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A Level Playing Field For Shipbuilders?

OECD Subsidy Elimination Agreement Draws Mixed Reactions

The key shipbuilding nations concluded negotiations in Paris on a multilateral agreement intended to eliminate government subsidies and other trade-distorting practices in the world shipbuilding sector. Achieving this agreement — creating a “level playing field” on which U.S. yards could compete — was a key element in the plan announced by President Clinton in October 1993 to strengthen the competitiveness of America’s shipyards.

Participants in the negotiations, held under the auspices of the Organization for Economic Cooperation and Development (OECD), included the European Union (EU), Japan, Korea, Finland, Norway, Sweden and the U.S. — all together accounting for some 80 percent of world shipbuilding. The agreement was accepted *ad referendum* by all delegations. Only representatives of the French shipbuilding sector were reportedly unhappy with the agreement — claiming provisions it would harm them against competitors — and reportedly plan to oppose the agreement within the U.S.

The agreement covers the construction and repair of self-propelled

seagoing vessels of 100-gt and above. It will reportedly eliminate subsidies and other distortive practices, both direct and indirect, by Jan. 1, 1996, and provide for effective enforcement of these prohibitions. This agreement also will set strong common rules for domestic and export credit financing for ships and establish an injurious pricing mechanism to prevent dumping in this sector. The provisions of the Jones Act will not be changed by the agreement, according to the U.S. Trade Representative’s Office — and the Jones Act’s cargo reservation provisions for U.S.-crewed, U.S.-owned and U.S.-flagged vessels has reportedly been a bone of contention in these negotiations in the past.

“This agreement will create the conditions under which all shipbuilding countries can compete fairly,” said U.S. Trade Representative Mickey Kantor. “By eliminating foreign subsidies and creating strong international rules in the shipbuilding sector, this agreement will enable U.S. shipyards to take their place in the commercial shipbuilding market, creating business opportunities and jobs for our industry.”

Reaction to the agreement has

been generally positive, but some see it as less than ideal. For one thing, the agreement has yet to be completely finalized — it has been accepted by the delegations to the OECD, but not yet by the governments these delegations represent. If it is accepted by those governments, it will be signed in the fall after which formal ratification procedures will take place.

Others feel the agreement could be worth only the ink on the paper. “The only way you can have an agreement (is when) both parties see a natural interest in the deal,” said Jim McCaul, president of IMA Associates, a consulting firm in Washington, D.C. which publishes a report called *Five-Year Outlook for U.S. Shipbuilding*. “As long as there’s this temporary shortfall in demand, there’s going to be subsidies,” he said. “Those subsidies could take many forms.” He stressed that the demand shortfall was indeed temporary, believing the shipbuilding scene will be on the upswing within the next few years, but “there’s nothing substantive that’s going to happen until the shipbuilding market improves.”

Mr. McCaul says this agreement will have little to no effect on the

shipbuilding outlook. Whatever may have been agreed to, countries simply will not remove all protections from their shipyards if it means losing vital capacity, he maintains. “As long as there’s insufficient demand, there’s going to be predatory pricing,” he said. Significantly, some countries have been accused of adding capacity for which there is no immediate need, giving their yards the ability to underbid other shipyards. Difficulty delivering the ships at the bid prices could then be offset by forms of government support, or “subsidization.” This excess capacity could cause a continuation of predatory pricing in ship construction even when the shipbuilding sector’s current dearth of orders ends. Conclusion of an OECD agreement to eliminate subsidies in the shipbuilding sector has been an objective of the U.S. government and industry for almost five years. Negotiations began in 1989 after the Shipbuilder’s Council of America withdrew its 301 complaint in favor of pursuing multilateral agreement.

After a one-year hiatus when negotiations broke down in April 1992, the negotiations were resumed by the Clinton Administration last summer.

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Singmarine Wins 2nd LPG Contract From Thai Oil

Singmarine Dockyard & Engineering Pte. Ltd., a member of the Keppel Group, won a contract to design and build a second Liquefied Petroleum Gas (LPG) carrier for Thai Oil Co. Ltd.

The \$11.15 million contract was signed in Bangkok between **Khun Kasame Chatikavanij**, chairman

and managing director of Thai Oil Company, and **Loh Wing Siew**, chairman of Singmarine Dockyard's parent company, Singmarine Industries Ltd.

To be named *Thaioil 5*, the vessel is to be delivered in mid-1995. "This is the fifth vessel we are building for Thai Oil Company and we are proud

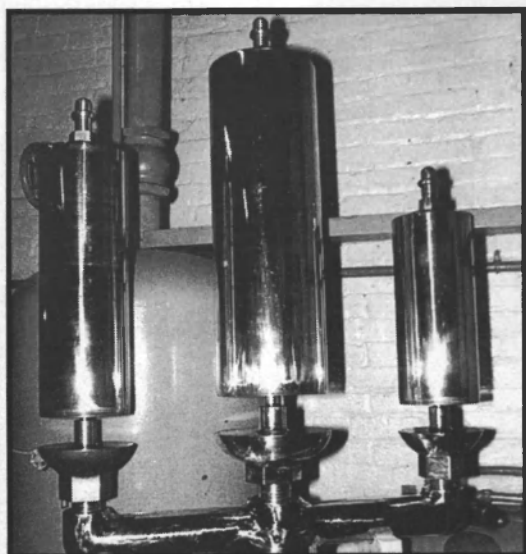
that they have once again shown their confidence in our capability to build specialized vessels," said **Loh Wing Siew**.

Singmarine Dockyard delivered a similar LPG carrier to Thai Oil in December 1992 and three clean product tankers since 1992.

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Lykes, All Alaskan Seafoods Seek MarAd O.K.

Lykes Bros. Steamship Co., Inc. asked the Maritime Administration for permission to increase from three to five the number of vessels Deppe Line GmbH may operate under the companies' reciprocal space charter and coordinated sailing agreement.

In December 1989, MarAd granted Lykes a waiver under section 804 of the Merchant Marine Act of 1936, as amended, permitting the company to participate in the agreement with Deppe. The agreement covers trade between the U.S. Gulf and East Coast and North Europe. The waiver was granted until the expiration of Lykes' operating-differential subsidy agreement. MarAd, however, retained the right to approve any increase in participating vessels.

According to Lykes' application, Deppe plans to operate the additional vessels in the trade and no other changes in the section 804 approval are being sought (section 804 precludes subsidized U.S.-flag operators or their affiliates from operating foreign-flag vessels which compete with essential U.S.-flag shipping services unless the Secretary of Transportation waives the provision of this section for a specific period of time).

MarAd also received an application from All Alaskan Seafoods, Inc., Seattle, for permission to charter

the 4,820-gt fishing vessel *All Alaskan* to Dalmoreproduct, Inc., Vladivostok, Russia. The vessel would operate under Russian registry in the fish processing industry. It was built in 1945 in Savannah, Ga.

Single Buoy Moorings Orders Viper™ From Perry Tritech

Single Buoy Moorings, Inc. (SBM), Marly, Switzerland, placed an order with Perry Tritech, Inc. of Jupiter, Fla. for a 1,000 meter rated Viper™ ROV System. Viper No. 4 will be fully outfitted with control cabin, tether management system and launch and recovery system. The ROV will be installed and commissioned on SBM's support vessel, the *Dynamic Installer*. The system will be employed for long-term support of SBM's offshore operations in West Africa. Scheduled for delivery in September 1994, Viper No. 4 is a 25-hp hydraulically-powered light work ROV system designed to provide a high powered, small sized vehicle for drill support, general subsea construction, inspection and maintenance tasks. The system features Perry's standard PC-486 based ROV control system with auto heading and auto depth as well as the capacity for a wide range of cameras, sonar and tooling.

For more information on Perry Tritech
Circle 119 on Reader Service Card

M. Rosenblatt Completes Conversion Plans For R/V Worthy

The San Francisco office of M. Rosenblatt & Son, Inc., naval architects and marine engineers, has completed the detail alteration plans and specifications for the conversion of the R/V *Worthy* (ex T-AGOS 14) to an oceanographic/geological research vessel to be operated by the U.S. Geological Survey, headquartered in Redwood City, Calif.

M. Rosenblatt specified that, to meet the damaged stability standards of 46CFR, Subchapter S, an existing transverse bulkhead will be converted to a watertight subdivision bulkhead; 30 tons of solid ballast will be installed; and a pair of port and starboard tanks will be cross-connected for counterflooding in case of damage.

To meet mission requirements, a stern mission platform will be installed; existing fuel oil and sea water ballast tanks will be converted to winch and compressor rooms; the upper deck will be extended to accommodate stowage spaces below, the aft ship control station will be relocated, and provision will be made for installation of four 20-foot stowage vans on the upper deck; the deck house on the foc'sle deck will be altered to allow for installation of a new J-frame; mission equipment will be installed

including: a stern U-frame, two HIAB sea cranes provided by Morgan Marine, a multi-channel seismic cable reel, "Gloria" sidescan sonar tow vehicle and gantry, an oceanographic coring winch with 30,000 ft. of wire, an electro/mechanical cable winch with 25,000 ft. of coax cable, and four seismic air compressors.

Also, two potable water tanks will be enlarged, an existing hydraulic crane will be relocated, and auxiliary ship systems will be modified to suit the alterations.

For more information on M. Rosenblatt
Circle 133 on Reader Service Card

Litton Receives \$836.7 Million Contract For Three Destroyers

The U.S. Navy awarded Litton's Ingalls Shipbuilding Div. a \$836.7 million contract for the construction of three additional Arleigh Burke (DDG-51) class Aegis guided-missile destroyers. The award brings Ingalls' backlog to \$4.4 billion, for the construction of 17 naval vessels.

The U.S. Navy has already ordered 32 ships of the class, including 14 from Ingalls. Fifteen additional ships are planned for award over the next five years.

The ships carry a mix of standard surface-to-air missiles, Tomahawk surface-to-surface missiles and anti-submarine rockets in two Vertical Launching System magazines.

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SHOW PREVIEW



The Offshore Northern Seas (ONS) Conference and Exhibition, a gathering of people in the international offshore industry, will be held August 23-26 in Stavanger, Norway. The conference will focus on overall strategic issues and technology details relating to the industry.

Under the main conference theme "A Changing World - A Changing Industry," industry and government officials will address the political and economic issues of importance to the future of the offshore industry. Such issues range from European energy policy and world economics through changes in OPEC's strategies in the oil market. Industry experts will look at

the consequences for the industry, including the opportunities in the energy markets and in the new republics of the former Soviet Union.

ONS 94 also has been planned as a forum for dialogue between technology users and technology suppliers. While oil companies have been invited to identify required new technology developments, support industry representatives have also been invited to present their responses to such requirements.

For more information on ONS 94, contact Offshore Northern Seas - International Conference and Exhibition, Gunnar Warebergs. 13, P.O. Box 410, N-4001 Stavanger, Norway, tel: +47 51 55 81 00; fax: +47 51 55 10 15.

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Aquamaster-Rauma Oy
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Thyssen AG
Ulstein International A/S
Unitor A/S
Wartsila Diesel Oy

Wartsila Wins Major Engine Orders

Wartsila Diesel recently received two orders: one order for six Wartsila Vasa 20 auxiliary engines for two containerships to be built for Norddeutsche Vermogen (NVA), Hamburg, Germany; and another order for 12 Wartsila Vasa 4R32 generating sets for four container vessels being built for the Taiwanese company Yangming Marine Transport Co.

The two containerships for NVA will be built by Hyundai Heavy Industries in Korea. The 3,600-TEU ships will each be equipped with three Wartsila Vasa 8R20 generating sets, each having an output of 1,240 kW at 900 rpm. The engines are specified to operate on heavy fuel oil up to 600 cSt and they will be supplied by the Wartsila Diesel factory in Vaasa, Finland, in December 1994.

The four container vessels for Yangming Marine Transport will each be equipped with three Wartsila Vasa 4R32 gensets driving alternators of 1,300 kW at 720 rpm. The engines will operate on heavy fuel up to 600 cSt from start to stop. The vessels will have a speed of 24 knots, and the main engine output is 30,000 kW.

For more information on Wartsila, Circle 7 on Reader Service Card

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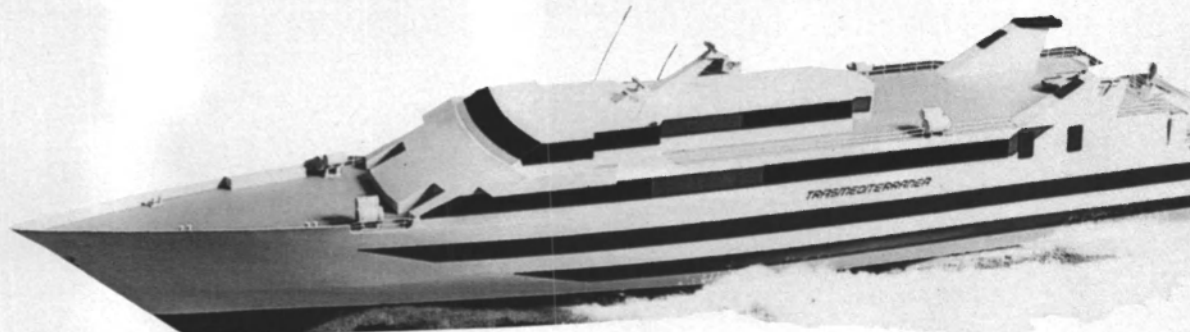
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FAST FERRIES:



Spanish yard Bazan has used its extensive naval background in designing the hull form for the Mestral fast ferry.

It's time to think newbuild

By
Carol Fulford & Andy Smith,
international editors

European builders of fast ferries are enjoying a significant number of orders in 1994, orders often for brand new designs. The ferry sector's lagging renewal rate, which leaves it open to criticism on issues of public safety, has been an impetus for the upturn in business. Economics are, however, at least equally critical.

As the average age of a ferry in the world fleet is 17 years, such vessels fall into the greatest "ship losses" category, according to the 1993 European Community White Paper on ship safety. Consequently, some of the vessels fall into the undesirable insurance arena of penalty premiums, and even outright refusal of cover.

With costs still in mind, operators have learned that passengers will pay higher fares for faster service, so it makes sense to opt for the bigger, swifter replacement ships. Whether an owner selects catamaran, monohull, SWATH, SES, hovercraft or one of the vast range of hybrids — which total up to over 80 available international types that have at least reached design stage — one thing is for certain: it's time

to think newbuild.

The most popular European option lies with the catamaran, and Swedish operator Stena Line has taken the most dramatic step by placing its faith and more than \$270 million in the hands of Finnyards. The order is for three HSS (High-speed Sea Service) ferries, which at 407 ft. (124 m) in length with 1,500-passenger capacity, will reportedly be the largest yet built anywhere in the world. At a speed of 40 knots (the realistic maximum for traversing busy shipping lanes) it will derive power from four gas turbines and will be the biggest fast ferry, capable of carrying trucks as well as cars. Being built of aluminium, another first for its size, vessel number one was recently christened at Finnyards' new 853 ft. (260 m) x 278 ft. (85 m) drydock facility when building commenced at the end of June. (Please see related story, page 62 of this issue).

While the Stena vessels take advantage of one of the true benefits of the catamaran form — the virtual lack of physical size limitation — all other vessels in build or on order are substantially smaller.

Other Scandinavian yards, mostly

in Norway where the country's fjord-indented coastline and many islands have long created the need to develop ferry designs, are taking center stage. Batservice, Kvaerner Fjellstrand, Ulstein and Westamarin have all blossomed in the fast ferry sector and, interestingly, each has opted primarily for the catamaran form.

Mandal-based Batservice Holdings, having achieved notable success in recent years, won a contract in April for its biggest-ever catamaran, the Sea Lord 38. According to marketing manager Jarl Mydland, the vessel has been designed for a service speed of 35 knots from an as-yet-unconfirmed propulsion package (MTU engines are standard specification). The vessel will be able to carry 307 passengers when it enters service between Harstad and Tromsø in Norway.

Kvaerner Fjellstrand's mainstay is the 131-ft. (40-m), 312-passenger Flying Cat, which is capable of operating in the 34- to 35-knot range. To date, 29 have been delivered. Recent design modifications include a motion dampening system and the most recent delivery, *Vargoy*, also incorporates the first commercial application of Kvaerner Energy's own waterjet design, twin 680mm versions which are powered by MTU 396TE74L engines. Kvaerner also reports that prospects are good for a first order for its Jumbo Cat, a 36-knot, 600-passenger, 122-vehicle ferry design.

Kvaerner and fellow Norwegian

rival Westamarin have been working along similar lines in the development of foil assisted catamarans.

The launch in 1991 of a 131-ft. (40-m) waterjet propelled, gas turbine-driven prototype at first seemed to indicate that Kvaerner had gotten there first.

However, technical glitches were reportedly addressed and solved, and the company has concluded a contract with Far East Hydrofoil Co. for two 115-ft. (35-m) versions with a 407-seat configuration.

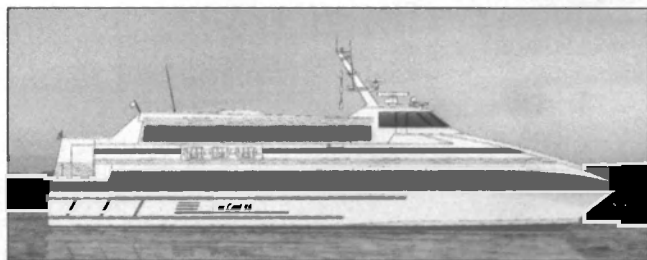
Westamarin's FoilCat 2900, launched a year later, uses diesel engines and the Ulstein-Liaaen Z propeller system. Its foils achieved remarkable lift and the vessel made 50 knots from day one with an extremely smooth ride thanks to a sophisticated ride and bank control system.

However, with capacity for only 160 seats in a single open-plan saloon, it proved unconvincing despite a massive sales effort from parent company Swede Ship.

Nevertheless, within the space of a single month Westamarin shipped the original 2900 to Indonesia for operation across the Strait of Malacca and received an order from Paciro in Singapore for a FoilCat 3000 with an option for a second. This slightly larger version can carry 200 passengers with a top speed of 50 knots and a service speed of 45 knots.

In the U.K. just one serious contender in the fast ferry stakes, a recently reorganized FBM Marine, has won success with a fast multihull design and as such has, after recessionary times, secured its future financially. Having built a handful of significant ferries over the last few years, including a SWATH, FBM successfully wedded its skills in aluminium catamarans to more recent experience in composite technology (building the latest breed of RNLI lifeboats) to produce the 147.6-ft. (45-m) TriCat design. Said FBM managing director Malcom Keith, who is bullish about the future, "This contract is the largest-ever single order won by the company and will establish FBM in

(Continued on page 13)



The fast ferry market is filled with new designs. Pictured on top is an artist's impression of the Sea Lord 38, the first of which is currently being built at Batservice Holdings. To the right is the TriCat design, the U.K.'s contribution to European fast ferries. Designed by FBM marine, the vessel is currently being built for Hong Kong operators.



Engine Makers, In-Water Exhibits Both Big Hits At Euro Workboat Show

By Carol Fulford & Andy Smith,
international editors

The fifth European Workboat Show took place at Port Solent marina near Portsmouth on the English South Coast at the end of June. The show places great emphasis on the in-water display and demonstration of workboats as well as incorporating a traditional booth-style exhibition area. As the European definition of a workboat is usually limited to vessels under 120 ft. (36.6-m), a marina venue is the perfect showcase. International visitors were not disappointed, as 100 boats were up for scrutiny.

In keeping with European size philosophy, the largest boat on the show pontoons was *Protector III*, the 75-ft. (23-m) fisheries protection vessel built in the U.K. by Halmatic. Although rigid inflatables and RIB look-alikes — mainly outboard or waterjet powered — were much in evidence, the bulk of the boats on display were in the 30- to 45-ft. (9- to 13.7-m) range. Typical was the latest offering from U.K. builder Lochin International, celebrating 21 years of boatbuilding with a new 40 footer (12.2 m).

Developed from the Royal National Lifeboat Institution's 33-ft. (10-m) Brede Class lifeboats and the Lochin 38, much revered by commercial inshore fishermen and pilot authorities alike, the new hull retains the instantly recognizable reverse sheer and all weather handling capabilities of both its predecessors. Fitted with twin 425-hp Caterpillar 3208TA engines, the Lochin 40 is capable of speeds in excess of 25 knots and is available in a variety of workboat configurations.

Perhaps the archetypal workboat in European eyes is the Nelson, a family of proven round bilge semi-displacement designs to be found serving on literally every continent, primarily in patrol and pilot boat roles. Several were on display including one newcomer — Landguard Marine's Nelson 33. The patrol boat version is powered by twin 300-hp Cummins diesels giving 26-knot speeds. Among the many smaller craft on display was an intriguing covert operations boat from Haworth Marine International, the *Interceptor*. Unusual in shape for a European builder, with proportions of 25 ft. x 4.6 ft. (7.6 m x 1.4 m) and a draft of only 1.3 ft. (0.4 m), it has an exceptionally low profile, giving a very low radar signature. Totally enclosed and inherently self-righting, the vessel and its features enable its two to three person crew to observe coastal installations and shadow other vessels without detection while the crew remains completely dry, even in adverse weather conditions. With a gas engine and stern drive, 40 knots can be achieved; but other propulsion options are available, including diesel/waterjet arrangements. Orders have already been received from several national governments. The engine builders dominated the 200 booths, and Cummins, Perkins, Sabre and Volvo all used the event to

introduce new engines. The professional small boat operator's undoubted preference for naturally aspirated diesel engines was well satisfied with the announcement of the compact 155-hp Cummins 6C8.3M and the 129 hp M130C from Perkins Sabre which is claimed to have exceptional fuel economy. Volvo launched its biggest engine yet, the new TAMD 163, with a maximum power output of 750 hp;

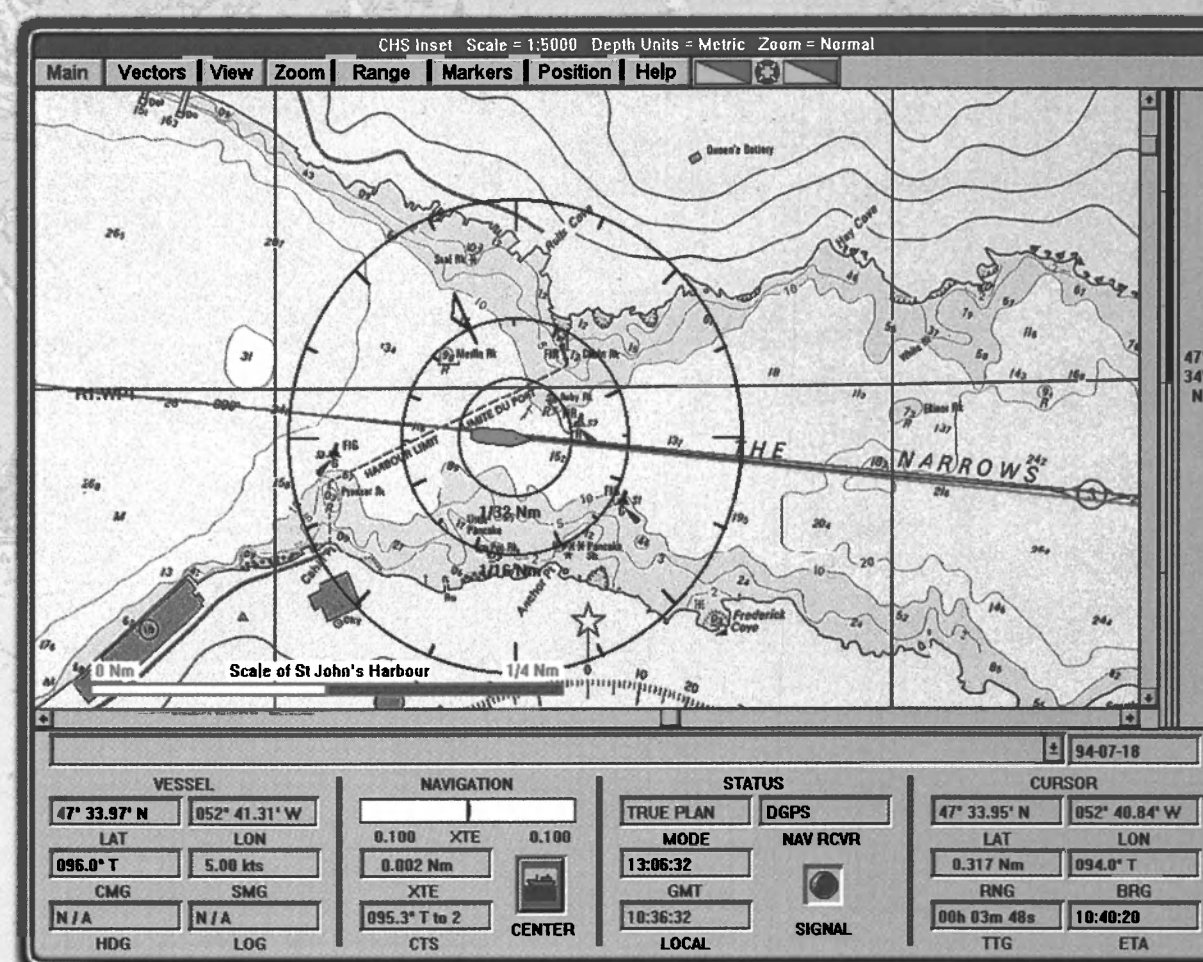
and a new 440-hp unit, the 72WJ, specially developed for waterjet applications.

Waterjets, a propulsion solution for so many workboat applications, were well represented with Hamilton from New Zealand, PP Jets (now part of Vosper Thornycroft) and Castoldi from Italy pointing out many examples from their ranges on numerous boats afloat and on individual booths.



More than 100 boats were on display in the pontoon area at the European Workboat Show.

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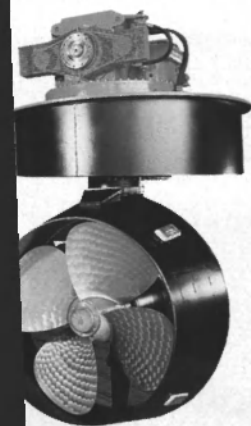
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FAST FERRIES: Time To Think Newbuild

(Continued from page 10)

the forefront of fast ferry design."

With a stylish, futuristic FRP clad superstructure from the drawing board of one of Europe's leading megayacht designers and a central third bow to improve sea-keeping, the 500-passenger, 45-knot TriCat met with early success, an order for five vessels from its parent company in Hong Kong. One effect of the superstructure cladding is to create the illusion of a monohull rather than the blunt appearance of a conventional catamaran.

Dutch yard Royal Schelde's increased range of catamaran designs includes two new low wash river and inland waterway vessels of 30 knots to add to its 123-ft. (37.6-m), 144-passenger version introduced last year. At the same time the company has announced a 230-ft. (70-m) catamaran passenger/vehicle ferry which has greater capacity — for 600 passengers and 196 vehicles — than its own 295-ft. (90-m) monohull which offers a similar speed of 37 knots.

Although little is new in the hovercraft and SES sectors in Europe, the SWATH concept continues to be the subject of discussion. Pure SWATH designs continue to be developed, although on an international level, few have been built to date. Possibly it is more likely to

attract investors in hybrid form (the HSS vessels for Stena are semi-SWATH catamarans).

Significant is a design from German yard Schichau Seebeckwerft for the SSW 320, a vessel designed for 600 passengers and 120 cars with a projected speed of 36 knots. The yard is currently building two fast ferries for Greek operators Attica Enterprises, Sales Manager **Helmuth Stoterau** told *Maritime Reporter*, but added that all information is under wraps until the fall.

Monohulls

FBM has announced a new 148-ft. (45-m) monohull design which borrows the futuristic styling of its TriCat, and Italian yard Rodriquez, in addition to its hydrofoil models, has diversified with the Aquastrada 331-ft. (101-m) high speed monohull in response to "a careful market survey," said Sales and Marketing Director **Diego Mazzeo**. The first examples, *Guizzo* and her larger sister *Scatto*, which was delivered in June, are now in operation between Sardinia and mainland Italy and on the La Spezia-Olbia route. A third vessel has also been ordered by Corsica Ferries and is due for delivery in May of next year.

Another Italian leader in the field, Fincantieri, has revised its 308 ft. (94 m) Pegasus monohull design with

a superstructure styled by the Italian design house of Pininfarina. The company's view is that, although it already has very high speed surface effect ships in its portfolio, there was a more immediate demand for a 35-knot deep Vee monohull project with visual appeal, simplicity of operation and no special technological and operational risks.

Spanish and French yards are also pitching in. Bazan has used its frigate building experience to develop the Mestral fast ferry concept, admitting that the monohull form of the two 315-ft. (96-m) vessels in build for Barcelona to Balearic Isle routes is totally military in origin. With a capacity of 450 passengers and 84 cars, these two ferries will, at a service speed of 35 knots, cut the passage time to Majorca from nine to 3.5 hours. Three new designs based on the same hull and superstructure have also been announced.

French yard Leroux & Lotz has meanwhile been completing a 216-ft. (66-m) waterjet propelled monohull for service on the St. Malo/Channel Islands route.

The company has also released details of two smaller designs, the Corsaire 4000 and Corsaire 5000, and a much larger fast monohull vehicle ferry, the 335-ft. (102-m) Corsaire 11000 which is predicted to give a top speed of 40 knots and carry 550 passengers and 148 cars. Early success seems likely, as it is reported that French operator SNCM has ordered an 11000 to serve the island of Corsica.

HDW To Buy Fuel Cell Power Plant From Ballard

Howaldswerke-Deutsche Werft AG (HDW) will use Ballard Power Systems Inc.'s Fuel Cell power plants in newbuildings.

The contract is worth almost \$7 million. Ballard will supply a prototype fuel cell power plant to HDW that will provide propulsion and auxiliary power for vessels such as submarines and merchant ships. The first phase of the project is expected to be completed by December 1995.

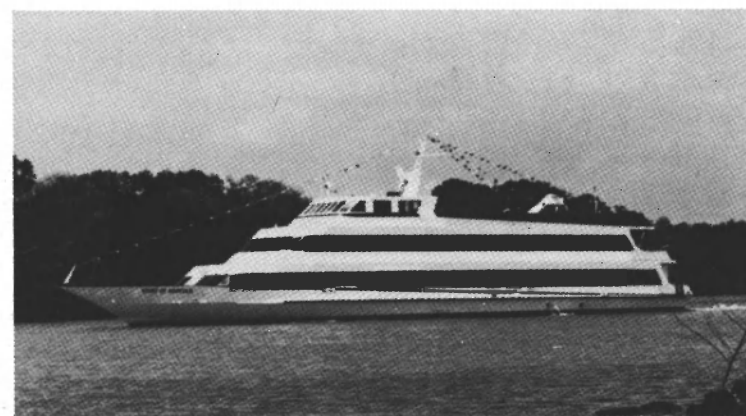
HDW has reportedly worked on fuel cell power plants for submarines for more than 13 years. The first submarine utilizing fuel cell power was operated by the German navy.

The Ballard Fuel Cell is a proprietary zero emission engine that converts natural gas or methanol fuel directly into electricity without combustion.

Ballard recently received a \$4 million contract from the Canadian Department of National Defense to design and construct fuel cell power systems.

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MarAd To Reconsider Northstar/Lachmar ODS Request

The Maritime Subsidy Board has reopened for reconsideration applications filed by Northstar Shipping, Inc. and Lachmar relating to an earlier request by Lachmar for operating-differential subsidy (ODS) for two liquefied natural gas (LNG)

carriers. The applications were assigned Docket S-904.

The original request filed by the companies asked MarAd to assign Northstar's ODS agreement to Lachmar; and Lachmar requested financial aid for the operation of the LNG vessels *Lake Charles* and *Louisiana* in an essential service in the foreign commerce of the U.S. under an ODS agreement, and modification of its agreement to permit worldwide transportation of LNG

in bulk by Lachmar.

In its decision, the agency noted that the applications were for subsidy for LNG vessels which had not previously been subsidized and that grant of subsidy could not be reasonably calculated to carry out effectively the purposes and policy of the Merchant Marine Act of 1936, as amended.

Parties are requested to file additional comments relevant to the issues raised by the applicants in

their May 27, 1994 petition to reopen.

MarAd Approves Delmar's Application To Sell Drill Rig

MarAd has approved an application filed by Delmar Systems, Inc., Broussard, La. to sell and transfer the 4,659-gt drill rig *Marine 9*. The purchaser is China Offshore Oil Bohai Corp., a Chinese corporation. The vessel was built in 1979 in Ingleside, Texas.

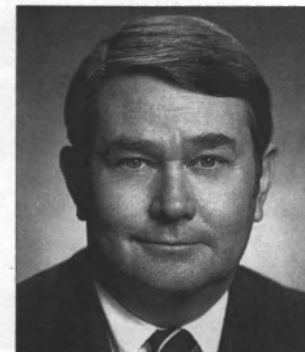
MarAd OKs \$40.7 Million Under Title XI For 40 Cenac Barges

The Maritime Administration has approved an application by Cenac Towing Co., Inc., Houma, La., for a Title XI guarantee to aid in financing the construction of 40 double-hull, 30,000-barrel inland tank barges. The barges will be built by Nashville Bridge Co. (Nabrico), Nashville, Tenn., and operated in the Gulf Intracoastal Waterway and the Mississippi River System.

The estimated guarantee amount is \$40.7 million, which is 87.5 percent of the estimated actual cost of \$46.5 million. The guarantee term is 25 years.

For information on Nashville Bridge Co. Circle 148 on Reader Service Card

Ganter Retires From Norshipco



Frederick A. Ganter

Frederick A. Ganter has retired from Norfolk Shipbuilding and Drydock Corporation after serving the company for 25 years. During that period he was responsible for the marketing and sales activities of the company.

He will continue to work for Marecon Corporation - International, a subsidiary company that represents overseas shipyards in the American and Canadian markets.

Marecon Corporation - International currently represents Lloyd Werft, Bremerhaven, Germany; and T.S.I. Pendik, Istanbul, Turkey. Marecon Corporation - International's address is: P.O. Box 308, Basking Ridge, N.J. 07920 - 0308. Tel: (908) 221-1300; fax: (908) 221-1212.

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Bruce Named Managing Dir. For IRI's London Office

Captain **David Bruce** has been appointed managing director of the London office of International Registries Inc. He will be responsible for safety inspections and vessel registration, and will act as advisor to the Liberian delegation to the International Maritime Organization (IMO).

Capt. **Bruce**, who joins IRI from his post as chief marine surveyor for the Isle of Man government, previously served with IRI. He was employed by Liberian Services Ltd. from 1972 to 1991 in various capacities.

He has been vice chairman of IMO's Containers and Cargoes Division II and has also served on the Maritime Safety Committee.

Dockwise Tows Presidential Yacht To Italian Yard

Dockwise NV, which claims to operate the largest fleet of semi-submersible heavy-lift vessels in the world, has been contracted by the U.S.S. Williamsburg Corporation for the carriage of the 240-ft. (73.1-m) historic presidential yacht *Williamsburg* aboard the heavy-lift vessel *Super Servant 3*.

The former "floating White House," built in 1931, will be restored to its former condition. Valdetaro Shipyard of Italy has been commissioned for the \$65 million restoration, and the yacht reportedly arrived there safely.

The completion of the *Williamsburg* will take two years. The recommissioning of the yacht will take place on July 4, 1996 in Washington, D.C.

For more information on Dockwise
Circle 137 on Reader Service Card

NKK To Build Icebreaking Patrol Ship For Safety Agency

Japan's Maritime Safety Agency has commissioned NKK Corp., reportedly Japan's only shipbuilder with icebreaking expertise, to build a 500-dwt icebreaking patrol ship.

To be built at NKK's Tsurumi Works in Yokohama, it is scheduled for delivery in October 1995. NKK has previously built seven vessels in this category, a company spokesman said. Two have been highly successful Antarctic observation ships; another, the *Aurora*, built in 1990, was Japan's first sightseeing cruise icebreaker and is in service off the northeastern coast of Hokkaido.

The same icebreaking and ice-resistant shipbuilding technology was used by NKK in building the super CIDS (concrete island drilling system) offshore oil platform now operating in the Beaufort Sea

off northern Alaska.

The new vessel will be capable of navigating through ice nearly two ft. thick, or in charging mode will be able to crush through ice beds of more than 2.5 ft. thick. The ship will be 180 ft. (54.9 m) long by 33.5 ft. (10.2 m) wide and have a depth of 16.4 ft. (5 m).

For more information on NKK
Circle 135 on Reader Service Card

Brynn Foss Joins Foss's Los Angeles Fleet

Foss Maritime Company added the *Brynn Foss* to its fleet in Los Angeles/Long Beach.

The *Brynn Foss*, a 3,500-hp cycloidal propulsion tractor tug, was moved from San Francisco Bay, where it operated for nearly a year. The tug will join the *Pacific Escort*, a 3,500-hp cycloidal propulsion tractor tug already working in the Los Angeles/Long Beach area.

Due to their cycloidal propulsion systems, tractor tugs can produce thrust in any direction, and Foss's studies have reportedly shown these tugs as extremely effective in retarding the speed of a tanker under way.

Foss owns a total of nine tractor tugs.

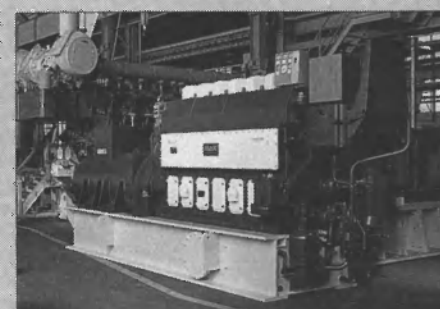
MAR Wins Gov't Contracts Worth Over \$30 Million

MAR, Inc. of Rockville, Md. has been awarded three major naval engineering and marine operations contracts by agencies of the U.S.

Krupp MaK Supplies Gensets To Ukraine-Built Reefers

Krupp MaK has succeeded in winning an order for the supply of eight diesel generator sets of the new type 6 M 20 for reefer vessels of the Greek shipping company Laskaridis, one of the world's largest shipping companies for reefer vessels.

The two vessels are the first in a planned series of 10. They will be built by the shipyard 61 Kommunare in Nikolaiev, Ukraine. Eight engines will be used with a total output of eight MW. These will provide the electric power supply for the vessels, especially for the extensive refrigerating plant. The gensets for the first vessel will be supplied to the shipyard in 1994.



This brings the total number of M 20 engines sold since its market introduction in 1992 to more than 200.

For more information on Krupp MaK
Circle 134 on Reader Service Card

government. The U.S. Customs Service (USCS) has awarded MAR a four-year contract valued at nearly \$25 million for national marine vessel maintenance.

MAR will maintain approximately 150 vessels ready for law enforcement operations, including a property inventory management and accounting system.

From the Environmental Protection Agency (EPA), MAR won a five-year contract valued at \$7.5 million to continue operation and maintenance of the *Peter W. Anderson*, a survey vessel equipped and crewed to conduct offshore scientific data collection. MAR will provide the necessary personnel, services, material and equipment to provide op-

erations program support, maintenance, modification and overhaul of the vessel. The vessel is used for at-sea survey of ocean dumpsites, monitoring coastal waters and investigating hazardous materials spills.

The third contract was awarded to a joint venture between MAR and ManTech Services Corporation of Fairfax, Va. by the Naval Surface Warfare Center, Carderock Division, Carderock, Md. The three-year contract will furnish a mix of naval architecture, marine engineering, system analysis, systems definition, acquisition and planning and other technical support for various programs.

For more information on MAR
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Feroform Marine Bearings Ordered For Middle East, Japan

Tenmat Ltd., manufacturers of Ferroform Marine Bearings, has expanded its distributor network to include the Middle East. Dolphin Trading, based in Sharjah in the United Arab Emirates, was appointed as Middle East distributor. United Arab Shipping Co. ordered Ferroform replacement rudder bearings for its *M/V Al Rayyan*, a 25,000-dwt container enhanced K-class vessel. Two Ferroform T14 tubes were delivered to the vessel in Dubai Drydocks.

Feroform T12 rudder bushes were ordered for a containership being built at Mitsubishi Heavy Industries Ltd. (MHI), Kobe Yard in Japan. The ship was ordered by Dutch operator Nedlloyd Lines.

The vessel will be capable of carrying 4,112 containers and will go into service in 1995 on the Europe and Far East route.

Other bearings for newly designed deck equipment on the vessel are being supplied in Ferroform F363 material, a high-strength self-lubricating composite used in the fairlead rollers.

For more information from Tenmat Ltd. Circle 126 on Reader Service Card

P&O Ferries Call On New Berth At Le Havre

The new berth of the Brostrom Quay, built in the Bassin de la Manche at the Port of Le Havre, was called on by the new passenger/vehicle ferries, *Pride of Le Havre* and *Pride of Portsmouth*, owned by P&O European Ferries.

The new facilities are made up of a berth equipped with a double rampway in order to embark and disembark vehicles, a gangway for foot passengers and a harbor terminal (295 ft. [90 m] long and 65 ft. [20 m] wide).

Lonseal Names Malco NE Marketing Rep.

Lonseal, manufacturer of marine and industrial matting and decking materials, has appointed Malco Marine Corporation, Smithtown, N.Y., as its northeastern marine marketing representative. Lonseal Regional Sales Manager Sean McGuire expressed a belief that Malco, headed by Malcolm Wisch, has expertise that will prove beneficial to Lonseal's long-term marketing plans.

Lonseal manufactures a broad line of vinyl matting and decking materials for specific application in marine and industrial areas. Several of Lonseal's product series are used by the U.S. Navy and the U.S. Coast Guard and meet Mil specification.

For more information on Lonseal Circle 143 on Reader Service Card

Maritime Reporter/Engineering News



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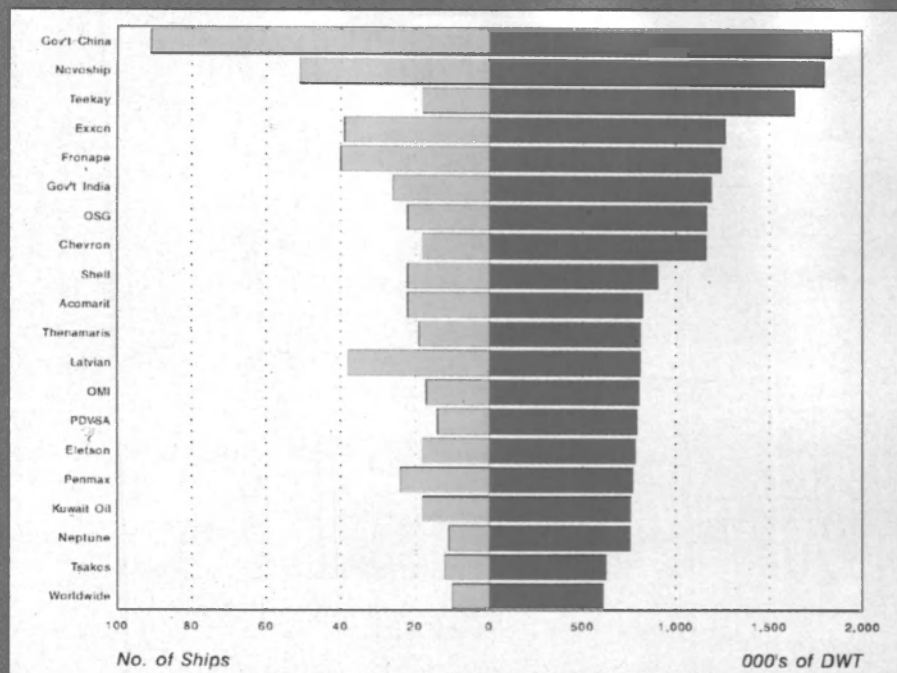


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INDUSTRY TRENDS



By James R. McCaul, president,
IMA Associates, Inc.

Twenty major ship operators control 530 product tankers, accounting for 25 percent of the number of product tankers now in service and almost 40 percent of the available worldwide product tanker capacity.

Source: IMA Associates, Five Year Outlook for U.S. Shipbuilding, 1994

Adm. Kime Honored For Efforts in Maritime Safety And Pollution Prevention

Admiral J. William Kime, who recently retired as Commandant of the U.S. Coast Guard (USCG), won the International Maritime Prize for 1993. The prize is awarded annually to the person thought to have done most towards advancing the objectives of the International Maritime Organization (IMO), the U.N. agency concerned with maritime safety and the prevention of pollution from ships.

Adm. Kime has been an active participant in the technical and political workings of IMO at all levels since 1972. He has always been, and remains, a strong proponent of multilateral solutions to maritime safety and marine environmental concerns.

Adm. Kime was a key participant in the development of the International Gas Carrier Code and the International Bulk Chemicals Code, and served as the principal U.S. negotiator for these agreements.

He also made an important contribution to 1978 International Conference on Tanker Safety and Pollution Prevention and served as head of the U.S. Delegation to the IMO Sub-Committees on Bulk Chemicals and Ship Design and Equipment. During 1984-1988, Adm. Kime served as the Chief of the Office of Marine Environment and Systems, and subsequently as Chief of the Office of Merchant Marine Safety. He was responsible for combining these two offices into the Office of Marine Safety, Security and Environmental Protection,

and served as its first chief. He served as head of the U.S.'s Delegation to IMO's Marine Environment Protection Committee and the Maritime Safety Committee.

Adm. Kime was a leader in the international effort to develop an international solution to maritime terrorism, as a result of the *Achille Lauro* incident, an effort which resulted in the development of the Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation, 1988, and specific measures to prevent unlawful acts. He also strongly supported the latest efforts by IMO to emphasize the importance of such measures.

He played a leading role in the successful development of subdivision and stability standards for dry cargo vessels and increased residual stability for passenger vessels, through amendments to the International Convention for the Safety of Life at Sea (SOLAS), 1974. He initiated the development, and the 1988 update, of the Code for the Construction and Equipment of Mobile Offshore Drilling Units and was a principal supporter of the development and implementation of the Global Maritime Distress and Safety System (GMDSS).

Adm. Kime served as head of the U.S. Delegation to the Conference on International Cooperation on Oil Pollution Preparedness and Response. He also served as head of the U.S. Delegation to the 17th and 18th IMO Assemblies.

GMDSS SART

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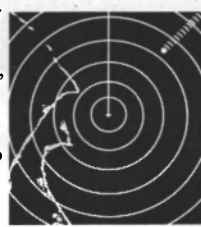


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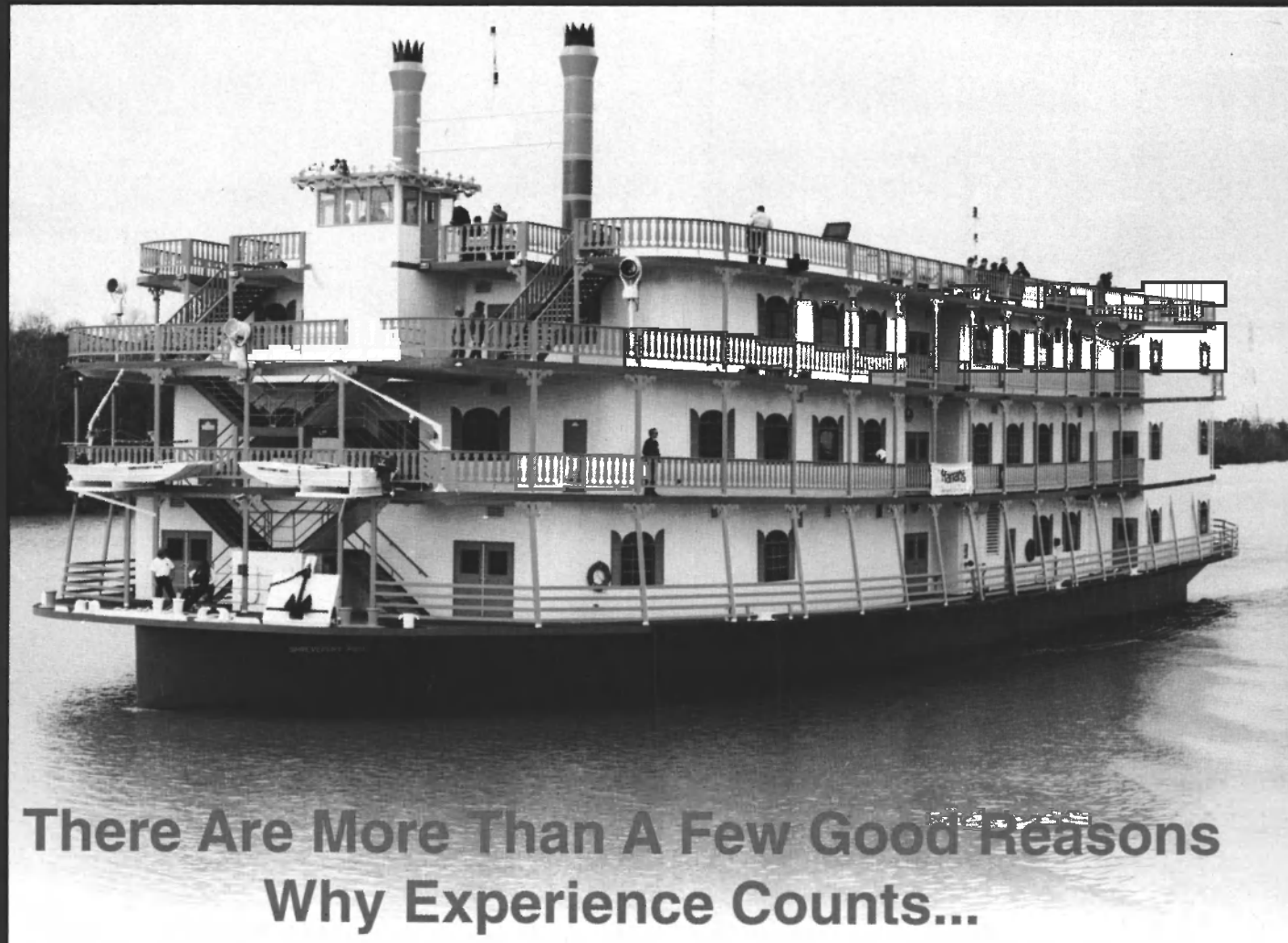
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Special Supplement — August 1994 Edition



Above: 322 ft. Casino Vessel (under construction).

Top left: 189 ft. Paddlewheel Excursion Vessel.

Bottom left: 184 ft. Excursion Vessel.

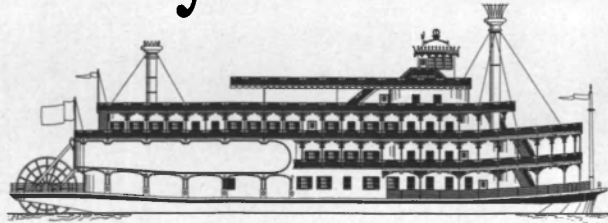
Top right: 200 ft. Trinity Space Ship.

Bottom Right: 140 ft. Excursion Vessel.

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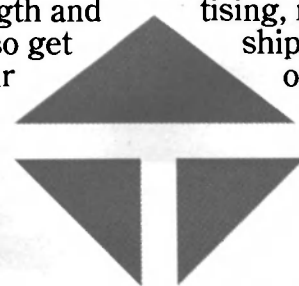
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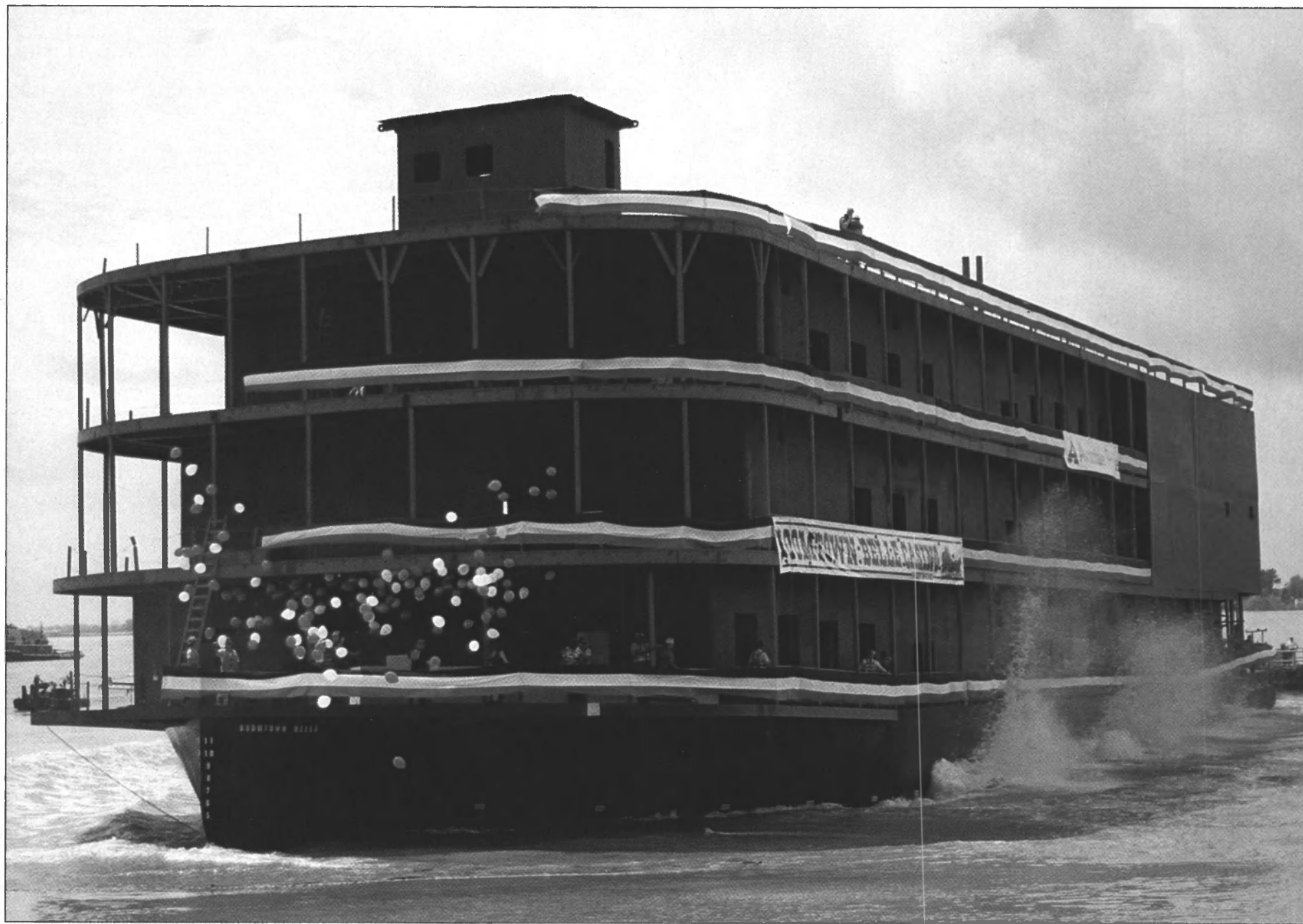
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The Avondale-built Boomtown Belle, which recently opened for business, is shown here during its launching in late April.

In the riverboat casino market...

Legislators Take Center Stage

The fledgling casino vessel market has encountered some growing pains in the form of legal challenges. Despite the current lull, industry executives close to the situation expect a big pick up ... and soon. — By Greg Trauthwein

To the uninitiated observer, recent legislative setbacks in the riverboat gaming market — specifically in Missouri and Indiana — might indicate the end of a market barely in its infancy. But listening to “those in the know,” one quickly gets the impression that these setbacks are indeed temporary, and many expect the brisk boat buying pace to pick up again this fall.

“This is a temporary setback, and as soon as the issues are resolved, we expect things to pick up,” said

Gary Lipely, sales and marketing, Trinity Marine Group (TMG). “Most of the companies we deal with (in this market) are in a slow down mode, waiting to see what will happen. But, they are definitely getting their ducks in a row so they are in a good position upon resolution.”

The boatbuilder’s views are especially crucial when attempting to plot the eventual course of the gaming boat market, as many of the yards have dedicated considerable time, effort and worker power to

designing, developing, selling and manufacturing riverboat casinos.

But boat builders are not, by far, the only group affected by cumbersome legal battles. They, along with prospective owner/operators and local politicians, are all paying close attention to not only the legal proceedings in Missouri and Indiana, but also in states which are reportedly close to legalizing this form of entertainment.

“Gaming companies are getting gun shy of pouring in millions of dollars (into a facility and vessel) to only have it tied up. Now they wait not only till legislation passes, but to see if there are going to be any court challenges,” said **Ronald Babin**, sales and marketing manager, Avondale Boat Division. While the recent court battles have been discouraging, they have had virtually no effect on business already in the yards, and recent deliveries give the appearance of (booming) business as usual.

Business As Usual

Avondale recently delivered the 250-ft. (76.2-m) x 72-ft. (22-m) *Boomtown Belle* to Boomtown Westbank. The vessel has approximately 30,000-sq.-ft. of public area and 1,211 gaming positions, including 849 slots and 362 table positions.

The Caterpillar-powered, 19th Century-styled vessel operates in Harvey, La., and will traverse the Harvey Canal. Avondale’s in-house staff, led by **Frank A. Ricks III**, designed the vessel; Directions In Design of St. Louis designed the Western-themed interior.

Also, at press time, Avondale announced its intention to deliver the 266-ft. (81-m) *Belle of Baton Rouge*, a paddlewheeler owned and operated by Argosy Gaming of Louisiana. The boat was to arrive at Jazz Enterprises’ site at Catfish Town in mid-August. This vessel features approximately 29,000-sq.-ft. of public areas, and was designed by Rodney Lay & Assoc.; interior by



Several shipyards, including Trinity Marine's Lockport Yard and Service Marine, have found the gaming vessel industry to be an attractive niche market.

Bauer Interiors.

Additionally, Avondale is building the 350-ft. (106.7-m) *Belle of New Orleans* for Bally's. This vessel, designed by Avondale's in-house

team, with interior design from Yates & Silverman, is scheduled for delivery in 1995. It will feature Caterpillar main engines, Schottel thrusters and Reintjes gears.

Current business at Trinity includes a 245-ft. (74.7-m) boat built for Hilton, completed in July, and the 322-ft. (98.1-m) permanent *Queen of New Orleans*, which is scheduled for completion in November. Service Marine Industries (SMI) can make a legitimate claim to being one of the top gaming vessel builders in the U.S. since the market roared to life in 1991. Since then, SMI has built (or is building) a total of 15 either dockside or self-propelled vessels.

The bottom line to the riverboat gaming industry, from the builder's side, is still quick design, construction and delivery. An owner ordering a boat for a new location today wants it delivered yesterday, and the yards must stay prepared to provide.

The Future Is Bright

Like his colleagues, **Larry Hairston**, senior vice president of marketing at SMI sees the market in a lull, but is confident of its future. Aside from the obvious boosts successful resolutions in Missouri and Indiana would provide, Mr. Hairston and his team are looking at a host of states and possibilities in anticipating the market's next move. For example, he said that at press time the Illinois legislature was meeting in a special session, and a possible outcome may be 10 additional licenses for the state, including five for Chicago. Also, there are indications that by the end of the year there may be five additional licenses available in Louisiana. This positive activity, combined with the "states to watch" (states which are considered close to, or at least interested in riverboat gaming, including Pennsylvania, West Virginia, Virginia, Ohio, Texas and Florida), make prospects for a long, healthy riverboat gaming market look promising.

Mr. Lipely considers the loosen-

ing of regulations in Iowa as a potential market opportunity, and similarly looks to West Virginia, Virginia, Pennsylvania and Texas as the best near-term hopes, with South Carolina and Ohio "a bit farther out."

It's a given that predicting the whims of the legislative process is next to impossible at best. However, in planning the future workload, SMI has devised some promising numbers. Counting self-propelled and dockside facilities, Mr. Hairston's market analysis indicates that there could be a call for 84 additional vessels from now until 1997.

While **Edward Doherty**, president of Atlantic Marine, is more reluctant to make number-of-vessel speculations, he too believes the market is still in for growth.

"If these things (states) start to fall in place, things will pick up and we look for continued business (in the riverboat gaming sector)," said Mr. Doherty.

Mr. Doherty hopes, as do all other builders and suppliers involved, that the market will invigorate itself once issues are settled and additional gaming laws are enacted. But he maintains — as do other yards — that they are diversified enough that not even losing all this valuable gaming work would put them out of business.

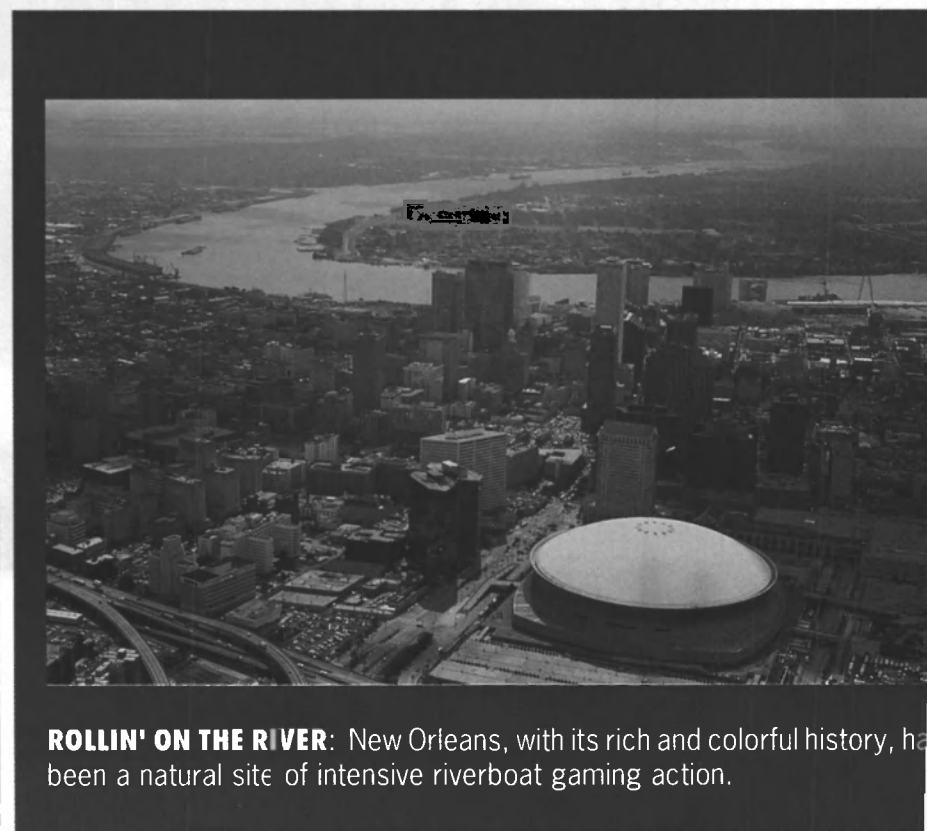
Most yards which have flourished in the gaming vessel market feature a varied and balanced workload, which includes newbuilds of vessels for different uses, such as dinner/passenger and workboats, as well as improved repair and service activities.

"Trinity Marine Group is so diversified that, although gaming is very important to us, if it does go into a longer-than-projected lull, we will be okay — because we're involved in so many other things," said Mr. Lipely.

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ROLLIN' ON THE RIVER: New Orleans, with its rich and colorful history, has been a natural site of intensive riverboat gaming action.

Maritime Assoc. Preps For 1st Ever N.E. Gaming Show

Scheduled for October 3rd & 4th at the DAC/Whitehall Club in New York City, "Rediscovering Our Waterways & Waterfront" is being presented by the Maritime Association of the Port of New York/New Jersey — in conjunction with *Maritime Reporter & Engineering News* — and billed as the Northeast's first waterborne gaming conference and exhibition.

Geared to the informational needs of maritime services and suppliers; buyers; shipyards; land and economic developers; and others, the preliminary program of conference speakers includes many of the top names in the marine industry, in-

cluding: **David F. McMullen**, vice president, John J. McMullen Associates, Inc./R.S. Stearn; **Ed Doherty**, president, Atlantic Marine; **Jack Gilbert**, president, John W. Gilbert & Assoc.; **Larry Evans**, The Transportation Institute; and **Jeannine Bequette**, Directions in Design.

Additionally, legislators, from

both the regional and national level, will present the latest legislative developments, which in essence determine the time frame and pace of the new building. Other conference sessions will focus on insurance, inspection, licensing and classification; land development and redevelopment around water gaming projects; and success stories in the

waterborne gaming industry.

Exhibit hours will be from 2:00 to 8:00 p.m. on Monday, October 3, and from 8:00 a.m. to 4:30 p.m. on Tuesday, October 4. The opening reception will be held in the exhibit area on Monday from 5:30 to 8:00 p.m.

For additional conference or exhibit information, call (212) 425-5704.

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Avondale's Active Summer

Despite legislative glitches, Avondale has been very active of late delivering vessels and preparing a 1995 delivery. Avondale currently has in-house designs for turn-of-the-century paddlewheel gaming vessels in varying lengths from 210 ft. (64 m) to 368 ft. (112.2 m), with design work currently being done on a 400-ft. (121.9 m) version.

For more information on Avondale
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Boontown Belle

Delivery: End of July
Length: 250 ft. (76.2 m)
Width: 72 ft. (22 m)
Main engines: Caterpillar
Propellers: Michigan Wheel
Gears: Reinties
Generators: Caterpillar
Engine controls: EMI
Bowthruster: Schottel
Sternthruster: Schottel
Interior design: Directions In Design
Slot machines: 849
Table games: 362

Belle Of Baton Rouge

Delivery: Mid-August (projected)
Length: 266 ft. (81 m)
Width: 77 ft. (23.5 m)
Main engines: Detroit Diesel
Propellers: Padgett Swan
Gears: Twin Disc
Electric Drive: Sumitomo
Generators: Detroit Diesel
Alarms/Steering systems: EMI
Thrusters: Schottel
Design: Rodney Lay & Assoc.
Interior design: Bauer Interiors

Belle Of New Orleans

Delivery: 1995
Length: 350 ft. (106.7 m)
Width: 83 ft. (25.3 m)
Passengers: 2,450
Main engines: Caterpillar
Gears: Reinties
Generators: Caterpillar
Thrusters: Schottel
Design: Avondale
Interior design: .. Yates & Silverman
Gaming positions: 1,300

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lers, receivers and auxiliary equipment is sold worldwide and can be found in security installations used by many of the nation's major businesses and institutions.

In addition to assisting in laying out CCTV installations, Kalatel also provides custom designs. Kalatel has built a reputation as a producer of high quality, reliable equipment at competitive prices.

Kalatel manufactures a discreet 12-in. dome (KTA-12) with a built-in

pan/tilt positioner. The KTA-12 can be housed in a flush mount, pendant, or weatherproof housing with either a tinted, clear or slotted acrylic dome cover. Kalatel domes require only a 24VAC power supply and can be operated from any of Kalatel's Digiplex Keypads via a simple twisted-pair connection. Dome pan/tilt positioners can be programmed for autopan and preset positioning. A choice of three motor speeds and a variety of mounting hardware is

available.

Kalatel also manufactures three versions of a time/date/title generator. Kalatel's time/date/title generator combines in one package both a multi-channel time/date generator and an alphanumeric title inserter. The KTS-53-16 is designed to display the same time and date on each of its 16 video channels and can be linked with additional units to expand to 1,600 channels. It also allows each channel to be field-programmed with its own 22-character title. A single channel unit is also available (the KTS-53). Standard features include on-screen programming menus, buffered video, and NTSC/PAL operation. When ordered as a KTS-53-1, an RS422 serial input/output port is also included. The input can be used to receive GPS information. The output sends data to Kalatel's Digiplex III system.

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Universal Gypsum Technology (UGT) is a manufacturer of glass fiber reinforced gypsum and cement products for decorative interior and exterior architectural shapes.

As its name suggests, UGT is more than just a fabricator of glass fiber reinforced gypsum and cementitious architectural products. UGT says it is probably the only manufacturer in its field that employs an architectural/design staff and a research laboratory directed by Dr. Pung Lu, an international leader in inorganic chemistry research. The result of this mix of talent is a continuing flow of (zero burn, melt, smoke and toxicity) new products developed for riverboat casinos and other passenger vessels. Because weight is an important factor, UGT created a super lightweight system that maintains structural stability, and allows molded ceilings that weigh under 13 ounces PSF. UGT says it has also developed the lightest weight cementitious material available anywhere for exterior use in such applications as molded window sash, shutters, decorative features, railing panels, pilothouses, etc. The cement can be molded with minimal wall thickness, in color, with surfaces that range from high gloss to wood and stone surfaces.

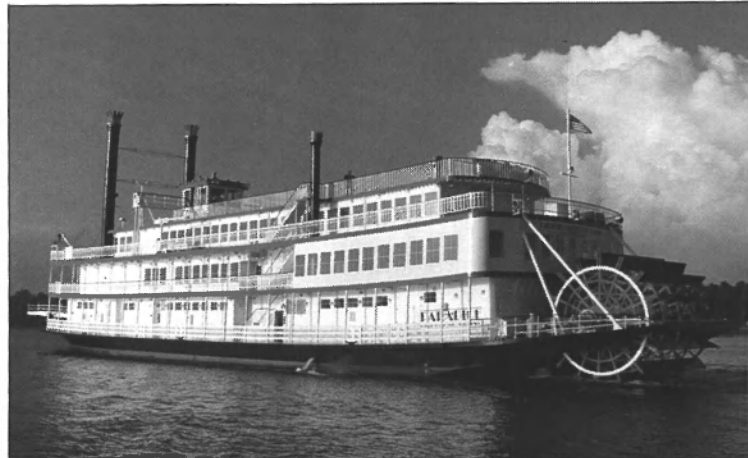
UGT's design team works with owners, architects, shipbuilders and designers to best utilize its products and systems for optimal appearance at affordable costs.

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Owners have realized that "on-time deliveries" and controlled costs are foremost when considering a

shipyard. Trinity says it's the best when it comes to these criteria: its performance and reputation speak for itself.

Trinity completed construction of a 245 by 62 by 12 ft. (74.7 by 18.9 by 3.7 m) casino paddlewheeler in an unprecedented seven months from the start of cutting steel to the inau-

gural cruise. Trinity says this type of commitment and execution is what it is known for. Its other riverboat casino projects include one 333 by 90 by 14 ft. (101.5 by 27.4 by 4.3 m) paddlewheeler and another 245 by 62 by 12 ft. paddlewheeler. Trinity also has designs for approximately 12 additional casino boats

ranging in size from 218 ft. (66.4 m) to 404 ft. (123.1 m), and feels certain it has a design that will fulfill every customer's needs. If not, its engineering staff of over 100 people is ready to assist.

Trinity has the capability to design a casino boat with its own "in-house" naval architects or it can work with the customer's design agent. Its experienced engineering staff has developed preliminary plans for gaming vessels ranging from 220 to 405 ft. in length, with passenger capacities from 1,200 to 3,500. Trinity can design these vessels as modest or as glamorous as the customer would like. These vessels are sternwheel, imitation sidewheel or ultra-modern, and can be modified to the customer's particular requirements. As discussed above, Trinity has successfully worked with numerous naval architects to build boats to their or the owner's designs.

Trinity has also developed a 337 by 68 by 15 ft. (102.7 by 20.7 by 4.6 m) Great Lakes casino boat which has approximately 43,000 sq.-ft. of gaming area, and can accommodate 2,500 passengers. Trinity's strength lies in its experience, quality construction, and on-time delivery.

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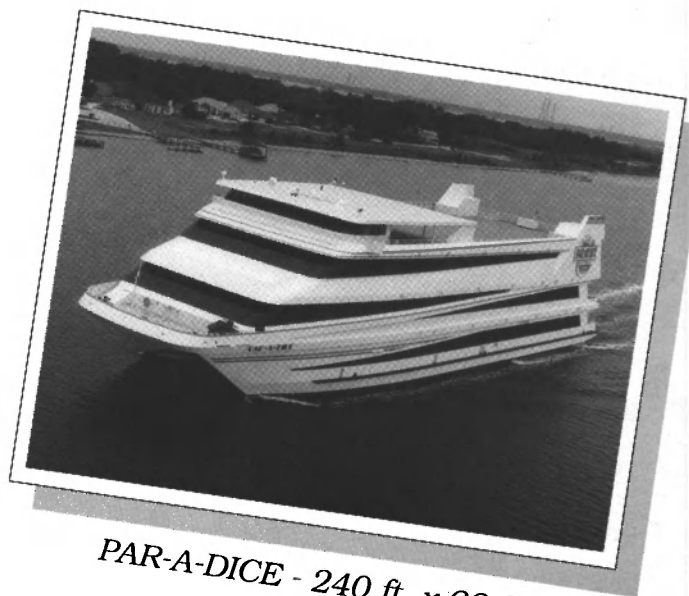
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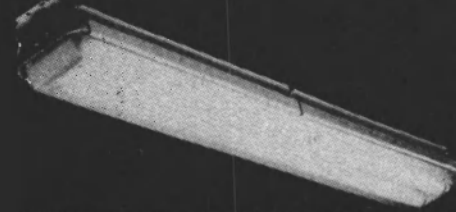
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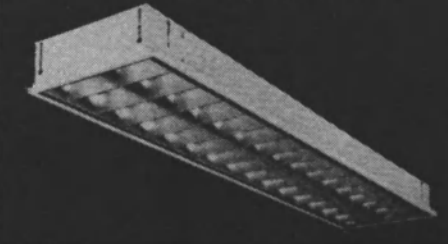
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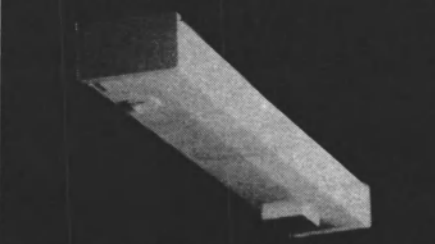
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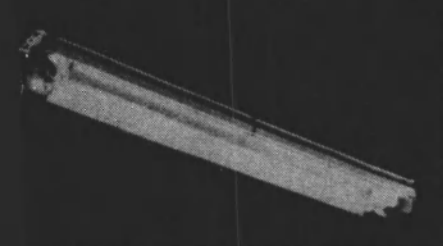
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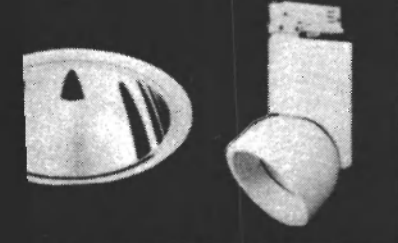
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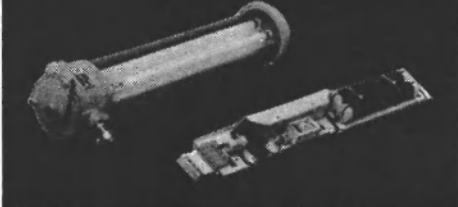
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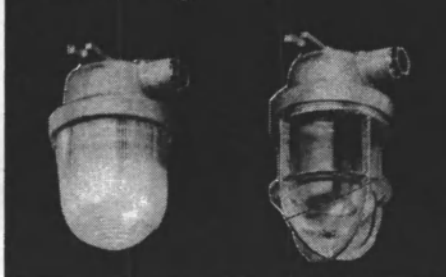
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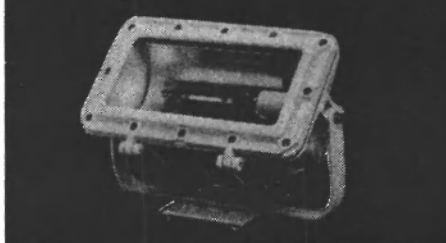
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For more information on Lighting Supply
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Patti Shipyards: Builder From The Beginning

Patti Shipyard, Inc. of Pensacola, Fla. was organized in 1977 to build steel vessels for the family seafood business that was founded in 1935. Since that time Patti has delivered 46 vessels, ranging from 60 to 447 ft. (18.3 m to 136.2 m) in length. All vessels are constructed to either ABS or USCG standards, incorporating modern advancements in technology and design. Vessel types have evolved from the early fishing vessels to tugboats, Corps of Engineers vessels, dinner-excursion vessels, vehicle ferries, and more recently, gaming vessels.

Patti Shipyard was proud to be the first shipyard in America to deliver a riverboat gaming vessel on the Mississippi. The *Dubuque Casino Belle*, now the *Casino St. Charles*, was delivered in April 1991, placing Patti at the forefront of the gaming vessel boom. Patti has not looked back since, delivering the largest gaming vessel on the river, the *Casino Queen*, in June 1993. The *Queen* weighs in at 7.1 million lbs. fully loaded and is a tug/barge combination, similar to its predecessor.

Each of these vessels, as well as all other Patti vessels, were built priced well below the "going rate." More outstanding is the fact that they were built for the price that they were bid for.

Patti Shipyard operates with an average "core" crew of 60-70 individuals. Its facilities include a large construction bay, a blasting shed, building ways with three railroad tracks for launching and a fabrication shop outfitted with up-to-date tools and equipment. Patti also offers in-house design with complete Computer Aided Design (CAD) and visualization capabilities.

For more information on Patti Shipyard
Circle 85 on Reader Service Card

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Bally Makes Sales Team Appointments



Greg Beard

Robert Rodriguez

Bally Gaming, Inc. has named **Greg Beard** to its Southern Nevada sales staff, and **Robert Rodriguez** to its international sales staff.

Mr. **Beard** has more than 18 years of sales experience, and spent the last 11 years in the pharmaceutical sales industry before joining Bally. Most recently, Mr. **Beard** was territory manager for ICN Pharmaceuticals, where he achieved large increases in sales volume.

Mr. **Rodriguez**, who is bilingual, will assist in further expanding Bally's growing market share outside the U.S. He has 25 years of sales experience, and spent the last decade in printing for the gaming industry.

Leevac Builds Boats "Ready To Go"

Leevac Shipyards, Inc. of Jennings, La., since the delivery of the *Casino Rock Island* (delivered two weeks earlier than contractually promised in November 1991), has delivered five more casino vessels and each has been completed on or before the promised date. The vessels have ranged in size from 190 ft. to 367 ft. (57.9 m to 111.8 m) in length.

The last delivery was the 367-foot *President Casino IV*, the third casino vessel for the President Riverboat Casino Company, completed on February 1994. While Leevac does not offer design capabilities, it works closely with qualified naval architects that design what the customer wants. Leevac has an engineering/programming staff that utilizes AutoCAD to develop the required construction drawings and programming to cut the steel on its own computer-aided Plasma-arc cutting machines.

In January 1994 Leevac expanded its capabilities by leasing another shipyard 2.5 miles south on the Mermentau River.

For more information on Leevac, Circle 67 on Reader Service Card

A.C. Coin & Slot Grows With Riverboat Market

"As gaming exploded across the country so did the demand for our products," said **Rick Schulman**, national sales manager for A.C. Coin & Slot Service Co. "The company has built all of the slot bases for

Caesars Windsor Canada, supplied thousands of chairs to Foxwoods and hopes to play a role in the opening of every major casino in the coming years. We have opened offices in major gaming jurisdictions to ensure the level of customer service that A.C. Coin is known for."

A major force in the gaming industry for the past 16 years, Pleasantville, N.J.-based A.C. Coin has opened three new offices recently

due to the rapid increase in demand for products and services. The company recently opened a new office in Las Vegas, Nev.; Chicago, Ill.; and Biloxi, Miss.

The distributor prides itself on the continuing quality and diversity of its product line, and now offers quality seating by Infanti Chair Mfg.; custom slot bases and table games; Keno systems by Imagineering; Keno paper and rib-

bon; custom silk/screened slot glass; and much more. The company also offers custom casino signage designed and painted by one of the foremost airbrush artist/illustrators in the U.S. The company also features IGT slot machines and electronics parts which A.C. Coin sells and services in the Caribbean and Atlantic City markets.

For information on A.C. Coin & Slot, Circle 184 on Reader Service Card



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RIVERBOAT GAMING LEGISLATION UPDATE

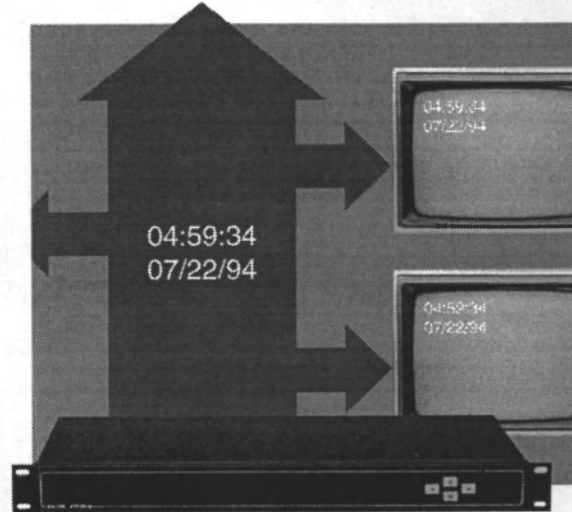
Riverboat gaming legislation is being monitored by gaming boat owners and operators today more closely than ever. The reason is simple: both Missouri and Indiana, states which had already passed legislation permitting gaming vessels, are embroiled in legal battles

which are indefinitely prohibiting, or severely limiting, riverboat gaming.

Thus the companies which purchase the boats and develop the waterfronts are not so quick to pour millions of dollars into a project based on speculation.

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The Transportation Institute issues a regular report which details — both federally and state-by-state — the past, current and pending legislation which will shape the riverboat gaming industry. The following information is excerpted from a recent issue. For information on ordering the report from the Transportation Institute, please contact: **Larry Evans**, 5201 Auth Way, Camp Springs, Md. 20746; tel: (301) 423-3335; tel: (202) 347-2590; or fax: (301) 423-0634.

DISTRICT OF COLUMBIA

The District of Columbia's Board of Elections permitted supporters of riverboat gaming to gather signatures from voters on a petition that would put riverboat gaming on the ballot this September. The D.C. Committee for Riverboat Gambling was to gather five percent or 16,500 signatures by June 15 for the measure to be on the September ballot, or by August 10 for the measure to be on the November 1994 ballot.

Despite objections from opponents — who contend the amendment is imprecise because it does not specify the number of boats or whether they will be dockside or cruising — the D.C. Board of Elections and Ethics said the proposal is appropriate for the ballot.

FLORIDA

Pro-gaming groups, at last report, were trying to get petitions signed by August 9th in order to have their gaming issue put on a November ballot. Safe Bet for Florida Committee, a state-registered political action committee, is reportedly interested in limited-access riverboat gaming. The group's ballot specifies an amendment which would allow up to 21 riverboat casinos around Florida, with a maximum of four per county, all subject to county and local vote. Carnival Hotel and Casinos is a supporter, and the Intracoastal Waterway, Florida Bay and St. John's River are among likely sites considered to attract riverboats.

S.B. 3038, sponsored by Sen. **Gutman** and titled the Water Vessel Gaming Act, would have permitted vessel gaming in counties that approved it. The measure, introduced March 16, died April 15.

IOWA

H.F. 2179 passed the House and was signed by the governor, an amendment to the riverboat gaming law which includes eliminating betting and loss limits, raises the legal age for gaming to 21 (from 18) years old, and changes the minimum passenger capacity per vessel

to 250, among other things.

MICHIGAN

Riverboat gaming is to be placed on Detroit's August 1994 ballot, although no language for it has been drafted to date.

MISSOURI

The vote to amend the Missouri constitution to allow slot machines on riverboats failed by less than one percent. And though the future of riverboat gaming is uncertain, and owner/operator confidence is shaken, the battle has not yet ended. There will be another vote, most likely in August.

The concept for the amendment originated when the Missouri State Supreme Court overturned the Cole County Circuit judge's dismissal of a case heard in July 1993 on the constitutionality of riverboat gaming in the state.

The 22 applications submitted to the Missouri Riverboat Gaming Commission have been revised to accommodate limited riverboat gaming. The Gaming Commission has continued to review applications regardless of the outcome of the constitutional amendment.

NEW YORK

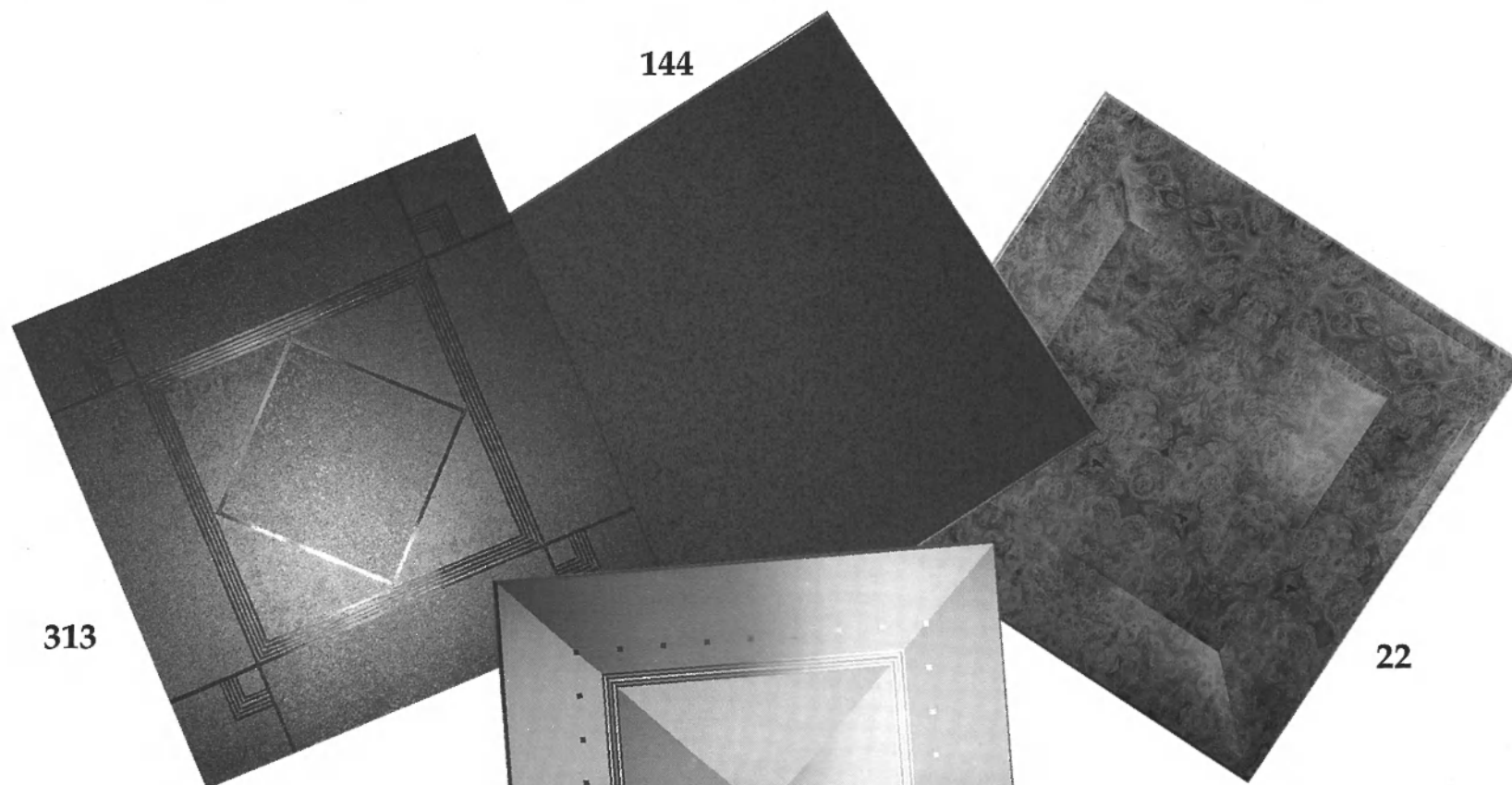
Plans for six riverboat casinos were proposed to the New York City Council. Council Finance Chairman **Herbert Berman** thought the casinos could bring in \$200 million a year in fresh taxes. S.B. 6592, introduced by Senator **Nicholas A. Spano**, proposes an amendment to the constitution concerning casino gaming in the Catskill region, vessels navigating in state waters and waterways, and certain gaming at horse racing tracks and simulcast theaters. It would allow gaming to be authorized upon public vessels being navigated upon state waters and waterways as may be authorized and prescribed by the legislature, but only if approved in a county referendum in the county in which persons may board the vessel.

TENNESSEE

Gaming legislation, S.B. 2450 (the Tennessee Gaming Control Act), died in the Senate State and Local Government Committee on April 21, the final day of the 1994 legislative session.

Sponsored by Sen. **John Ford**, S.B. 2450 would have allowed an unspecified number of gaming vessels to operate on certain waterways within counties bordering on the Mississippi, Tennessee and Cumberland Rivers, and would have additionally allowed land-based casinos.

Casino Ceilings From Gage

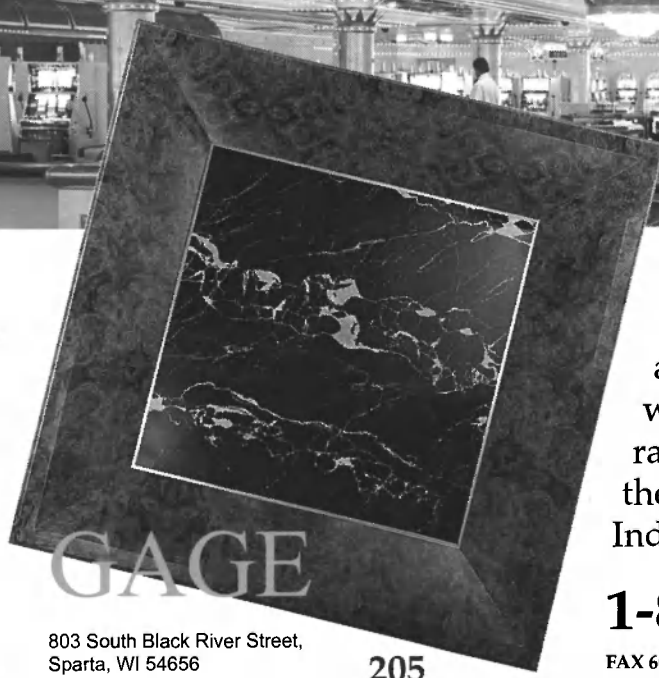


Star Casino Photo by Carl Gustafson



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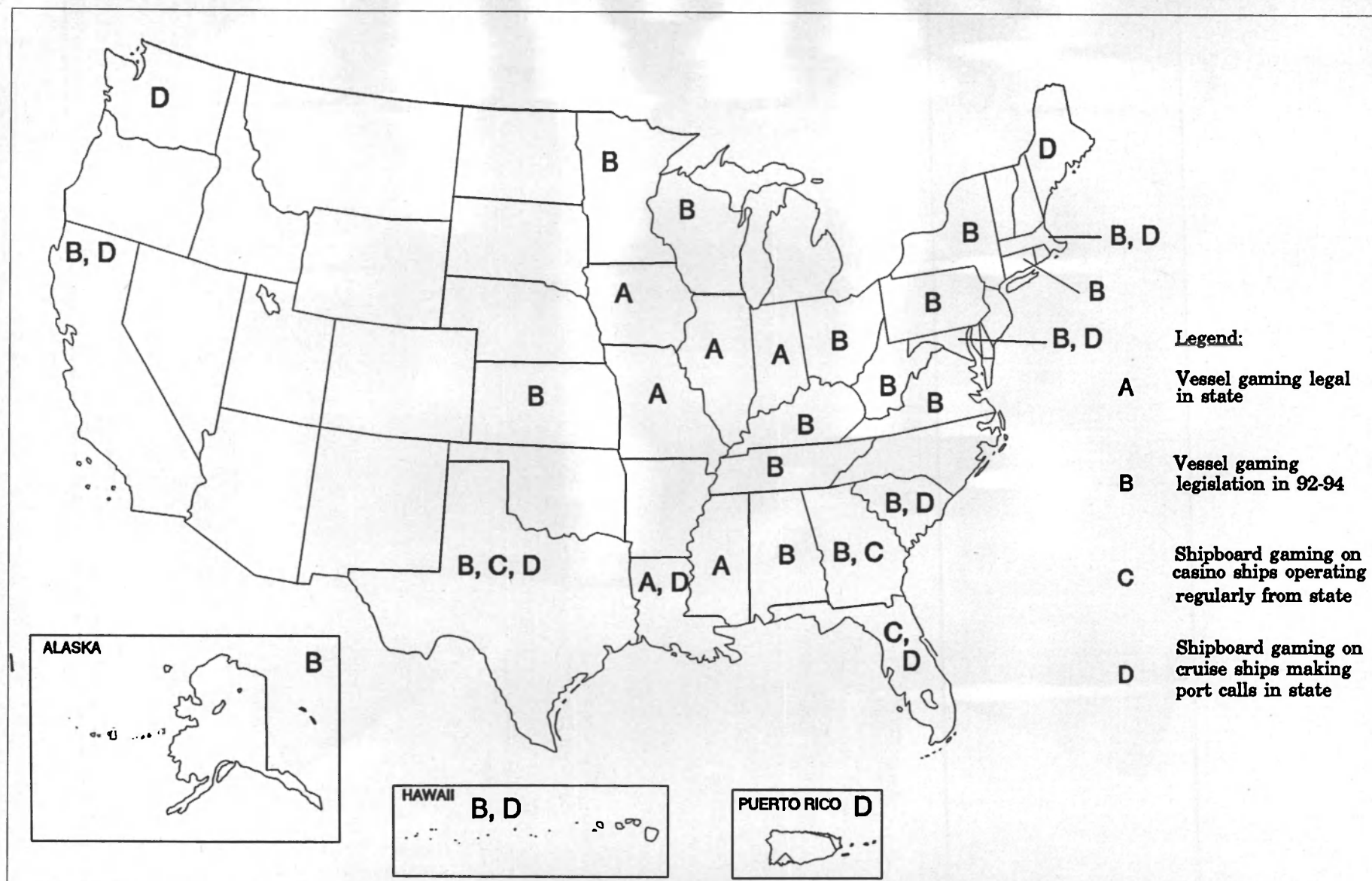
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Source: The Transportation Institute, May 1993

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Aztar And Evansville, Ind. Agree On \$100-Million Facility

Jeffboat tapped to build 310-ft. City of Evansville

The city of Evansville, Ind. announced the selection of Aztar Corp. as its choice to operate the only riverboat gaming facility planned to be licensed in the Evansville market.

Announced by Mayor Frank McDonald II, the agreement stipulates that the city will recommend to the Indiana Gaming Commission that Aztar be licensed to operate the Evansville riverboat casino. Evansville, on the Ohio River in Vanderburgh County in southwestern Indiana, is a market of 650,000 people within 50 miles and 2.5 million within 100 miles.

It's projected the facility will attract 2.3 million visitors annually until additional competition, if any,

emerges from the Louisville market.

Aztar's proposed project, to be called Evansville Landing, will be situated in downtown Evansville,

and feature the City of Evansville, a replica of the historic Robert E. Lee racing sidewheel steamboat. The vessel is currently under construction at Jeffboat of Jeffersonville, Ind. The 310-ft. (94.5-m) by 70-ft. (21.3-m), 2,500-passenger vessel is scheduled for delivery by April 1995, and will feature 1,250 slot machines and 70 table games.

The estimated \$100-million contract will also include: a 250-room

hotel; a riverfront pavilion, an entertainment complex for pre-boarding facilities, restaurants, retail shops and a lounge.

Aztar's application for an Indiana gaming license is pending, as the successful resolution of a court ruling challenging the constitutionality of Indiana's riverboat gaming legislation must first occur.

For more information on Jeffboat, Circle 75 on Reader Service Card

Harrah's Debuts New Look, Emphasis

Harrah's Casinos has unveiled a new brand mark, positioning line and ad campaign to appeal to the growing number of casino entertainment customers nationwide. The new look is more than just a look, however, as it embraces an entertainment focus and moves Harrah's beyond gaming into the entertainment arena. The new focus is embodied in the company's new line, "Great Time. Every Time."

Casino America Earnings Strong At New Facilities

Casino America Inc., which reported it anticipated gaming revenues in excess of \$140 million for FY '94 which ended April 30, reports generally positive results on the riverboat gaming front.

The Isle of Capri Casino, Bossier City, La., which opened May 20, 1994, has had gaming revenues in excess of \$370,000 per day, which translates to more than \$11 million on a monthly basis, exceeding the company's original projections.

The Isle of Capri Casino in Vicksburg, Miss. opened a new floating pavilion on May 18, and the facility had gaming revenues of \$4.9 million in May, and is currently seeing a strong increase in gaming revenues, with expectations of surpassing \$6 million for June.

The Isle of Capri Casino in Biloxi, Miss. had gaming revenues of approximately \$5.1 million in May, an approximately 23 percent decline from May '93 results. However, the decrease was expected due to a substantial increase in competition, and the facility reportedly remains profitable for the company.

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- The laboratory has also perfected a cement (exterior) that can be molded less than 3/16" thick and still retain extreme strength. Color can be molded-in for many applications.

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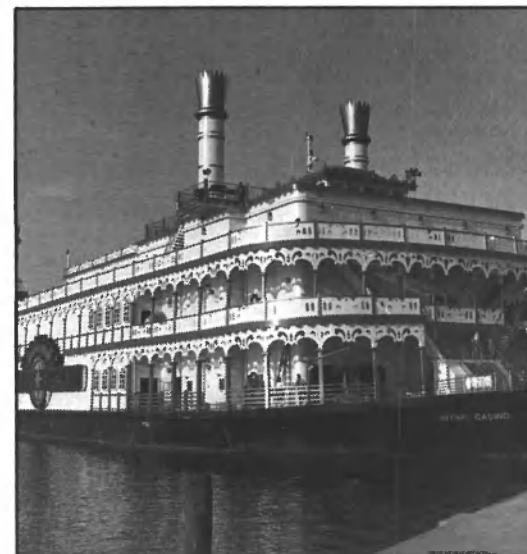
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Hilton Reaches New Agreement In Kansas City

After weeks of negotiations, the Port Authority of Kansas City and Hilton Hotels Corp. announced a new agreement by which Hilton will develop and operate a riverboat casino on a single site in Kansas City on the Missouri River. In January of 1993, Hilton had been

awarded exclusive rights to develop two Kansas City sites.

However, due to changing regulatory requirements, changes in the Missouri gaming laws, certain site constraints, and archaeological and environmental concerns, the two decided jointly to modify the original agreement. It is anticipated that a temporary floating casino facility could be in the water by the end of the year.

The revised agreement calls for a floating facility with up to 25,000-sq.-ft. of gaming space (with an option to expand up to 50,000-sq.-ft.) offering 1,000 gaming positions, located at the Paseo Bridge site.

Upon final approval of the agreement by the City Council and Port Authority, which was pending at press time, Hilton has until Dec. 31, 1994 to waive contingencies. These contingencies include, but are not

limited to: Missouri Gaming Commission approval of continuous dockside gaming at the Paseo Bridge site; issuance of a gaming license; receipt of all required building permits; Section 404 and other U.S. Coast Guard and Corps of Engineers required approvals, as well as other economic, environmental and archaeological matters.

Innovative Gaming Receives License Approval From Miss. Gaming Commission

Innovative Gaming Corp. of America received approval from the Mississippi Gaming Commission for its license to manufacture and distribute its interactive video gaming machines in that jurisdiction. "This decision opens up one of the most significant gaming markets in America to our video gaming machines," said **D. Brady Olah**, chairman and CEO. "This is, without doubt, our biggest potential market to date, and we already have a significant number of backorders for our Live Video Black Jack and Live Video Craps machines to be filled."

Players' Riverboat Gaming Revenues Up In June

Players International Inc. announced that in June gaming revenues at the company's Metropolis, Ill. casino were \$5.7 million, compared to \$5.3 million for the same period last year. Passenger count was slightly down (105,241 this year versus 108,685 last), which in turn raised the win per passenger to \$54 this year compared to \$49 a year ago.

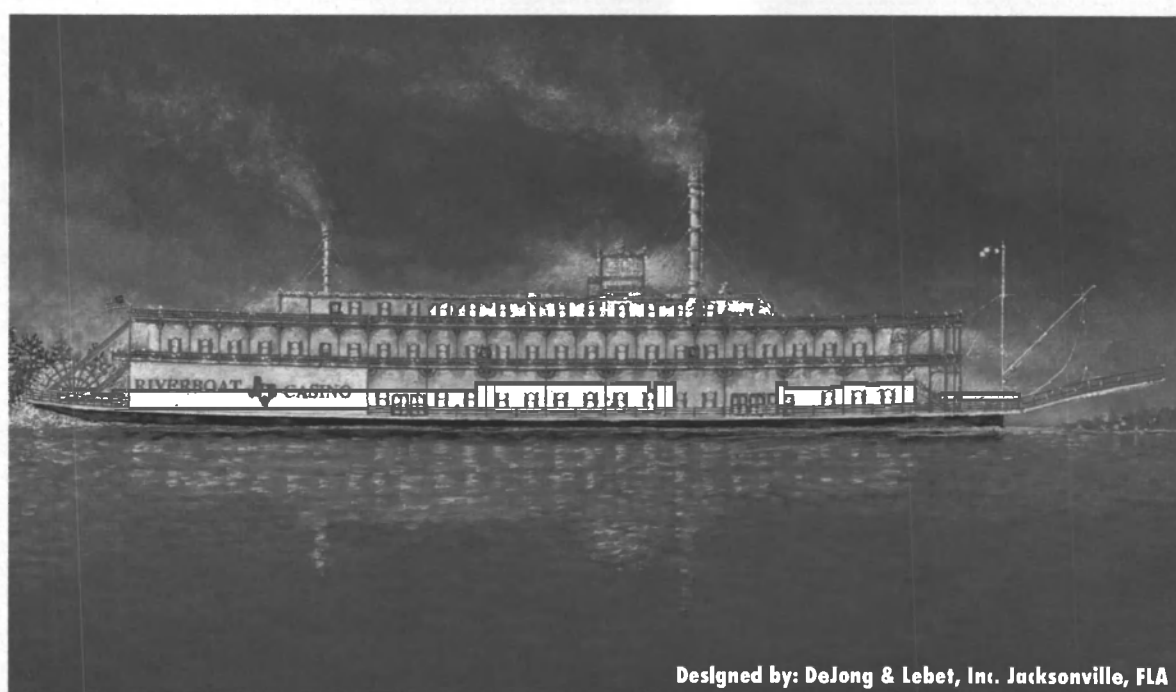
In Lake Charles, La., gaming revenues were \$8.5 million and passenger count was 95,546 in June, versus \$9.4 million and 95,574 in May of this year.

"Results in Metropolis continued to exceed our expectations, and both the Metropolis and Lake Charles riverboats posted record breaking numbers over the Fourth of July weekend," said **Peter Aranow**, CFO.

Close Vote Defeats Detroit Gaming Initiative

In a hotly contested vote, the New Detroit, Inc. Board of Trustees voted against supporting upcoming ballot proposals on gaming in Detroit. The board voted against both the Greektown Indian Gambling Initiative (proposal C) and the Riverboat Gambling Initiative (proposal B). The vote came during a regular meeting of the New Detroit board and followed extensive board discussion and presentations by Detroit City Councilman **Gil Hill** and businesswoman/educator **Nellie Varner** (both in favor of gaming proposals) and attorney **Patricia Arndt**, who spoke in opposition.

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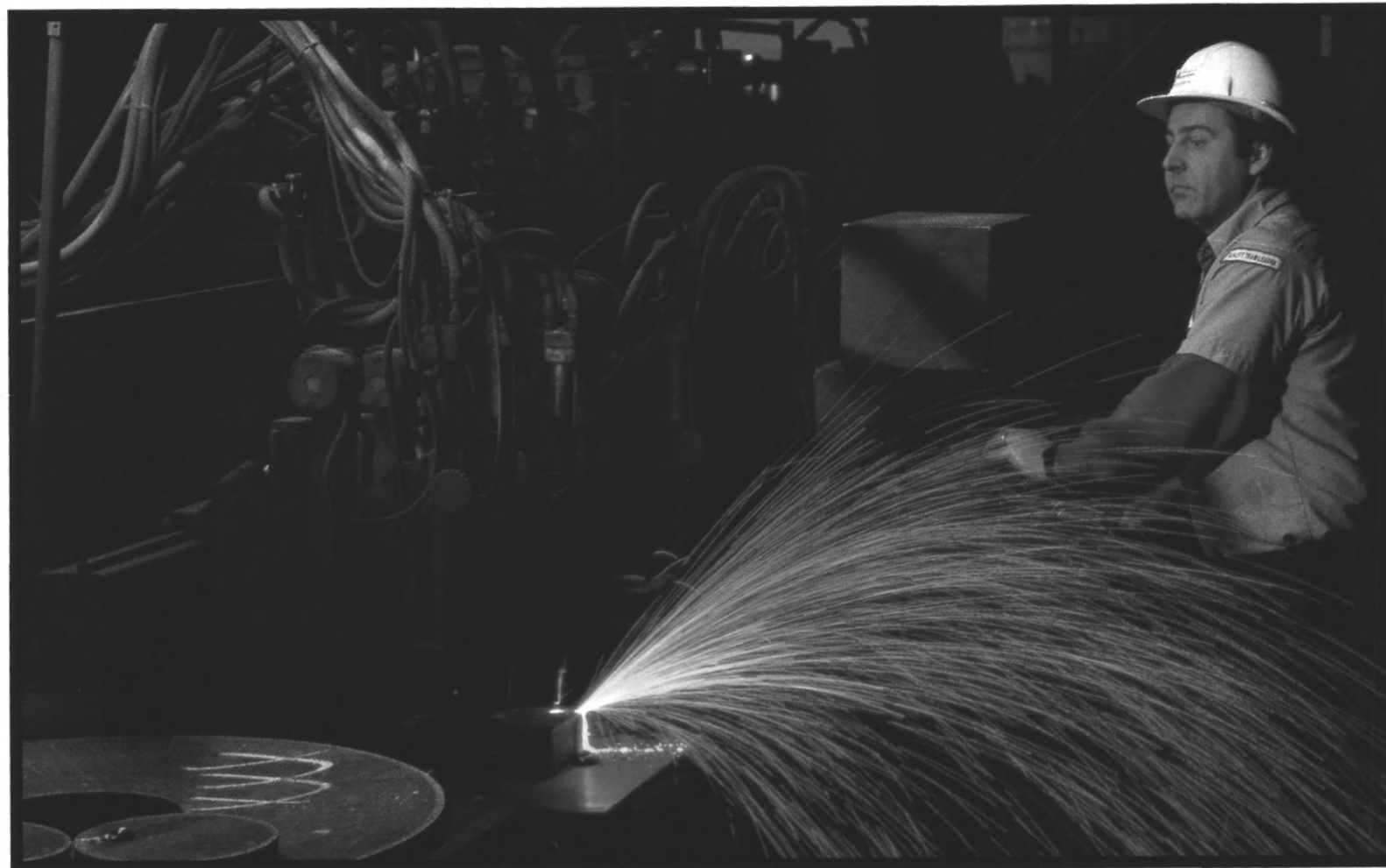
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Crown Closes Deal For Riverboat

Crown Casino Corp.'s wholly owned subsidiary St. Charles Gaming Co. closed the purchase and took possession of the completed, 292-ft. (89-m) riverboat casino *Crown Casino*, a vessel for operation at the company's Charles Parish, La. location.

The tri-deck boat underwent sea trials and received its Certificate of Inspection from the U.S. Coast Guard.

Equipped with approximately 777 slot machines and 44 table games, the vessel was to enter service late this summer.

Boomtown Receives Mississippi Gaming License

Boomtown Inc. received a gaming license from the Mississippi State Gaming Commission, on July 1 at a hearing held in Biloxi. The company opened the *Boomtown Biloxi*, as scheduled, in mid-July. The 30,000-sq.-ft. casino is situated on a 400-foot barge.

Argosy Receives Missouri Gaming License, Opens Riverside Casino

Argosy Gaming Co. and its wholly owned subsidiary, The Missouri Gaming Co., opened its Argosy Riverside Casino in Riverside, Mo.

Located approximately five miles from downtown Kansas City, the Argosy Riverside Casino will initially utilize the former *Par-A-Dice* vessel, which the company recently acquired. The 34,000-sq.-ft., three-level riverboat accommodates 1,200 passengers and has approximately 12,500-sq.-ft. of gaming space, including 52 blackjack tables, and 219 video poker and blackjack machines. Subject to the passage of a constitutional amendment allowing for games of chance, Argosy plans to build a land-based facility, spending more than \$50 million. The company anticipates delivery of the permanent *Argosy Riverside Casino* vessel later in the summer, and the new three-level, 57,000-sq.-ft. vessel will accommodate approximately 1,800 passengers and crew, featuring 30,000-sq.-ft. of gaming space. The new vessel will measure 240 ft. (73.2 m) long and 77 ft. (23.5 m) wide with a 13-ft. (4-m) ceiling.

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A NEW OUTLOOK:

As the riverboat casino market records tremendous gains in popularity across the U.S., the skylines of cities which have legalized this form of entertainment will continue to change.

August, 1994

GAMING SHOW PREVIEW

WORLD GAMING CONGRESS & EXPO

**September 26-28, 1994
Las Vegas, Nevada**

The World Gaming Congress & Expo will host more than 15,000 gaming executives and more than 500 leading gaming suppliers in approximately 250,000-sq.-ft. of exhibition space in Las Vegas next month. Geared to the gaming industry in general, the show will nonetheless prominently feature growth areas of the industry, including the riverboat gaming market.

In total there will be more than 100 seminars and workshops from which to choose, led by more than 200 leading industry executives and



The popularity of gaming has spread to the U.S. waterways in a big way, creating a "win win" business situation for boat builders and suppliers, as well as casino vessel owners, operators and the local communities they support.

encompassing all facets of the gaming market.

Some of the planned sessions include:

• **Riverboat Gaming: A Status Report.** This two-hour session will look at riverboats, a market segment which is currently plotting a profitable course in Illinois, along the Mississippi in New Orleans, and along the Gulf Coast of Missis-



sippi. The session will examine the current state of the riverboat gaming industry and look at pending legislation which could equal new riverboats.

• **Marketing The Riverboat Casino.** At the beginning of the riverboat gaming boom, scattered boats in Illinois and Iowa meant little marketing effort was required to attract large crowds. However, as competition heats up, particularly along the Mississippi and Gulf Coast, operators must work hard to distinguish their properties. Find out how in this session.

• **Creating An Image: The Exterior & Creating An Image: The Interior** (2 separate sessions). Whether its a small-stakes casino, an Indian casino, a mega-resort or a riverboat casino, operators make a statement about the customer they want when they choose a design. In these sessions, top architects and design firms will discuss ways to optimize the look of both interiors and exteriors.

• **Maintaining A Positive Public Image.** As gaming rapidly gains acceptance as a vessel for growth in economically strapped areas in North America, as is exemplified by the explosive growth of the riverboat gaming market, operators are under tremendous pressure to be good corporate citizens. This session offers a look at tried ways to influence public opinion.

• **Gaming, Tourism & Taxes.** In this session, distinguished operators and regulators will try to answer important questions such as: Does gaming really bring in new dollars in the form of tourists, or is it diverting money from the local economy?; and How much can governments take before an operation ceases to be viable?

• **Choosing A Casino Management Company.** Many boat owners may choose to have a professional casino management company run the facility, and this session will explore the methods to find a management company which fits an individual operation.

For more information contact the World Gaming Congress & Expo at tel: (212) 594-4120.

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Atlantic Marine Predicts Market Will Rise Again

Atlantic Marine, Inc., with shipbuilding and repair facilities in Jacksonville, Fla. and Mobile, Ala., has been quite active in the burgeoning gaming vessel market. "The demand for gaming boats, which began in 1991 when the state of

Iowa legalized riverboat gaming, shows no signs of abating," said Ed Doherty, president. "We've built nine casino vessels, eight in Jacksonville and one at our Alabama Shipyard subsidiary in Mobile." Atlantic Marine's experience in

building gaming vessels has been a departure from its traditional markets, which include ferries, tugs, fishing, research and other similar-type work boats. "The main difference between gaming vessels and work boats is the high style interior decor required in the casinos," said Mr. Doherty. The yard has developed the capability to work with interior designers in the use of U.S. Coast Guard-approved materials and components. Atlantic Marine's reputation for producing quality

casino interiors is recognized in the gaming industry. Mr. Doherty believes Atlantic Marine's gaming vessel experience positions it for future construction of gaming vessels that would operate at locations outside of the U.S., and also for the construction of cruise ships.

Atlantic Marine and Alabama Shipyard are both part of Atlantic Marine Holding Co., based in Jacksonville.

For information on Atlantic Marine, Circle 60 on Reader Service Card

Cummins Mid-South Provides The Power

Cummins Mid-South, Inc. is the Cummins Diesel engine and Onan generator distributor for Louisiana, Arkansas, Mississippi and West Tennessee. Headquartered in Memphis, with its marine division in New Orleans, Cummins Mid-South was reportedly the number one marine distributor for Cummins Engine Co. in N. America. A major

contributor of the upturn in marine sales over the past few years has been the riverboat casino market, and Cummins Mid-South has sold and delivered packages to: *Players Riverboat Casino II, Columbia Sussex, Queen of New Orleans and Queen of Kansas City*, to name a few. Cummins Engine Co. is a \$4 billion company and is reportedly the world's largest distributor of diesel engines above 200 hp. For information on Cummins Mid-South, Circle 70 on Reader Service Card

U.S. Games' Technology Helps Attract Players

U.S. Games, Inc. is an Atlanta-based designer and manufacturer of video games and systems for the coin-operated amusements, VLT and casino industry. U.S. Games has distributed more than 40,000 games in the U.S., as well as throughout Europe, Canada, the Caribbean and South America.

According to the company, customer response to its products has increased sales at a 30 percent rate for the last five years.

U.S. Games provides Pot-O-Gold gaming machines. Some of the features of Pot-O-Gold machines are touch screen technology, multiple games, one-line linked intermachine communications, integrated progressive central site data collection, and customization capabilities. The core coin-operated amusement-only product for U.S. Games is Countertop Champion.

Initially manufactured as Little Casino, and then as Bar Brain Bar Top, today's models offer up to 50 operator and player-selectable amusement games in a countertop cabinet particularly suited for bar top placement. U.S. Games' goals are to: design and manufacture

video gaming equipment and proprietary software for computerized wide-area game monitoring systems; offer a broad line of gaming equipment; offer high player appeal through innovative engineering; and invest in research and development to maintain innovative products.

For more information on U.S. Games, Circle 63 on Reader Service Card

Bill Brown Enterprises Offers HVAC, Plumbing Systems

Bill Brown has been in the HVAC and plumbing business since 1978, and over the last five years has found a lucrative niche in marine application, including casino vessels.

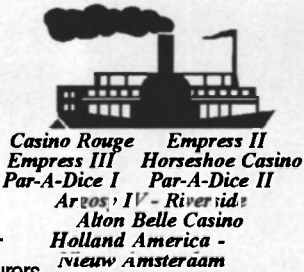
As the conditions aboard a riverboat casino vessel are considerably different than other commercial HVAC installations, the company pins its success on properly fabricating and installing the air conditioning, heating, ventilation and plumbing in these unique environments. Services also include IAQ control analysis and testing, as well as duct cleaning and sprinkler systems.

For more information on Bill Brown, Circle 64 on Reader Service Card

LIGHTING SUPPLY... IS THE SUREST BET IN THE LIGHTING BUSINESS!

Lighting Supply Inc. is the leader in lighting innovation and distribution for the architectural and marine industry. We specialize in gaming vessels, dinner boats, cruise ships and ferries.

Lighting Supply provides the latest lighting technology in the ever changing industry. We have over 30 years of buying influence with hundreds of manufacturers across the country so we can complete the project on time, within budget, satisfying and exceeding Coast Guard requirements.



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CAPABILITIES

- **Lighting Supply Inc.** can satisfy lighting requirements from low voltage accent lighting to the latest halogen sconce products.
- **Lighting Supply Inc.** can design and manufacture to the standards of UL 595 marine product listings. All products will be manufactured to acceptable Coast Guard standards for safety.
- **Lighting Supply Inc.** works with leading design firms in the architectural and marine industry to provide integrated lighting design assistance and the coordination of custom manufacturing design.
- **Lighting Supply Inc.** has direct involvement with any shipyard requesting assistance with technical support. We'll also provide installation and wiring data and shipyard site visitation for assistance.
- **Lighting Supply Inc.** offers a partnership to vessel owners, operators, shipyards not only during design and construction, but also with maintenance supplies.

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Circle 253 on Reader Service Card



Conversion of the Cotton Club Casino Vessel Reputation

Bender has been at the forefront of the riverboat gaming boom. The company, which is celebrating its 75th anniversary, started in the market with the conversion of the 156-ft (47.5 m) *Alton Belle Casino*, the first riverboat casino to operate in Illinois.

By 1993, Bender had become one of the nation's top builders of riverboat casinos, and to date has converted or built many projects for facilities in Illinois, Mississippi, Louisiana and Missouri. Partly in response to the fast growing market, Bender expanded its capabilities by opening a shipyard in Braithwaite, La. in early 1993.

Less than eight months after opening its Louisiana yard, Bender delivered the first riverboat casino to operate in Louisiana, *The Star*

Casino. Conversions performed by Bender include the *Cotton Club*, converted from an automobile ferry; and Harrah's *Vicksburg*, a dockside casino converted from a deck barge.

Bender is currently building six casino riverboats, for use in Louisiana, Illinois and Missouri. The yard offers turnkey entry into the river casino business, and offers an experienced staff who are knowledgeable in gaming regulation to help guide customers through the red tape.

From initial design and concept, Bender can assist with site development, as well as looking for financing, interior design, food and beverage planning and land-based support facilities.

For more information on Bender, Circle 65 on Reader Service Card

Great Lakes Location Leaves PBI Well-Positioned

Peterson Builders, Inc. (PBI) is a full service shipyard located on Lake Michigan, in Sturgeon Bay, Wis. PBI is a privately owned company, operating in its present location since 1933, designing, building, converting and repairing vessels for both the commercial and military markets. PBI is well-positioned to provide Great Lakes casino boats for operation in the Lake Michigan shore of Indiana and other potential Great Lakes and coastal sites. As the only full-service new construction shipyard operating on Lake Michigan, PBI is suited to provide a quality casino vessel.

Having been heavily involved in the military shipbuilding projects, PBI is now balancing a military/commercial mix with a sizable expansion of its commercial capabilities. As a full service yard, PBI has experience in the use of many different materials for hull construction and outfitting. PBI has immediate space available to support a quick construction or conversion period. Additionally, PBI has developed a wide variety of Great Lakes and coastal casino boat designs, both new construction and conversion of existing vessels, with gaming areas in the 30,000 to 60,000-sq.-ft. range.

For information on Peterson Builders, Circle 68 on Reader Service Card

SMI Builds For Harrah's, Lady Luck And Many More

Service Marine Industries (SMI) established in 1967, today is comprised of three shipyards located in Morgan City, La. SMI has grown to more than 700 employees with primary emphasis in ship repair and overhaul, and the construction of passenger gaming vessels, passenger dinner/cruise vessels and off-shore support vessels.

SMI has become one of the largest producers of both dockside and self-propelled casino riverboats in the U.S. Through July, 1994, SMI has either delivered or has under construction a total of 15 dockside and self-propelled riverboat casinos. The list of customers is long and distinguished, and includes: Harrah's; Lady Luck; Boyd Group; and more. Several of these customers have ordered multiple vessels from SMI with either dockside or self-propelled vessels located in Mississippi, Louisiana, Missouri and Illinois. At the World Gaming Congress & Exhibition, SMI will focus on the extent of its gaming experience, and will display photos of recently developed vessel, along with additional information concerning SMI's new designs for both the Indiana gaming market and dockside markets in Texas and other areas of the U.S. In addition, Service Marine will focus on "on-site" construction for land locked areas where dockside casino is permitted.

For more information on SMI, Circle 69 on Reader Service Card

Shelby Williams Puts World Class Design In Seating

The traditional design blackjack stool from Shelby Williams is unique. Design features include hand-carved, fluted leg detail and solid brass footrests on all four sides. The flame retardant Pyroguard II foam padded spring seat is designed to ensure maximum longterm sitting

comfort for blackjack players. The hardwood frame is available in a large selection of standard and premium Shelby Williams finishes, and a wide selection of in-stock fabrics.

In addition to blackjack stools, Shelby Williams offers a complete selection of chairs for every gaming

area of the casino including baccarat, keno, poker, roulette and slot machine stools equipped with permanent mount or with a special, patented, quick-release base. The outside back of most casino chairs are available in a variety of abstract or custom designs.

For information on Shelby Williams, Circle 72 on Reader Service Card

International Compactor Incorporated Proudly Introduces Two Great New Products! Flash - Call us about our new Glass Disintegrator!



Volume Reductions up to 50:1 with Densification to 25lbs / ft.

Great For Recycling & Storage Reduction!

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Economical and environmentally friendly. Densification of plastics, aluminum & metal cans.

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Available in Four Models — 10P, 20P, 40P & 80P

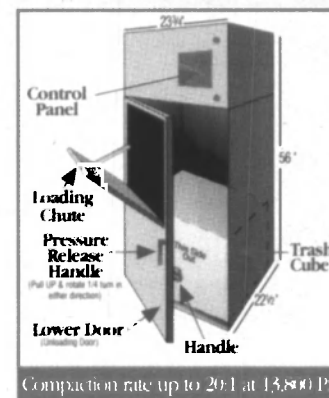


Our Revolutionary New Mini Trash Compactor!

The All-New Model MP-4S Mini Compactor! Small & compact with the crushing power of our larger units. Crushes regular trash, 5 gallon paint cans, #10 cans and just about any type plastic container.

FEATURES-

- Space required, only 4 cubic feet!
- Unit Weight only 475 lbs.
- 3.8 cubic foot capacity, 700 lbs. per hour
- 25 -35 sec. cycle time, 2 stage cylinder
- Chute Door Opening, 19 3/8" X 16 1/2"
- Chamber Size, 20 1/4" X 19 1/4" X 35 3/8"
- Solid state electronics using only UL listed components
- Built-in motor protection with automatic shut-off after 60 seconds
- Stainless steel construction
- Larger units available



ACCESSORIES: Container - Solid or Two-Piece Cubes • Bags - 3 Mil Plastic Bags • Strapping - For Bailing Cardboard • Bag Holder - Top or side mounted for easy bag access • Oil Sight Bowl - Shows Hydraulic Oil Level When Plate is in the Up Position • Deck Legs - For marine use instead of casters • TrashLift - Winch-Type Hand truck for unloading container • Ejector Strap - Use to eject container or bale from unit • Odor Control - Controls odor inside unit.

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Circle 305 on Reader Service Card

Gasser Provides Seating Solutions

Gasser Chair Co. has more than 47 years of experience in manufacturing commercial contract seating. Today, Gasser Chair employs approximately 185 people and is still family owned. Gasser Chair developed specialty seating for the gaming industry starting about 25 years ago. Applied to the chair's backrest

is Gasser Chair's patented Protected Edge, a feature designed by the company to protect the upholstery at its most vulnerable points. The company's complete range of furniture includes armchairs, sidechairs, barstools, settees and stackable chairs, offered in several hundred styles, and also with the capability to be custom designed to client specs. Quick-Release is a patented gaming seating system by Gasser Chair that is now in use in casinos around

the world. The growing popularity of the system is due, in part, to the company's ability to manufacture custom seat and back styles, as well as custom-designed bases to accommodate a particular requirement. Its greatest feature, perhaps, is its ability to be easily removed to allow access to gaming machines for repositioning, housekeeping, coin-drop pickup and maintenance.

For more information on Gasser Circle 61 on Reader Service Card

Johnston Bros. Helps "Clear The Air"

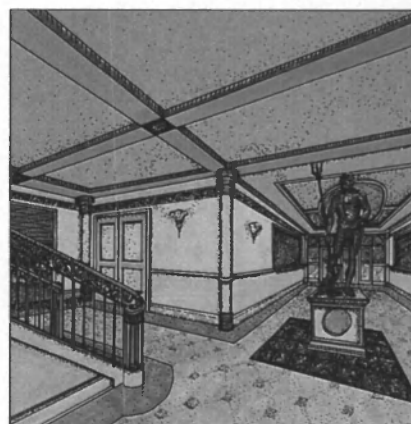
Poor IAQ affects patrons and employees alike. In 1993, the EPA estimated that employees alone were suffering \$60 billion annually in lost productivity related to illness. To date, poor IAQ has cost American business an estimated \$15 billion in health-related care and employee sick days. Many factors influence IAQ. Air flow, odors, smoke, heat, cooling and personnel loads and humidity are among the many considerations. The HVAC system supplied on the casino riverboat *Shreveport Rose* is the culmination of many hours of simulations and analyses using various real world scenarios. Following are some of the areas considered in the HVAC system design: the interjection of outdoor air for ventilation and smoke removal; the use of humidity controllers with re-heat; maintaining a positive static pressure within the vessel by the use of modulating outside air dampers; centrally located HVAC control panel to monitor and regulate temperatures and humidity of separate climatic zones on each deck level; and control and regulation of the chill water flow to maximize efficiency of each air handler unit.

For more information on Johnston Bros. Circle 62 on Reader Service Card

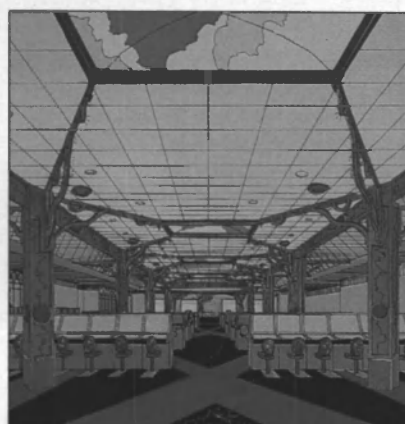
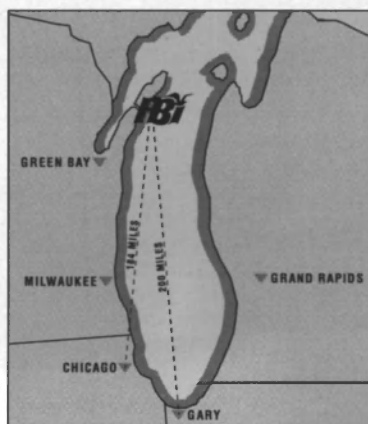


50,000 square feet of gaming area available.

To Get Your Casino Boat To Indiana, We'll Need A Little Latitude. Very Little.



Interior design by BAUER INTERIORS, INC.



Interior design by BAUER INTERIORS, INC.

In navigational terms, delivery of your Great Lakes casino boat is just a few hours away. Peterson Builders is located right on Lake Michigan and has the physical capacity to begin work on your vessel immediately. Plus we have the design and construction experience necessary for the unique conditions of the Great Lakes.

To begin building your Lake Michigan casino business, call today!



Peterson Builders, Inc.

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World Gaming Congress & Exposition

Gage Corp. Offers Unique Ceiling Solutions For Riverboat Casinos

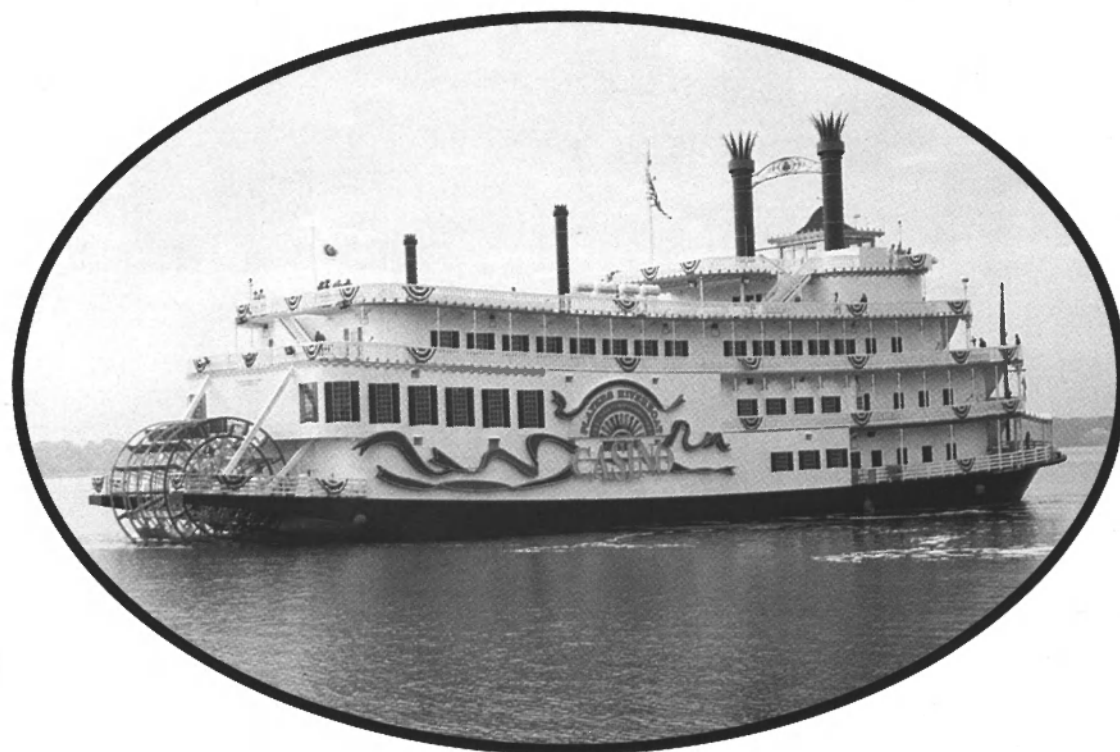
The Gage Corp. Intl. of Sparta, Wis. is recognized as a creative force in decorative aluminum ceilings. Calling the company's ceilings a merger of art and technology, John Lillejord, general manager, explains: "Gage is working with aluminum ... adding highly selective measures of proprietary burnishing, printing, coating and forming techniques to create unique interior surfaces." Gage offers a number of standard designs from which to choose, including Italian marble, granites, woods, and textured and metallic patterns; but also develops custom designs on spec, and has found thematic ceilings a hot trend in the gaming industry. Gage has recently completed a number of custom developments with many of the industry's noted design firms, including:

Vessel	Design Firm
Boomtown Belle	Directions in Design
Treasure Chest	Paul Steelman Ltd.
Lady Luck Rhythm & Blues	Paul Steelman Ltd.
Isle of Capri	Kuhlman Design
Argosy III	Bauer Interiors
Argosy IV	Interior Design International
Crown Casino	Kehl Riverboats
Monarch Casino	Peter Wilday Architects

Gage combines the aesthetic qualities of its products with functional aspects, such as lightweight (1/2-lb. per sq. ft.), fire and corrosion resistance.

For more information on Gage Circle 59 on Reader Service Card

WELCOME TO THE WHEEL OF POWER



Delivered by Leevac Shipyard, Inc. - 2 Months early.

"We Make It Happen"

Cummins Mid-South Inc. is proud to have supplied the engine package to Leevac Shipyards, Inc. for the Players Riverboat Casino II, successfully operating in Lake Charles, Louisiana.

Congratulations to Leevac Shipyard Inc. and to Naval Architects, Rodney Lay & Associates Inc. for a job well done, and a professional, on-time delivery.

This is one of 14 Riverboat Gaming Vessels that have joined the Cummins Marine Wheel of Power as well as hundreds of other riverboats in the past.

The Engine Package Consist of:

Propulsion:	2-Cummins KT-38M rated 800 HP with Twin Disc MG-530 Gear
Shipservice Generator:	2-Cummins/Onan Model KTA38G1 rated 680 KW @ 1800 RPM
Standby Generator:	Cummins/Onan Model 6CTA8.3G rated 175 KW @ 1800 RPM
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Join the **Wheel of Power** and discuss your casino requirements with
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Al Heisler
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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 has delivered boat after boat — on time and on budget. In fact, 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.

With the addition of its new yard in Braithwaite, Louisiana, Bender is now even more competitive on delivery and pricing. Bender delivered the *Star Casino*, Louisiana's first riverboat casino, less than eight months after its new facility opened, and it continues to race new casino boats into the market with record speed.



BENDER
SHIPBUILDING & REPAIR CO., INC.

265 South Water Street • Mobile, AL 36603 • P.O. Box 42 • Mobile, AL 36601 • Phone: (205) 431-8000 • Fax: (205) 432-2260

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

With this impressive track record, Bender offers you turn-key entry into the river casino business. Our experienced staff is knowledgeable in gaming regulations in most states and can serve as your guide through the technical red tape. From initial design and concept, we can assist you with site development, looking for outside financing, interior design, food and beverage planning, land-based support facilities — everything you'll need to get you to opening day.

Every Bender vessel is backed by a 75-year history of quality and reliability. In 1994, Bender is celebrating its 75th year as one of America's leading shipbuilding and repair companies.

Bender's full-service facilities in Mobile, Alabama and Braithwaite, Louisiana provide for maximum flexibility in delivery.

When all the cards are on the table, the winning choice is BENDER!

See Us At Booth #2436
Circle 212 on Reader Service Card

COMSAT Announces Global Service And Lower Prices For Inmarsat M, B

COMSAT Mobile Communications opened its Eurasia land earth station, marking the introduction of global service and lower prices for its Inmarsat M and Inmarsat B services. With the operation service in the Indian Ocean Region, COMSAT is reportedly the only company in the world to offer digital mobile satellite services worldwide.

COMSAT's new Eurasia land earth station, located in Kuantan, Malaysia, joins COMSAT's stations in Santa Paula, Calif. and Southbury, Conn.

The Eurasia station is linked by dedicated leased circuits for COMSAT's Santa Paula station for operator assistance. It is equipped to provide all of COMSAT's services, including 24-hour operator assistance, foreign language assistance in more than 140 languages, specialized telephone services, FaxMail service and other news and information services.

For more information on COMSAT
Circle 123 on Reader Service Card

Autronica Marine Named J.S. Agent For QMI

Autronica Marine USA of Northvale, N.J. was named exclusive U.S. sales and service agent for Quality Monitoring Instruments Ltd. (QMI), a manufacturer of oil mist detection systems.

The QMI oil mist detection system monitors up to 12 detection points simultaneously, with individual detector heads (sensors) which are connected to the monitor cables instead of gas-filled pipes. Because of this feature, the monitor can be mounted in the control room or on the bridge. Several engines can be monitored with a single QMI oil mist detection system. The QMI oil mist detection system also reportedly has fast reaction time, no false alarms, and long pipes and valves — all sensors are wired to the monitor.

For more information
Circle 125 on Reader Service Card

Drewry Offers Report On Trends In Seaborne Trade Forest Products

Drewry Shipping Consultants made a new report available titled "Forest Products: Trends in Seaborne Trade, Transport and Pricing." The report addresses the prospect of increase in trade in the forest products industry and its implications for the shipping and logistics chain. Issues such as speed of cargo handling, cargo damage minimization/nation and quality of shipping service will become even more

prominent amid shipper demands that the cost of freight is also kept to a low level. The seaborne transport of forest products has become an increasingly specialized operation. With freight rates under almost constant pressure from shippers, operations have become more innovative and sophisticated, with a special focus on cargo handling. Much debate continues on the merits of open hatch bulk carriers, RoRo cargoships, and the Sto-Ro, Pallet or cassette carry-

ing options, and the use of containers. To obtain a copy of the report, contact **Malcolm Jupe**, Drewry Shipping Consultants, 11 Heron Quay, London E14 4JF, England, tel: +44 71 538 0191; fax: +44 71 987 9396.

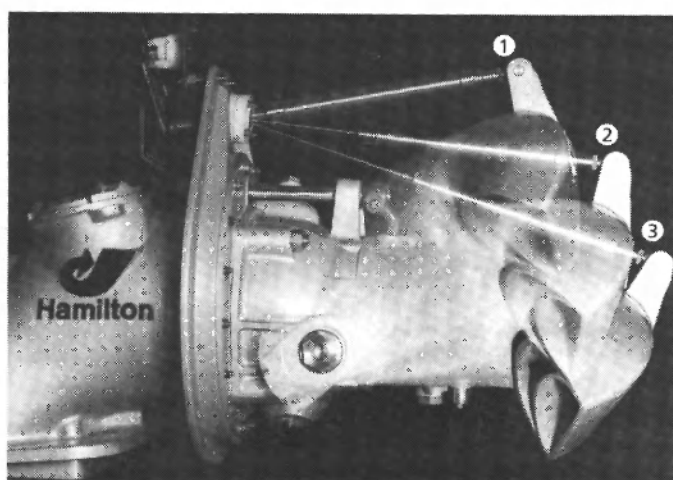
Japan's Ship Orders Up In June

New orders in ship construction

in Japan totaled 663,500 gt (29 vessels) in June 1994, a figure which is 0.3 percent higher than May's figure of 661,600 gt.

June's figure is 173 percent higher than the same month in 1993.

The types of ships ordered for the month of June include: nine bulk carriers; eight containers; one oil tanker; two LPG tankers; three cargo carriers; two woodchip carriers; one barge; one chemical ship; and two reefers.



- ① AHEAD.
- ② ZERO-SPEED. Full steering effect in this mode.
- ③ ASTERN.

We've just taken another step ahead by going astern.

When you're firmly established as a world leader, it can be easy to become complacent. But for HamiltonJet, quite the reverse is true... literally.

As the first to introduce the split duct deflector for superior astern thrust and vessel manoeuvrability, HamiltonJet has just advanced this concept another step.

The result is the patented HSRX servo-hydraulic follow-up control system. This major advance in applied hydraulics features a unique rotary valve integral with the deflector actuating cylinder.

The new HSRX gives full follow-up movement with enhanced reaction time and precision at the zero-speed position... simply. And all with inboard hydraulics for long life and easy maintenance.

HamiltonJet.
Definitely not astern in going ahead.



Highly Specified. Hamilton Jet

Manufactured in New Zealand by CWF Hamilton and Co. Ltd, P.O. Box 709, Christchurch, New Zealand, Ph: 64-3-348-4179, Fax: 64-3-348-6969.
Worldwide Distributors — Italy, Spain, UK, USA, Canada, India, France, Germany, Holland, Australia, Finland, Hong Kong,
Indonesia, Korea, Norway, Greece, Singapore, Sweden, Taiwan, Japan, Malaysia, Thailand, Denmark, Philippines, Panama, South Africa. CWF 0053

Circle 236 on Reader Service Card

BY THE NUMBERS

RECENT SHIP SALES

This report, compiled by Shipping Intelligence, Inc. — a New York maritime consulting firm — tracks sale prices of secondhand bulk carriers and tankers.

Date	Vessel Name	Type	DWT	Year Built	Sale \$ (millions)
7/4	Bor	Bulker	12,046	1975	\$1.35
7/4	Diana Island	Bulker	16,574	1980	\$4
6/27	Princess Castle	Bulker	20,800	1984	\$8.6
7/4	Arishima	Bulker	21,289	1982	\$7.8
7/4	Starlight Success	Bulker	21,362	1984	\$8.5
7/11	Marbonita	Bulker	21,764	1982	\$9
6/27	Rema	Bulker	22,069	1974	\$2.95
6/27	Ocean Lucky	Bulker	23,979	1979	\$6.2
6/27	Grand Unity	Bulker	23,987	1981	\$7.4
7/4	Clare	Bulker	24,492	1983	\$7.5
7/11	J Emma	Bulker	26,598	1985	\$13.2
7/11	Sirinada	Bulker	26,641	1974	\$3.6
7/11	Green Laker	Bulker	28,358	1987	\$13.2
7/11	Ga Chau	Bulker	29,552	1977	\$5.8
7/11	Sanko Heart	Bulker	33,024	1984	\$12.9
7/4	City of Port Louis	Bulker	36,850	1984	\$13
6/27	Lombard	Bulker	38,930	1977	\$7.25
7/4	Rich Way	Bulker	39,000	1990	\$20.4
6/27	Cavalier	Bulker	43,385	1983	\$13.6
6/27	Almerinda	Bulker	43,426	1982	\$8.25
7/4	Costas Konialidis	Bulker	58,370	1981	\$11
6/27	Tirol	Bulker	65,112	1976	\$6.4
7/4	Capricornus	Bulker	61,779	1978	\$4.9
7/11	Paros	Tanker	30,328	1972	\$2.5
7/11	Norsk Barde	Tanker	31,450	1976	\$5.6
8/27	Torm Herdis	Tanker	39,977	1988	\$21.5
6/27	Eirheim	Tanker	40,157	1985	\$17.8
7/4	Puertollano	Tanker	152,277	1978	\$5.9
7/11	Bloom Lake	Tanker	281,794	1991	\$51.5

For further information, contact: Shipping Intelligence, Inc., 25 West 43rd St., New York, N.Y. 10036, tel: (212) 997-0966.

Tanker & Combined Tonnage Sold For Scrapping

	1992		1993		to date 1994	
	No.	M.Dwt	No.	M.Dwt	No.	M.Dwt
10-200,000	91	5.41	97	4.86	33	2.19
200,000+	25	6.15	27	6.53	18	4.51
Comb. Car.	13	1.58	11	1.31	14	1.53
Totals	129	13.14	135	12.7	65	8.23

(Source: INTERTANKO, Fearnleys A/S, Oslo)

NEW ORDERS

Shipyard	Ship type	Main engines	DWT	Owner	Delivery
Imabari Shipbuilding	Container Carrier #513	Hitachi B&W 7550MC	18,500	Ching And Son Maritime, S.A., Taiwan	June 1995
China Shipbuilding	Container Carrier #595	Hitachi B&W 7550MC	18,500	Ching And Son Maritime, S.A., Taiwan	May 1995
China Shipbuilding	Container Carrier #596	Hitachi B&W 7550MC	18,500	Cheng Lie Navigation Co. Ltd., Taiwan	July 1995
China Shipbuilding	Container Carrier #597	Hitachi B&W 7550MC	18,500	Ching And Son Maritime, S.A., Taiwan	Sept. 1995
China Shipbuilding	Container Carrier #598	Hitachi B&W 7550MC	18,500	Ching And Son Maritime, S.A., Taiwan	Nov. 1995
Hindustan Shipyard Ltd. (India)	Bulk Carrier	9,925 hp @ 106 rpm	42,750	M/s. Mideast (India) Ltd.	N/A
Hindustan Shipyard Ltd. (India)	Passenger/cargo ship (vessel designed by Szezezin Shipyard, Poland)	(2) 6L 35MC	N/A	M/s. A&N Administration	N/A

(Source: Maritime Reporter & Engineering News)

Canadian Pacific Acquires Cast

Canadian Pacific Ltd. announced that it had reached agreement in principle to acquire the container shipping business of The Cast Group Ltd. as a going concern. Completion of the transaction is subject to a due diligence review and the consent of the relevant regulatory authorities.

Closing is expected to occur on or before October 31.

The acquisition will evidently strengthen Canadian Pacific's position in the North Atlantic container trade, where it is already a significant force through its ownership of Canada Maritime.

Canada Maritime Limited is a Bermudian-registered shipping company, 100 percent owned by Canadian Pacific Ltd., a Canadian transportation, energy, real estate and industrial group.

The following charts indicate the company's current fleet, as well as that of the fleet of Cast.

Ships owned or operated by Canada Maritime

Ship	TEU	Built
Canmar Europe	1,800	1970
Canmar Ambassador	1,800	1971
OOCL Bravery	1,800	1970
Canmar Triumph	1,800	1979
Canmar Victory	1,000	1979
OOCL Assurance	1,000	1979
Canmar Spirit	800	1971
Canmar Venture	800	1971
Canmar Valiant	800	1971
Canmar Glory	1,000	1979
Canmar Conquest	1,000	1979
Buxmerchant **	1,300	1982
Borbarossa **	1,050	1982
Newbuilding I	2,200	1995
Newbuilding II	2,200	1995

**temporary charters to be replaced shortly with 1,000 TEU ships.

Ships owned or operated by Cast

Ship	TEU	Built
Cast Beaver	1,500	1984
Cast Husky	1,500	1982
Cast Muskox	1,500	1982
Cast Otter	1,500	1982
Cast Polarbear	1,500	1982
Cast Elk *	1,900	1987
Cast Lynx *	1,900	1988
Cast Bear *	1,900	1988
Cast Wolf *	1,900	1989

* These ships will replace the conbulkers in 1994.

Carnival To Build First 100,000-Ton Ship

Carnival Cruise Lines announced that it will build the world's first 100,000-gross-registered-ton ship, to be built by Italy's Fincantieri Shipyard. The not-yet-named ship is scheduled for delivery in the fall of 1996.

Originally announced as a 95,000-grt vessel last year, CCL's spokes-

man Bob Dickinson said the estimate size was based on the general arrangement plan and other preliminary engineering documents. Then, we've fleshed out the spec the ship in much greater detail based on the information currently available, the final tonnage is expected to exceed the 100,000 mark.

Coastal Triples Barge, Doubles Towboat Fleet

Coastal Towing, Inc., Houston, has acquired a fleet of towboats and double-skinned inland tank barges from Ingram Ohio Barge Company, a subsidiary of Ingram Industries Inc., of Nashville.

The transaction nearly triples Coastal's fleet of barges and doubles its fleet of towing vessels. The en-

larged company becomes one of nation's largest tank barge companies with 130 barges and 34 towboats. Coastal Towing creates nearly 250 new Texas jobs in the transition and grows from 250 employees to 500.

Coastal Towing is a privately held company that owns and operates towing vessels and tank barges transport petroleum products at the Gulf Coast on the U.S. river system.

Weeks Jamestown Updates Salvage And Firefighting Techniques

Weeks Jamestown Inc. (WJI) completed a five-day training course in Jamestown to additionally qualify its West Coast Salvage Engineers in HECSALV, a Salvage Engineering PC-based computer program. HECSALV gives real-time answers to salvage problems and is accepted as the salvage program adopted to meet all requirements of the U.S. Coast Guard regulation which tightens up OPA 90 requirements for tank ships and offshore tank barges.

WJI sent a number of East and West Coast Salvage Engineers to attend the course.

For more information
Circle 117 on Reader Service Card

Sperry Equipment Chosen For New Marine Simulator Facility

MarineSafety Rotterdam b.v., Europe's newest marine simulation research and training center, has selected Sperry Marine equipment for the new facility.

Five Sperry Marine Voyage Management System (VMS) integrated bridges, complete with SeaNET local area networks and RASCAR radar/ARPA's, plus other equipment, were used to outfit the new research and training center in the former Holland-America Line Terminal at the Wilhelminapier in the center of Rotterdam. The 3,400-sq.-m. facility consists of five bridge simulators including a full mission 360-degree bridge with a motion base to simulate sea conditions, two 225-degree bridges and two radar/ARPA bridge simulators. One of the radar/ARPA simulators is configured as the bridge of a self-propelled inland barge and is equipped with a Sperry Marine River Radar. The facility also contains a multi-station vessel traffic system simulator.

For more information on Sperry Marine
Circle 122 on Reader Service Card

Electronics Achieves 9001 Certification

KB Electronics Ltd. of Bedford, England, has achieved registration of its Quality Program to the ISO 9001. The registration was conducted by Quality Management Institute.

For more information on KB Electronics
Circle 118 on Reader Service Card

Bio Kote Wins DNV Approval

Esso Marine Products Inc., Lafayette, La., announced that Bio Kote, its semi-annual ballast and void coating for marine vessels, has been

awarded "Type Approval" by Det Norske Veritas (DNV). In earning this recognition, it was necessary for Bio Kote to meet in-service requirements and quality control criteria. This recognition follows the successful completion of the Marintek study where Bio Kote reportedly tested top-in-class for non-paint protective coating systems.

For more information on Esgard, Inc.
Circle 120 on Reader Service Card

Tritec Appointed As New Autoship Dealer

Autoship Systems Corp. appointed Tritec Marine Consultants Ltd., Glasgow, Scotland, as the exclusive authorized dealer of its integrated suite of Windows programs for the U.K., Ireland and Iceland.

Tritec provides a comprehensive consultancy service to ship owners,

offshore operators, marine contractors, government departments and defense ministries.

Bill McKinnon, managing director at Tritec, said, "We are already working directly with a client to implement Autoload as their standard tool for monitoring stability, loading and strength to their fleet of tankers."

For more information on Tritec
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AWO

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22

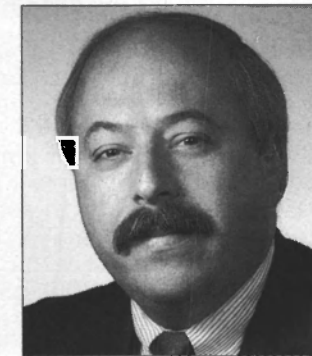
AWO Faces Another Round Of Challenges

by
Thomas A. Allegretti,
President, AWO

September signals the start of a period of intense Congressional activity as Congress returns to work after its Labor Day recess, and begins to work toward adjournment and the November elections. This also means the start of a new round of issue challenges for AWO. Those issues and more will be addressed among AWO's members during its Fall Board of Directors meeting at the Fairmont Hotel in San Francisco, September 8-9, where the Association will also celebrate the second of three events this year to commemorate its 50th anniversary.

Towing Safety

The safety debate taking place in the Congress, the Administration, and the industry, which began with the Amtrak derailment last September, continues to dominate both the regulatory and legislative agendas, and remains the central focus of AWO's work. At press time, two hard safety bills — HR 3282, the Towing Vessel Navigational Safety Act of 1993, introduced by Rep. Billy Tauzin (D-La.) last October, and HR 4058, the Towing Safety Act, introduced by Rep. Gerry Studds (D-Mass.) last March — s



AWO FALL MEETING CALENDAR OF EVENTS

Thursday, September 8

8 a.m. - 10 a.m.: AWO Common Issues Council
10 a.m. - 11 a.m.: AWO Public Affairs Committee Meeting
11 a.m. - 1 p.m.: AWO Coastal Sector Committee Meeting
1 p.m. - 3 p.m.: AWO Inland Dry Sector Committee Meeting
3 p.m. - 5 p.m.: AWO Inland Liquid Sector Committee Meeting

Friday, September 9

8:30 a.m. - 12 p.m.: AWO Board of Directors Meeting

At this meeting, AWO will celebrate the second event of its 50th Anniversary Celebration, with a private evening aboard a vessel cruising San Francisco Bay. The celebration began in April in St. Louis, where AWO celebrated its 50th anniversary in the presence of the President and Vice President. The September cruise will celebrate the 50th anniversary of AWO's presence in the industry, and a headliner luncheon in Washington, D.C. will recognize its presence in our nation's capital.

Maritime Reporter/Engineer

remained in legislative limbo. HR 3282 calls for towing vessels to carry navigational charts and publications, compasses or swing meters, fathometers, and radar, and directs that vessel personnel be proficient in their use. AWO's board of directors voted overwhelmingly to support HR 3282 and AWO, along with Secretary of Transportation **Federico Pena**, has urged its enactment before the one-year anniversary of the Amtrak accident on September 22. The bill was passed unanimously by voice vote in the House Coast Guard and Navigation Subcommittee in April.

HR 4058, in addition to incorporating the increased navigational equipment requirements of HR 3282, calls for vessel inspection, U.S. Coast Guard (USCG)-prescribed manning scales, and deep-sea crewing requirements. HR 4058 is without consensus, as its approach woefully imposes on the towing industry a regulatory regime which was never developed with the towing industry in mind. Furthermore, the bill misses the mark on what statistics point to as the real cause of vessel accidents — human error. The next bill faces mark-up in the full House Merchant Marine and Fisheries Committee, although at press time, no time-frame had yet been established.

The post-Amtrak safety debate will ultimately result in safer waterways. It has also had the very beneficial effect of propelling forward a cooperative and effective partnership between government — the Congress, Department of Transportation, USCG, and the National Transportation Safety Board — and the barge and towing industry. The Towing Safety Advisory Committee, a Congressionally-chartered committee which provides advice to the USCG on matters related to the safe operation of towing vessels and barges, has played an integral role in the partnership.

'A '90 & Financial Responsibility

While safety remains our primary focus, AWO is keeping a close eye on other activities as well. On July 1, roughly three years after its original proposal, the USCG published in the *Federal Register* an interim rule specifying procedures by which vessel and operators may obtain the certificates of financial responsibility (COFRs) required by the Oil Pollution Act of 1990.

The rule requires vessel owners to provide they can pay for a potential up to the limits of liability established by OPA 90 via an insurance policy, surety bond, guaranty, or self-insurance. The USCG's rule is very identical to the September 1990 Notice of Proposed Rulemaking, which provoked strong opposition from vessel owners and the International Group of Protection and Indemnity (P&I) Clubs. The issue is problematic for both large and small companies; large companies cannot self-insure their compa-

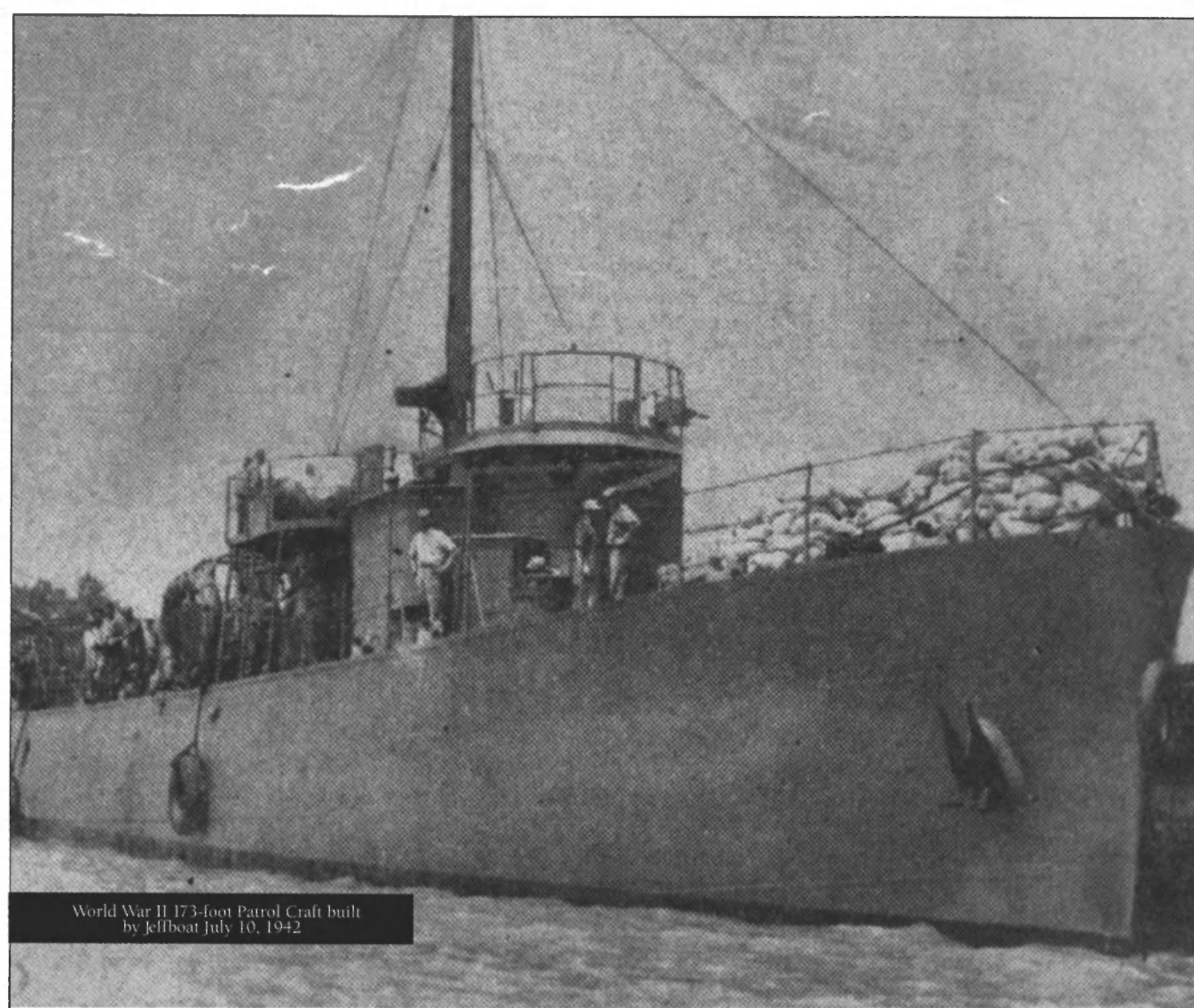
nies without a USCG waiver, which will be granted on a case-by-case basis. The rule represents equal problems for smaller companies which now must find a new insurer, at potentially enormous cost, because the USCG will not allow existing P & I coverage to serve as evidence of financial responsibility. From the beginning of this debate, AWO has urged the USCG not to move forward with a rule which

could trigger a shutdown in the waterborne transportation of petroleum in the U.S.

Fuel Tax

While the Administration's proposed \$1 per gallon fuel tax increase on the inland waterways was soundly defeated in 1993, AWO continues to watch closely for pro-

posals which may look to raise user fees or increase the Inland Waterways Fuel Tax. Although there were persistent rumors that the Administration was considering a range of new user fees and increased fuel taxes as part of its FY '95 budget, the budget did not include any new proposals to levy user fee or fuel charges on the industry. AWO strongly supports the effort to inject greater cost control into the Army Corps of Engi-



World War II 177-foot Patrol Craft built by Jeffboat July 10, 1942

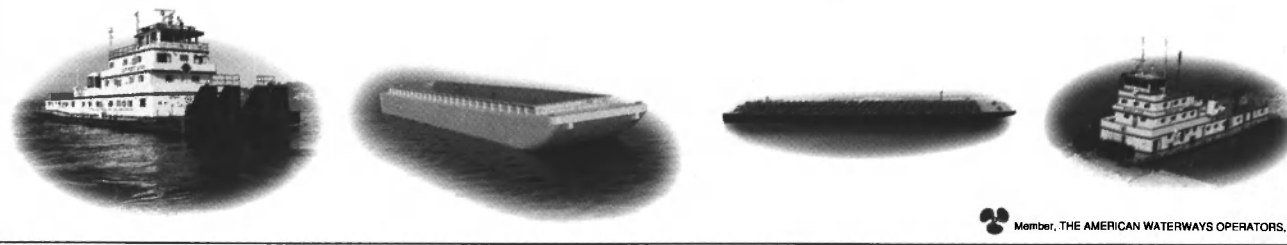
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AWO: Allegretti Editorial

(Continued from page 23)

neers construction and operations processes, and to ensure that we live within our means, to build only the projects, on only the schedule, that the Inland Waterways Trust Fund can afford.

The Jones Act

Other issues on AWO's horizon include closely monitoring attempts to eliminate cabotage protections in the Jones Act, which reserves participation in the U.S. coastwise trade to U.S.-owned, U.S.-crewed, and U.S.-built vessels. As support for the Jones Act remains a fundamental policy of the Association, AWO established a coalition of AWO members and non-member groups and commissioned a Jones Act study intended to lay the groundwork for a successful defense of the Act

against future challenges. The creation of this coalition has garnered strong unity and focus, and will produce a strengthened, solidified defense of the Act.

Species Preservation & Trade Expansion

On the environmental front, AWO is closely following Endangered Species Act (ESA) amendments, meant to try to balance economic development with species protection. AWO supports ESA reform legislation (HR 1490) offered by Congressman **Billy Tauzin** (D-La.) that would extend the Act for an additional five years and also mandate consideration of economic and social factors in any species preservation plans. By contrast, Rep. **Studds** introduced ESA reform legislation that would make

it easier for the U.S. Fish & Wildlife Service and the National Marine Fisheries Service to develop habitat plans for species that are candidates for listing under the Act, thereby increasing the number of "critical habitats" and impeding maritime commerce. AWO continues to be actively involved with a coalition of various industry associations to evaluate and influence ESA bills and regulatory initiatives.

Other Fronts

In the AWO's American Waterways Shipyard Conference (AWSC), maritime reform and the Title XI loan guarantees for the construction of vessel remain important issues.

Included in President **Clinton's** National Shipbuilding Initiative, meant to revitalize the nation's shipbuilding industry, was the creation of an industry/government cost-shared program called MARITECH intended to accelerate technology transfer to shipyards. Congress ap-

propriated \$30 million for MARITECH in May 1994, and AWSC was awarded a MARITECH grant from the Advanced Research Projects Agency (ARPA) for its proposal, "Penetrating the International Market for Small Ships."

On the shipyard regulatory front, the Occupational Safety and Health Administration (OSHA) at press time was expected to release a new rule regarding safety in confined spaces in shipyards. The new regulation will establish safety procedures and training requirements for entry into confined spaces in all vessels and vessel sections in shipyards.

While all of these activities make for a very active agenda, AWO is fully prepared to face the challenges ahead.

This year, as the Association celebrates its 50th anniversary, it is particularly gratifying to look back on the industry's victories, and the lessons learned over the past five decades, and feel confident that as a result, AWO's future is very much assured.

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Maritime Reporter/Engineering

WASHINGTON D.C. UPDATE

House Panel Approves Retaliatory Fishing Bill Measure

The House Merchant Marine Committee has approved a bill to retaliate against Canada's recent transit fee on U.S. vessels headed for salmon fishing grounds in Alaska.

The reauthorization of the 1967 Fishermen's Protective Act would charge Canadian boats a fee equal to the one Canada has imposed on U.S. fishermen, and reimburse U.S. fishermen who have paid the fee with funds from the Fishermen's Protective Fund. Over 150 fishermen have reportedly paid the fee, and the bill charges the Secretary of State, whose department has already declared the fee a violation of international law, with recovering those funds from Canada.

Canada reportedly imposed the fee in frustration that the U.S. did not make greater efforts to update and reauthorize the Pacific Salmon Treaty, a 1985 agreement which set limits on the amount of salmon each country's fishermen are allowed to catch. The agreement expired last year.

House Subcommittee Approves U.S. Cruise Industry Bills

The House Merchant Marine and Fisheries Subcommittee on Merchant Marine gave voice vote approval June 23 to a pair of bills aimed at encouraging cruise lines to build ships in U.S. yards. HR 1821, introduced by Congresswoman **Jolene Unsoeld** of Washington, would allow foreign cruise lines to carry passengers between U.S. ports if they agree to register in the U.S. and hire U.S. crews. The original bill provides for the new building replacement vessels or U.S. operation in U.S. yards within three years, but an amendment offered by **William O. Ripinski** (D-Ill.) would shorten that term to two years.

By voice vote, the subcommittee adopted an amendment to require companies to put 10 percent of their new-built ships' gross revenues to escrow until they sign contracts to build ships with U.S. yards funds they would forfeit if they failed to meet the two-year deadline.

The other bill, also sponsored by Congresswoman **Unsoeld**, offers incentives for building cruise ships at U.S. yards and holding conventions on cruise ships. The incentives for conventions on U.S.-built cruise ships would be equal to tax breaks provided for conventions on land.

TECHNOLOGY

NIST Researcher Develops Compound To Measure Heat Up To 1,200° C

A researcher at the National Institute for Standards and Technology (NIST) has invented a series of materials for thin-film thermocouples that allows temperature changes to be measured up to 1,200 degrees C in microsecond increments. Made with molybdenum silicide or titanium silicide, the NIST thermocouples can measure changes in temperature inside such places as diesel or jet engines.

The patented NIST materials are made with a thin outer layer of heat-resistant silicon dioxide protecting a layer of electrically-conductive molybdenum or titanium silicide, with a layer of pure silicon underneath.

New LNG Refrigeration Technology Employs Sound

A new cooperative R & D agreement between NIST and Cryenco Sciences Inc. of Denver will apply refrigeration technology developed by NIST and Los Alamos National Laboratory (LANL) to the task of liquefying natural gas. **Ray Radebaugh** of NIST and **Greg Swift** of LANL invented the thermocoustically-driven orifice pulse tube refrigerator, which has no moving parts, contains tubes of helium gas and is capable of producing a temperature of 112 Kelvin.

Studds Introduces Environmental Impact Legislation

The environmental impacts of free-trade agreements and other major trade actions must be considered prior to their conclusion. This is the cornerstone of legislation introduced recently by Massachusetts Congressman **Gerry Studds**, chairman of the House Merchant Marine and Fisheries Committee, Rep. **Jolene Unsoeld** (D-Wash.), and Rep. **Ron Wyden** (D-Ore.).

The **Studds** bill, the Trade and Environmental Reporting Act of 1994, also requires the U.S. Trade Representative (USTR) to prepare and submit to Congress environmental assessments of free trade agreements and directs U.S. environmental agencies to monitor and report on the environmental effects of free trade agreements. In drafting the bill, Congressman **Studds** sought input from the USTR's office and the Environmental Protection Agency (EPA).

"It's a brave new world of international trade, a world just beginning to understand that the potential enormous benefits of a global economy may not come without environmental costs," said Mr. **Studds**. "This fact became painfully obvious during last year's debate on NAFTA and will be a major

question over the next few weeks when Congress must vote on the implementation of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT)."

"While current law does not require the consideration of environmental issues in trade agreements, Ambassador **Kantor** and this Administration have forged new ground by opening the door to these concerns," Mr. **Studds** continued. "This legislation will throw that door open wide and put environmental issues on the table where they belong ... To make an informed decision we need information. This legislation will ensure that the impact — positive or negative — of all future trade agreements is understood before we sign on the dotted line and before Congress is called on to implement them."

The Merchant Marine and Fisheries Committee has jurisdiction over a host of environmental laws that could be impacted by trade agreements. These include the Endangered Species Act, the Marine Mammal Protection Act, the Magnuson Fishery Conservation and Management Act, the International Dolphin Conservation Act, and the Wild Bird Conservation Act.

The helium gas is repeatedly compressed and expanded with sound waves rather than with a mechanical compressor as in most conventional cooling systems. Cryenco has obtained the development license as well as the exclusive license to the patents through LANL. Mr. **Radebaugh** and Mr. **Swift** will assist Cryenco in upscaling the sys-

tem in two versions that will be tested, manufactured and marketed by the company.

The first will liquefy 1,900 liters of natural gas per day, and the second will increase that output to 38,000 liters per day. The costs of the systems will reportedly be very economical, with liquefaction taking place on-site.

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Bay Transportation Exercises Option To Build 3 More Tugs

Aquamaster-Rauma, Wärtsilä To Power Nabrico-Built Vessels

Bay Transportation/Philip Towing of Tampa, Fla. has exercised options to build three additional stern-drive tractor tugs at an estimated cost of \$18 million with Nashville Bridge Company (Nabrico) of Nashville, Tenn. The 110-ft. (33.5-m) *Kinsman Hawk* is due to be delivered by Nabrico in November, 1994. The tugs are to be used for tanker escort service/ship assist and ocean-towing.

Aquamaster-Rauma Inc. will provide six 3001

Z-drive units to be installed in the three multi-purpose stern-drive tugs. According to Aquamaster-Rauma vice president and vessel designer **Gregory E. Castleman**, each of the units is capable of absorbing 3,300 hp, resulting in total power of 6,600 hp for each vessel.

Bay Transportation reported that the ease of maintenance and time intervals between overhauls of the Vasa 32 engines over 10 years of field application were major factors influencing its engine choice, as well as the engines' extremely low level of NO_x emissions. Also considered was the high level of post-delivery technical support and parts availability that Wärtsilä was able to supply.

The hull design provides a clean flow of water to the thrusters, which enables them to rotate 360 degrees without encountering interference from vessels alongside.

Not only is the hull designed for speed running, but the bow is also shaped to provide high dynamic drag when the tug is in the various escort modes. Additionally, the thrusters are installed far enough apart for them to work in the transverse mode, which has been found to be very effective in escort service.

In the *Kinsman Hawk* class vessel, the Aquamaster 3001 Z-drive units will produce an estimated bollard pull in the 170,000-lb. range — making them, according to Aquamaster, the most powerful Z-drive tugs of their size in the world.

The running speed will be in the 14.5-knot range.

Aquamaster-Rauma has systematically researched tanker escort operation techniques and tug technology, verifying theories with model and full scale trials. This process has validated the use of two novel operating modes:

- The "Transverse Arrest" mode utilizes the active thruster forces for retarding the tanker's forward advance without inducing a turning force and is designed to pose no risk of engine overload at any ship's speed.
- The "Combination Arrest" mode combines the lateral lift and resistance of the tug's hull with the active thrust generated by the Aquamaster propulsors.

Bay Transportation's powerful stern drive tugs will add these two new operating modes to the traditional escort "indirect" and "direct" methodology to provide for safe tug and tanker escort operations. All four escort operating modes can be accomplished only with independently steerable Z-drives having nozzle propellers.

The twin US3001 propulsion units have all of the reliable features associated with Aquamaster propulsion:

- The strength of the units derived from the design philosophy for heavy duty ice conditions is designed for the most severe operating scenarios.
- The Aquamaster Z-drives can be installed and removed without docking the tug.
- The compact, self-contained archi-

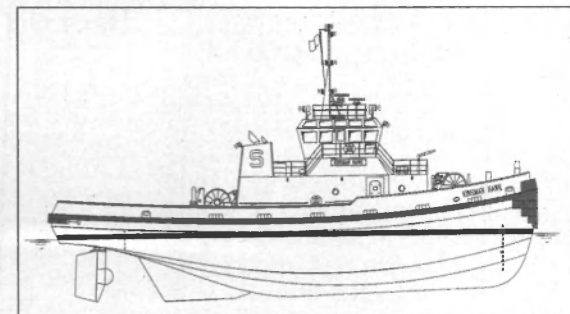
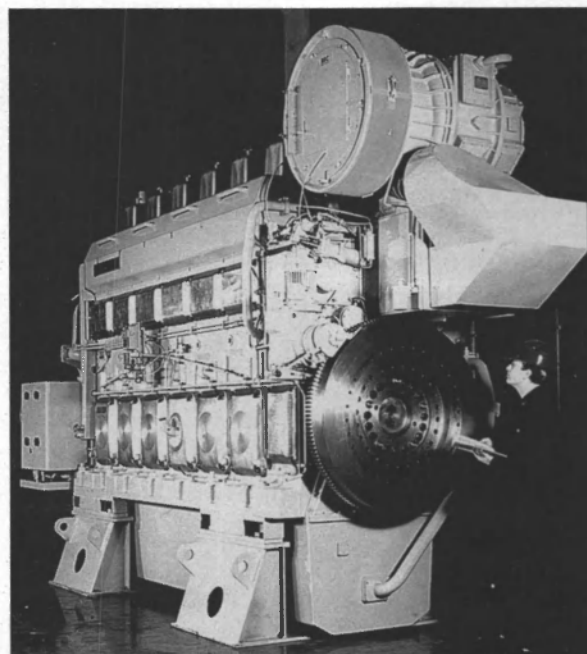


Diagram of Kinsman Hawk class tug to feature Aquamaster-Rauma Z-drives and Wärtsilä engines.



Two of Wärtsilä's Vasa 6R32E engines will power the next three *Kinsman Hawk* class tugs, being built at Nabrico.

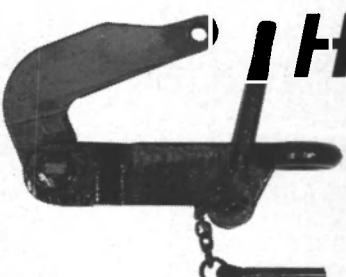
ture of Aquamaster units is designed for easy Z-drive installation and maintenance.

- The standard Aquapilot drive control system, reinforced with the Micropilot single point joystick controller, provides redundant safety operations — even a blackout of electric power on board will not jeopardize control of these tugs. The Aquapilot and Micropilot control systems are type-approved by the major classification societies, as well as by other regulatory bodies.

For more information on the companies in this article, circle the corresponding number on the Reader Service Card bound in this issue:

Aquamaster-Rauma	13
Nabrico	71
Wärtsilä	58

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Circle 29 on Reader Service Card



According to Aquamaster-Rauma, the high bollard pull capable six Z-drives it is supplying for three Bay Transportation tugs make them the most powerful Z-drive tugs of their size in the

ABB Wins Emissions Reduction System Order

ABB Flakt Marine of Gothenburg, Sweden has been commissioned by the National Maritime Administration of Sweden to supply SCR (Selective Catalytic Reduction) systems for one of its supply vessels, *M/S Scandica*.

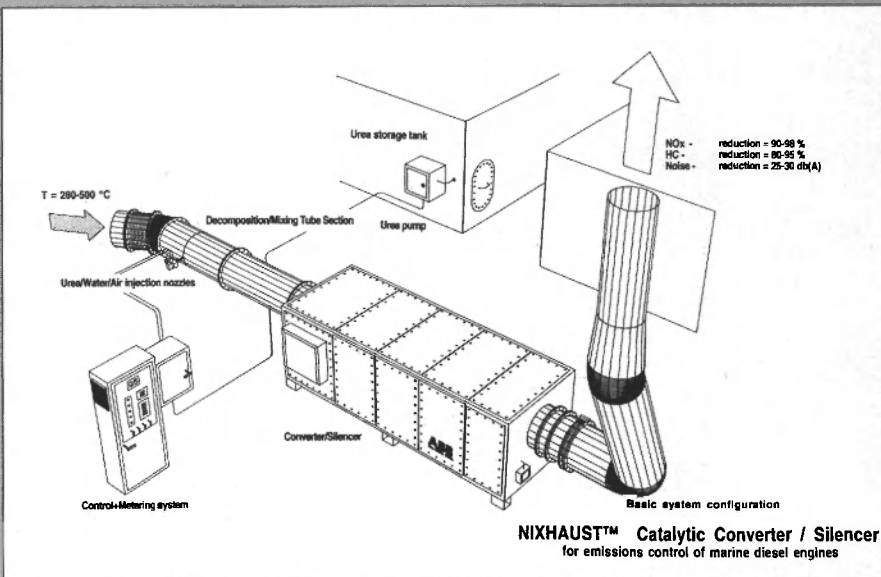
M/S Scandica is equipped with two Hedemora main engines and four Scania diesel auxiliary engines for a total installed power of 3.7 MW. ABB will supply the NIXHAUST catalytic converter/silencer system for a multiple engine configuration with converters serving three engines each.

The SCR system for *M/S Scandica* is the same type as the one ABB supplied in 1992 to the *M/S Aurora* RoRo ferry that shuttles between Sweden and Denmark. The system

has reportedly been in continuous and trouble-free operation for 13,000 hours with respective NO_x and hydrocarbon (HC) reductions of 96 and 90 percent.

The retrofit installation on the *Scandica* of two NIXHAUST systems entails the removal of two existing silencers and their replacement with catalytic converters that have integrated silencers; the conversion of a lube oil tank to a storage tank for the reagent, urea water, needed for the SCR process. The NIXHAUST systems are designed to reduce concentrations of NO_x and HC in exhaust gas by 90 and 80 percent, respectively.

Extensive tests done by the Environmental Research Institute of Sweden on the ABB NIXHAUST



SCR were done on three occasions — after 800, 1,200 and 1,800 hours of operation — and despite extreme load swings and countless starts and stops, the system reportedly succeeded in removing 97 percent

of all NO_x emissions and 90 percent of all HCs.

For more information on ABB
Circle 11 on Reader Service Card

Coastal Towing Sells Tank Barges To South America

Coastal Towing, Inc. sold its two 30,000-BBL tank barges — *Coastal 3381* and *Coastal 3581* — to South American clients for operation in Argentina. The barges will be transported to Argentina by a heavy-lift submersible ship out of New Or-

leans. Marcon International, Inc. acted as broker in this transaction.

Kirby Corp. To Buy Or Lease 101 Vessels From Dow

Kirby Corporation signed a letter of intent to purchase 65 inland tank barges, a river towboat and two shift-

ing boats from the Dow Chemical Company.

Kirby will also assume the leases or purchase of an additional 31 inland tank barges and two towboats presently in Dow's service.

The inland tank barges have a total capacity of 1,121,000 barrels and consist of 84 double skin barges, six pressure barges and six acid barges. Kirby will operate the

barges in its Inland Industrial and Agricultural Chemical Division, which provides transportation of industrial and agricultural chemicals by tank barge to destinations along the Gulf Intracoastal Waterway and the Mississippi River. The addition of the 96 barges brings the number of barges operating in Kirby's Inland Industrial and Agricultural Chemical Division to 381.

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Bremer Vulkan Will Jointly Build \$377-Million Cruise Ship For Costa Crociere

German shipbuilder Bremer Vulkan AG, and three other companies in the Vulkan Group, won a \$377 million contract to build a ship for Italy's Costa Crociere S.p.A. cruise line. The 74,000-ton vessel will be built jointly by: Bremer Vulkan Werft and Maschinenfabrik GmbH, Lloyd Werft Bremerhaven GmbH and Schichau Seebeckwerft AG of Bremerhaven. STN Systemtechnik Nord GmbH will provide special-

ized electrical engineering and electronics. The newbuilding is scheduled for delivery in 1996. The vessel will be able to carry 2,200 passengers. The vessel will be 820 ft. (250 m) long, with a molded beam of 105 ft. (32 m).

For more information on Bremer Vulkan Circle 56 on Reader Service Card



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Circle 261 on Reader Service Card

Bellecraft Designs River Taxis



Bellecraft Industries Corp. designed two river taxis for Gaylord Entertainment to be used in Opryland USA. The high speed ferry cats are convertible from ferries to dinner cruisers.

The vessels are powered by twin Daytona-Merlin ME-9 V8 diesels at 860 hp each. The generators are twin Deere Power TO4045TM diesels, rated at 35 kW each. The ZF gears were supplied by North American Marine Gear, with twin Michigan four-blade propellers.

The vessels are 58 ft. (18 m) long and 20 ft. (6 m) wide, with a depth of 5.6 ft. (2 m) and draft of 3 ft. (1 m).

For more information on Bellecraft Circle 57 on Reader Service Card

Morrison Appointed Head Of Marine Atlantic Inc.

It was announced by Transport Minister Douglas Young that Roderick John Morrison of Victoria, B.C. was appointed as president and CEO of Marine Atlantic Inc. for a five-year term effective September 1, 1994. Mr. Morrison has been with the British Columbia Ferry Corp. since July 1982, and was appointed general manager in 1987. Marine Atlantic's chief activity is the operation of the major ferry services in the Atlantic provinces on behalf of the government of Canada. The company has 15 ships and 2,774 employees, and transported more than 2.5 million passengers and one million cars in 1993.

Canadian Coast Guard Vessel To Be Refit At CS&E Shipyard For \$4M

The Canadian Coast Guard vessel CCGS *Griffon* is scheduled to be refit by a subsidiary yard of CS&E Shipyard, Port Weller, Ont. The refit is expected to be completed in early 1995.

The *Griffon* is an 1100 class light icebreaker and navigational aids tender that currently operates on the Great Lakes area and along parts of the St. Lawrence River. The refit will reportedly extend the vessel's life by 10 years.

Maritime Reporter/Engineering News

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Circle 21 on Reader Service Card

New Rescue Ship Class Fitted With Aquamaster Propulsion



The standby/rescue vessel *Scott Guardian*, equipped with an Aquamaster propulsion system, is 180 feet (55 m) long with a breadth of 43 ft. (13 m) and depth of 18 ft. (5.5 m).

A new state-of-the-art standby/rescue vessel class now in operation has been fitted with Aquamaster propulsion systems, reportedly giving the vessels excellent maneuverability and control.

The first vessel, *Scott Guardian*, is in service with Amerada Hess in the North Sea. The second vessel, *Trafalgar Guardian*, was taken into service with Enterprise Oil at the Nelson Field, also in the North Sea. Propulsion on both vessels is by two Aquamaster US 911 units mounted aft; they have a loiter drive Aquamaster UL 601 retractable unit in the bow. All units are direct diesel driven.

With the Aquamaster propulsion system, the ships rotate on the spot through 360 degrees in 63 seconds and can remain on station alongside a rig in severe North Sea weather conditions.

This new Sea Guardian class was designed by IMT and built by the Yorkshire Drydock Company in Hull to the order of the Sunset Shipping, U.K. The ships are managed and crewed by Seaboard Offshore of Aberdeen.

For more information on Aquamaster
Circle 2 on Reader Service Card

Kvaerner Masa-Yards Delivers Fascination To Carnival



The *M/S Fascination* was delivered to Carnival Corporation USA by Kvaerner Masa-Yards — the fourth super-cruise liner delivered by Kvaerner Masa-Yards' Helsinki New Shipyard to Carnival.

M/S Fantasy, the first in the series, was delivered in 1990. Its sisterships, *M/S Ecstasy* and *M/S Sensation*, were delivered in 1991 and 1993, respectively. The fifth and sixth vessels in the series will be delivered in summer 1995 and winter 1996, respectively.

The 70,367-gt *M/S Fascination* can carry 2,600 passengers served by a crew of more than 900.

All cabins were prefabricated and were delivered by Kvaerner Masa-Yards' Piikki Works.

The vessel has a diesel-electric AC-AC power plant consisting of six diesel generators and two cycloconverter-controlled electrical propulsion motors. The total onboard power developed is 42,240 kW (57,400 hp). There are six thrusters — three forward and three aft with a total power of 9,000 kW (12,200 hp). The vessel is 855 ft. (261 m) with a beam of 103 ft. (31.5 m) and draft of 25 ft. (8 m).

For more information on Kvaerner Masa-Yards
Circle 8 on Reader Service Card

M/S Fascination Equipment List

Main engines	Wartsila Sulzer
Propulsion motors	ABB Marine
Propellers	KalleWa
Fin stabilizers	Brown Brothers

Ferries Australia Introduces New Vehicle-Passenger Ferry Design



Ferries Australia, the joint venture between Western Australia shipyards Austal Ships and Oceanfast that specializes in the construction of mega ferries, has introduced a 308-ft. (94-m) vehicle-passenger ferry to its design portfolio. The vessel is based on the Auto Express 79 (AE79) for which the company has secured its first contract with Sea Containers Ltd.

The Auto Express series utilizes Austal's "semi swath" round bilge hull shape and bulbous bows, and incorporates the company's fully computerized stabilizing system, Ocean Leveller, to ensure optimal passenger comfort. The Ocean Leveller stabilizing system has a central microprocessor system which incorporates a sophisticated high speed monitoring and control algorithm, constantly monitoring the output from the motion sensors and controlling the fin and flap angles to maximize passenger comfort.

The AE94 has a carrying capacity of 1,000 passengers and 252 cars.

Chris Norman, managing director of Ferries Australia, said, "With a diesel/gearbox/waterjet propulsion system, speeds of up to 39 knots will be achieved."

The ferry is designed to be 308 ft. long, with a breadth of 88.5 ft. (27 m) and draft of 8 ft. (2.5 m), with a deadweight of approximately 500 tons.

For more information on Ferries Australia
Circle 12 on Reader Service Card

GRP Div. of Avondale Christens Third Coastal Minehunter



MHC-56, the third coastal minehunter ship being built for the Navy by the Glass Reinforced Plastic (GRP) Division of Avondale Industries, Inc., was christened *Kingfisher* in ceremonies

Seamen's Church Honors Industry Leaders At Annual Awards Dinner



(L. to r.) **David A. Olsen**, chairman & CEO, Johnson & Higgins; The Rev. **Peter Larom**, executive director, The Seamen's Church Institute; and **Malcolm W. MacLeod**, president & CEO, Moran Towing Corp.

More than 400 guests gathered at The Seamen's Church Institute's 16th Annual Awards Dinner to honor **David A. Olsen**, chairman and CEO of Johnson & Higgins, a large privately-held insurance brokerage and employee benefits consulting firm, and others for their contributions to maritime safety.

The Awards Dinner raised \$65,000 for the Institute's 1994 Annual fund.

Mr. Olsen received the Silver Bell Award, which is presented annually by the Institute to an individual in recognition of his or her outstanding leadership in the maritime community. The bell was chosen as an award because of its historical significance in religious ceremonies from early times and its use on board ships in ancient times.

Sharing in the honors of the evening were several people who through personal or professional endeavors have also contributed to maritime safety. The Institute gave Lifesaving Awards to the following people:

Sandy Hook Pilot Apprentices **Tom Walsh**, **Kevin McNamara**, **Paul Klein** and New York City Police (Scuba Unit) Officers **Daniel Sharkey** and **John Dalton** for carrying out a heroic effort to rescue a U.S. Coast Guard helicopter crashed near Ambrose Light last fall as Hurricane Emily approached New York Harbor, and U.S. Coast Guard Group New York whose icebreakers assisted 367 vessels in the 1994 ice season.

The Institute gave Distinguished Service Awards to VAdm. **Paul A. Welling** upon his retirement from the U.S. Coast Guard, and **Charles L. Black, Jr.**, a scholar and the co-author of *The Law of Admiralty*.

This year, the Institute also introduced the Seamanship Award, which recognizes the accomplishments made by recreational boaters to the maritime community. **Ted Seymour**, the first African-American to sail around the world was the first recipient of this award.

For more information on The Seamen's Church
Circle 9 on Reader Service Card

at the Gulfport, Miss. shipyard. It is the fifth ship in the Navy's MHC-51 (Osprey) class coastal minehunter program, and the third U.S. Navy ship to bear the name *Kingfisher*. MHC-51-class ships are reportedly the world's largest glass reinforced plastic ships and the first U.S. Navy ships designed solely for minehunting. Their mission is to clear shore areas, harbors and coastal and ocean waters of acoustic, magnetic, and pressure/contact type mines utilizing reconnaissance, classification and neutralization tactics. The sponsor of the new ship was **Elizabeth Fisher**, an actress, model and dancer who entertained thousands of troops during WWII in conjunction with the ISO. *Kingfisher* is 187 ft. (57 m) long, with a beam of 35 ft. (11 m) and draft of 10 ft. (3 m).

For more information on Avondale
Circle 35 on Reader Service Card

New Magnatex Pumps For No-Leak Applications



Magnatex Pumps Inc. introduced the MP/MPL Series of high-efficiency, close-coupled, magnetically-driven sealless centrifugal pumps, designed specifically for low-flow, high-head applications in corrosive, noxious or toxic services, where leakage cannot be tolerated. The pumps are available in nine sizes in stainless steel, Alloy 20, or Hastelloy C construction, with capacities from 1 gpm to 150 gpm. Handling head to 400 ft. (121.9 m); temperature to 300 degrees F; working pressure to 225 psig; and one- to 20-hp models are available.

The MP/MPL Series utilizes Magnatex Pumps' exclusive straddle-bearing design to provide longer life in a wide range of corrosive applications in chemical process, pharmaceutical, pulp & paper and other industrial plants.

For more information on Magnatex
Circle 83 on Reader Service Card

MarAd News

MarAd FY '93 Report To Congress Available

MarAd has released its annual report to Congress for fiscal year 1993, MarAd '93. Copies of the report are available from MarAd's office of External Affairs, Room 7219, 400 7th St. SW, Washington D.C. 20590; tel: (202) 366-5807.

APL Applies For MarAd Permission On TMM Cargo Exchange

American President Lines (APL) filed an application with the Maritime Administration for permission to use space on vessels operated by Transportacion Maritima Mexicana SA de C.V. (TMM) for carrying cargoes in U.S. foreign trade.

The permission requires a waiver of section 804(a) of the Merchant Marine Act, 1936, which precludes subsidized U.S.-flag operators or their affiliates from operating foreign-flag vessels which compete with essential U.S.-flag shipping services unless the Secretary of Transportation waives the provision for a specific period of time. It has been assigned Docket S-907, and is being published in the *Federal Register*.

APL entered into a slot charter agreement with TMM in foreign-to-foreign trade between Asia and Mexico. TMM's ships in the trans-pacific service provide weekly ser-

vice on an itinerary with the following configuration: Manzanillo, Lazaro Cardenas, Long Beach, Yokohama, Kobe, Hong Kong, Kao-Hsiung, Pusan, Osaka, Kobe, Yokohama, San Pedro, Ensenda, and Manzanillo.

APL stated in its application that the permission would accommodate overflow cargoes, which the company sometimes experiences, and enable APL to utilize a portion of its

space on the TMM vessels under the slot charter agreement for the carriage of U.S. foreign trade cargoes.

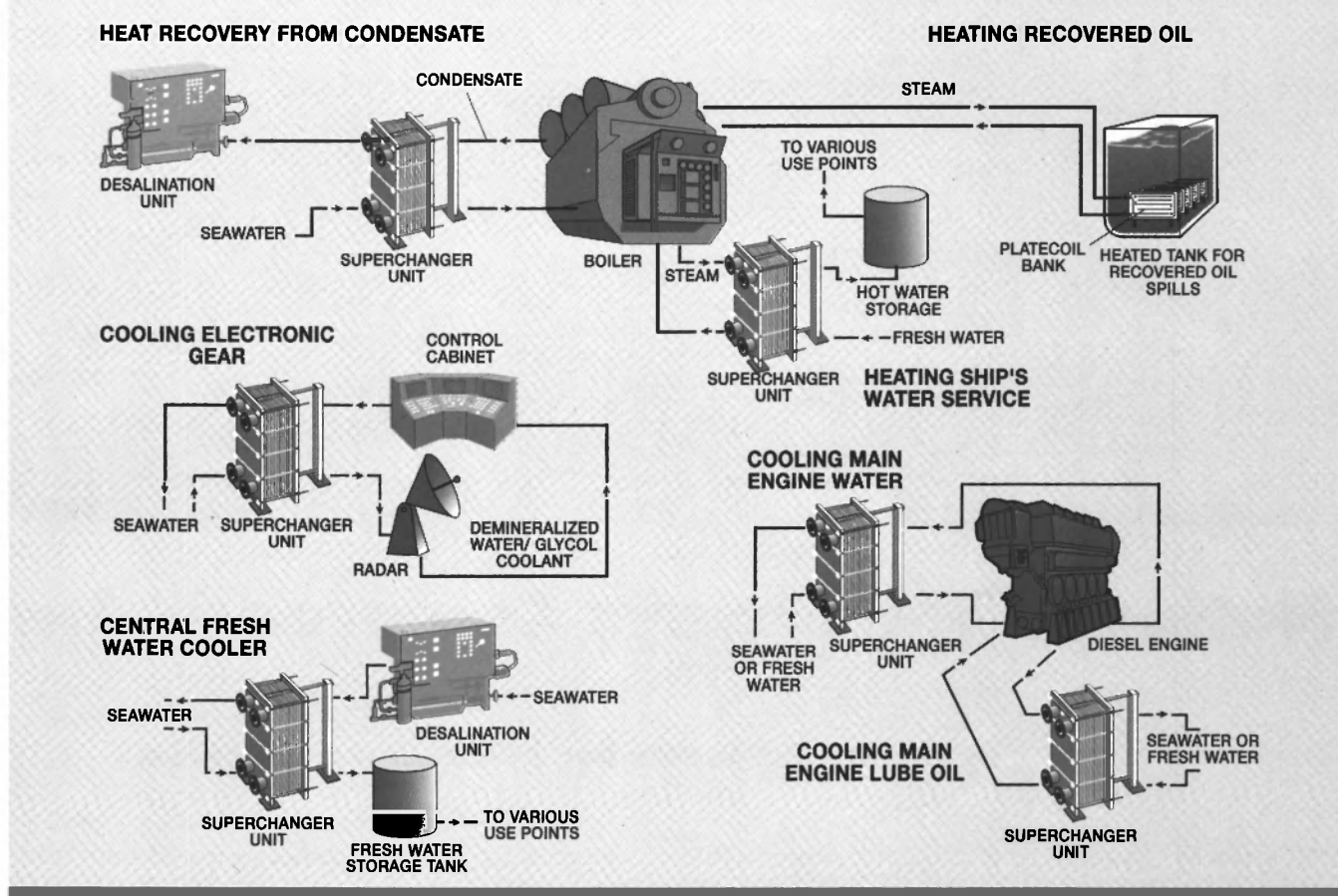
Report On U.S.-Owned, Foreign-Flag Ships Updated

MarAd has updated its report, *Foreign Flag Merchant Ships Owned by U.S. Parent Companies as of July 1, 1993*, which lists the

foreign-flag oceangoing merchant ships of 1,000-gt and over owned by parent companies legally organized and incorporated in the U.S., either through direct ownership or foreign subsidiary companies. The report may be obtained from MarAd's Office of Trade Analysis and Insurance, Room 8117, tel: (202) 366-2400; or the Office of External Affairs, Room 7219, tel: (202) 366-5807.

(MarAd News Continued on page 37)

How to Operate More Efficiently At Lower Cost With Tranter Plate-type Heat Exchangers



Naval ships, fleet oilers, commercial containerhips, tankers and dredges are successfully finding new ways to operate more efficiently at lower cost, by utilizing Tranter's unsurpassed plate-type heat exchanger technology. Schematics presented here illustrate typical ways they are doing it.

Superchanger® plate and frame heat exchangers are used in a wide variety of shipboard applications—particularly for cooling main engine jacket water and cooling main engine lube oil with fresh water or seawater; cooling the ship's central fresh water; cooling electronic equipment; or recovering heat from condensate. They are far more efficient than tubular systems, and provide heat transfer coefficients from two to five times greater than those achieved by shell and tube units. They also require 10% to 50% less deck space and weigh up to one-sixth less.

Superchanger units can be equipped with titanium plates which offer the best resistance to corrosion and erosion when exposed to seawater. Intermixing or cross-contamination

of hot and cold liquids is virtually impossible. Low fouling rates reduce cleaning requirements for Superchanger units, that are designed for easy maintenance. They can be cleaned-in-place by backflushing, or quickly disassembled by hand, cleaned and put back in operation.

Platecoil® prime surface heat exchangers offer optimum temperature control. A Platecoil bank-in-tank unit provides wide interspaces for effectively passing solids while efficiently heating seawater containing oil from spills.

Platecoil bayonet heaters provide a large amount of efficient primary heating surface in a single unit for maintaining desired temperatures in storage tanks. These heaters help promote convection currents for better heat transfer rates and tank temperature uniformity. Platecoil suction heaters provide immediate heating for pumping oil out of tanks.

Tranter plate-type heat exchangers can be supplied in full compliance with codes and specifications as required by the ABS; the U.S. Coast Guard; shock testing per MIL-S-

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Circle 275 on Reader Service Card



National Waterways Conference Annual Meeting

September 21-23, New Orleans, La.

"Waterway Policies in Flux: Managing the Dynamics of Change" is the theme of the National Waterways Conference's (NWC) 1994 annual meeting, to be held at the Inter-Continental Hotel in New Orleans. Some 400 business, civic and waterways leaders are expected to attend.

The annual meeting will explore changes, or proposed changes, in national policies governing freight transportation, inland navigation projects, waterway user taxes, floodplain management and environmental regulations.

Even the NWC's annual meeting program has not escaped change. For the first time in the organization's 34-year history, a railway industry official will be one of the featured speakers.

The Speakers

Edwin L. Harper of Washington, D.C., president and CEO of the Assn. of American Railroads, will address the opening luncheon meet-

ing. Born in Illinois, he comes from a family which was involved in river transportation and in railroading.

In his remarks, he will stress the growing interest in the shipping community in intermodalism.

Mr. **Harper** plans to discuss combination rail-water routes in serving new markets, particularly in Mexico and Central America, and other ways in which rail, water and other modes can work more closely in the future.

Mr. **Harper** will be introduced by **J. Ron Brinson**, president and CEO of the Port of New Orleans.

Speaking at the closing luncheon will be **Jerry E. Van Der Kamp** of West Des Moines, Ia., president and CEO of AGRI Industries, a regional grain marketing cooperative owned by 225 local cooperative elevators in Iowa and Minnesota. AGRI, in turn, owns three river terminals and operates 500 rail cars and several barges.

In a recent paper, he criticized the Administration's 1993 proposal to increase inland waterway fuel taxes by \$1 a gallon, which Congress later rejected. Mr. **Van Der Kamp**

charged that such a tax would cause the U.S. to lose market share and result in grain producers receiving lower market prices for their grain.

Some 25 others will participate in six panel discussions at the waterways convention. They will include:

- Maj. Gen. **Stanley G. Genega** of Washington, D.C., director of civil works for the Army Corps of Engineers, who will report on the status of the agency's port and waterway program.

Such presentations are a regular feature of NWC annual meetings.

- **M. J. Fiocco**, freight transportation specialist in the U.S. Department of Transportation's Office of Intermodalism.

Ms. **Fiocco** formerly worked for the National Industrial Transportation League.

- Dr. **Robert M. Engler** of Vicksburg, Miss., manager of the environmental effects of dredging programs at the U.S. Army Engineer Waterways Experiment Station.

Dr. **Engler** was recently named

international chairman of Permanent Environment Commission of the Brussels-based Permanent International Assn. of Navigation Congresses (PIANC).

- **James D. Pugh** of Memphis, president of Americas Marine Express, which recently began offering ship service between Memphis and Central America, utilizing a combination river-ocean vessel.

- **Harry N. Cook** of Washington, D.C., president of the National Waterways Conference, Inc., who will present his annual report on the "state of the waterways."

Several other waterway organizations plan meetings to coincide with the NWC convention.

They include the Arkansas Waterways Commission, Domestic Water Transportation Committee of the National Industrial Transportation League, Inland Rivers Ports & Terminals, Inc., Standing Committee on Water Transportation of the American Assn. of State Highway and Transportation Officials (AASHTO), and the U.S. Section of PIANC.

The Program

The 1994 NWC convention will kick off on Wednesday, Sept. 21, with a tour of the Port of New Orleans, starting at the new Nashville Avenue port complex and ending with an inspection of the Industrial Lock.

Conference Chmn **W. Richard Christensen**, recently retired vice president of Ashland Oil, Inc., will open the NWC convention on Thursday, Sept. 22.

After Mr. **Cook's** report, the first panel will assess the outlook for barge shipments of grain, coal and chemicals.

The second panel will address intermodal issues, followed by a luncheon at which Mr. **Harper** will speak.

Two afternoon panels will be concerned with the waterway user tax issue, which is considered to be on the front burner in Washington with the recent appointment of **Alice M. Rivlin**, a long-time proponent of navigation cost recovery, as the new director of the White House Office of Management and Budget.

In the evening, there will be a banquet in the Inter-Continental Hotel ballroom.

On Friday morning, two additional panels are



Harry N. Cook, conference president, now in his 30th year at NWC's helm.

Edwin L. Harper, opening luncheon speaker.

Jerry E. Van Der Kamp, closing luncheon speaker.

W. Richard Christensen, NWC's chairman of the board.

Robert W. Portiss, NWC's vice chairman.

scheduled. The first will examine environmental restrictions and how they affect port and waterway programs, and the second will explore possible changes in floodplain management policies.

The final luncheon, at which Mr. **Van Der Kamp** is to speak, will follow.

A spouses' program has been arranged on Thursday, Sept. 22. It will feature a tour of the Garden District and lunch at Commander's Pal-

ace, a widely known restaurant in that area.

Larry R. Daily of New Orleans, vice president of Canal Barge Co., is general chairman of the 1994 NWC convention.

An opening reception will be held at the Inter-Continental Hotel on Wednesday evening.

For additional information, including convention registration and hotel reservation forms, contact NWC, 1130 17th St., N.W., Washington, D.C. 20036, tel: (202) 296-4415, fax: (202) 835-3861

National Waterways Conference Officers

NWC's chairman is **W. Richard Christensen** of Destin, Fla., a consultant for Ashland Oil, Inc., for which he was until a few months ago vice president, marine/surface transportation and facilities. He has led the NWC since March 1993.

Serving as vice chairman is **Robert W. Portiss**, port director at the Tulsa Port of Catoosa, situated at the head of navigation on the McClellan-Kerr Arkansas River Navigation System. Tulsa will host NWC's annual meeting next year.

Harry N. Cook of Washington, D.C., is president, a post which he has held since 1978. In June, he marked his 30th anniversary as an NWC official. He joined the organization in 1964 as managing director and became executive vice president 10 years later.

NWC's first vice president is **Dennis L. Kirwin** of Houston, vice president and general manager of Midland Marine Corp.

There are four vice presidents: **Wallace A. Gieringer**, consultant for Pine Bluff-Jefferson County (Ark.) Port Authority; **Charles F. Lehman** of Jeffersonville, Ind., vice president of American Commercial Barge Line Co.; **Gale R. Rhodes** of Lakin, W. Va., manager, river transportation, AEP Fuel Supply; and **Donald G. Waldon** of Columbus, Miss., administrator, Tennessee-Tombigbee Waterway Development Authority.

William J. Hull of Sea Island, Ga., who had served as vice president and counsel since 1974, died in June. He was one of NWC's founders.

Donald C. McCrory, director of the Port of Memphis, is treasurer and **H. Nelson Spencer, III**, of St. Louis, is secretary.

The officers, plus 14 other members elected from the Board of Directors, constitute the Executive Committee:

Arthur W. Bayer of Mt. Vernon, Ind., president and general manager, Mt. Vernon Barge Service, Inc.; **Robert G. Brave**, executive director, Little Rock (Ark.) Port Authority; **W. R. (Ron) Coles** of Nashville, president, W. R. Coles & Associates; **Brian L. Garrity** of Mundelein, Ill., manager, water distribution system, IMC Fertilizer, Inc.; **Keith R. Gosney** of Chesterfield, Mo., president, Pinnacle Transportation, Inc.

William F. Harbison of Greenville, Miss., president, Arkansas River Co.; **David W. Kreutzer** of Elizabeth, Pa., general manager, river division, Consolidation Coal Co.; **Charles Douglas McGinnis** of South Point, Ohio, chair-

man, McGinnis, Inc.; **A. J. Milligan** of Birmingham, principal, fuel procurement and planning, Southern Co. Services, Inc.; **Offa S. Nichols**, also of Birmingham, president, Warrior-Tombigbee Development Assn.

R. Barry Palmer of Pittsburgh, executive director, DINAMO; **T. Mark Simmons** of Belzoni, Miss., executive committee, Lower Mississippi Valley Flood Control Assn.; **Alan Willis**, government relations representative, Port of Portland (Ore.); and **John T. Zick** of Chicago,

senior vice president, North American grain division, Continental Grain Co.

NWC is governed by a 75-member Board of Directors. Former presidents and chairpeople who are still active in the waterways industry serve on the Consultative Council. There is also an Advisory Council consisting of former Board members elected by the Executive Committee. **Vernon Behrhorst** of Lafayette, La., executive director of the Gulf Intracoastal Canal Assn., chairs the Advisory Board.

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DREDGING

U.S. Corps Of Engineers Dredge Ad Schedule

The Advertising Schedule is a report which includes information and status of all U.S. Army Corps of Engineers dredging contracts expected to be advertised in the fiscal year. The report is sorted by district code.

JS Bid Open	Quantity (cu. yds.)	DT	\$	Job Name	JS Bid Open	Quantity (cu. yds.)	DT	\$	Job Name	JS Bid Open	Quantity (cu. yds.)	DT	\$	Job Name
LMK District VICKSBURG					NAO District NORFOLK					NCR District ROCK ISLAND				
A 03/15/94	4,500,000	P	D	RED RIVER	C 10/19/93	80,000	P	A	LYNNHAVEN INLET	A 10/22/93	0	P	C	EMER LOUISA CO. DIST 11
A 03/17/94	1,000,000	P	D	QUACHITA & BLACK RIVERS	A 11/02/93	100,000	P	A	WCV - ACCOMACK COUNTY	A 10/26/93	0	P	C	EMER LOUISA #8,
A 03/22/94	1,700,000	P	D	MS RIVER HRBRS, YAZOO RIVER	A 02/08/94	40,000	P	A	NANSEMOND RIVER					LEVEE REPAIR
LMK Totals: 3 Contracts 7,200,000 CYS					NAO Totals: 14 Contracts 2,350,000 CYS					NCR Totals: 2 Contracts 0 CYS				
LMN District MEMPHIS					NAP District PHILADELPHIA					NED District NEW ENGLAND				
A 05/05/94	0	P	D	White River Dredging	A 09/28/93	546,170	P	C	WILMINGTON HARBOR FALL DRDG	A 09/01/93	965,000	B	E	NEW HAVEN HARBOR, CT.
A 05/12/94	0	P	D	Miss. R. & Harbors	A 09/28/93	546,170	P	C	WILMINGTON HARBOR FALL DRDG	A 11/03/93	102,000	H	B	CONN. RIV. BELOW HARTFORD CT
A ---	16	D	E	DUSTPAN DREDGE	A 09/28/93	546,170	P	C	WILMINGTON HARBOR FALL DRDG	NED Totals: 2 Contracts 1,067,000 CYS				
LMN Totals: 3 Contracts 16 CYS					NAP Totals: 11 Contracts 7,604,821 CYS					NPA District ALASKA				
LMN District NEW ORLEANS					NCC District CHICAGO					NPP District PORTLAND				
C 09/09/93	2,500,000	P	D	IA BRANCHE WETLAND RESTORATION	C 12/30/93	24,500	P	B	MICHIGAN CITY HARBOR	C 11/16/93	5,500	P	A	IRRIGON BOAT BASIN
C 10/20/93	2,300,000	P	D	OUTLETS @ VENICE TIGER PASS	P 07/01/94	75,000	X	B	WAUKEGON HARBOR	W 11/17/93	3,200	u	A	PORT ORFORD HOIST (CANCELED)
C 10/21/93	77,608	P	B	BAYOU LECARPE	P 08/01/94	150,000	B	C	CALUMET RIVER & HARBOR	C 11/30/93	17,000	B	A	WAHIAKUM FERRY CROSSING
C 12/09/93	31,000	B	A	BAYOU TECHE CALUMET FLOODGATE	NCC Totals: 3 Contracts 249,500 CYS					CC 12/23/93	2,000	B	B	WINCHESTER COAST GUARD STA.
A 12/14/93	7,400,000	H	D	MISS RIV SWP LSD HOP 1-94	NCE District DETROIT					W 02/11/94	40,000	P	B	ROGUE RIVER BB (CANCELED)
C 01/04/94	2,300,000	H	D	MISS RIV SWP LSD HOP 3-94	A 12/29/93	50,000	P	B	ONTONAGON HARBOR, MI	CC 02/15/94	300	B	A	FOSTER DAM STILLING BASIN
C 01/05/94	700,000	P	C	MISS RIV NEW ORL HARB 1-94	A 01/18/94	20,000	P	B	HOLLAND HARBOR, MI (OUTER)	A 03/22/94	3,280,000	H	D	COLUMBIA RIVER/COOS BAY
C 01/12/94	300,000	P	B	BERWICK BAY 1-94	A 01/18/94	20,000	P	B	GRAND HAVEN HBR, MI (OUTER)	A 03/30/94	280,000	H	D	OREGON SOUTH COAST HOPPER
A 01/24/94	450,000	P	C	BAYOU TECHE MI 0 TO 5	A 01/27/94	34,000	P	A	FRANKFORD HARBOR, MI	NPA Totals: 1 Contracts 225,000 CYS				
A 02/01/94	5,000,000	P	E	MISS RIV SWP CUTRHD 1-94	A 03/03/94	50,000	P	B	ST JOSEPH HARBOR, MI (OUTER)	NPP Totals: 3 Contracts 22,700 CYS				
C 03/02/94	1,000,000	P	C	FRSHWTR BAYOU MI 1.3 TO -4	A 03/09/94	25,000	P	B	MANISTEE HARBOR, MI	NED District NEW ENGLAND				
A 03/29/94	300,000	P	C	ATCHAF RIV BAYSBAR LSD CUT	A 03/10/94	15,000	P	A	NEW BUFFALO HARBOR, MI	A 09/01/93	965,000	B	E	NEW HAVEN HARBOR, CT.
A 04/12/94	4,760,000	H	D	MISS RIV SWP LSD HOP 2-94	A 03/22/94	117,000	P	C	MONROE HARBOR, MI	A 11/03/93	102,000	H	B	CONN. RIV. BELOW HARTFORD CT
A 04/20/94	3,000,000	H	D	MISS RIV SWP LSD HOP 4-94	A 03/22/94	170,000	B	D	DULUTH-SUPERIOR HBR MN & WI	NED Totals: 2 Contracts 1,067,000 CYS				
A 04/28/94	1,200,000	P	D	ATCHAF RIV BAY AND BAR CHNL	NCE District DETROIT					NPP District PORTLAND				
A 05/09/94	8,000,000	P	D	ATCHAF RIV SIX MI LK EMERGENCY	A 12/29/93	50,000	P	B	ONTONAGON HARBOR, MI	C 11/16/93	5,500	P	A	IRRIGON BOAT BASIN
A 05/10/94	2,000,000	P	D	ATCH RIV SIX MI LK EMERGENCY	A 01/18/94	20,000	P	B	HOLLAND HARBOR, MI (OUTER)	W 11/17/93	3,200	u	A	PORT ORFORD HOIST (CANCELED)
A 05/11/94	2,300,000	H	D	MISS RIV SWP LSD HOP 5-94	A 01/18/94	20,000	P	B	GRAND HAVEN HBR, MI (OUTER)	C 11/30/93	17,000	B	A	WAHIAKUM FERRY CROSSING
A 05/17/94	6,000,000	P	D	MRGO MILE 14 TO 6	A 01/27/94	34,000	P	A	FRANKFORD HARBOR, MI	CC 12/23/93	2,000	B	B	WINCHESTER COAST GUARD STA.
A 05/18/94	2,000,000	P	D	MISS RIV NEW ORL HBR 2	A 03/03/94	50,000	P	B	ST JOSEPH HARBOR, MI (OUTER)	W 02/11/94	40,000	P	B	ROGUE RIVER BB (CANCELED)
A 06/02/94	2,000,000	H	D	MRGO BAR CHNL LSD HOP #1	A 03/09/94	25,000	P	B	MANISTEE HARBOR, MI	CC 02/15/94	300	B	A	FOSTER DAM STILLING BASIN
A 06/09/94	700,000	P	C	OUTLETS @ VENICE BAP COLLETTE	A 03/10/94	15,000	P	A	NEW BUFFALO HARBOR, MI	A 03/22/94	3,280,000	H	D	COLUMBIA RIVER/COOS BAY
A 06/14/94	350,000	P	C	GIWW BELOW BAYOU SCORREL	A 03/22/94	117,000	P	C	MONROE HARBOR, MI	A 03/30/94	280,000	H	D	OREGON SOUTH COAST HOPPER
A 06/21/94	6,000,000	P	D	CALC RIV MI 22.7-36	A 03/22/94	170,000	B	D	DULUTH-SUPERIOR HBR MN & WI	NPP Totals: 3 Contracts 22,700 CYS				
A 07/06/94	5,000,000	H	D	CALCAS RIV BAR CHNL LSD HOP	NCE District DETROIT					NED District NEW ENGLAND				
P 07/12/94	750,000	P	C	ATCH RIV HORSESHOE EMERGENCY	A 12/29/93	50,000	P	B	ONTONAGON HARBOR, MI	A 09/01/93	965,000	B	E	NEW HAVEN HARBOR, CT.
H 09/20/94	900,000	P	C	MERMENTAU RIV MI 1.4-6.2	A 01/18/94	20,000	P	B	HOLLAND HARBOR, MI (OUTER)	A 11/03/93	102,000	H	B	CONN. RIV. BELOW HARTFORD CT
A 09/29/94	3,000,000	P	D	MISS RVR. SOUTH PASS	A 01/18/94	20,000	P	B	GRAND HAVEN HBR, MI (OUTER)	NED Totals: 2 Contracts 1,067,000 CYS				
OA --	2,300,000	H	D	MISS RIV SWPLSD HOP 6-94	A 01/27/94	34,000	P	A	FRANKFORD HARBOR, MI	NPA District ALASKA				
OA --	700,000	P	C	MISS RIV NEW ORL HARB 3-94	A 03/03/94	50,000	P	B	ST JOSEPH HARBOR, MI (OUTER)	A 03/09/94	225,000	W	D	ANCHORAGE HARBOR, AK
OA --	1,000,000	P	D	MISS RIV SALTWATER SILL	A 03/09/94	25,000	P	B	MANISTEE HARBOR, MI	NPP District PORTLAND				
OA --	700,000	P	C	3 RIV ORL FBAY PAL FBAY BR H	A 03/10/94	15,000	P	A	NEW BUFFALO HARBOR, MI	C 11/16/93	5,500	P	A	IRRIGON BOAT BASIN
OA --	2,400,000	P	D	MISS RIV SWP CUTHD 2-94	A 03/22/94	117,000	P	C	MONROE HARBOR, MI	W 11/17/93	3,200	u	A	PORT ORFORD HOIST (CANCELED)
OA --	2,300,000	H	D	MISS RIV SWP LSD HOP 7-94	A 03/22/94	170,000	B	D	DULUTH-SUPERIOR HBR MN & WI	C 11/30/93	17,000	B	A	WAHIAKUM FERRY CROSSING
OA --	2,300,000	H	D	MISS RIV SWP LSD HOP 8-94	NCE District DETROIT					CC 12/23/93	2,000	B	B	WINCHESTER COAST GUARD STA.
OA --	2,300,000	H	D	MISS RIV SWP LSD HOP 9-94	A 12/29/93	50,000	P	B	ONTONAGON HARBOR, MI	W 02/11/94	40,000	P	B	ROGUE RIVER BB (CANCELED)
OA --	1,000,000	H	C	MISS RIV XINGS LSD HOP 1-94	A 01/18/94	20,000	P	B	HOLLAND HARBOR, MI (OUTER)	CC 02/15/94	300	B	A	FOSTER DAM STILLING BASIN
OA --	1,000,000	H	C	MISS RIV XINGS LSD HOP 2-94	A 01/18/94	20,000	P	B	GRAND HAVEN HBR, MI (OUTER)	A 03/22/94	3,280,000	H	D	COLUMBIA RIVER/COOS BAY
A --	2,500,000	P	D	MISS RVR XINGS	A 01/27/94	34,000	P	A	FRANKFORD HARBOR, MI	A 03/30/94	280,000	H	D	OREGON SOUTH COAST HOPPER
LMN Totals: 39 Contracts 88,818,608 CYS					NCE District DETROIT					NED District NEW ENGLAND				
NAB District BALTIMORE					NCC District CHICAGO					NPP District PORTLAND				
Hb 02/23/94	20,000	P	B	LITTLE WICOMICO RIVER, VA	C 12/30/93	24,500	P	B	MICHIGAN CITY HARBOR	C 11/16/93	5,500	P	A	IRRIGON BOAT BASIN
A 03/22/94	25,000	P	B	HERRING BAY, MARYLAND	P 07/01/94	75,000	X	B	WAUKEGON HARBOR	W 11/17/93	3,200	u	A	PORT ORFORD HOIST (CANCELED)
A 04/14/94	42,000	P	B	RHODES PT. TO TYLERTON, MD	P 08/01/94	150,000	B	C	CALUMET RIVER & HARBOR	C 11/30/93	17,000	B	A	WAHIAKUM FERRY CROSSING
A 07/20/94	2,000,000	B	E	BALT HARB & CHAN 50'	NCC Totals: 3 Contracts 249,500 CYS					CC 12/23/93	2,000	B	B	WINCHESTER COAST GUARD STA.
NAB Totals: 4 Contracts 2,087,000 CYS					NCE District DETROIT					NPP District PORTLAND				
NAN District NEW YORK					NCC District CHICAGO					NPP District PORTLAND				
A 12/20/93	3,827,000	Y	E	SEABRIGHT	C 12/30/93	24,500	P	B	MICHIGAN CITY HARBOR	C 11/16/93	5,500	P	A	IRRIGON BOAT BASIN
A 01/10/94	375,000	P	A	JONES INLET	P 07/01/94	75,000	X	B	WAUKEGON HARBOR	W 11/17/93	3,200	u	A	PORT ORFORD HOIST (CANCELED)
A 01/10/94	200,000	Y	D	JAMAICA BAY	P 08/01/94	150,000	B	C	CALUMET RIVER & HARBOR	C 11/30/93	17,000	B	A	WAHIAKUM FERRY CROSSING
A 01/28/94	2,250,000	P	E	CONY ISLAND	NCC Totals: 3 Contracts 249,500 CYS					CC 12/23/93	2,000	B	B	WINCHESTER COAST GUARD STA.
A 04/28/94	500,000	Z	D	HUDSON/EDGEWATER	NCE District DETROIT					W 02/11/94	40,000	P	B	ROGUE RIVER BB (CANCELED)
HF 08/10/94	1,000,000	P	E	FIRE ISLAND TO JONES	A 12/29/93	50,000	P	B	ONTONAGON HARBOR, MI	CC 02/15/94	300	B	A	FOSTER DAM STILLING BASIN
A 08/25/95	186,000	X	A	MILITARY OCEAN TERMA-BAYONNE	A 01/18/94	20,000	P	B	HOLLAND HARBOR, MI (OUTER)	A 03/22/94	3,280,000	H	D	COLUMBIA RIVER/COOS BAY
HP --	200,000	B	D	NEWARK/PORT ELIZ RARITAN RIVER	A 01/18/94	20,000	P	B	GRAND HAVEN HBR, MI (OUTER)	A 03/30/94	280,000	H	D	OREGON SOUTH COAST HOPPER
HP --	200,000	B	C	NEWARK/HACKENSACK	A 01/27/94	34,000	P	A	FRANKFORD HARBOR, MI	NPP District PORTLAND				
HP --	300,000	B	D	NEWARK/HACKENSACK	A 03/03/94	50,000	P	B	ST JOSEPH HARBOR, MI (OUTER)	C 11/16/93	5,500	P	A	IRRIGON BOAT BASIN
NAN Totals: 10 Contracts 9,038,000 CYS					NCC District CHICAGO					NPP District PORTLAND				

(Dredging Charts Continued on page 36)

Advertising Schedule Legend

Job Status [JS]

A Active
 C Completed
 CC Claim on Payment Pending
 H Hold-Miscellaneous Reason
 HB Hold-Protest on Bid
 HF Hold-Awaiting Funding
 HP Hold - Awaiting Permit
 M Moved to another FY
 OA Open by Amendment
 P Proposed-Not yet active
 u undefined
 W Withdrawn

Dollar Range (\$)

A Up to \$99,999
 B \$100,000 to \$499,999
 C \$500,000 to \$999,999
 D \$1,000,000 to \$4,999,999
 E \$5,000,000 and above

Dredge Type [DT]

B Bucket
 D Dustpan
 H Hopper
 N Nonconventional type
 P Pipeline
 S Sidecaster
 W All Types
 X Pipeline & Bucket
 Y Pipeline & Hopper
 Z Hopper & Bucket

Source: U.S. Army Corps of Engineers

\$148.6 Million Dredging Contract Awarded In Los Angeles

A \$148.6 million contract for the largest dredging and landfill project in the U.S. was awarded by the Los Angeles Board of Harbor Commissioners to The Pier 400 Constructors, a joint venture of Great Lakes Dredging & Dock Co. and Connolly-Pacific Co.

The dredging project is the cornerstone of the Port of Los Angeles Pier 300/400 Implementation Program, an expansion project to help accommodate an expected doubling of cargo by the year 2020. The three-year dredging project, which is scheduled to begin this August, will generate a total of 4,200 direct and indirect jobs in the region, with 2,100 jobs created during the peak year of construction in 1995. Total regional industry sales are expected to amount to nearly \$215 million.

The dredging of 30 million cubic yards of material will produce water depths of 45 to 63 ft. (13.7 to 19.2 m) to accommodate deep-draft containerships and dry bulk vessels. The dredged material will be contained behind rock dikes, creating a 265-acre portion of a new land mass called Pier 400. The new land in the Port's outer harbor will be available for future terminal developments as part of the total 582 acres planned for Pier 400.

This program includes the construction of the American President Lines Container Terminal, reportedly the largest facility of its kind in the nation; the Los Angeles Export Terminal, a state-of-the-art dry export facility; and an intermodal container transfer facility.

Atlantic Champion Gets \$29-Million Restoration At Marystown Shipyard

The *Atlantic Champion*, Ottawa's Department of Fisheries and Oceans' newly acquired Fisheries Assessment Research Vessel (FARV), will be managed in-house by the Department's Vessel Management Directorate.

The department sought bids to determine whether industry would be able to provide more cost-effective management of the vessel. All five bids received, which ranged from \$4.1 to \$5.1 million for the first year of operation, were higher than the in-house projected cost of \$3.7 million.

The *Atlantic Champion* will replace the chartered vessel *Gadus Atlantica* and is expected to go into service as a research vessel in the fall. The 207-ft. (63-m) trawler is being modified and re-equipped at Marystown Shipyard Ltd. in Marystown, Newfoundland. After the \$29-million modification, the vessel is expected to have a useful service life of 25 years. The vessel will be used to undertake enhanced studies of the state of the northern cod and other groundfish stocks.

OSI Expands North American Dealer Network

Offshore Systems International (OSI), a leader in Precise Electronic Marine Navigation Systems, announced the establishment of an extensive dealer network throughout N. America and Hawaii. The network will reportedly allow the company to serve the maritime com-

munity more effectively and will increase the company's market penetration. The following organizations were tapped by OSI:

- Pacific Region: Navatek Electronics, Honolulu
- Pacific Region & East Coast Region: Radar Services, Los Angeles, Portland & Ft. Lauderdale
- Pacific Coast: Brian Woolf & Assoc., Walnut Creek, Calif.
- Pacific Region & Atlantic Region:

Raytheon Services Co., San Francisco (Maryland, Virginia, N.J.)

- Gulf Coast: F.L. Radio, Metairie, La.
- Gulf Coast: G.S. Industries, Pasadena, Texas
- Atlantic Coast: Seacoast Electronics, Jacksonville, Fla.

OSI also announced the sale of an ECPINS (Electronic Chart based Precise Integrated Navigation System) to Clipper Cruise Line.

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In fact, many people at sea have come to think of COMSAT operators as a "friendly voice from home" that they can always count on.

And in a real emergency, you can always

count on highly trained COMSAT operators such as Suzanne Loetz of our Santa Paula facility. Suzanne recently sprang into action to get quick rescue assistance to a cargo ship sailing near Indonesia after she received an urgent distress call saying the ship had been boarded by armed pirates.

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MarAd News (cont.)

(Continued from page 31)

MarAd Section 9 Applications

MarAd has received three Section 9 applications for approval under the Merchant Marine Act, 1916, as amended:

- Neptune International, Inc., Elk Grove Village, Ill., requested permission to sell the 40,631-dwt tanker *Texas Trader*. The proposed purchaser is Neter Navigation SA, Singapore. The vessel was built in 1957 in Newport News, Va. If approved, the tanker would be scrapped in India.
- MarAd has given Sjovind Enterprises, Inc. and Gravina Fisheries, Inc., Mercer Island, Wash., permission to change to Belize registry the 1,076-gt fishing vessel *Sjovind*. Built in 1977 in Houma, La., the vessel will be used for crab fishing and other available fisheries.
- MarAd has received an application from Action Marine, Inc., Luling, La., for permission to sell the 1,026-gt deck barge *Bengal-180*. The proposed purchaser is Irvin Kanhai, Paramaribo, Suriname. The vessel was built in 1981 in Houma, La. If approved, the barge would be transferred to Suriname registry and used to transport timber from and within Suriname and trading in South America and the Caribbean.

MarAd Awards \$7.8 Million Training Vessel Conversion Contract

MarAd has awarded a \$7.8 million contract to Stevens Technical Services, Inc., Brooklyn, N.Y., for conversion of the naval survey vessel USNS *Chavenet* to a public nautical schoolship. It will replace the Texas Maritime Academy's *Texas Clipper*.

MarAd provides training vessels to five sea-coast academies for use in at-sea training and as shoreside laboratories to assist in training deck and engine officers for the American merchant marine.

The contract requires that all repairs necessary to meet regulatory survey and inspection requirements be performed. It also requires that all necessary personnel, material, equipment, services and facilities be provided. The work is scheduled to be completed in 10 months.

MarAd Grants Lykes Permission To Alter ODS Subsidizable Lives

MarAd and the Maritime Subsidy Board have given approval to a request from Lykes Brothers Steamship Co., Inc. to waive section II-28(c) of its operating differential subsidy agreement in order to terminate the final subsidized voyage of the *Velma Lykes* in Mogadishu, Somalia, and to extend the subsidizable life of the vessel, pursuant to section 605(b) of the Merchant Marine Act, 1936, as amended, until final discharge of cargo in Mogadishu. The board determined that it is in the public interest to grant financial aid for the vessel beyond its 25-year life.

In approving the application, the board required a reduction in the previously extended subsidizable life of the *Stella Lykes*, and applying the reduced subsidy amount to the extension of the *Velma Lykes*. The agency also said granting the financial aid is necessary to place the proposed operation of the vessel on a parity with those of foreign competitors.

August, 1994

Senate Armed Services Committee

Deadlocked On RoRo/Helicopter Carrier Funding

A debate troubled the Senate Armed Services Committee over whether it should approve the spending of \$601 million to fund two RoRo cargo ships, to be built by Avondale Shipyards Division in New Orleans, La. and National Steel and Shipbuilding Co. (NASSCO) in San Diego — or whether the money would be channeled toward a \$1.4 billion helicopter carrier to be built by Litton Industries, Miss.

A reported error on the part of the Navy regarding the expiration dates of contract options led to some confusion as to where the funds would be best spent this year, and which project could come out of budgets for future fiscal years.

When it became clear that the options for both projects expired at the same time, support reportedly grew for the RoRo vessels, including the support of Joint Chiefs of Staff Chairman John Shalikashvili.

The Senate reportedly appeared ready to

approve funding, but a group including Armed Services committee member Trent Lott (R-Miss), who is from Litton's home state, barred final action on the issue, insisting the Senate at least partially fund the helicopter carrier.

Approvals

The panel approved \$2.7 billion requested for three Navy destroyers equipped with the Aegis anti-aircraft system and \$258 million for 202 Standard missiles carried by the Aegis destroyers.

The panel also added \$29 million onto a requested \$374 million to develop more effective defenses for smaller ships against aircraft and missile attack; approved \$266 million to continue the development of a new submarine smaller than the Seawolf-class ships now being built; the committee also added to the bill \$5 million to speed the process of giving Navy ships separate living quarters for women.

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equipment, sensors and vision, process equipment, automation accessories, safety systems, material handling and custom software.

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For more information on CYBO Robots Circle 76 on Reader Service Card

Raytheon's RL-9 Radar: Compact And Compatible



Raytheon Marine company introduced its RL-9 LCD Radar earlier this year. The unit, measuring 8.2 in. by 7.8 in. by 2.5 in., features 1/8- to 16-mile nautical range scales and 2 kW transmitting power. The RL-9 is waterproof to U.S. Coast Guard CFR 46 standards and has a 7-in. diagonal temperature compensated screen, which Raytheon says means it won't turn black, even in bright sunlight.

The unit is also Raychart compatible: plug the Raychart 600XX control head into the RL-9 to view detailed C-MAP® electronic charts on the radar display. The user can then alternate back and forth between full-screen electronic chart and radar display. Other features include: Timed Transmit mode, which automatically turns the transmitter and antenna on and off to conserve power; Guard Zone to warn when targets enter or leave selected areas; 2X Zoom; and Off-centering up to 66 percent to expand the forward view without changing the range setting. The unit comes with six-degree horizontal beamwidth radome antenna and 33 ft. (10 m) of interconnecting cable.

For more information on Raytheon Circle 77 on Reader Service Card

V-Links Corp. Emergency Belt Good In A Pinch

The Emergency Ready V-Belt reportedly offers a quick and easy-to-install solution for a wide range of applications where an immediate replacement is needed for a failed belt. Whether used in a power boat or with industrial machinery, the individual-link construction and open-end design enables users to bypass obstacles and easily mount

the belt on pulleys. Once in place, the belt is adjusted to the required length by simply removing the excess material and snapping the two ends together to form a secure, continuous loop. Although intended as an interim measure, automotive tests in a vehicle operating at highway speeds for more than 6,000 miles caused no failure in the belt.

For more information on V-Links Corp. Circle 78 on Reader Service Card

Drew Ameroid Offers Amerarc™ Constant-Current Arc Welder



Drew Ameroid Marine has introduced a new constant-current arc welding machine it claims brings the benefits of modern inverter technology to shipboard welding operations. Because of its efficient inverter design, the durable, heavy-duty Amerarc™ I-300GTS inverter arc welding machine is also lightweight and portable. This enables the machine to be brought to the work site, minimizing required cable length and voltage drop problems. With a built-in high-frequency starter and gas control system, the I-300GTS also satisfies the requirements for a portable automated Tungsten Inert Gas (TIG) welding system. Measuring 12 in. by 20 in. by 18 in. (305mm by 510mm by 470mm), the unit weighs 84 lbs. (38 kg). The unit offers constant current output of 300 amps DC power at 60 percent Duty Cycle, and 375 amps at 35 percent. The Open Circuit Voltage is 70 volts. A 13-ft. (4-m), four-conductor primary cable is included, and no additional wiring or adjustments are required.

For more information on Drew Ameroid Circle 79 on Reader Service Card

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- Enclosed gears
- Unique automatic load activated brake
- Four sizes—150LB - 1,100LB line pull capacities

WGCF SERIES

- Center flange to separate the two ropes on the drum
- Two speed on larger models
- Tough cast construction with steel frame
- Removable handcrank—even under load
- Unique automatic load-activated brake
- Five sizes—1,100LB - 11,000LB line pull capacities

V SERIES

- Tough and rugged for continuous heavy duty use
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- Unique automatic load activated brake
- High rope/drum ratios for maximum rope life
- Six sizes—550LB - 11,000LB line pull capacities

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- Double braking system—completely automatic. One centrifugal dynamic brake to prevent over speed, one automatic load activated brake to hold load in any position.
- Totally enclosed gears for use in adverse conditions
- High rope/drum ratios for maximum rope life
- Four sizes—660LB - 3,300LB line pull capacities

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- Chainwheel operated for use in inaccessible locations
- Forty feet of chain as standard
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- Six sizes available—550LB - 11,000LB

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Circle 242 on Reader Service Card

FBM Wins Portugal Catamaran Order

by Andy Smith & Carol Fulford, international editors

FBM Marine in the U.K. has received an order for four 148-ft. (45-m) catamaran passenger ferries from Portuguese operator Transtejo SA. The contract was reportedly won against intense international competition, and the U.K. yard was favored in part because its bid included the lowest fuel consumption figures, substantiated by results on similar craft working U.K. routes.

Intended to carry 500 passengers on various commuter routes across the River Tagus, the longest

river on the Iberian Peninsula, the new design of aluminum catamaran is a development of a proven class known for low wash and wake characteristics. It incorporates a futuristic superstructure featuring exterior panels in fiber reinforced plastic sandwich, similar to the five FBM 50-knot TriCats currently under construction for Hong Kong. FBM will build the first two craft, but plan to subcontract the remainder to Estaleiros Navais do Mondego SA in Portugal. Peterson Builders Inc. is FBM's licensee in the U.S.

Maritime Reporter/Engineering News

Brookfield Cone-Plate Viscometers Offer High Shear Rates

Brookfield's new CAP 2000 series of cone-plate viscometers offers high shear rates and variable speeds in an instrument Brookfield says is optimized for R & D and QC applications. The instrument develops variable shear rates to 26,600 sec⁻¹ and speeds from 50 to 2,000 rpm. Other features include rapid sample temperature control from five to 200 degrees C with accuracy to within plus/minus five percent.

The CAP 2000 can be used in either a free-standing or programmed operation using its RS232 computer interface. There is also a parallel printer interface to provide documented test data. Brookfield says other advantages of CAP 2000 are ease of use, ability to test small samples less than 1 ml in volume, rapid testing, speed and ease of cleanup.

Optional features include CAPCALC® application software

for data gathering and analysis, choice of cone angles for different viscosity ranges, high temperature model with operation to 200 degrees C, and single-speed model CAP 1000 designed especially for the paint and coatings industry with single shear rate measurements around 10,000 sec⁻¹.

For more information on Brookfield Circle 80 on Reader Service Card

Nelson Pipe-Choke System Offers Cost-Effective Firestopping

Nelson's new PCS™ Pipe Choke System is designed as an economical, easy-to-install through-penetration firestop solution for a wide range of applications. Consisting of a heavy-gauge metallic collar filled with non-toxic highly intumescent material, the system mounts easily around non-metallic pipes up to 4 in. in diameter.

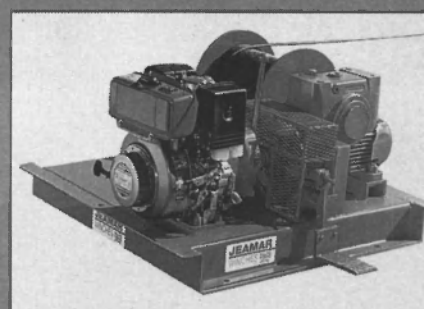
The Pipe Choke installs flush to the surface in minutes with ordi-

Jeamar Introduces New Winch Line

Jeamar Winches has introduced a new line of engine-powered winches in sizes ranging from 2,000-lb. line pull to 18,000-lb. line pull as standard sizes, with larger sizes on request.

All sizes are available with either gasoline or diesel engines. Standard features include automatic fail safe braking and variable speeds; the units also offer portability, compactness and conformity to ANSI standards.

Jeamar says the new line is de-



signed for continuous heavy duty operation at low maintenance and operating cost.

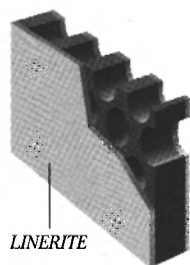
For more information on Jeamar Circle 81 on Reader Service Card

nary toggle or anchor bolts. No special tools or skills are required. A seam in the collar allows it to be easily opened and then closed by means of an integral clamp, making it removable for installation later or transfer for a pipe of equal diameter. The system will expand when a fire raises the ambient temperature above 300 degrees F, sealing

the void created by deteriorating non-metallic pipes to prevent passage of fire and smoke. Certifications include UL 1479, ASTM E-814, and ASTM E-119 ratings. Four PCS sizes are available, to accommodate pipes of 1.5, 2, 3, and 4 in. in diameter.

For more information on Nelson Circle 82 on Reader Service Card

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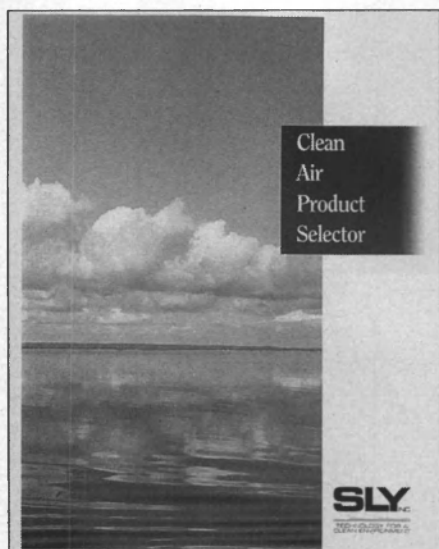


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"Clean Air Product Selector" Is New Brochure From Sly



A new brochure from Sly, Inc. discusses a range of equipment available to solve industrial air pollution problems. Included in the new brochure, dubbed "Clean Air Product Selector," are both wet scrubbers and dust collectors. The brochure contains reference charts to assist users in understanding the many facets of

air pollution control. General product information is offered on a variety of collectors, including pulse jet, shaker, cartridge and pulse-cleaned envelope bag styles.

For a copy of the Sly brochure
Circle 191 on Reader Service Card

O'Keefe Joins Resolution Management

Resolution Management Consultants, a professional firm specializing in providing program

management and dispute resolution services to the construction, shipbuilding/shiprepair and cruise line industries, announced that **Gerard P. O'Keefe** has joined the Marine Services Group. A 1959 graduate of New York State Maritime College, Mr. O'Keefe also obtained an MBA degree from William and Mary. He previously served in the U.S. Navy and held a number of positions with Newport News Shipbuilding early in his career, when he was involved in the engineering, construction and production control management of naval nuclear and commercial vessels. Over the past 10 years, he has worked in the analysis of shipyard requests for equitable adjustments, among other activities.

For more information on Resolution Management
Circle 198 on Reader Service Card

Intl. Ship Repair & Marine Services Names Two Vice Presidents

George H. Lorton, president and owner of Tampa, Fla.-based International Ship Repair & Marine Services, Inc., named **James D. Braukman** to the position of vice president, operations, responsible for the day-to-day operations of the shiprepair facility. Previously he was a vice president at Gulf Marine Repair Corp. Mr. Braukman earned a degree in Business Administration at the University of Cincinnati. Also, **Peter C. Maschke** was named vice president, marketing, a newly created position. Mr. Maschke brings 30 years of marine sales experience, having held similar positions at Maryland Shipbuilding & Drydock; The American Shipbuilding Co.; John J. McMullen Assoc.; Bender Shipbuilding & Repair Co., Inc.; and at Campbell Shipyard.

Lang Introduces Maximizer 30

Lang, which provides commercial and marine cooking equipment, has added the Maximizer 30 convection oven range to its marine product line. The new unit features: (Hatchable) two-piece construction to allow passage through a 26-in. by 66-in. watertight door; convection oven base; stainless steel exterior to include front, back and sides; a larger grease bucket for extra waste containment; adjustable four-in. legs with bolt-down flange; all marine hardware, latches and sea rails; and Underwriters Lab tested and listed as meeting UL 197 to include the marine supplement per the U.S. Coast Guard regulation 46 CFR 111.77-3.

For a full spec sheet from Lang
Circle 199 on Reader Service Card

Royal Schelde Expands Commercial Work

Royal Schelde is directing more effort toward the commercial shipbuilding market, as evidenced by the construction of the ferry *Koningin Beatrix* and a RoRo order from Commodore Shipping. The company is modifying one of the graving docks at its Scheldepoort shiprepair yard to accommodate vessels with beams of up to 92 ft. (28 m).

Scheldepoort was busy recently with the *Sea Cat Scotland*, first of a series of sea cat catamarans overhauled at Scheldepoort. Of the aluminum vessel's four waterjets, two were steerable. At Scheldepoort, the other two waterjets were also made steerable with new cabling and hydraulics. The four Ruston 16V main engines were overhauled, and stainless steel cold water pipes and a new lubricating oil cooler were installed in the engine room. The hull and paint system were repaired, the four aluminum stern tubes renovated, and the alignment of the propulsion units was checked and corrected. Schelde Services was involved in the overhaul of engine parts on *Sea Cat Scotland*; Schelde MT-Products did the propeller shaft pipe prefabrication and assembly work for the *Sea Cat Scotland* and the *Sea Cat Boulogne*, as well as making two T-foil stabilizers; and Schelde Shipbuilding carried out drawing work for the aluminum constructions. Between naval and commercial work, the capacity of Schelde Shipbuilding will be utilized almost totally in the next few years. In addition to preparing for a Royal Netherlands Navy contract won in April for an amphibious transport ship, the company is presently finishing a project to build an eight-ship series of M-frigates, the last of which will be delivered to the Royal Netherlands Navy in 1995, along with a naval supply ship.

For more information on Royal Schelde
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ABS Offers Guide To ISO Standard, ISM Code

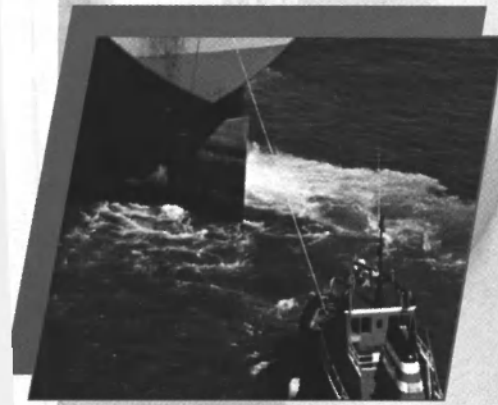
American Bureau of Shipping (ABS) Marine Services published a Marine Management and Ship Operations Guideline. The document serves to provide guidance to shipowners, ship operators and others in understanding the requirements of the International Safety Management (ISM) Code and ISO 9002 standard as applied to marine management. The guideline places the ISM Code requirements in the framework of an ISO 9002 interpretation for ship management and operation. ISM is the International Management Code for Safe Operation of Ships and Pollution Prevention. Under the terms of an amendment to the SOLAS Convention, its implementation becomes a requirement in 1998.

Requests for the guideline may be faxed directly to (713) 874-5974.

A Commonly Asked Question From Our Readers



Q. Is there a difference between Dacron® and polyester fibers for ropes and cordage?



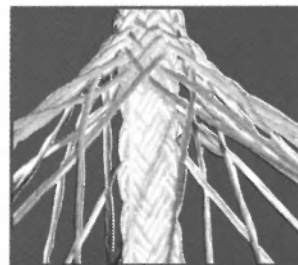
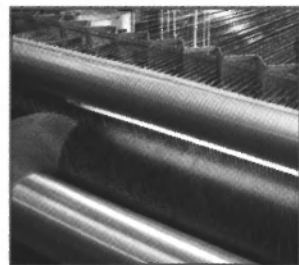
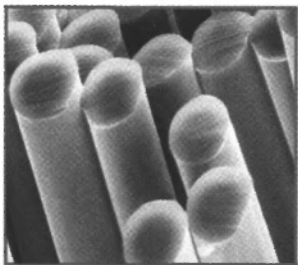
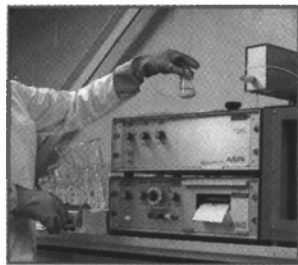
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application. All polyester offers great flexibility in manufacturing. This is exemplified by AlliedSignal Fibers application-oriented line of polyester products. Polyester can have ultra-low elongation (for heavy lifting applications), high modulus (for tires), or low shrinkage (for broad woven fabrics).

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For further information, contact AlliedSignal Fibers, 224 West 35th Street, Suite #1500, New York, NY 10001.

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REGIONAL REPORT

WEST COAST YARD REVIEW

By
Kathleen Gleaves,
contributing editor

Consisting mainly of small to medium-size yards, the West Coast is a specialty market. But specializing has its rewards, as West Coast yards have earned a reputation for quality workmanship, innovative design and construction methods, and the flexibility to change with the marketplace.

The group of yards included in this report vary widely, from giant National Steel & Shipbuilding Co. (NASSCO) to mid-sized Todd to the smaller Westport. However, the shared goal among all is continued strong business of ship and boat building and repair.

Todd Shipyards, Seattle, Wash.: New manager, **Roland Webb** came to Todd from a three-year stint as

project director for Integrated Ferry Constructors, Inc., where he oversaw the modular construction of B.C. Ferry's newest Spirit class vessels.

Stockholders charged Mr. Webb with the task of reorganizing a cumbersome, outdated facility and streamlining it to compete in the lean marketplace of the '90s.

Consultants from Maritech Engineering Japan (MEJ) are assisting in the restructuring efforts which include updating equipment and downsizing staff.

Todd recently converted two Matson containerships to the new open-top design, and completed renovations to the *Tillicum*, a Washington State ferry, and the U.S. Coast Guard (USCG) icebreaker, *Polar Star*. They currently have an off-site crew working on the USS

Nimitz at the Naval Shipyard in Bremerton. Future work includes a second icebreaker and a major overhaul of the USS *Camden*, a Navy AOE.

Todd runs three drydocks ranging in size from 412 ft. x 66 ft. (125.5 m x 20.1 m) to 873 ft. x 137 ft. (266 m x 41.7 m) with a maximum capacity of 40,000 long-tons. In answer to local environmental concerns, Todd is in the process of replacing its sandblasting equipment with waterblasting technology.

"We can offer a more strategic location," says Mr. Webb of Todd's Port of Seattle dock, "and a full-service yard."

Crews can be dispatched directly to the unloading docks, many times facilitating repairs without interrupting shipping schedules.

Although primarily a repair and conversion yard, Todd is currently preparing a construction bid for the Jumbo Mark II ferries, a proposed \$210 million, three-vessel project for the Washington State Ferry System.

Nichols Bros. Boat Builders, Whidbey Island, Wash.: Located on an island in Puget Sound, Nichols Bros. can currently accommodate 430-ft. (131-m) vessels on-site. Its involvement with a local consortium known as the Evergreen State

Shipbuilders will increase that capacity into the 500-ft. (152.4-m) range by utilizing modular construction methods.

Nichols and the consortium hope to exhibit their joint capabilities on the 468 ft. x 90 ft. (142.6 m x 27.4 m) Jumbo Mark II ferries and are aggressively pursuing that contract. Completing the consortium triad are Dakota Creek Industries, Anacortes, Wash., and JM Martinac Shipbuilding Corp. of Tacoma, Wash.

Seventy-five percent of Nichols Bros.' work is new construction, with the majority of that in the passenger boat area: gaming and dinner boats, mini cruise ships, and fast-ferry catamarans.

Most significant is its relationship with International Catamaran. Nichols is currently working on its 21st custom-designed InCat hull, a boat featuring the new Z-bow design.

Also underway is a SWATH-design gaming boat. According to Bryan Nichols, the gas turbine driven, all-aluminum hull is capable of 28-knot speeds.

A recently signed contract with Yacht Ship Cruises in Seattle calls

Todd Shipyards, pictured below, recently converted two Matson containerships to the new open-top design, and completed renovations to the *Tillicum*, a Washington State ferry,



for a 230-ft. (70.1-m) mini cruise boat reminiscent of a Mississippi River sternwheeler with a working mechanical drive paddle. The ship will carry 154 passengers on overnight cruises along the Columbia River.

Five years ago Nichols Bros. added a yard in Portland, Oregon. That yard is currently building a 54-car ferry and split-hull hopper dredge.

Facility expansion is a priority. **Matt Nichols**, company president, expects the Washington yard to double in size in the next five years.

Future plans include the design and marketing of a high-speed cargo ship utilizing a wave-piercing hull to produce a projected 40-knot speed cargo ship.

NASSCO, San Diego, Calif.: The largest shipyard on the U.S. West Coast, NASSCO is a full-service facility capable of handling vessels up to 1,000 ft. (304.8 m) long. NASSCO is currently handling three multiple-vessel Navy contracts: four 950-ft. (289.5-m) AOE's — one delivered, three in progress; three cargo vessel conversions to RoRo for Navy Sealift; and its latest contract, the construction of six, NASSCO-designed Navy Sealift vessels — one firm, five options.

According to NASSCO Vice President **Fred Hallett**, the lack of future military contracts means they will be competing for more commercial business than ever before. The wish-list of prospective projects includes hospital ships, ocean-going cruise ships, car carriers, and an increasing share of the double-hull tanker construction business.

Although primarily a repair and conversion yard, Todd is currently preparing a construction bid for the Jumbo Mark II ferries, a proposed \$210-million, three-vessel project for the Washington State Ferry System

Westport Shipyards, Westport, Wash.: This small yard owned by brothers **Randy and Rick Rust** is located on Washington's Pacific Coast in Grays Harbor. Originally catering to the commercial fishing and chartering industry, it now specializes in construction of fiberglass passenger vessels and pleasure yachts. Westport claims to have built more large (80 ft. [24.4 m] to 128 ft. [39 m]) fiberglass hulls than any other shipyard in the U.S.

August, 1994

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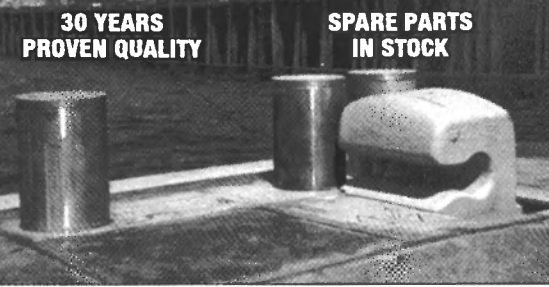


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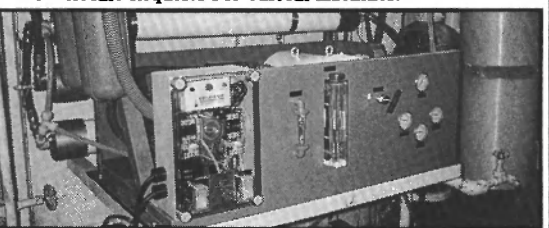
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WEST COAST T&E REVIEW

Projects currently underway include five 106 ft. (32.3 m) pleasure yachts for Westship Yachts, Inc. of Florida, and two high-speed monohull passenger-only ferries for Catalina Express, a private company operating the 100-ft. (30.5 m) ferries along the Southern California coast.

As a noted fiberglass specialist, Westport inventories a wide selection of fixed and adjustable hull molds ranging from 46- to 130-ft. (14- to 39.6-m) lengths with the greatest emphasis on the 80- to 118-ft. (24.4- to 35.9-m) range in a variety of designs.

Westport recently received USCG concept approval on a combination fiberglass and aluminum hull capable of carrying 150 to 400 passengers. They will combine their fiberglass expertise with the aluminum know-how of Nichols Bros. Boat Builders, its partner in this unique joint proposal. Westport hopes to begin construction on this new design in the near future.

Vancouver Shipyards, Vancouver/Victoria, B.C., Canada: The Vancouver Shipyard consists of three separate facilities, two in Vancouver and a third in Victoria.

The Victoria yard is used strictly for repair work and features a 1,173 ft. x 126 ft. (357.5 m x 38.4 m) graving dock.

Of the two yards situated in Vancouver, one is used for new construction, the other for repairs. The repair yard has a 720-ft. x 150-ft. (219.5-m x 45.7-m) floating drydock with a 36,000-ton lift. New-construction facilities include a 550-ft. x 100-ft. (167.6-m x 30.5-m), side-launch building berth.

Past projects include ferry, cruiseliner, and



Nichols Bros. recently delivered the Bay Breeze.

tanker repair, and ferry, tug and barge construction.

The B.C. Ferry System's ambitious renovation and expansion plans play a positive role in the future of Vancouver Shipyards. With the recent closure of Yarrow Ltd., a major competitor in the ferry business, Vancouver plans to be a contender for the upcoming work. Vancouver is a full-service yard, and boasts the largest heavy machine shop in the area. Marketing Manager **Bill Armstrong** said that "quality work and quick turn-arounds" are Vancouver's hallmarks.

Portland Shipyard, Portland, Oregon: Formerly Portland Ship Repair, the name was changed to more accurately reflect the facility's scope of work.

Portland has three active drydocks, among them a 982-ft. x 185-ft. (299.3-m x 56.4-m) with an 87,000 long-ton lift capacity making it the largest floating drydock in the Americas.

Portland currently works with two primary contractors, West State, Inc., and Cascade General, Inc., and is actively seeking foreign contractors in the building and conversion trade.

VLCCs, the Alaska tanker fleet, and MarAd support vessels have been its primary focus, but **Dick Montgomery**, spokesman for Portland, sees cruise ships as the major growth area for the yard. Holland America's *Rotterdam* and *Westerdam* are scheduled for brief visits this fall. Eight to 12 more cruise ships are expected in the next year.

Marine Industries Northwest, Inc. (MINI), Tacoma, Wash.: Primarily a repair and conversion yard, company President **Don Slater** sees MINI changing its focus from the fishing industry to the oil trade and oil spill response vessels.

MINI builds a unique ABS- and USCG-approved removable module for barges and other oil spill response vessels. The module provides vessel flexibility by allowing a certification change from unstaffed to staffed barges with the modules attachment.

Zidell Shipyard, Portland, Ore.: Zidell operates a cargo barge leasing operation and builds all its fleet barges at its Portland yard.

Currently under construction are two ocean-going, flat-deck barges, one measuring 375 ft. x 36 ft. (114.3 m x 10.9 m), the other 285 ft. x 78 ft. (86.9 m x 23.8 m).

Cadenza Marine, San Diego, Calif.: Cadenza is working on a prototype for its SSHARP ferries, a futuristic passenger-only vessel consisting of a narrow hull balanced atop Hydrolance's Wave Piercer rails. The vessels will carry rotary engines and utilize a proprietary waterjet propulsion system.



PORTLAND SHIPYARD has three active dry docks, including a 982-ft. x 185-ft. (299.3-m x 56.4-m), 87,000-long ton lift capacity floating dry dock.

For additional information on any of the vessel builders mentioned in this U.S. West Coast review, circle the corresponding number on the Reader Service Card bound in this issue.

Cadenza Marine	37
Marine Industries Northwest Inc.	38
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Vancouver Shipyards	44
Zidell Shipyard	45

For news on select West Coast Suppliers, see product information on page 55.

Bender Delivers Patrol Boat To Colombia

Bender Shipbuilding & Repair Co., Inc. of Mobile, Ala. delivered the second 116-ft. (35-m) patrol boat to the Colombian Navy's Coast Guard.

The A.R.C. *Jose Maria Garcia De Toledo* began its drug enforcement mission in Colombia in July.

The *Jose Maria Garcia de Toledo* and its sistership, the A.R.C. *Juan Nepomuceno Eslava* are the first vessels built for Colombia's Coast Guard, a new branch of the Colombian Navy.

The two patrol boats will be used for drug detection and enforcement, search and rescue missions and fisheries control within Colombia's Economic Exclusion Zone.

The vessels have a maximum speed of 28 knots and a maximum displacement of 131 tons.

Powered by two MTU marine diesel engines each, the boats have an endurance of more than 2,000 nautical miles.

The patrol boats are each armed with a 25 mm cannon on the bow and two 50 caliber machine guns on the flying bridge.

For more information on Bender
Circle 1 on Reader Service Card

Zodiac Hurricane Delivers Whale Watching Boat To S.C. Customer

Zodiac Hurricane Technologies Inc., a builder of rigid hull inflatable boats and a wholly-owned subsidiary of Zodiac International in France, delivered a specially-built 24-ft. (7-m) whale watching boat to a client in Hilton Heads, S.C.

Based on the successful 733 hull currently in service with the U.S., Canadian and Australian Navies, this Zodiac Hurricane carries U.S. Coast Guard approval as a T boat.

Powered by a single 225-hp OMC outboard, the Hurricane has seating capacity for 16 passengers plus helmsman on specially-constructed seats.

For more information on Zodiac
Circle 4 on Reader Service Card

Grady Marine Delivers Oversized Boat Molds

Grady Marine Construction, Inc., Fort Lauderdale-based tug and barge company, delivered two oversized boat molds from Sanford, Fla. Race Boat Row in North Miami. These boat molds had to be moved by barge because they were too long and wide to be hauled over land by truck.

The 74-ft. by 18 ft. (22.5-m by 5.5-m) molds were loaded onto the 100-ft. (30-m) by 30-ft. (9-m) deck barge *Symar 15-E* by cranes.

They were then towed by the tug *Pile Express* 140 miles from the end of the St. Johns River to Jacksonville, Fla., then 320 miles south on the Atlantic Intracoastal Waterway to North Miami.

Grady Marine Construction was contracted by race boat builder Jose Peralta Enterprises.

For more information on Grady Marine
Circle 5 on Reader Service Card

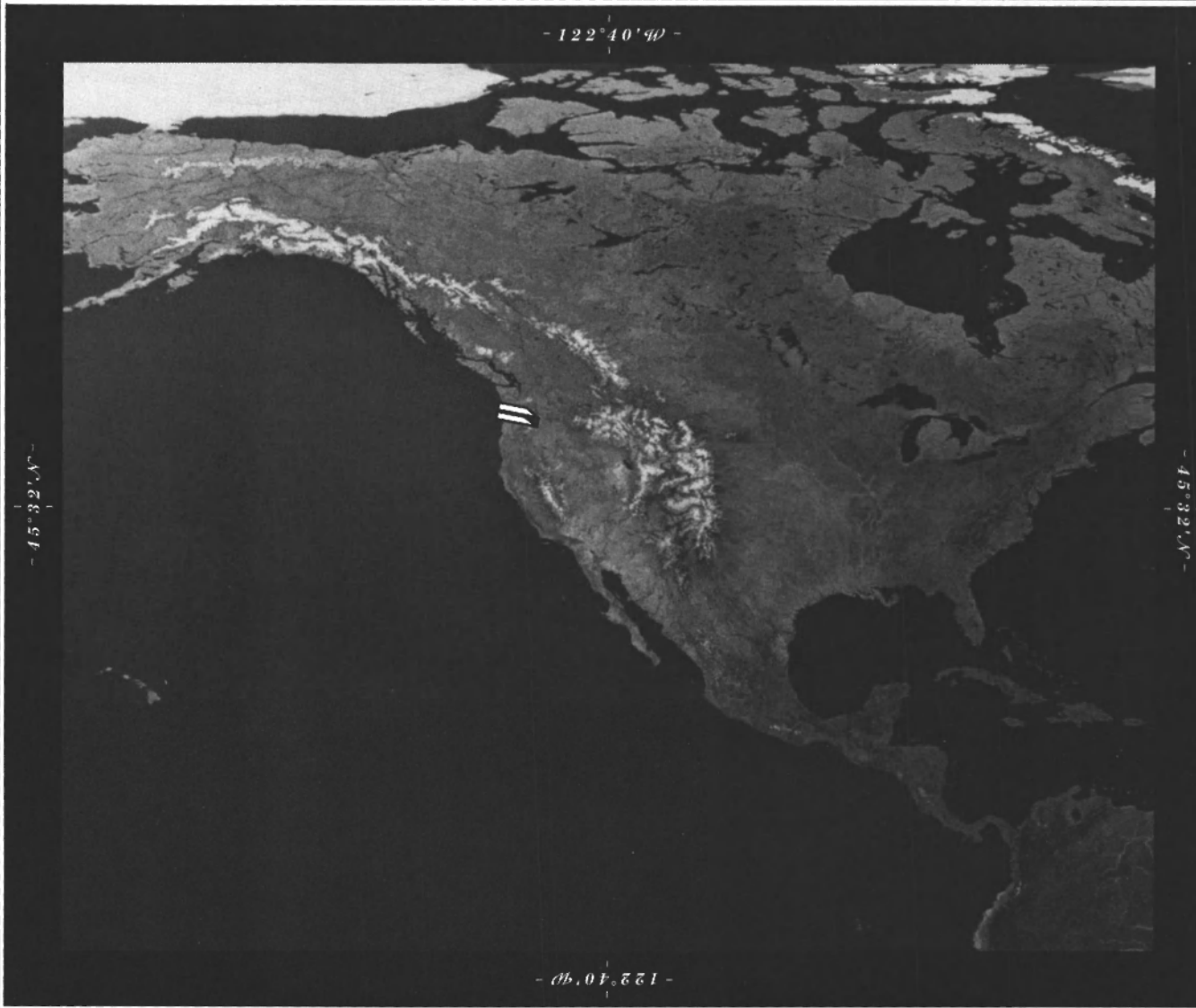
Hitachi Zosen Completes Containership *Shan He*

Hitachi Zosen Corp.'s Ariake Works delivered the containership *M/V Shan He*, capable of carrying 3,800 TEU containers, to China Ocean Shipping Co. (COSCO). It is the sistership of the *M/V Zhen He* and the *M/V Da He*, completed at the Ariake works.

The *Shan He* is the last ship in

the series of the three built for the same owner. The *Shan He* is the largest type of containership ever delivered by Hitachi Zosen and it is one of the largest vessels that can enter Shanghai harbor and pass through the Panama Canal. *Shan He* is 902 ft. (275 m) long, with a breadth of 105 ft. (32 m) and depth of 69 ft. (21 m).

For more information on Hitachi Zosen
Circle 36 on Reader Service Card



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experts, and the general prevailing attitude: to treat every ship like she was our own. Which helps explain why we get over 40% of all West Coast commercial jobs.

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MIN. TENSILE STRENGTH:
86,108 LBS.
WEIGHT: 503 LBS.

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	WEIGHT	MIN. TENSILE STRENGTH	WEIGHT	MIN. TENSILE STRENGTH	WEIGHT	MIN. TENSILE STRENGTH	WEIGHT	MIN. TENSILE STRENGTH
6"	496 lbs.	46,800 lbs.	503 lbs.	86,108 lbs.	849 lbs.	104,000 lbs.	679 lbs.	108,460 lbs.
7"	662 lbs.	62,000 lbs.	687 lbs.	113,300 lbs.	1,130 lbs.	138,000 lbs.	904 lbs.	142,000 lbs.
8"	864 lbs.	81,000 lbs.	895 lbs.	145,024 lbs.	1,468 lbs.	178,000 lbs.	1,175 lbs.	186,340 lbs.
9"	1,101 lbs.	103,000 lbs.	1,132 lbs.	183,546 lbs.	1,857 lbs.	220,000 lbs.	1,486 lbs.	229,900 lbs.
10"	1,368 lbs.	123,000 lbs.	1,403 lbs.	222,068 lbs.	2,289 lbs.	270,000 lbs.	1,831 lbs.	283,800 lbs.

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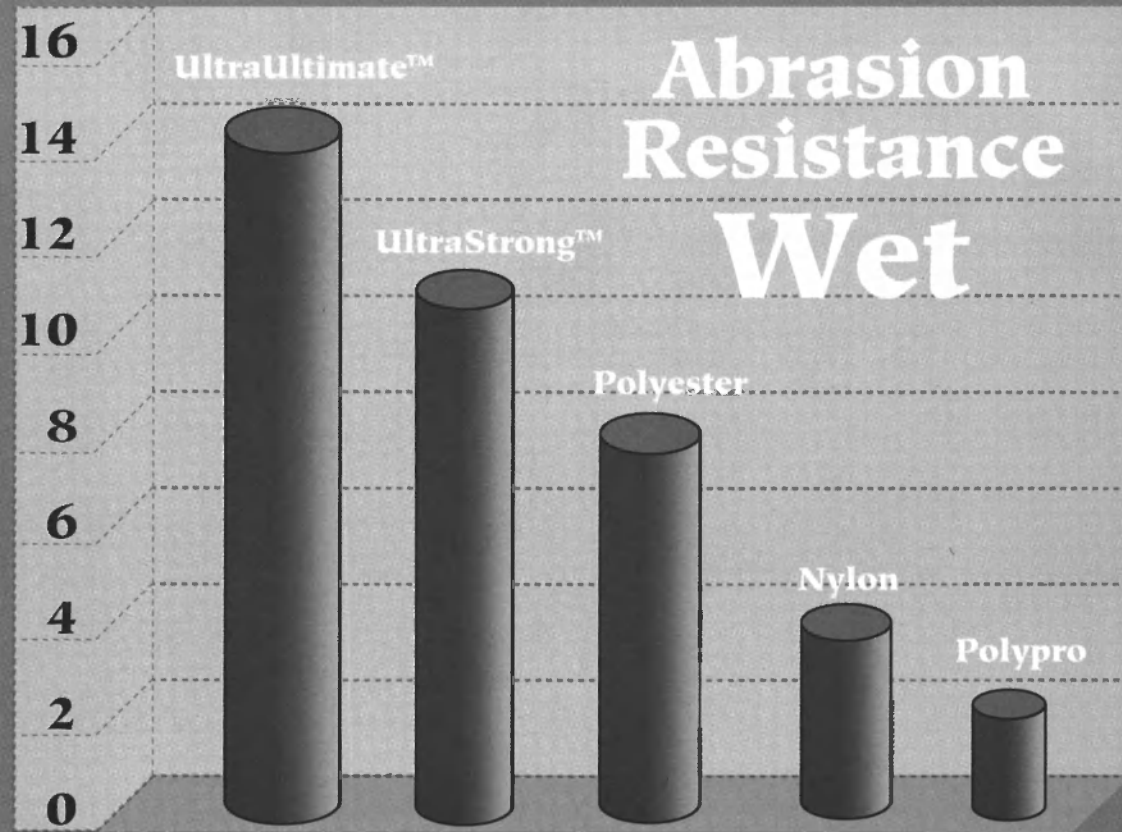
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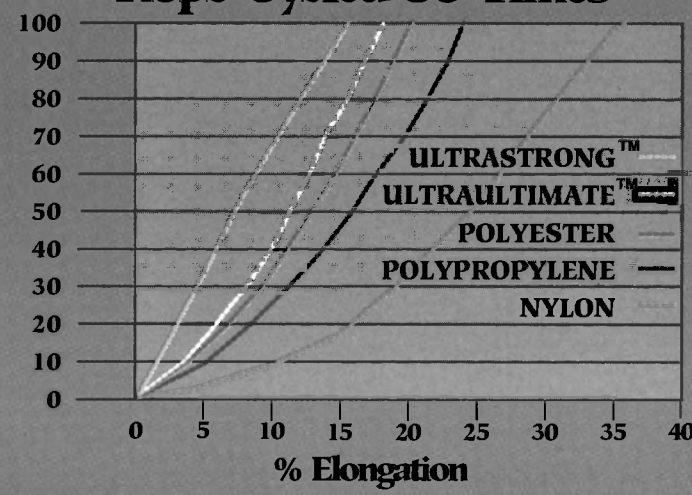
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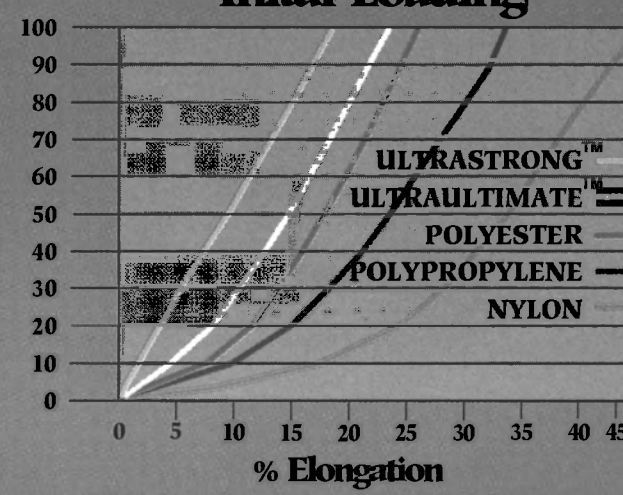
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INLAND: Survey Of New Construction

The following data on newbuilding activity in U.S. yards is the results of a limited survey by the editors of *Maritime Reporter & Engineering News*. Publisher is not responsible for errors or omissions. (Source: *Maritime Reporter & Engineering News*, August 1994)

Vessel Name/ Type	Dimensions (in feet)	Engines	Owner	Delivery Date	Vessel Name/ Type	Dimensions (in feet)	Engines	Owner	Delivery Date
Alabama Shipyard Inc., Mobile, Ala.					USS Firebolt/Cyclone Class	170 x 25 x 13	Paxman	U.S. Navy	1/95
Asphalt Barges (2)	460 x 72 x 36	n/a	Penn Maritime	1/95 & 3/95	Casino River Boat	294 x 97 x 14	Caterpillar	Lady Luck	1/95
Atlantic Marine, Inc., Jacksonville, Fla.					USS Whirlwind/Cyclone Class	170 x 25 x 13	Paxman	U.S. Navy	4/95
Empress III/Casino	280 x 74 x 10	Caterpillar	Empress River Casino	11/94	USS Thunderbolt/Cyclone Class	170 x 25 x 13	Paxman	U.S. Navy	6/95
Bellecraft Industries Corp., Naples, Fla.					USS Shamal/Cyclone Class	170 x 25 x 13	Paxman	U.S. Navy	9/95
Dive Catamaran	46 x 15	Cummins	Dive Dominica Ltd.	8/94	Offshore Support	181 x 92 x 16	Caterpillar	Halliburton Energy Serv.	11/95
Airboat (2)	26 x 12	Marine Power/ Dominator	Weeks Marine	8/94	Breaux's Bay Craft, Inc., Loreauville, La.				
Car Ferry/Catamaran	42 x 14	Yanmar	Chile	11/94	Hull 1668/Crew-Supply	152 x 30	Detroit Diesel	n/a	9/94
Bender Shipbuilding & Repair Co., Mobile, Ala.					Hull 1680/n/a	140 x 30	Caterpillar	n/a	12/94
Lucky Seven/Casino	232 x 78 x 14	Caterpillar	Randolph Riverboat Co.	8/94	Campbell Shipyard, San Diego, Calif.				
Elgin Lady/Casino	400 x 114 x 8	Caterpillar	Nevada Landing Hotel & Casino/Hyatt	10/94	Golden Shadow/Motor Yacht	219 x 39 x 27	KHD Deutz	Actaeon Shipping Ltd.	9/94
Crescent City Queen/Casino	360 x 99 x 14	Caterpillar	Capital Development Group	12/94	Conrad Industries, Morgan City, La.				
Grand Palais/Casino	360 x 99 x 14	Caterpillar	Grand Palais Riverboat	12/94	Deck Barge	240 x 72 x 16	n/a	Dickson GMP International	8/94
Blount Industries, Inc., Warren, R.I.					Spud Barge	120 x 52 x 8	n/a	Canal Barge Co.	9/94
Niagara Prince/Passenger	170 x 40 x 6	MAN Diesel	Am. Caribbean Cruise Line	8/94	Freeport Shipbuilding & Marine Repair, Jacksonville, Fla.				
HITECH/Commuter Passenger	83 x 21 x 2.5	MAN Diesel	n/a	11/94	Sightseeing	98 x 26	Caterpillar	n/a	9/94
Bollinger Machine Shop & Shipyard, Lockport, La.					Gaming Vessel	236 x 72	Cummins	n/a	12/94
USS Zephyr/Cyclone Class	170 x 25 x 13	Paxman	U.S. Navy	8/94	Gladding-Hearn Shipbuilding (Duclos Corp.), Somerset, Mass.				
USS Chinook/Cyclone Class	170 x 25 x 13	Paxman	U.S. Navy	10/94	Vizcaya/Pilot Boat	52 x 16	n/a	Miami Key Biscayne Pilots	8/94
(18) 10-Meter RIBs	33 x 11 x 3	Cummins	U.S. Navy	1/94 to 9/94	Garden State/Passenger	97 x 24	n/a	Port Imperial Ferry	8/94
Utility/Supply (2) 1	45 x 36 x 12	Detroit Diesel	Gilbert Ceramie Boats	10/94, 12/94					

(Continued on page 52)



U.S. yards have the capability to build a variety of vessels such as this MK VSOC aluminum hull craft, built by Peterson Builders Inc. of Sturgeon Bay, Wis.

U.S. YARD NOTES

The following are notes and news from select U.S. yards. For more information on a particular shipyard, circle the number for the yard on the Reader Service Card bound in this issue. (Reader Service Card numbers are found on the chart below.)

Alabama Shipyard recently added one new 2,500-sq.-m. steel storage facility complete with a new twin hook cab operated magnetic crane; it improved 20,400-sq.-m. of the primary erection site including the installation of one modified 150-ton revolving gantry crane; and it

also installed a new CM300-14 DNC/CNC multi-station flame planer with a series 2000-70 controller.

The new steel storage yard reduces the time and worker power required to receive raw materials and load the blast and coat facility. The erection site improvements will facilitate the fabrication of large modules and reduce overall production costs.

The new flame planer accurately

squares plate for the panel line butt welder and also reduces fitting cost.

Alabama Shipyard invested in one modified PLC controlled blast machine, which will reduce labor content and improve high tolerance coating capabilities within an existing blast and coat facility.

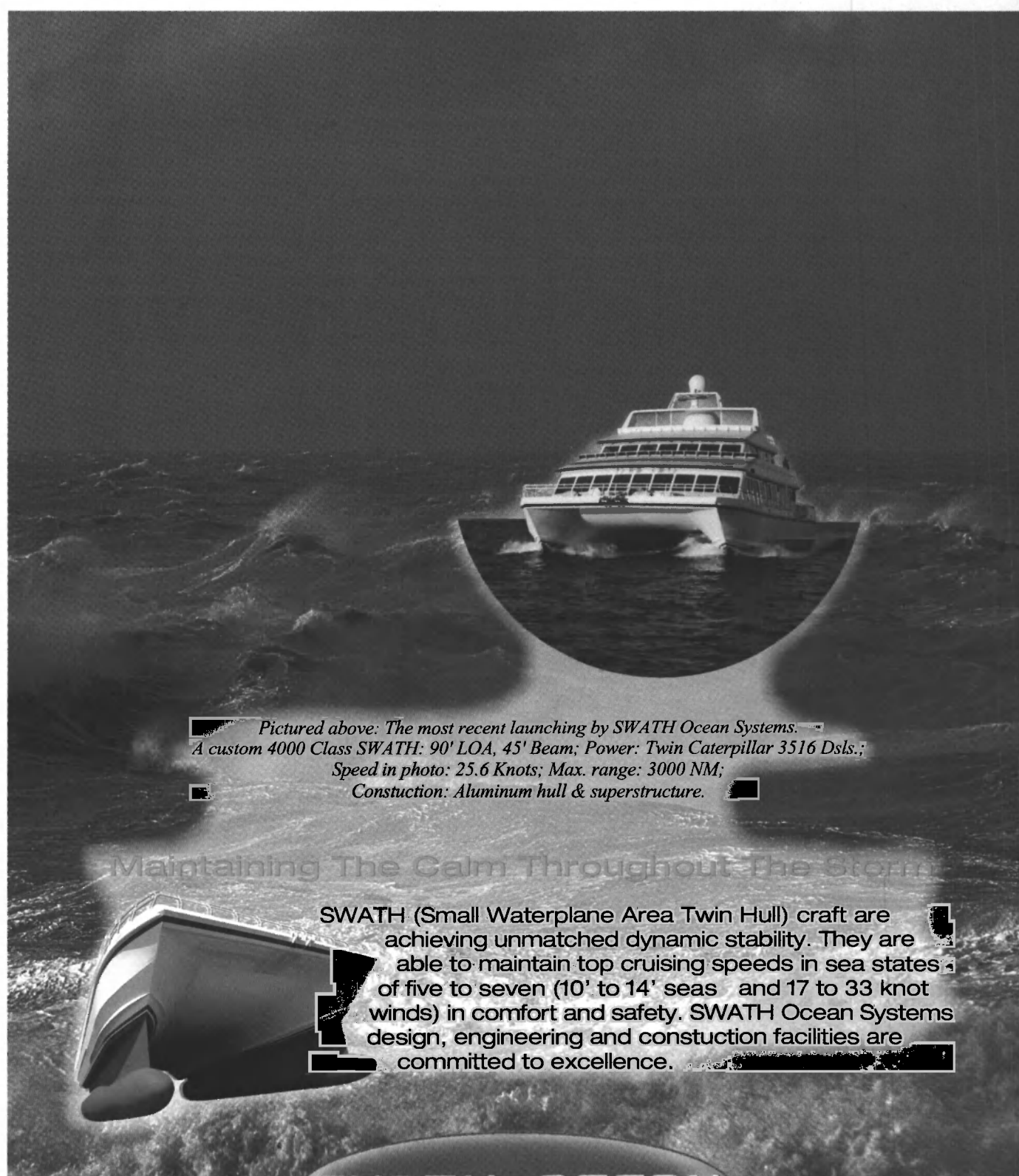
Alabama Shipyard estimates it spends \$6 million annually on facility costs.

(Continued on page 51)

For more information on the shipyards mentioned in this survey, circle the appropriate Reader Service Number on the card bound in this issue.

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Wright Marine Group	30
Yachtburn & Dougherty	108
Yardmaster Shipyard	55
Yardmaster Marine Corp.	31

SWATH OCEAN



Pictured above: The most recent launching by SWATH Ocean Systems.
A custom 4000 Class SWATH: 90' LOA, 45' Beam; Power: Twin Caterpillar 3516 Dsls.;
Speed in photo: 25.6 Knots; Max. range: 3000 NM;
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UNITED STATES ARMY CORPS OF ENGINEERS

Patti Shipyard, Inc. was established in 1977. Since that time, Patti has completed seven vessels for the United States Army Corps of Engineers, and is presently in the process of building two more vessels for the Corps. Patti prizes its relationship with the Corps of Engineers Marine Design Center in Philadelphia, which acts as the contracting and design representative for the individual Corps districts. Their highly trained team, along with Patti's own in-house staff coordinate on design solutions quickly and cost effectively, providing the highest quality vessel for the customer. Patti wants to congratulate the Marine Design Center and the owning districts on receiving their new **Patti Built** vessels.

PATTI SHIPYARD, INC.

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YARD NOTES

(Continued from page 49)

ity improvements and technology updates.

Gulf Coast Fabrication Inc. recently extended its marine ways, citing cost effectiveness and the ability to build longer vessels.

Gulf Coast Fabrication estimates its spends \$1 million annually on facility improvements and technology updates.

Marine Builders Inc. is considering the addition of 10,000-sq.-ft. of fabrication to increase its capacity. The shipyard recently purchased an 84-ton iron worker and will possibly purchase a CNC plasma table. Marine Builders says these new purchases will increase its efficiency and reduce its layout and machine shop labor.

Trinity Marine announced that Platzer Shipyards Inc. of Houston, Texas and Port Allen Marine Inc. of Brusly, La. are now part of Trinity's inland barge group.

Service Marine Industries added yard number 3 dedicated to outfitting of large dockside casinos. The new addition spans five acres and has two slips. Service Marine also added a 10,000-sq.-ft. Administration Building.

The new Administration Building allows space for the expansion of marketing, estimating, purchasing and accounting staff. Service Marine installed additional AutoCAD Release 12.0 computers in its Engineering Department. This improves efficiency in development of design drawings and interface with outside naval architects and customers. Service Marine estimates it spends between \$1 and \$2 million a year on facility improvements and technology updates.

Swiftships, Inc.'s newest project is a 141-ft. (43-m) aluminum crew/supply vessel being built by Diamond Services Corp. The company says this quad-propulsor, aluminum craft revolutionizes commercial vessel design and construction.

The vessel features four million waterjet propulsion units that can achieve speeds of 30 knots. Eight additional Riverine Assault Craft (RAC) have been ordered by U.S. Marine Corps. The order for the additional vessel is the third in a series exercised by the Marine Corps in its original 100-boat contract signed in 1993 with Swiftships. Swiftships recently delivered a 110-ft. (33.5-m) aluminum pilot/handler launch to the Panama Canal Commission. The vessel is powered by two Detroit Diesel engines.

Three coastal Minehunters (MH) are being built for the Arab Republic of Egypt. The 110-ft. (33.5-m) class reinforced plastic (GRP) vessels will be used in minehunting

and route surveying missions in the Red Sea and Mediterranean.

Nearing completion is the U.S. Air Force's 93-ft. (28-m) Parasail Launch Vessel (PLV). Designed for use in inland waterways, bays and harbors, the PLV will be used in parasail training exercises and simulation of pilot bailout/ejection over water, and will be used to support the USAF's Sea Survival School training mission.

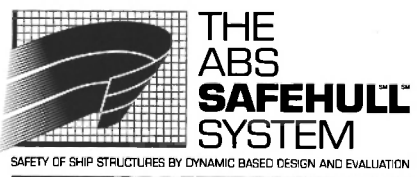
Vessel modifications have also been the focus of activity at Swiftships' Freeport facility in Texas. Currently underway is the conversion of a 180-ft. (55-m) offshore supply vessel to a dive support vessel.

Westport Shipyard recently delivered two high speed ferries to Catalina Express of San Pedro, Calif. Westport has added a new 100-

ft. (30-m) high speed boat hull mold in order to broaden its product line. Westport claims it spends between \$300,000 and \$400,000 a year on facility improvements and technology updates.

Zidell Marine recently widened the launch ways at its yard and is now able to construct barges anywhere in width from 76 ft. (23 m) to more than 90 ft. (27 m).

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September 1993: ABS launches the SafeHull™ System for tanker newbuildings.

January 1994: ABS introduces SafeHull Condition Assessment Services for existing tankers.

Now ABS offers the SafeHull System for both new and existing bulk carriers.

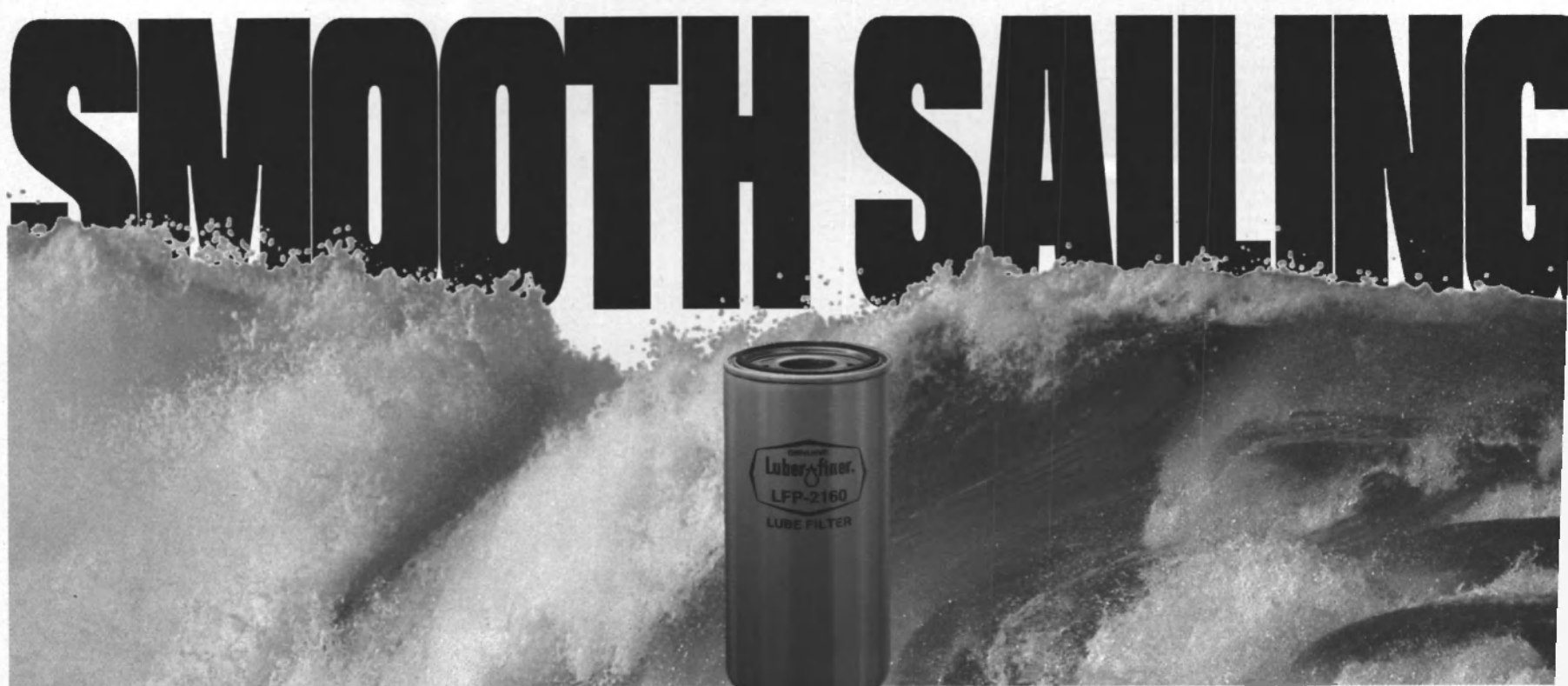
The system is based upon the same fundamental design principles as for tankers, but is adjusted for determination of the specific dynamic loads which act upon a bulk carrier at sea. It identifies critical structural areas that require enhancement, by a more effective distribution of steel, to lower the ship's operating stresses.

ABS SafeHull for bulk carriers benefits designers, owners and operators. It reduces the risk of structural failures, thereby lowering life-cycle maintenance and repair costs. It also helps with planning maintenance and inspections. Moreover, SafeHull fulfills the ABS mission of promoting the safety of life and property at sea.

For more information about SafeHull, contact your nearest ABS office.

INLAND: Survey Of New Construction

Vessel Name/ Type	Dimensions (in feet)	Engines	Owner	Delivery Date	Vessel Name/ Type	Dimensions (in feet)	Engines	Owner	Delivery Date
(Continued from page 48)					Marine Inland Fabricators, Panama City, Fla.				
Unnamed	36 x 12	Caterpillar	New York Police	12/94	Work Boat	24 x 14 x 5	Detroit Diesel	Riley's Boatyard, Inc.	n/a
Gulf Coast Fabrication, Inc., Lakeshore, Miss.					Deck Barge	40 x 10 x 4	n/a	Riley's Boatyard, Inc.	n/a
Deck Barge	260 x 80 x 16	n/a	Turecamo	9/94	Work Boat	55 x 18 x 6	Detroit Diesel	T.L.C. Marine Svc., Inc.	n/a
Taku Provider/Deck Barge	322 x 90 x 18	n/a	Western Towboat	1/95	Marinette Marine Corp., Marinette, Wis.				
Houma Fabricators, A Div. of L.O.R., Inc., Houma, La.					High-Speed Catamaran	100 x 30	n/a	Arnold Transit Line	9/94
Paddlewheel Casino	292 x 74 x 13	Cummins	n/a	8/94	Juniper/Seagoing Buoy Tender	225 x 46 x 13	Caterpillar	U.S. Coast Guard	11/95
Kvichak Marine Industries, Seattle, Wash.					Ida Lewis/Seagoing Buoy Tender	175 x 36 x 8	Caterpillar	U.S. Coast Guard	12/95
Passenger Vessel	58 x 18 x 5	Lugger	Decatur North-West	8/94	WLB 2/Seagoing Buoy Tender	225 x 46 x 13	Caterpillar	U.S. Coast Guard	7/97
Leevac Shipyards, Inc., Jennings, La.					McDermott Shipyard, Amelia, La.				
Capitol Queen	218 x 62 x 11	Cummins	Capitol Queen & Casino	8/94	Sulphur Enterprise/Sulphur Carrier	524 x 90 x 50	Wartsila	Sulphur Carriers Inc.	8/94
J.S. Deluxe II	325 x 80	Caterpillar	Jumers	8/94	American Queen/River Cruise	419 x 89 x 14	Aquamaster Z-Drives	Delta Queen Steamboat Development Inc.	3/95
Marine Builders, Inc., Utica, Ind.					Push Tugs (2)	80 x 29 x 10	Caterpillar	Crowley Marine Service	12/94-3/95
Pushboat	65 x 25 x 8	Caterpillar	n/a	12/94	Nichols Brothers Boat Builders, Inc., Freeland, Wash.				
Aluminum Gaming Boat	100 x 30 x 9	Cummins	n/a	2/95	M/V Cloud 10/SWATH	122 x 59 x 12	Textron	Lycoming Martin Automatic	8/94



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Circle 292 on Reader Service Card

Review: West Coast Industry Products

SGC, Inc. Releases New Slimpak SG-2000SP HF SSB Radio

SGC, Inc. has made available the new SG-2000SP Slimpak HF SSB radio. The Slimpak is the same technology and design as the SG-2000, but with a slimmer profile and several operating head choices.

The Slimpak can be used for tight installations in sportfishing boats, as well as aircraft installations or mobile use. The unit measures 3.6 by 10 by 13 in., with 644 ITU and 100 user-programmable frequencies and easy weatherfax connections. The Slimpak produces 150 watts and full frequency range, 1.6 to 30 MHz, or complete and legal marine use as well as coverage of all ham bands. Head options are the mobile head, aviation head and the standard SG-2000 programming head.

For more information from SGC, Inc. Circle 112 on Reader Service Card

Leica Upgrades Magnavox GPS Receivers

Leica Navigation and Positioning (NAP) Division introduced a new version of the Magnavox X100 GPS Navigator with built-in differential navigation capability.

The differential-ready MX100 provides higher position accuracies by accepting error correction data transmitted from shore reference stations. It can be used with the U.S. Coast Guard radiobeacon GPS signals as well as other precision differential GPS networks such as the ACC-Q-POINT FM radio broadcasts.

Leica is offering a complete shipboard DGPS package that includes MX100 and DGPS beacon receiver, along with all necessary antennas and cables. The MX100 can also be interfaced with other GPS data receivers using the standard RTCM SC-104 protocol. Existing MX100 units can be easily upgraded to add the differential capability by an authorized Leica dealer.

For more information on Leica Circle 110 on Reader Service Card

Carma Systems Acquires German & Milne Machinery Monitoring Technology

Carma Systems of Vancouver, Canada acquired the machinery monitoring technology and services of German & Milne Ltd. This includes the Carma[®] analysis unit, the Carmalog electronic logging and the Saysar[™] preventive maintenance software system. Carma Systems also represents a number of manufacturers of associated equipment for machine condition monitoring.

tion monitoring.

Carma equipment is used to analyze engines, compressors and associated equipment used in the petroleum industry, electric power generation and marine transportation. Maintenance costs are reportedly reduced due to reduced down-time, fuel savings and increased periods between major overhauls.

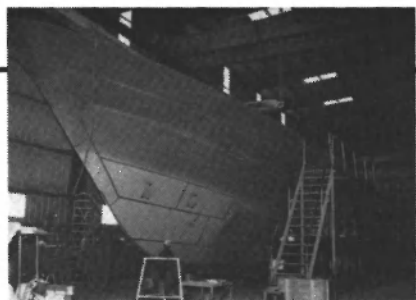
For more information from Carma Circle 111 on Reader Service Card

Lifestream Watersystems' Desalination Systems For A Variety Of Uses

Lifestream Watersystems, Inc. manufactures reverse osmosis desalination systems for commercial marine use, barges, drilling platforms, pleasure yachts, land-based applications, and naval vessels. Worldwide Systems are available in

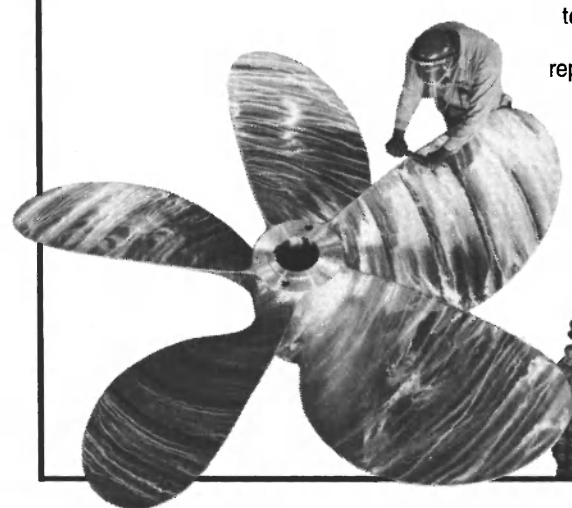
a modular form or frame design from 200 gallons/day up to 100,000 gallons/day. Parts and accessories are available for all R.O. systems such as replacement membranes, UV sterilizers, media filters, and membrane care skids. Lifestream watermakers have been chosen for the following Naval projects: TAGS, AGOR and PCF.

For more information on Lifestream Circle 109 on Reader Service Card

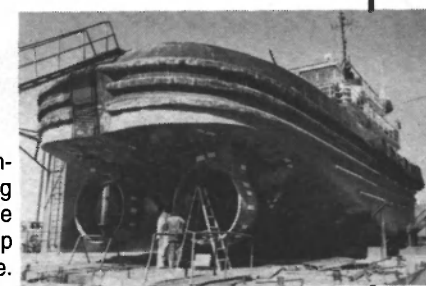


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Silver Dollar City Selects Showboat's Management

As construction continues on the *Showboat Branson Belle*, expected to set sail in the Spring of 1995, Silver Dollar City (SDC) announced the ship's management team has been chosen.

Coe Sherrard was chosen as project manager, **Ann McDowell** as director of marketing and **Lisa Rau** as director of public relations.

Co-owned by SDC, Inc. and **Kenny Rogers**, the \$13-million showboat, an 1890s paddlewheel riverboat cruising Table Rock Lake, is scheduled to open along with the themed White River Landing, an 1890s riverfront village.

The keel was laid for the *Showboat Branson Belle* in August 1993, and plans, at press time, were underway for an August launch for completion of the upper decks. Once completed, the boat will embark on two-hour cruises, each complete with a meal and a full-scale production show.

Meltric Helps Ships Stay Plugged In

The Meltric Corp. supplies the marine industry with high-current, watertight connectors for ship to shore power applications. The PF and PFQ allow a vessel to disconnect quickly and safely from a power source, and are available in 300, 400, or 600 amps/1,000 volts AC or DC maximum.

The company claims the quick disconnect properties of the PF and PFQ are especially important for marine boats which must be able to leave the dock without delay in rough weather, or casino vessels that may need to be connected and disconnected to its power source several times a day.

Meltric's PF and PFQ are designed to prevent the user from accidentally plugging in or unplugging a high current connection. The connectors feature Meltric's self-cleaning contacts, which allow them to perform in dirty, wet and/or oily conditions. The silver-nickel com-

Innerspace: Offering The Whole Hydrographic Surveying System

Innerspace Technology, a maker of instruments and systems for hydrographic surveying, offers its customers not only the electronics, but the boat as well.

Delivered "survey ready," Innerspace will deliver a boat ready to collect and process data, with typical survey equipment encompassing: depth sounder; DGPS positioning with 486 computer; veloc-



ity profiler; field/office data collection and processing software. Custom installations are available.

For more information from Innerspace
Circle 197 on Reader Service Card

position resists corrosion.

For more information from Meltric,
Circle 196 on Reader Service Card

RGF Appoints Tees As GM

RGF Marine Environmental Technologies Inc. announced that **Tim Tees** joined the company as general manager. Mr. Tees is a

Naval Academy graduate with a mechanical engineering degree. He also has a Masters degree in Business Administration from Chaminade University. He has 12 years of experience in the marine industry, having formerly served as vice president of operations at Brooklyn Marine & Oil. He will be responsible for marketing, new product development and general operations

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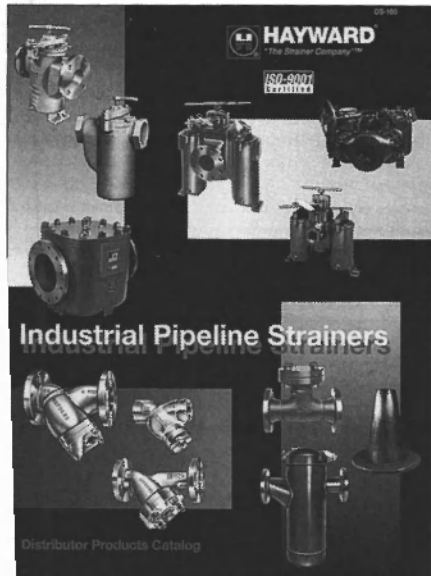


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Circle 254 on Reader Service Card

Maritime Reporter/Engineering

Strainer Spec Catalog Describes Thousands Of Selections



The most commonly specified Hayward Pipeline Strainer lines, including both metal and plastic trainers — literally thousands of selections — are detailed in a new 100-page Distributor Products Catalog. Detailed are metal simplex, duplex, Y and custom-fabricated trainer lines, all manufactured in compliance with Hayward's certified ISO 9001 Quality Assurance program. Also, there is a wide selection of plastic simplex and duplex strainers for corrosive service.

For a catalog from Hayward
Circle 188 on Reader Service Card

ICS Launches New GMDSS SC System



ICS Electronics launched a new, dual, networked Digital Selective Calling (DSC) system, the ICS C-2. Designed as the core element of a GMDSS type approved portable integrated radio communications system, the ICS C-2 rates with a wide range of commercially available, MF, HF and F radio transceivers. The system will be type approved for DSC use and will meet IMO requirements as well as the recommendations of IEC Technical Group on the use of networks and centralized consoles aboard commercial vessels.

For information from ICS Electronics
Circle 192 on Reader Service Card

Universal Bunker Service Offers Vast Experience

Universal Bunker Service has been in the marine fuel market for over forty years, and offers its

Since 1944

customers a wealth of experience in all facets of the business. The company's background includes long service with a major supplier, with a shipping company as a bunker purchaser, and as a bunker and lubricants broker. The company keeps full records going back more than 15 years, as well as on today's prices and positions throughout the world. For more information from Universal
Circle 193 on Reader Service Card

Fincantieri Chooses Sperry On New Bulk Carriers

Fincantieri, Trieste, ordered navigation equipment from Sperry Marine Inc. for five new bulk carriers it is building. Three of the new vessels will be built at the company's Castellammare di Stabia Shipyard and two will be built at the Marghera Shipyard. The equipment order, said J.N.

DaCunha, vice president at Sperry, is for Sperry Marine X and S Band RASCAR Radar/ARPA, MK-37 Gyrocompass, ADG-3000 Adaptive Gyroplot, SRD-331 Speed Log and GMDSS Radio Station for each vessel along with RAI and NAVAIDS. For more information on Sperry Marine
Circle 194 on Reader Service Card

For more information on Fincantieri
Circle 195 on Reader Service Card

A SUCCESSFUL NAVAL ENGAGEMENT FOR THE J.D. NEUHAUS TASK FORCE.

When the U.S. Navy sent a S.O.S. to help move this giant crane, we dispatched two of our JDN PROFI 100 ton pneumatic hoists. The results was a complete victory for us both.

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In this case the 100 ton pneumatic hoists were used on site to level these 310 ton cranes. Incredible size and capacity ratio, precision engineering and construction, and their dependability on only 85 PSI compressed air operation made the JDN PROFI the perfect choice for the job.

But this hoist, and the rest of the world famous PROFI series, can operate at the same performance level mounted overhead on trolleys and in low overhead situations. They are unaffected by dampness, moisture, steam or heat, and the pneumatic operation makes them ideal for situations where sparks and electrical problems cannot be tolerated.

The ultra sensitive, pull cord speed regulation, built into every PROFI hoist, was key to this precision Navy operation. The ability of the hoists to be left running indefinitely without damage adds to the exceptional versatility of the PROFI line.

The J.D. Neuhaus Corporation offers a full line with capacities from 500 lbs. to 100 tons, pneumatic hoists, plus a wide variety of trolleys and hoists that operate at 60 PSI or hydraulic power.

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DEPARTMENT OF THE NAVY
COMMUNICATIONS CENTER
AFSB-17/100
OPR 2102104
18 November 1987

From: Commander, Charleston Naval Shipyard
To: J.D. NEUHAUS, BALTIMORE, MD 21207

Subj: DELIVERY OF TWO 100 TON PNEUMATIC OPERATED CRANE HOISTS
ON CONTRACT 80041-01-7111

Re: (1) REQUESTED CRANE PHOTOGRAPH OF NEW AFB-7 CRANE LIFT
IN HELP LACK INSTANT (2) copies

1. The purpose of this letter is to commend you, Mr. Donald E. Plattenberg for his dedicated support and exemplary performance in the handling of my office on delivery of the two 100 ton crane hoists on our Contract 80041-01-7111. REQUESTED CRANE PHOTOGRAPH OF THE CRANE ACTION AND DELIVERY TO SUPPORT OUR SCHEDULE FOR LIFTING THE TWO NEW PORTAL CRANES AND SHIPMENT TO HELP LACK.

2. Enclosure (1), shows the two (100 and 100) cranes being used in HELP LACK by OBT International Lifting crane, 100 LIFT to lift the two 100 ton cranes. (2) shows the two 100 ton cranes being lifted by the two 100 ton pneumatic hoists on our contract. The cranes were lifted on the water and the cranes were lifted on the water simultaneously. The project was a great success and we are very pleased with the results and the other one in the afternoon.

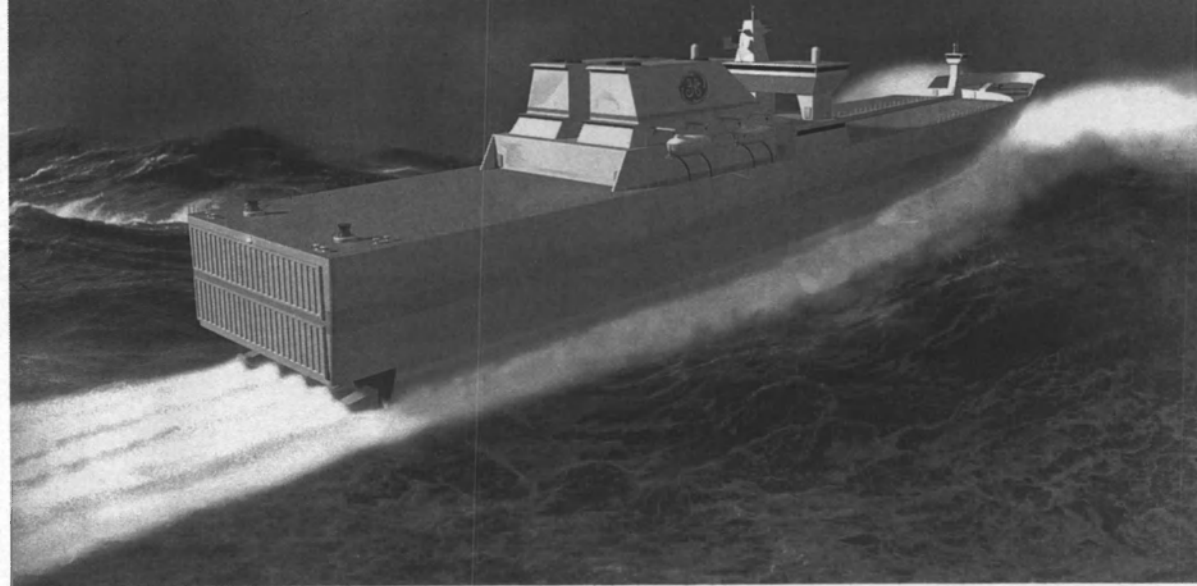
3. Please return one of these photographs to Mr. Plattenberg with our sincere appreciation for a job well done.

A. R. ANDERSON
ACTING

Circle 241 on Reader Service Card

FASTSHIP —

40-Plus Knot Service Across The Atlantic Ocean By 1998



The Delaware River Port Authority (DRPA) and two transportation executives have recently made moves which could eventually help the dream of a 40-plus-knot cargo ship plying the waters of the Atlantic and Pacific Oceans a reality.

"The DRPA and two leading international transportation executives, **Tom Holt, Sr.** and **Dennis Colgan, Jr.**, have taken a major step toward making Philadelphia a leading port into the 21st Century," said **Paul Drayton**, executive director of DRPA. "Our actions today are a clear signal of DRPA's mandate to aggressively promote and develop the Ports of Philadelphia and Camden."

DRPA is a bi-state agency of Pennsylvania and New Jersey charged with improving the Ports of Philadelphia and Camden. Mr. **Holt** is the region's largest terminal operator and stevedore, and Mr. **Colgan** is chairman of Barthco Intl., the region's largest customhouse broker.

The steps taken, using Mr. **Drayton's** words, amount to a \$7 million investment by DRPA and more than a \$3 million investment by Mr. **Holt**

and Mr. **Colgan** in FastShip Atlantic. The investments ensure that Philadelphia will become the exclusive North Atlantic port for FastShip Service.

What is FastShip?

FastShip™ is the trademark for a vessel that, using a patented and innovative combination of existing technologies, is designed to revolutionize the speed and reliability of shipping. The patented technology — the Semi-Planing Monohull or "SPMH" — was developed by Thornycroft, Giles & Co. Inc., a Virginia-based company which has invested 15 years in the testing and design of the FastShip hull design.

FastShip service promises to revolutionize trans-oceanic shipping for high value, time sensitive cargo (HVTs), which includes commodities such as automobiles and automotive parts, pharmaceuticals, apparel and other consumer goods. Current plans call for a vessel of this design to leave Philadelphia fully loaded, cross the North Atlantic, deliver its cargo, load new cargo and return to Philadelphia in eight days.

FastShip Atlantic, Inc. (FSA) is a Virginia-based company which has exclusive licenses to operate a fleet of FastShips, a design for a new generation of high speed containerized cargo ship intended for service in both the Atlantic and Pacific trade routes.

Ultimately, FSA envisions introducing a fleet of up to eight TG-770 FastShip vessels for the North Atlantic route. Each 774-ft. (236-m) vessel, while substantially shorter than today's container ships, will compensate for its smaller stature by making up to five times the number of annual ocean crossings.

While a shipyard to build the vessel has yet to be selected, those involved have stated a preference to build in the U.S. provided that the yards can match international standards for price and timeliness. It is estimated that each TG-770 will cost between \$130 and \$150 million to build, and approximately \$100 million annually to operate.

The Hull Design

FastShip will use the patented SPMH design, which was created to allow the ship to travel at

NEW TECHNOLOGY

very high speeds by developing lift at the stern as additional thrust is applied. According to the designers, experience with smaller SPMH vessels and exhaustive testing with models in tanks and the open sea has demonstrated that FastShip is reliable in the most extreme sea conditions, up to and including waves 40 to 50 ft. (12.2 to 15.2 m) in height.

Current hull designs call for a vessel 774 ft. (236 m) long, with a 116.5-ft. (35.5-m) molded beam and a 34.3-ft. (10.4-m) draft, at full load. Hold capacity is designed at two million cu. ft.

The Propulsion Package

On the North Atlantic, FastShip is designed to use eight General Electric gas turbines and five KaMeWa waterjet propulsors, which will help propel the ship across the ocean in 3.5 days. The hull design, combined with this tremendous speed capability, is designed to either sail in seas that would delay conventional vessels, or outrun or circumvent weather that other freighters would have to endure.

An average service speed of 42 knots is planned for the FastShip version with eight engines, at 97 percent MCR; 37.5 knots with six engines, at 97 percent MCR. Endurance at 37.5 knots would be 4,800 nm; at 42 knots 3,200 nm.

The Loading System

FastShip will use the Alicon™ loading system, a new intermodal handling system which uses pallets supported by compressed air cushions to provide frictionless loading and unloading of the vessel. Entire train loads of containers will be simultaneously on- and off-loaded, as opposed to the conventional piece-by-piece removal of containers by dockside cranes. This will allow FastShip to be completely unloaded and have new cargo on-loaded in four to six hours. A patent application is pending for the Alicon system.

As a part of the agreement, DRPA has agreed to invest \$50 to \$75 million to build a new terminal to service FastShip operations, an investment to be made once FastShip has demonstrated to DRPA that it has obtained financing to construct at least three 774-ft. FastShips. The preliminary sites being considered for the terminal include Conrail's Greenwich rail yard, which is adjacent to Packer Avenue Marine Terminal and property located on the northern part of the Philadelphia Naval Shipyard, which the City of Philadelphia is currently negotiating to take over from the U.S. Navy.

TG-770 FastShip™ Specs

Length o.a.	774 ft. (236 m)
Length (water line)	679 ft. (207 m)
Beam (molded)	116.5 ft. (35.5 m)
Beam (water line)	101.5 ft. (31.8 m)
Draft (full load)	34.3 ft. (10.4 m)
Displacement (full load)	30,480 tons
Avg. Service Speed	42 knots
	w/8 engines at 97% MCR
	37.5 knots
	w/6 engines at 97% MCR
Endurance (w/10% fuel reserve)	4,800 nm
At 37.5 knots	3,200 nm
At 42 knots	
Cargo Capacity	9,760 tons
At 37.5 knots	8,070 tons
At 42 knots	Approx. 2 million cu. ft.
Engines	(8) GE LM6000 Gas Turbines
Thrusters	(3) KaMeWa Waterjet Propulsors
	(2) KaMeWa Maneuvering Waterjets
Gearboxes	(4) GE Reduction Gears

COMPARE & CONTRAS

Here's how the FastShip stacks up against conventional ships, according to the vessel's designers.

Parameter	Conventional	FastSh
Speed	18-24 kts	37.5
Capacity	3,500-4,500 TEU	1,360 T
Seatime	7-8 days	3.5 d
Cargo Protection	Uncovered	Cove
No. of Ports	8-12	

Maritime Reporter/Engineering N

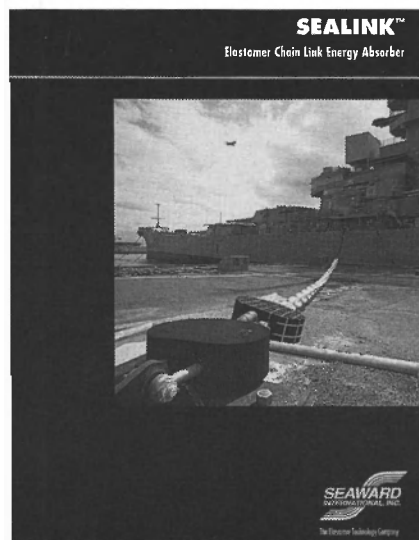
Seven Seas Appoints New Manager, Fishing Industry

Seven Seas Communications announced that **Dave Brenglemann** joined the company as manager, fishing industry, responsible for sales, marketing and customer service.

Mr. **Brenglemann** was most recently operations manager for Arctic King Fisheries in Seattle, where he was responsible for the F/V *Arctic Trawler*. Prior to that he was a quality control manager at American Seafoods, and a vessel agent for Alaska Maritime. Seven Seas is committed to continuing its position of offering top satellite communications, and the company will be offering the new Inmarsat M and Inmarsat B services by the end of 1994. Additionally, its Oceancell satellite service, with prices as low as \$1.50 per minute, will be available in 1995.

For more information on Seven Seas
Circle 187 on Reader Service Card

Seaward Intl. Debuts Product To Reduce Peak Loads On Lines



Seaward Intl. introduced the new sealink Elastomer Chain Link Energy Absorber, a marine chain link designed to reduce peak loads on mooring and tow lines. The product works by attaching it to vessel mooring lines, anchors lines, towing lines, mooring buoys, floating production and offshore drilling platform mooring lines, and offshore lifting and mooring lines.

Use of the new product can reportedly reduce peak mooring loads by 50 percent or more, and it is designed to permit safer mooring in port-scope conditions.

For Seaward's new brochure
Circle 186 on Reader Service Card

NLI Selects Laser Plot To Help Outfit New Lifeboats

Laser Plot was selected by the Royal National Lifeboat Institute (RNLI) of Poole, England, to supply the company's ChartNav integrated electronic chart navigation system for use in RNLI's new FAB III and AB IV lifeboat.

The crew aboard these rescue vessels, which often operate in rough seas and difficult conditions, required a system which necessitates they only glance at the high-resolution color monitor to determine real-time position on a full-color government chart. When the boat reaches a search site, ChartNav automatically creates a search and rescue plan to follow.

For more information on Laser Plot
Circle 189 on Reader Service Card

Esgard Introduces "P" Preservatives to Guard Metal Equipment

Esgard, Inc. introduced the "P" Preservatives for use in the preservation and packing of almost any metal in nearly any situation.

The five preservatives are VOC compliant coatings which are listed qualified products as per MIL-C-

1617E.

Intended uses include preservation of power transmissions, gears, reducers and associated lube oil components, steam turbines and other machine metal equipment.

In total there are five preservatives in the "P" preservative line, from PL-1 to PL-5, each intended for specific material and environmental conditions.

For more information from Esgard
Circle 190 on Reader Service Card

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A model 300 BFM mobile hoist rated at 660,000 lbs. shown at Fairhaven Shipyard, Fairhaven, MA.

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Details and specifications on the 300 BFM or our complete line of mobile boat hoists with capacities from 16.5 to 550 tons (15 mT to 500 mT), or our line of Mariner® forklifts, are available from your local representative or Marine Travelift, Inc., 49 E. Yew St., P.O. Box 66, Sturgeon Bay, WI 54235 USA. • Phone: 414-743-6202, • Fax: 414-743-1522.



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Circle 256 on Reader Service Card

Independent Marine Technical Services Promote High Quality, Cost-Effective Vessel Development

by
John O'Connor, vice president,
International Marine Consultants, Inc.

The earliest stages in a vessel's development are perhaps the most critical. There are many decisions to be made relating to a ship's design, contractor selections, and the actual construction schedule. Ship owners/operators can streamline the shipbuilding process considerably with the assistance of an independent marine technical resource. Staffed with experienced and

trained marine engineers, surveyors and technical representatives, the firm can satisfy several of the ship owner's most important requirements, while serving as an effective liaison with other contractors involved in the project.

From Vessel Design to Delivery and Technical Guarantee

There are three phases in which the marine technical resource firm is instrumental. They include: the planning and design phase; con-

tractor selection phase; and newbuilding design and construction phase. To address these different phases in the shipbuilding process, the marine technical firm will designate a specific team. It can include a senior project manager, as well as marine superintendents and technical representatives in charge of hull and



mechanical, deck and electrical work, construction, outfitting and services, and various technical aspects. For instance, the senior project manager, supported by several marine superintendents and project assistants, would provide hands-on supervision of the vessel's technical development and shipbuilding contract design. Once the construction contract has been let, this same team would be expanded with the support of an administrative assistant and several technical representatives. This latter category of personnel would be used throughout the technical development and construction phase to vessel delivery and through the technical guarantee period. In fact, the involvement of the technical representatives should be extensive and cover a broad range of tasks, including:

- Technical design and layout work,
- Analysis of technical studies, tests, weight calculations and specifications to be implemented by marine architects or the shipyard,
- Preparation of building specifications and contract documentation,
- Coordination of technical activities during the contract stage, in conjunction with the shipowner and shipyard's legal representatives,
- Involvement in negotiations with regulator authorities such as the U.S. Coast Guard, Environmental Protection Agency, Classification Societies (e.g. ABS), etc. and subsequent approvals,
- Screening, qualifying and final selection of the shipyard/building contractor, and support in the selection of other consultants (e.g., architects, designers, mechanical systems contractors, etc.).

Design and Construction Supervision

The marine technical resource firm assumes a broad and diverse role in the oversight of the vessel's actual design and construction. From the onset, there is an ongoing liaison with the shipowner/operator and the numerous internal and external consultants involved. Specifically, the firm's project manager, superintendents and technical representatives will work to ensure that the owner's specifications are upheld and that services are implemented on schedule and within established budgetary guidelines.

Every service and technical phase is reviewed against the original plans and system diagram. When necessary, the manager or the staff will institute modifications to the shipyard's main drawings and specifications in order to achieve the optimum design. At all times, the shipowner/operator is kept apprised of the project's progress and any changes to be initiated. Once vessel construction is complete, the marine technical resource firm would conduct pier and sea tests at trials, and ultimately provide final technical approval and vessel delivery acceptance. The role of the marine technical resource firm does not necessarily end with vessel delivery. Often, the firm will manage possible guarantee claims after vessel delivery and supervise guarantee repair work.

Extending the Role for Future Vessel Performance

Besides the obvious benefits of having an independent marine technical resource firm advocating on behalf of the shipowner during the entire vessel design and construction period (i.e., quality

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Circle 218 on Reader Service Card

GE, Raytheon Supply Trinity-Built Electric Plant Barge



Phase I of a barge-mounted combined-cycle plant, the barge portion which was built by Trinity's Beaumont, Texas yard and whose suppliers include General Electric and Raytheon, reportedly began operation in late June. Under a \$120 million turnkey contract, GE Industrial Power Systems (GEIPS) and Raytheon Engineers & Constructors are supplying equipment and services for the 186-MW plant, located in Puerto Plata, Dominican Republic and owned by Smith/Enron Cogeneration Ltd. The plant will supply power to a Dominican utility under a 16-year agreement.

Phase I is a barge-mounted, triple-cycle gas turbine system producing 76 MW of power, constructed by Trinity Marine Group's Beaumont, Texas yard and delivered to the project site May 10 — less than six months from contract signing. Phase II, a second barge carrying a steam turbine generator, heat recovery steam generator and two other boilers will be added. William Wert, vice president and regional executive for GEIPS Americas, said he believed this was the first combined-cycle, barge-mounted

electric plant. Smith Cogeneration of Oklahoma City worked with Raytheon and GE for approximately a year in pre-construction engineering during the development phase of the project, and brought in Enron as a partner to commence construction in November 1993.

Combined-cycle operation is to begin July 1995, bringing total output to 186 MW. GE is providing plant conceptual design, combined-cycle performance guarantees and major power island equipment, including an MS7001EA gas turbine generator, 118-MW steam turbine generator, an HRSG and a plant control system. Raytheon is providing turnkey construction; engineering and design services, all balance-of-plant electrical and mechanical equipment, project and construction management, installation and erection services, plant start-up and testing services.

For more information circle the appropriate number on Reader Service Card:

GE	18
Raytheon	19
Trinity	20

Promoting High Quality, Cost-Effective Vessel Development

Continued from page 60)

Insurance, cost controls, on-time vessel delivery, etc.), there is a residual gain to having a firm involved from the very inception of a vessel's development. That is, the owner has now established a qualified resource, familiar with the complete history of the vessel and capable of supporting various maintenance and repair requirements, casualty/damage surveys, operational reviews and evaluations and claims investigations. For all of these ar-

reas, there would be no learning curve involved nor the associated costs incurred. Instead, the ship owner/operator can be confident in knowing that the marine technical resource firm can address these areas of vessel operation with full knowledge and direct experience with the vessel's original design, construction and intended purpose.

International Marine Consultants, Inc. is a full-service marine consulting, engineering and technical services firm headquartered in Mineola, N.Y., with regional offices in Houston, Texas and San Francisco, Calif.

August, 1994

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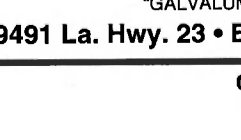
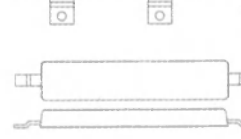
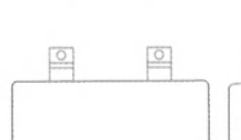
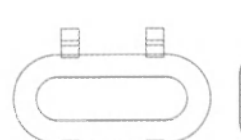
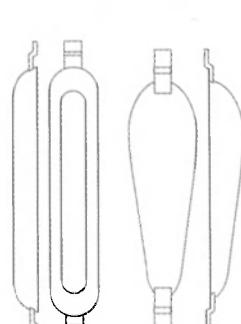
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Circle 204 on Reader Service Card

61

Blohm + Voss Helps Convert Tanker *Savonita*



As well as converting the Aframax tanker *Savonita*, Blohm + Voss carried out scheduled capacity repairs to Uglund's shuttle tanker *Evita*.

Uglund and Blohm + Voss combined their efforts to convert the Aframax tanker *Savonita* into a full DP shuttle tanker within five months. Beginning in early 1994, the two companies procured equipment and converted the vessel for a three-year time charter to Stena Offshore in Aberdeen.

Work on *Savonita* included installation of: a bow loading system; thruster at bow and stern; CP propeller; additional diesel generator; DP system including Simrad transducer unit; and additional fire, safety, navigation and communication systems.

The first employment of the renamed Stena *Savonita* is on the BP's Machar Field. Blohm + Voss also carried out scheduled capacity repair to Uglund's shuttle tanker *Evita*.

For more information on Blohm + Voss
Circle 48 on Reader Service Card

First Keel Laid in Finnyards' New Graving Dock

On June 29, 1994, Finnyards' new graving dock saw the construction of its first ship begin: the first keel was laid for the first of two RoRo passenger vessels for TT-Line GmbH & Co., Germany.

The first ship to be built in the new 853-ft. (260-m) by 279-ft. (85-m) drydock is one of two RoRo passenger ferries TT-Line ordered last December for approximately \$190 million. The ferries are scheduled for delivery in spring and autumn 1995. The TT-Line vessel is being built on the left side of the basin. In August, side by side with the RoRo

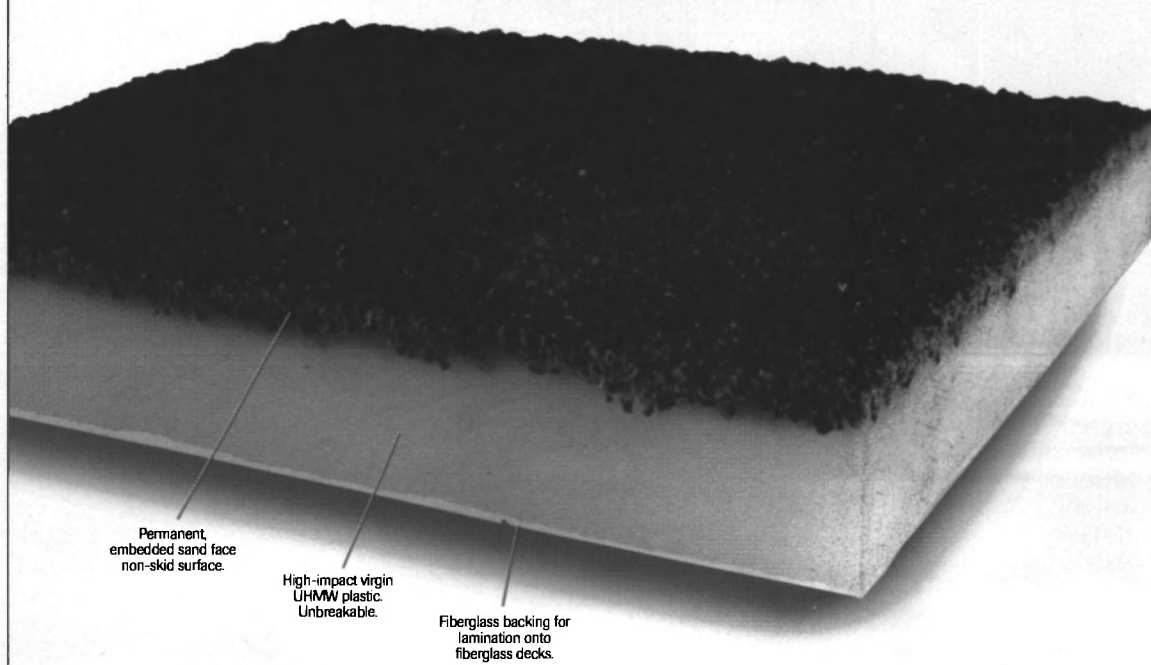
vessel, an aluminum catamaran will be constructed for Stena Line. According to Finnyards, the RoRo will be "green" vessels that use 10% less fuel oil and diesel-electric propulsion. The vessels will be capable of 18.5 knots.

The 588.2-ft. (179.3-m) new basin will have 2,400 lane meters of deck space, providing space for 1,500 cars; room for 300 passengers and crew. They will have a beam of 110 ft. (27.2 m) and a 19.7-ft. (6-m) draft.

For more information on Finnyards
Circle 16 on Reader Service Card



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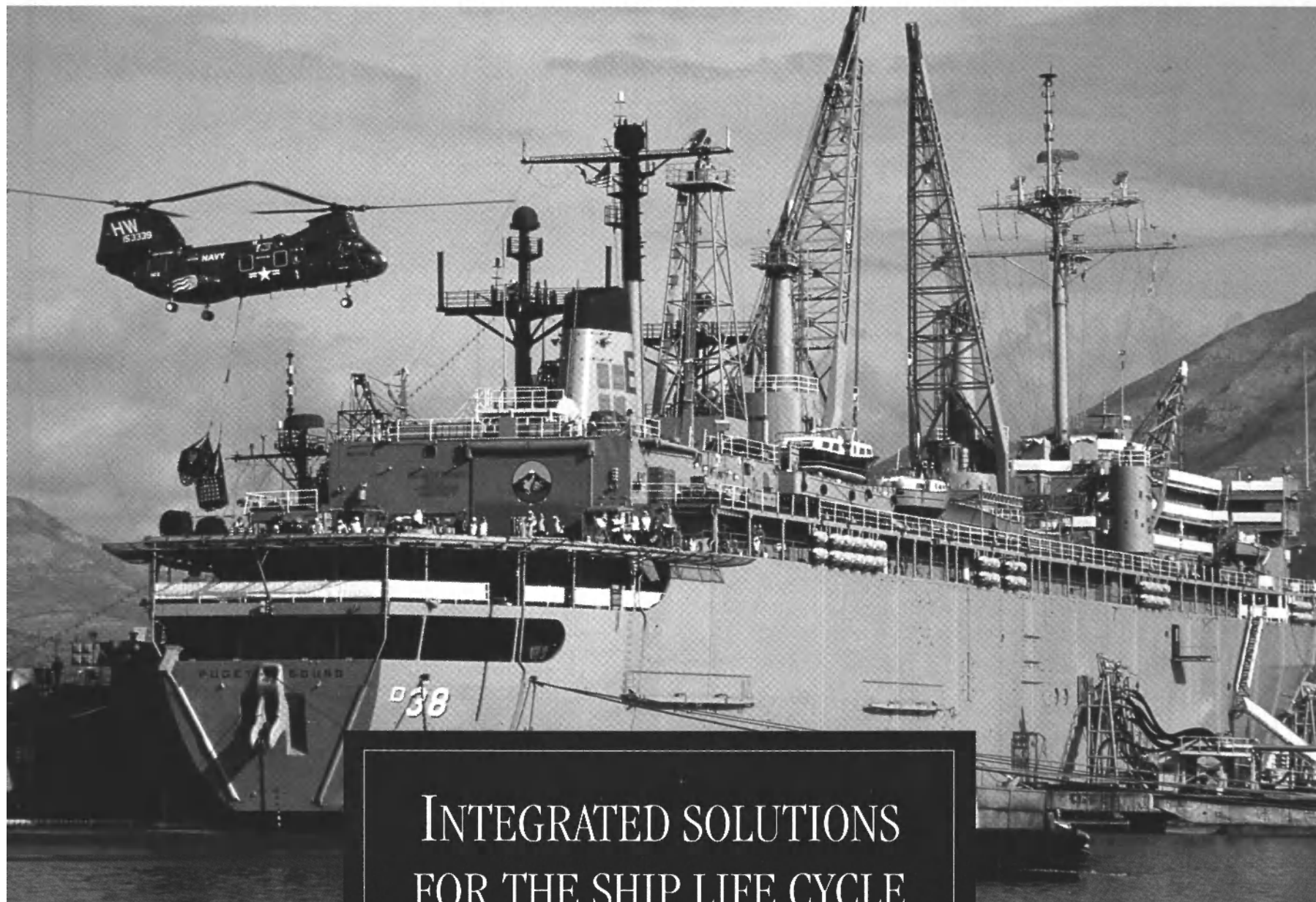
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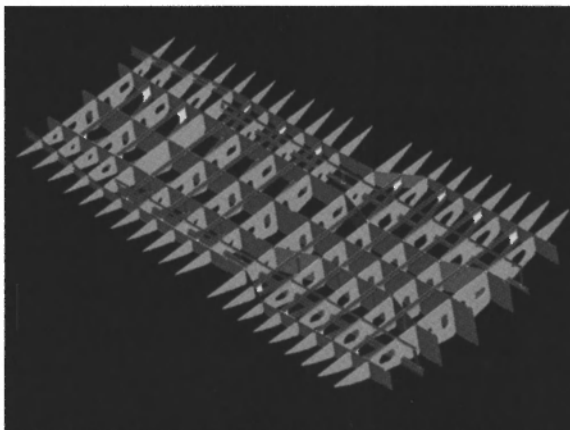
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Circle 23E on Reader Service Card

JOHN DEERE ENGINES ARE COMIN' ON STRONG

IN CRUISE BOATS.

Why are more and more cruise boats being outfitted with John Deere engines? We asked Captain Bill Davis, operating the 85' Crystal Queen out of Morehead City, NC.

"They're smooth throughout the power range."

According to Captain Davis, "Those 4-stroke Deere engines are very smooth throughout the RPM range. Low end torque and throttle response is excellent."

"Engine noise is minimal."

Quiet operation is important on boats operating in tourist areas. "The John Deere engine is much quieter than a comparable 2-stroke engine. I really like the way they sound."

"Very low fuel consumption."

"They're a wonderful running engine, said Davis. "They don't burn a lot of fuel and top speed on the vessel is about 5 knots faster than we had anticipated."



Why are more and more crane barges being outfitted with John Deere engines? We asked Joel Smith, of R&D Maintenance Service. Smith is supervising a project near Columbus, Mississippi for the Corps of Engineers.

"Very little maintenance."

Smith operates a new 54' x 160' crane barge with two Deere genset engines. He also uses two Deere powered compressors elsewhere in the project. "To my knowledge we haven't had to do anything but routine service on any of them."

"Seven years old and the engines run with no problems."

Smith likes the way even older Deere engines keep delivering the performance he needs. "The compressor engines have been in service for 7 years now, and they still work like the new ones."

"Just plain dependable."

"They just keep running...doing the job with no problems," said Smith. "They give us the dependability we need on projects like ours."

IN CRANE BARGES.



COMIN' ON STRONG.

Dependable, fuel efficient, high torque, smooth-running John Deere engines in the 70-300 hp (52-224 kW) range are being used on more workboats of all kinds every day. Talk to the people who use them and find out why.

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Circle 289 on Reader Service Card

ACTU-VATOR:

Folding Hatch Cover Innovation From The Main Deck, Inc.

The Main Deck, Inc. has designed a new type of folding hatch cover that may be fitted at both weather deck and tweendeck hatchways. In its simplest form, this type of hatch cover consists of two, flat-topped panels, similar in basic construction to those currently in use and driven by hydraulics, but completely self-contained inside the hatch cover. Adjacent panels are hinged together so that they fold. The panel at the stowage end is hinged to a plinth, welded to the deck. Mechanical actuators, gearbox, drive shaft, pillow block bearings and electric motor are contained within the cover. The mechanical actuator unit designed for the system is reportedly very safe to operate, inexpensive and durable for a shipboard environment.

Components

Reportedly, parts and equipment of the ACTU-VATOR system are relatively inexpensive, and due to the system's simplicity, repairs can be performed by ships personnel in port or underway. The ACTU-VATOR lifting system is a simple arrangement consisting of the following components:

- **Electric Motor.** Five-hp, coupled to accept a 2.25-inch stainless steel drive shaft. The motor is controlled by a hand-held control unit, attached to a flexible cable, plugged into the coaming or convenient receptacle, outside the cargo hold. The control unit is attached to an electric cable, lengthened to suit.
- **Motor Drive Shaft.** 2.25 in., stainless steel, supported midway by a pillow block bearing, running on to the gearbox.
- **Gear Box.** Transfers power from the single, incoming drive shaft to a transverse drive shaft used to power the mechanical actuators.
- **Mechanical Actuator.** Transfers power from the transverse drive shaft, creating a lifting movement as the screw moves forward and a closing movement as the screw retracts.
- **Yoke.** Installed at the end of the actuator screw. The opposite end of the yoke is pinned through the cam action hinge assembly, which is attached to the hatch cover at the break point. Different configurations of various designs can be incorporated into cargo access openings. For a larger application, the size of the actuator and drive shaft would be enlarged, and the number of actuators and the rated hp of the electric motor would be increased. Different types of gear

reducers can be introduced to maximize power configurations. All the drive system's components are attached to the underside of the hatch cover panel. All drive mechanisms are held in place by brackets welded to the underside of the top panel and supported by cross beams. This places the drive system out of harm's way and out of the elements.

The ACTU-VATOR drive mechanism is a positive locking system, so unless the motor is engaged and the drive system energized, the covers will not move. This design feature reportedly prevents covers from free falling. For emergency operations such as a power failure, a manually operated ratchet assembly is incorporated into the drive train. The Main Deck claims ACTU-VATOR hatch covers can be operated virtually by anyone who is capable of operating the hand controls (open/close), and there is no need for more than one operator. The covers can reportedly be stopped in an instant in the event of an emergency. Applications for the ACTU-VATOR system include, but are not limited to, ship's cargo hatch covers on coamings and ship's cargo hatch flush hatch covers in the weather and below decks; barge cargo hatch covers; shipboard aircraft hangar covers; large stores hatches; single section stern, bow ramps and side port ramps; ship's interior ramps; bow, stern and side port door openings; submerged door openings for torpedo tubes and missile launch tubes; large shipboard doors in bulkheads and deckhouses; inland waterway lock gates; and shore side facility doors — horizontal, inclined or vertical.

For more information on The Main Deck
Circle 32 on Reader Service Card



The Main Deck's new ACTU-VATOR hatch cover system can reportedly be operated by one person.

RCCL Orders Second, \$300-Million Ship From Kvaerner Masa-Yards

Royal Caribbean Cruises Ltd. (RCCL) exercised its option to order a second 1,950-passenger cruise ship from Kvaerner Masa-Yards of Helsinki, Finland. The ship is scheduled for delivery in September 1997 and will cost about \$300 million.

RCCL currently has a 1,950-passenger ship on order with Kvaerner-Masa, for delivery in November 1996. RCCL has committed itself to fleet expansion through new construction to approximately \$1.2 billion through 1997, making it one of the largest shipbuilding programs in the cruise industry's history.

For more information on Kvaerner
Circle 49 on Reader Service Card

AMSC In Agreement With Sprint

American Mobile Satellite Corp. (AMSC) signed a distribution agreement with Sprint Cellular, which provides wireless voice and data service to more than 750,000 customers. As a distributor of AMSC's Skycell mobile satellite services for use in the maritime industry, Sprint Cellular will be able to offer comprehensive availability of mobile communications service regardless of location throughout the U.S. once the service begins in 1995. AMSC holds the Federal Communications Commission license to construct and operate a mobile satellite service which will complement the existing terrestrial cellular system, providing mobile voice, fax and data communications in all areas not covered by cellular.

For more information on AMSC
Circle 51 on Reader Service Card

SHOW PREVIEW

Superyacht Northwest '94

The Northwest Yacht Network Gathers For Exhibition

Some of the world's most luxurious yachts will convene at the Kirkland Yacht Club Marina in an exclusive gathering of Pacific Northwest yacht builders, naval architects, designers and equipment manufacturers — all to showcase the talents of this leading American superyacht region. The second annual in-water display of multimillion-dollar yachts built and/or designed in the Northwest, the event is an opportunity for prospective yacht owners and their agents to explore new shipbuilding and design contracts.

Fifteen or more superyachts will be open for tours during the three-day show, along with exhibits from 50 regional companies that service

the superyacht industry.

According to the show's organizers, the U.S. produces more superyachts than any other country in the world.

More than 4,000 people from around the world attended the first Superyacht Northwest in 1993. **Chuck Worst** of Northern Marine Electronics summed up the event: "By bringing together megayacht owners, captains, suppliers and qualified prospective buyers, more has been done for the local economy and marine industry than anything else in recent history. This is a super boost for the Northwest." As a result of the 1993 show, two yachts were sold and six buyers entered into pre-contract discussions with builders.



Superyacht Northwest '94 will bring together the area's yacht builders, designers, suppliers and potential owners. The show will be in Kirkland, Wash.

Exhibits are open on September 15 from 10 a.m. until 5 p.m., with a welcoming cocktail party at 7 p.m. that evening. The next day has the same exhibit hours, plus a forum at 1 p.m. called "Cruising Southeast Alaska and Baja California," presented by **James O'Donnell**, captain of the charter yacht *Marco Polo*. Then comes the Bal de la Mer, a cocktail buffet and auction benefit "dance of the sea" to raise funds for The Nature Conservancy, on Friday evening, September 16, 1994. On Saturday the 17th, exhibits are open an hour longer, until 6 p.m., and a forum will be given at 1 p.m. called "The Technological Edge: Design & Construction of *Evviva*,"

presented by **Daryl Wakefield**, president of Admiral Marine Works.

The show is underwritten in part by Cellular One, its patron sponsor. Supporting sponsors include Detroit Diesel, Deutz MWM, First New England Financial, Fisheries Supply, Naiad Marine, Pratt & Lambert and U.S. Paint. Underwriting the exhibitors' reception are host sponsors MTU & debis, Mercedes-Benz, American Eurocopter and Freightliner. Tickets for Superyacht Northwest are \$100 per person before August 31 or \$150 at the door and \$250 for the Bal de la Mer. For more information, contact **Reggie Dennis** at tel: (206) 228-4284; fax: (206) 226-7426.

Exhibitor List (Partial)

Admiral Marine Works
American Marine Contractors
B.C. Association for Harbors,
Ports and Marinas
B.C. Research
Beline Woodworks
Bell Design Group
Christensen Motor Yacht Corp.
Cooper & Queenship Yacht Works
Crescent Beach Boatbuilders
Delta Marine Industries
Eagle Yachts
Freeman Marine Equipment
Heisley Marine
Charlotte Henkey Designs
Hydra-Power Systems
Nick Jackson Company, Inc.

Glade Johnson Design
Juneau Convention &
Visitors Bureau
Kobell Manufacturing
Lacasse Marine Group
Lake Union Drydock Co.
Lang Management Northwest
Light Engineering
Marine Graphics
Nordlund Boat Company
North Coast Boats
Northern Lights/Lugger
Oceanvision Systems, Inc.
Guido Perla & Associates
Playpus Marine
Pokala Design
Port of Juneau

Potter Stewart & Assoc. Inc.
Puglia Shipbuilding
Reisner, McEwen & Associates
Ron Smith, Inc.
Jack W. Sarin Naval Architects, Inc.
Sea Inc.
Seaton Yacht Design
The Ship's Computer
Sovereign Yachts
U.S. Submarines
United Yacht Transport (USA), Inc.
Vessel Information Systems, Inc.
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Wesmar Bow Thrusters
West Bay Sonship Yachts, Ltd.
Westport Shipyard

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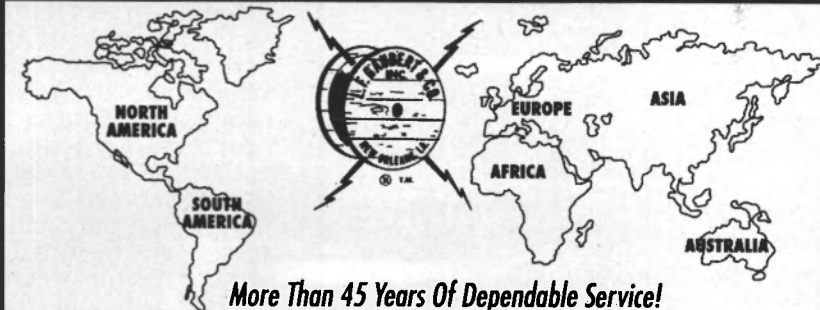
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Maritime Reporter/Engineering News

Brandtship Earns ISO Certification From BV

Brandtship U.S.A., Inc. has been certified by Bureau Veritas Quality International (NA) Inc. as meeting all the requirements of the ISO 9002 standard as shipbrokers, ship managers and agents.

The company, established 25 years ago, started operation in the New York area and moved in 1988 to Fort Lauderdale, Fla. Its main areas of operation are in the forest products industry, container vessels and in the movement of anhydrous ammonia in LPG carriers, as well as involvement in numerous other commodities. The company can be reached at tel: (305) 525-8831; fax: (305) 525-9181.

Port Allen Yard Becomes 15th In Trinity Group

Eastern Enterprises reported that its subsidiary, Midland Enterprises Inc., recently sold its Louisiana barge construction and repair facility, Port Allen Marine Service, to Trinity Industries Inc., making it the 15th yard in the Trinity Marine Group.

Trinity agreed to reserve barge construction capacity for Midland's future requirements and deliver new barges at competitive prices for an undisclosed period of time. Eastern so stated that it expects to record small gain on the sale of the Port Allen facility in its second quarter 94 earnings, scheduled to be released in late July.

Eastern Enterprises Chairman and CEO J. Atwood Ives said the transaction would allow Eastern to divest an underutilized asset without sacrificing barge construction rights, while giving Trinity a first-class facility to increase its capacity.

Eastern Enterprises is a holding company with revenues of more than \$1 billion and three businesses: Bostrom Gas Company, a natural gas distributor; Midland Enterprises, an inland barge operator; and PerPro Supplies, a water and wastewater systems distributor. Trinity Marine Group includes shipyards in the U.S. and provides a variety of ship, barge and construction and repair services.

For more information on Trinity
Circle 15 on Reader Service Card

World Bank Approves \$42 million In Financing For Chowgule

The World Bank's International Finance Corp. approved a \$42 million financing package for Chowgule Steamships Ltd. of Bombay, India, to back the company's acquisition of modern and fuel-efficient vessels. International Finance, which is the World Bank's private sector arm, is providing a \$15 million loan to

Chowgule Steamships as part of a \$27 million loan syndication. Besides the loans, International Finance added that it is taking a 10 percent equity stake in Chowgule for \$5 million.

Chowgule's existing fleet comprises 11 bulk carriers totaling 310,229-dwt. Its expansion program includes the acquisition of two to three more bulk carriers for international transport of dry bulk commodities, according to International Finance.

Marine Terminals Corp. To Operate Oakland Terminal

Marine Terminals Corp. (MTC) will operate Oakland's Seventh Street Marine Container Terminal for the next 10 years under a new management agreement that, reportedly for the first time, commits a terminal operator to a major facility improvement program.

The three-berth, 56-acre terminal serves some of the port's largest container carriers, including the transpacific services of Hanjin, Hyundai and Yangming. It accounted for 136,000, more than 10 percent, of the total number of TEUs the Oakland port handled in 1993.

The pact calls for San Francisco-based MTC to build a \$5 million terminal gate and related infrastructure. Now in design by the Oakland-based engineering and architectural firm of Jordan-Woodman-Dobson, the 10-lane complex will make extensive use of computer and video technology to speed the movement of containers and other cargo on and off the wharves. Construction is expected to start in October and be completed early next year.

MTC's investment will be repaid over the life of the agreement. As reimbursement for the improvements, MTC will receive an additional 2.5 percent of gross tariff dockage and wharfage fees from new activity generated at the facility.

Steamers Buys Containership From Gigi Shipping For \$20 Million

Steamers Maritime Holdings Ltd., a member of the Keppel Group, has acquired a new containership for about \$20 million from Gigi Shipping, a U.S. subsidiary of the Russian Sovcomflot Group, and will charter it to Danish shipping group A.P. Moller.

The new generation, 12,500-dwt RW49-B183 ship had just been delivered to Gigi in April from a Polish shipyard. The vessel has a top speed of 18 knots and is equipped with two 40-ton cranes and 90 reefer points. Classed by Germanischer Lloyd, the vessel is designed for one-man bridge operation. Upon delivery, the ship will commence on a nine-month charter with further options. To be renamed *Maersk Miami*, she will trade between ports on the east coasts of the U.S. and South America.

This is the second vessel acquired by Steamers as part of a major new initiative to invest in container feeder ships for trade in the charter market. In April, the company purchased a six-year-old ship with an existing charter.

Steamers is raising \$67 million through a one-for-four rights issue of shares and convertible loan stock to finance company expansion.

Keppel Unit Wins Tanker Contracts

Keppel Shipyard Inc., a member of the Keppel Group, has secured a contract to build two clean product tankers for Tevhan Marine Corporation of the Philippines for \$6 million each, inclusive of machinery and equipment supplied by the owner.

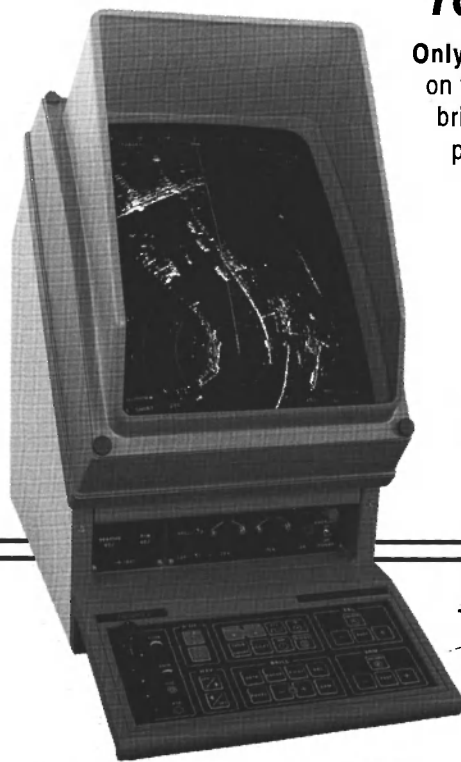
Each will have a tank capacity of 6,000-cu.-m. to accommodate 5,000 tons of petroleum products. Measuring 328 ft. (100 m) long, with a molded width of 50.8 ft. (15.5 m) and molded depth of 24.6 ft. (7.5 m), they will each be powered by a single screw 2,300-bhp engine. One tanker is slated for delivery in the second quarter of 1995, and the other three months later. The hulls, machinery and equipment will be classed by the American Bureau of Shipping with a notation of + A1 (E) Oil Carriers + AMS for unrestricted service.

Keppel recently delivered an 8,000-dwt fuel oil barge to Far East Livingston Shipbuilding (FELS) Ltd. of Singapore and is completing a synchrolift platform for a dockyard in Kwajele in the South Pacific. It is also scheduled to begin fabrication of two container cranes for International Container Services, and a floating crane for Petron.

The yard's current \$1.5 million in shiprepair activities include steelwork renewal of the log carrier *Andhika Asoko*; tank blasting of the tanker *Gomburza*; hatch cover repair of the containership *Lorcon Mindanao*; and tank top renewal of cargo vessel *Eastern Jupiter*.

For more information on Keppel
Circle 90 on Reader Service Card

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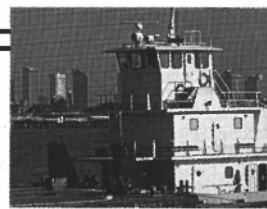
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M. Rosenblatt & Son, Inc. Helps Modernize Cruise Ship *Independence*

M. Rosenblatt & Son, Inc., naval architects and marine engineers, has completed the contract plans and specifications for the modernization and renovation of the U.S.-flag cruise ship *SS Independence*, being performed at Newport News Shipbuilding (NNS). The 800-passenger, 680-ft. (207-m), 30,000-ton vessel is operated by American Hawaii Cruises in the Hawaiian Island cruise trade.

The work included new passenger cabins and suites; renovating and enlarging existing passenger cabins and public spaces; improved vertical access to public spaces with the installation of weather stairways; a new food buffet area, com-

plete with galley, scullery and reefer storage; refurbishment of swimming pools; extension of two elevators to the new Sports Deck suites; refurbishing windows and wood decking and adding canopies above the superstructure decks; updating HVAC, lighting, interior communications and plumbing; replacing distillers, air conditioning plants, emergency diesel generator, and various pumps; upgrading the marine sewage system; and renewal or doubling of most of the tank top and "D" deck plating.

For more information on M. Rosenblatt
Circle 53 on Reader Service Card

North Atlantic Marine Refurbishes Tug For Maine Maritime Academy

North Atlantic Marine, Inc. rewired and revitalized the Maine Maritime Academy tug *Pentagoet* located in Castine, Me.

The tug is used in student training by the academy and is used for docking their training vessel the *State of Maine* and other activities.

North American Marine worked on or replaced the following systems:

Emergency battery DC systems; power distribution systems; all logic systems tied in with steering and air handling units; all constavolt

charging systems; power transfer switches; all generation systems, lighting and alarm systems.

All wiring was cleaned and inspected and all new motors and motor starters were rewired.

For more information on N. Atlantic Marine
Circle 54 on Reader Service Card

Lykes Reaches Agreement With All Seagoing Unions

Lykes Bros. Steamship Co., Inc. has report-

edly become the first employer to reach final contract agreement with its four seagoing unions.

The American Radio Association, District 1/ Marine Engineers Beneficial Association (MEBA), District 4-NMU/MEBA, and the Masters, Mates & Pilots have all agree to new contract terms with the company.

Maersk Contributes To SUNY Maritime College

The State University of New York (SUNY) Maritime College at Fort Schuyler Foundation has been awarded a \$150,000 gift from Maersk Line, Ltd. to help underwrite the completion of the college's Center for Simulated Maritime Operations (CSMO). CSMO already includes bridge diesel, radar, navigation, and Global Marine Dress & Safety Systems (GMDSS) simulators. With the addition of an oil spill response simulator, a liquid cargo simulator, and a second pilot house for its bridge simulator, CSMO is expected to be one of the most comprehensive simulator training centers in the Northeast. Used by the cadets at the college, CSMO is also available to maritime industry employees seeking continuing education or retraining.

Freeport, Texas Becomes Offshore Activity Center

Transshipment activity at Freeport, Texas just one indication of the Port's emergence as center of offshore, oil-related, semisubmersible and try tow activity. In June, the Dut semisubmersible heavy lift ship *Mighty Servant* transported two jackup platform rigs, the *Acadi Spirit* and *Marine IX*, from Freeport, Texas China and the Yellow Sea. *Mighty Servant I*, oceangoing, 22,000-ton vessel owned and operated by Wijsmuller Transport BV, required Freeport 65-ft.-deep "sink-hole" to load the structures. In late 1993, the huge Shell Auger tension leg drill and production platform (TLP) was towed to Port Freeport for final hookup and commission prior to its drilling site installation in the Gulf of Mexico. And in April of 1993, Global Marine Drilling Co. brought its *Glomar High Island* and *VIII* jackup rigs into Freeport from West Africa for preparation to work new drilling sites in the Gulf.

Mobile Telesystems Wins Sealift Contract

Mobile Telesystems, Inc. has been awarded largest contract to date by the Military Sealift Command (MSC) to supply Inmarsat-C terminals for the U.S. Navy, U.S. Coast Guard (USCG) MSC vessels.

The contract's award is the culmination of a lengthy process that will require Mobile Telesystems to supply up to 360 Inmarsat-C terminals, as well as provide installation and training. The units are fitted with integral GPS and approved for GMDSS.

Mobile Telesystems, Inc. is a leader in design, manufacture, and marketing of Inmarsat communication terminals for marine, terrestrial and land-mobile markets.

MTI currently has, or has under development, terminals for Inmarsats A, B, C and M.

For more information on Mobile Telesystems,
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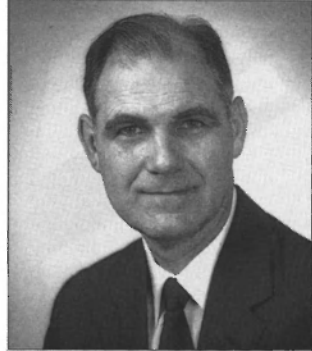
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New Orleans Trade Board Names Executive Director



Gene Hymel

The New Orleans Board of Trade has appointed **Gene Hymel** its executive director, replacing **J. Edward Barr**, long-time executive director, who is retiring and will continue as a staff consultant.

Mr. **Hymel** was formerly a business consultant and a real estate broker. He was employed as division controller and administrative manager for the Ingram Corporation from 1967 to 1983. He holds a BBA degree from Loyola University and an MBA from Tulane University. He is also a retired Lt. Commander in the U.S. Naval Reserve.

Grundmann Named MarAd Trade Specialist

Van J. Grundmann has been appointed trade specialist for the Maritime Administration's Central Region Headquarters Office in New Orleans, La. Mr. **Grundmann** has nine years in the ocean freight shipping industry representing U.S.-flag carriers.

A graduate of Tulane University, Mr. **Grundmann** has spent the last seven years with Sea-Land in Dallas and Ft. Lauderdale representing the Europe and Middle East trades.

He will be meeting with commercial cargo interests in Louisiana, Mississippi, Alabama, Arkansas, Kentucky, Tennessee and Western Florida.

Pates Named Welding Division Manager For Fleet Technology Ltd.

Michael J. Pates has been named division manager, materials and welding technology, for Fleet Technology Limited (FTL) of Toronto, Ontario, Canada.

Mr. **Pates**, a metallurgist with six years in welding technology and management, returns to FTL after seven years with the Canadian Welding Bureau, where he was responsible for all aspects of the bureau's certification involvement with the Alberta Offshore Project.

His prior position at FTL was as welding research manager. Mr. **Pates** will be part of the senior management at FTL, and head up the entire materials

research and consulting effort, which includes about \$1 million in contract research per year, as well as failure investigations, engineering critical assessment, etc.

FTL has comprehensive metallurgical and mechanical testing labs. The company has a specialization in Arctic and cold regions engineering, ship technology, hydraulics, materials and fabrication.

Patella Named Bailey Controls' VP Of Engineering, R&D

Joseph G. Patella has been appointed vice president of engineering and research & development at Bailey Controls Company. Mr. **Patella** joined Bailey in 1983

and has held positions as supervisor and director of application engineering. He was formerly employed with Gulf Oil Company.

He is a past recipient of the Ervin G. Bailey Technical Paper Award and holds a number of patents in advanced controls. He is a member of the American Institute of Chemical Engineers and is a licensed professional engineer in Ohio.

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Partner, Herbert Smith, London.

MONDAY 17th OCTOBER *Delegate Registration and Organisers Welcome Cocktail Party*

DAY ONE - TUESDAY 18th OCTOBER

Official Opening

Paper 1. **Inaugural Paper.** *Bob Anderson.*

Paper 2. **20 Years Salvage in the Caribbean.**

Capt. O. Gutierrez, Empresa Antillana De Salvamento, Cuba.

Paper 3. **Hydrodynamic Effects of Ship-Handling Tug
Hull Forms.** *Paul Brandner, Australian Maritime College,
Australia.*

Paper 4. **Legal & Technical Aspects of Cargo Recovery
from the Ocean Bed.** *Roy Martin and Tim Bryant, Marine
Salvage Services, U.K.*

Paper 5. **Dynamic Loads on Towlines.** *Bill Milwee, U.S.A.*

Paper 6. **Maximising the Salvage Award.** *David Hebden,
Thomas Cooper & Stibbard, U.K.*

Paper 7. **Sacking a Salvor.** *Richard Olsen,
Stephenson Harwood, U.K.*

Stephenson Harwood, U.K.

Happy Hour in Exhibition Area.

DAY TWO - WEDNESDAY 19th OCTOBER

Paper 1. **Liability Salvage.** *James T. Brown, Bell & Murphy,
U.S.A.*

Paper 2. **Design of Ship-Assist Tugs.** *Robert Allan,
Robert Allan Limited, Canada.*

Paper 3. **The Role of Inmarsat in Salvage.** *Chris Wortham,
Inmarsat, U.K.*

Paper 4. **Merchant Shipping (Salvage & Pollution) Bill.**

Ben Browne, Clyde & Co., U.K.

Paper 5. **Raising from the Depths.** *Allan Colquhoun,
Australia.*

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An afternoon of Tug & Salvage displays and demonstrations
Cocktail Party. Details to be announced.

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Riomar Names Seacorp's Takeuchi As Agent In Japan

Riomar is now represented in Japan by **T. Takeuchi** of Seacorp, Ltd. Prior to establishing Seacorp in 1992, Mr. **Takeuchi** was affiliated with Y.S. Line for many years and served as managing director of Navix Line (Europe) Ltd. His full address is: **T. Takeuchi, c/o Seacorp Ltd., 4-12-9, Nishiogi-Minami, Suginami-Ku, Tokyo 167, Japan; tel: +81 3335 7424; fax: +81 3335 7526.**

Corps Names New Engineer For Portland District

The Portland District, U.S. Army Corps of Engineers, recently named **Maj. Steven G. Wabnitz** as its new deputy district engineer. **Maj. Wabnitz**, who assumed the position June 8, replaced **Maj. Richard E. Dadisman**, who retired.

The Portland District, one of four districts in the Corps' North Pacific Division, has responsibility for the Corps' water resource activities in Western Oregon and part of Southwestern Washington.

Most recently, **Maj. Wabnitz** served within the Portland District as the planning and engineering operations coordinator and as project manager for the Bonneville Navigation Lock, Project Improvements for Endangered Species and other projects.

New Marketing/PR Director for Hamburg Port

Ursula Schmeling-Brinkmann has been appointed to the position of marketing and public relations director for the Port of Hamburg, Germany.

She will oversee all marketing and promotional activities in Europe as well as activities of the port's representative officers throughout the world. She previously served as the press relations director and correspondent for the port.

Galveston Port Names Board Officers

The Port of Galveston has re-elected **John Unbehagen** to the position of chairman of the board, as well as **James E. Yarbrough** to the position of vice-chairman of the board, at its annual meeting. Both have served in these positions from 1993 until June 1994.

Also, two new board members were sworn in. Former employee **Henry L. Selig** was appointed by the Galveston City Council to serve a term of three years. City council

member **Dr. William H. Clayton** was appointed to serve a term of one year in the capacity of city council representative on the board.

Total Quality Institute Names Kuly Facilitator & Affiliate

Total Quality Institute has appointed **James A. Kuly**, head of

Visioneering in Springfield, Pa. as a certified facilitator and an affiliate of the Institute. **Mr. Kuly** has more than 20 years of marine engineering and operations experience in a variety of management positions.

He holds a bachelor's of science degree from the Merchant Marine Academy and an MBA from the University of South Florida.


Visioneering offers small to me-

dium-sized companies in the marine industry with a comprehensive, customized, results-oriented approach to total quality management, strategic planning and management development.

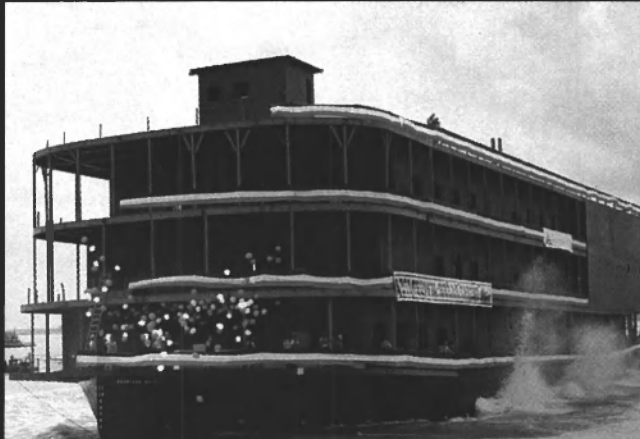
Total Quality Institute is an international group of management specialists which develops customized Total Quality Management (TQM) implementation processes.

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SHOW PREVIEW

4th International Conference On **High Speed Marine Craft**

September 7-9, Kristiansand, Norway

The 4th International Conference on High Speed Marine Craft will focus on the challenges related to transport economy, safety, human factors and environmental aspects of fast sea transportation. To be held at the Hotel Caledonien, Kristiansand, Norway, the conference program will feature sessions titled *Fast Short Sea Shipping*, *Environmental Aspects* (of fast sea transportation), *Safe Operation of High Speed Marine Craft*, and *Human Factors* (in relation to fast sea transportation). Topics addressed during the sessions include "The Effect of Speed on Transport Economy," "The Need of High Speed

Marine Craft in Cargo Transportation," "Exhaust Gas Emission from Diesel Engines in High Speed Craft," "IMO's Rules and Regulations for Pollution and Safety Effects on Operability of High Speed Craft," "Operation of High Speed Craft in Congested International Waters," "Safe Operation of High Speed Marine Craft," "Human Factor in Bridge Design and Operational Aspects," and "Resource Management and Crew Training." For more information, contact the Norwegian Society of Chartered Engineers, P.O. Box 2312 Solli, N-0201 Oslo, Norway, tel: +47 22 94 75 02; fax: +47 22 94 75 02.



Moran Christens Trinity-Built Barge Connecticut

A double-hulled barge designed and built to deliver oil to Northeast Utilities (NU) generating stations was christened by owner Moran Power Company of Greenwich, Conn. The 325-ft. (99.1-m) 40,000 barrel capacity

barge *Connecticut* has been chartered to NU. "The *Connecticut* was built to protect the environment during delivery of oil to shallow tidewater locations and has a double hull of reinforced steel with spill rails surrounding the deck perimeter. It also is equipped with a high-level alarm system to prevent the overloading of any tank ... and onboard pollution response equipment includes 1,200 ft. (366 m) of oil

containment boom and absorbent pads to aid in any potential clean-up operations," said **Malcolm W. MacLeod**, president and CEO of Moran Towing. The *Connecticut* will also supply NU's three other oil-burning stations at Montville on the Thames River, Devon on Long Island Sound, and the Norwalk Harbor Station. The barge was built by Trinity Marine, Beaumont, Texas.

For more information on Trinity
Circle 50 on Reader Service Card

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NOL, Tosco In Pact To Move Crude Oil

Tosco Corp.'s Bayway Refining Company, which operates a 260,000-barrel-per-day refinery in Linden, N.J., entered into a 12-year tanker charter with Neptune Orient Lines, Ltd. (NOL) of Singapore for the charter of three 100,000-dwt crude oil tankers.

The tankers will be built to Bayway's specifications at Samsung Heavy Industries of South Korea. Each tanker will have six pairs of tank segregated by a centerline bulkhead and will be double sided and double bottomed.

Flender Werft, Lubeck Launches M/V Santa Maddalena

The containership M/V *Santa Maddalena* was launched July 1, 1994 at the Flender Werft, Lubeck for shipowner Claus-Peter Offen, Hamburg.

The ship is a newbuilding of the FW 1800-type. The *Santa Maddalena* is 597 ft. (182 m) long with a breadth of 92 ft. (28 m), depth of 52.5 ft. (16 m) and draft of 38 ft. (11.5 m). The deadweight capacity of the vessel is 30,000 dwt.

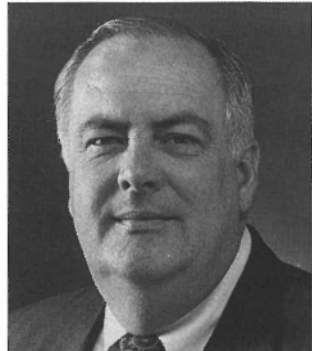
The vessel is equipped with four cranes for carrying 1,921 containers in six tiers on deck and in holds, where they are stowed in fixed 40-ft. ceiling guides.

Propulsion is by a crosshead MAN B&W 6S6 MC, with a rating of 12,240 kW at 105 rpm. The propulsion package helps provide a service speed of 20 knots. The vessel is scheduled for delivery in November 1994.

For more information on Flender Werft
Circle 52 on Reader Service Card

Maritime Reporter/Engineering News

Westinghouse Names Clark Marine Division Gen. Mgr.



Arthur D. Clark

Westinghouse Electric Corp. has appointed **Arthur D. Clark** to the position of general manager of its Sunnyvale, Calif.-based marine division, effective immediately.

Mr. Clark, a 1963 graduate of the U.S. Naval Academy and former naval officer, comes to the new position from the Westinghouse Savannah River Company in Aiken, S.C., where he served since early 1992 as vice president and general manager of the engineering and projects division.

At the marine division, Mr. Clark will be responsible for overseeing Westinghouse operations in marine propulsion systems, including the new Intercooled Recuperated (ICR) gas turbine engine; missile launching systems; advanced materials and processes; and precision mechanical systems.

Mr. Clark has had a distinguished career in naval engineering. He served as chief operating officer of the Charleston Shipyard and also as executive manager of the Pearl Harbor shipyard. Before leaving the Navy to join Westinghouse, Mr. Clark served as CEO of the Philadelphia Naval Shipyard. He retired in 1992 with the rank of captain.

Crowley Chair & CEO Dies At Age 79

Thomas Bannon Crowley, Sr., chairman and CEO of Crowley Maritime Corporation, passed away on July 7, 1994 after a battle with prostate cancer at UC Medical Center in San Francisco.

Mr. Crowley served 61 years in the maritime industry, all in the company founded in 1892 by his father. Mr. Crowley eventually led the company's expansion into an international firm with annual revenues estimated at \$1.2 billion, a fleet of over 400 vessels and over 5,000 employees worldwide. Its numerous business lines are conducted through two major operating units: Crowley American Transport, Inc. of Jacksonville, Fla. and Crowley Marine Services of Seattle.

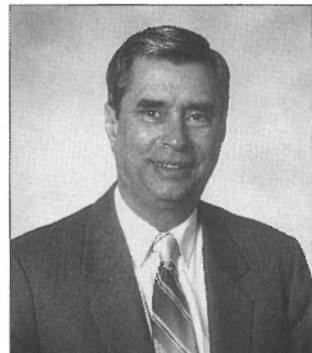
Mr. Crowley was a member of the American Bureau of Shipping and the Transportation Institute's board of trustees. He was chairman of the board of trustees of Ralph K. Davies Medical Center and an honorary trustee of the Woods Hole

August, 1994

Oceanographic Institution. He was a past board member of the American Institute of Merchant Shipping, the American Waterways Operators and the National Ocean Industries Association.

In lieu of flowers, the family suggests that contributions be made to the Thomas B. Crowley, Sr. Memorial Fund c/o Bank of America, The Private Bank, 50 California St., Suite #2800, San Francisco, Calif. 94111. These funds will be used for further research and treatment of prostate cancer.

Alden Electronics Names VP of Satellite & Marine Div.



George E. Lariviere

Alden Electronics, Inc. has promoted **George E. Lariviere** to the position of vice president, satellite and marine division. Mr. Lariviere has more than 20 years of experience in the sales and marketing of marine electronics systems. He joined Alden in January 1993 as the international marine sales manager. Prior to joining Alden, he was vice president and chief operating officer of Kodon International, Inc.

Frank W. Murphy Mfr. Certified To ISO 9001

Frank W. Murphy, Mfr. is now certified by BSI Quality Assurance as having a quality system that meets ISO 9001 standards at all facilities in Tulsa, Oklahoma and Rosenberg, Texas. The auditing firm, BSI Quality Assurance, is based in Milton Keynes, U.K.

The Total Quality Management (TQM) process entails a TQM system developed by employees, based on a Corporate Quality Manual, Standard Procedures, Policies and Work Instructions. It is designed to assure continuous improvement and consistent product quality. All employees participate in Quality Work Groups.

The company is a certified supplier to major OEMs including Caterpillar, Ford, Ingersoll-Rand, Twin Disc and others. Established in 1939, Murphy manufactures a full line of controls and instrumentation, supplying switches, gauges and electronic and automation products to the offshore oil and gas, marine and other industries.

For information on Frank W. Murphy Circle 33 on Reader Service Card

Offshore Coatings Becomes Carboline Distributor In South Texas

Carboline Company, headquartered in St. Louis, Mo., has named Offshore Coatings, Inc., Houston, as its exclusive marine distributor for South Texas, including the ports

of Beaumont, Port Arthur, Orange, Houston, and all the areas south to Brownsville. Carboline is a manufacturer of paints and coatings, recognized for its products Carbo Zinc 11 Inorganic Zinc Primer, Carbomastic, Bitumastic, and Phenoline tank linings. Carboline is a division of RPM, which has annual revenues of \$750 million.

Denholm Makes Management Changes



Bob Speedie

Mike Pride

Denholm Ship Management (Holdings) Ltd. has appointed **Bob Speedie** chief executive. Mr. Speedie joined Denholm as chief officer in 1973 and served as master for five years. Since coming ashore he has held a number of posts, most recently as managing director of Denholm Ship Management (U.K.) Ltd. He takes over the post of **Harry Gilbert**, who is leaving to take the position of managing director of the Wallem Group of companies in Hong Kong.

Mike Pride has been appointed managing director of Denholm Ship Management, the post vacated by Mr. Speedie. Mr. Pride joined Denholm as an engineer cadet and rose to chief engineer. He has held a number of key positions including operations director and deputy managing director.

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Circle 299 on Reader Service Card

PROPULSION UPDATE

MAN B&W

Results Are In On Sea-Land Genset Retrofits

Operational feedback and 20,000-hour inspection reportedly re-confirm benefits of MAN B&W Holeby L28/32H genset engines retrofitted in Sea-Land Service containerships.

The re-engineering project was completed in mid-1991 and resulted in the rejuvenation of the auxiliary power generating plant of Sea-Land Service Inc.'s 12 Atlantic class containerships.

The contract signed by the major U.S. operator and MAN B&W Diesel AS, Holeby, Denmark, was important not just because of its scale — it called for the swift supply of 36 six-cylinder L28/32H engines — but for the requirement to execute the retrofits at sea without disrupting the fleet's normal demanding liner schedules.

The 4,140-TEU ships, built as the Econoship series by Daewoo in 1984-85 for U.S. Lines, were acquired in the late 1980s by Sea-Land Service.

The owner's desire to improve operational and maintenance costs for the series influenced the decision to replace the three original

auxiliary power shipsets with a unifuel package burning the same IF 380 cSt heavy fuel bunkers as the low-speed main engine over the entire engine range: from no load to full-load, including start/stop and standby modes.

The replacement 6L28/32H engines, each 1,075 kW at 720 rpm, were supplied on a baseframe for coupling to the existing Fuji alternator. MAN B&W Holeby also acted as project manager for the re-engineering program.

The investment cost of the project was to be underwritten by the better fuel economy of the new engines, their 25,000-hour intervals between major overhauls and extended components durability, compared with the original shipsets.

Strengthening Of The MC Engine Program

In other MAN B&W news, a longer-stroke and lower-speed version of the 420 mm bore MAN B&W Diesel's MC two-stroke engine has been launched to offer even higher

propulsion plant efficiency for small to medium-sized ships.

The new S42 MC series is now designed to provide a simple and reliable direct coupled engine solution for projects requiring outputs of 3,800 - 16,700 bhp with propeller speeds between 115 and 136 rpm.

The 1,764 mm stroke of the S42MC yields a bore/stroke ratio of 4.2:1 and a nominal speed of 136 rpm.

The layout flexibility enables operators to select maximum continuous service speeds between 115 and 136 rpm for optimum propeller efficiency. An output of 1,025 kW (1,395 bhp) per cylinder is delivered at 136 rpm.

The S42MC series embraces 4-12 cylinder models covering an output band from 1,800 - 12,300 kW (3,800 - 16,700 bhp). A specific fuel consumption of 174 g/kWh (128 g/bhp) contributes to the low overall running costs associated with a direct-coupled two-stroke engine plant.

For more information on MAN B&W
Circle 132 on Reader Service Card

\$13.5M Tug Building Contract Coming Soon

C.H. Cates & Sons Ltd. of North Vancouver will add two new 5,600-hp Z-Peller ship berthing tugs, scheduled to be in service in early 1995. Naval architects Robert Allan Ltd. of Vancouver are designing the vessels, and the shipbuilding contract valued at \$13.5 million is expected to be awarded shortly.

For more information
Circle 10 on Reader Service Card

Austral Wins Approx. \$15 Million in Ferry Contracts

Austral Ships sold a 141-ft. (43-m) high-speed passenger vessel to Japanese operator Diamond Ferry for approximately \$7.7 million. Main propulsion is quadruple MTU diesel engines driving KaMeWa waterjets through ZF gearboxes. Austral Ships also won a \$7.2 million contract for a 131-ft. (40-m), Textron Lycoming gas turbine-powered passenger catamaran from the Zhong Shan - Hong Kong Passenger Shipping Co. Ltd.

For more information on Austral Ships
Circle 140 on Reader Service Card

Kvaerner To Supply Ships Building At Holland Yard

Kvaerner Ships Equipment has secured the complete turnkey contracts for three large ferries building in Holland for Irish and Chinese orders. The newbuildings will be constructed in Van der Giessen de Noord, The Netherlands.

For more information on
Kvaerner Ships Equipment
Circle 139 on Reader Service Card



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Circle 127 on Reader Service Card

Tech-Tran's Marine Duty Transformers Provide Optimum Performance

Tech-Tran Corp.'s Marine Duty Rectifier and Distribution Transformers are designed to work a ship's variable speed power-driven propulsion systems.

Tech-Tran's distribution transformers are built to distribute power for shipboard operations, including bow and stern thrusters, and electrical equipment.

On ships without SCR-drive equipment, the distribution transformers can be incorporated into the power-train system. Tech-Tran's rectifier transformer's power range is 10 KVA to 20 MVA; the power range of the distribution transformer is 45 KVA to 5,000 KVA. Tech-Tran's Marine Duty Transformers are built according to ABS, NEMA, ANSI/IEEE and U.S. Coast Guard Standards.

Tech-Tran's Marine Duty Transformers are used on cruise ships, riverboat gaming vessels, research ships and naval vessels, including the AGOR-class oceanographic research boats, the *Queen of New Orleans* riverboat, and the aircraft carrier *USS Carl Vincent*.

For more information from Tech-Tran
Circle 131 on Reader Service Card

James Marine Services Appoints New Agent

James Marine Services (JMS) announced the appointment of Sea Power Hellas Ltd. as agent to serve its interests in the Greek ship supply market. James Marine Services has concluded an agreement with Piraeus-based Sea Power Hellas to represent both JMS Japan and JMS UK in Greece. James Marine Services recently earned continued accreditation to ISO 9002.

MHI Wins Two Containership Orders From Singapore

Mitsubishi Heavy Industries (MHI), through Marubeni Corporation, has received an order for two 1,128-TEU containerships from Regional Container Lines Pte. Ltd. in Singapore, a subsidiary of Regional Container Lines Public Company Limited in Thailand. The first ship will be delivered in November 1995 and the second in December 1995.

MHI will build these containerships at its Shimonoseki Shipyard & Machinery Works.

For more information on MHI
Circle 150 on Reader Service Card

Art Anderson Assists In Ferry, SLICE Projects

Art Anderson Associates, an engineering firm in Bremerton, Wash., was recently selected for its August, 1994

services on two projects.

The city of Vallejo, Calif. selected the firm to prepare the specifications and assist in vessel selection for procurement of two new high-speed 350-passenger ferries to operate between Vallejo and San Francisco; and Hawaii-based Navatek Ships selected them to assist its SLICE program, in developing a new generation of high-speed, low-waterplane area ships.

The new vessels for Vallejo will augment service currently being provided by the *MV Jet Cat Express*, recently purchased by Vallejo from Catalina Express and operated by Blue and Gold Fleet of San Francisco.

Art Anderson Associated also assisted the city of Vallejo in the selection and purchase of the *MV Jet Cat Express*.

Navatek's SLICE program is a joint venture between Navatek and Lockheed Missiles and Space.

It is intended to produce low-waterplane area ships, which are reportedly known for excellent seakeeping, but nonetheless mostly operated in moderate speed regimes — such as the two existing Navatek SWATHs, with speeds of 15 to 22 knots.

The new SLICE, drawing on Lockheed's advanced technology and modeling capabilities, will have a service speed of 30 knots.

Art Anderson will provide producibility, operability, and maintainability review of the design concept, and will execute detailed design of the passenger modules and interior space — assisting in bringing the advanced technology into the production phase.

For more information on Art Anderson
Circle 149 on Reader Service Card

Board Approves Modernization Of Three Port Of Baltimore Cranes

Governor William Donald Schaefer announced the Board of Public Works' approval of a contract to modernize and improve the efficiency of three container cranes at the Maryland Port Administration's Dundalk Marine Terminal in the Port of Baltimore.

Maryland-based Whiting-Turner Contracting Co., Inc. was approved for the \$9.5 million contract. It will increase the productivity and extend the life expectancy of the cranes by 20 years. This will be the first major modification of the three cranes. The improvements include providing new programmable digital controllers, motors, diesel elec-

tric generator sets, wiring, elevators and other modifications, resulting in an increase in trolleying and hoisting speeds. The cranes will be capable of handling 30 container moves per hour, up from the current average of 22 moves per hour.

Expected to be completed by the spring of 1995, the upgrading of the three IHI-made cranes continues the modernization of the 570-acre Dundalk facility, the port's largest general cargo terminal.

The Board recently approved the purchase of a \$7.4 million container crane, which, when brought on line next year, will give Dundalk 10 container cranes.

PSY Director Warns Against Lifting Alaska Oil Ban

Lifting the federal ban on the export of Alaskan crude would seriously damage the Portland Ship Yard (PSY) and cost up to 700 Portland jobs a year, warned Mike Thorne, Port of Portland executive director. Mr. Thorne said he is trying to create support for Senate bill 1265 and House Bill 2670, both of which would extend the ban.

The ban was imposed in 1973 as a way to improve U.S. oil self-sufficiency. It was on the basis of this firm federal policy that Portland voters approved an \$84 million expansion of PSY — which included

building a mammoth floating drydock to handle the new Alaskan crude oil tankers coming into service. Mr. Thorne says close to about 80 percent of PSY's repair jobs are tankers, and 67 percent of those tankers are in the Alaskan oil fleet. "Largely on the basis of this tanker business, Portland has become the leading commercial shiprepair center on the West Coast," said Mr. Thorne. "Lifting the crude oil export ban would take away a shiprepair market niche Portland created for itself," because if crude is exported, it is almost certain these tankers will be repaired on the other side of the Pacific.

For more information on PSY
Circle 152 on Reader Service Card

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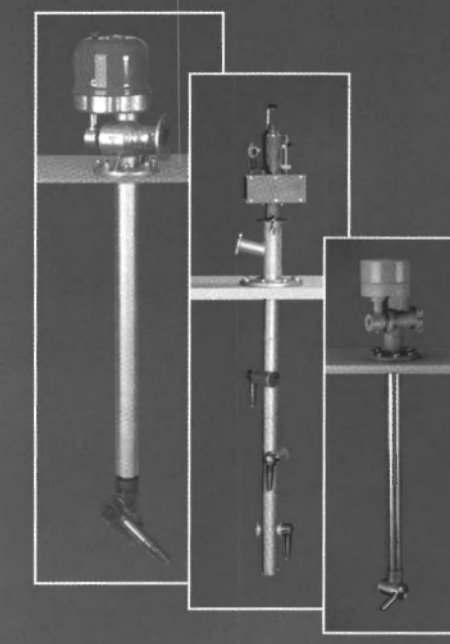
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Caridoc

A Variety of Drydocking/Repair Services In the Caribbean

Caribbean Drydock Limited (Caridoc), located on the island of Trinidad, the last and one of the most industrialized in the chain of Caribbean islands, plays a significant role in the area's shiprepair market for small to medium-sized vessels of all types, including chemical, LPG, LNG and product carriers, as well as tankers, general cargo, RoRo vessels, tug boats and barges. The 26-acre yard offers 1,968 ft. (600 m) of sea frontage, 2,296 ft. (700 m) of quayside and three berthing piers.

A local engineering group of several companies provides support and back-up services to Caridoc, including: diesel engine overhaul, repair and components reconditioning; repair and maintenance of hydraulic systems, pneumatic systems, electrical motors, generators, transformers, and switchgear. This includes a complete range of on-site machining and testing equipment which includes dynamic balancing, vibration analysis, laser alignment, non-destructive crack-detection equipment, electroplating of hydraulic shafts, components (diamond-hard chrome) metal heat treatment, foundry molding and casting of cast-iron, brass, bronze and aluminum components (including zinc anodes, crankshaft grinding and white metal bearing relining).

Variety of Shops for Service and Repair Needs

Engineering department. Includes a computerized system, 10

qualified engineers and a drafting office with a range of testing equipment. The department is fully equipped to design, draw and produce construction drawings for completion of jobs. The mobile and support equipment available on site consists of mobile compressors, fixed compressors, 265-kVA generators, 10- and 20-ton mobile cranes, sand and grit-blasting equipment, airlines spray paint equipment, high pressure wash machines up to 10,000 psi, pump deep well, multi stage, centrifugal and multi-gear for water, fuel and oil, Butterworth tank cleaning machines, 600-, 1,200- and 1,800-hp tugboats, forklift trucks, cherry picker, etc.

Steel fabrication shop. Offers plate rolling up to 355 inches (9,000mm) by two inches (50mm) thick; plate bending and shearing with capacity of 9.85 ft. (3m) wide and .6 in (15mm) thick; equipment for MIG, TIG, stick and oxy/gas welding; plasma cutting; and a 15-ton-capacity traveling crane.

Pipe fabrication shop. Contains pipe bending machines with capacities of up to eight inches in diameter up to schedule 80, both with mandrell and pump bend type machines. Hot and cold bending is also available, cleaning of pipes by pickling process and other chemical and mechanical methods.

Machine shop. Fully equipped with several lathes (capacity up to 35 ft. [10.7 m] long and 13-ft. [3.9 m] diameter), milling machines, gear cutting machines, shapers, boring



mills, jig borers, grinders, threading machines in both English and metric measurements, overhead traveling cranes of up to 15-ton capacity — all in a covered space of 1,800 sq-m.

Engine overhaul department. Equipped for steam cleaning, shot blasting, cylinder boring, cylinder head and cover reconditioning, crankshaft grinding, with facilities for complete engine overhaul. Its

electrical shop contains high and low voltage testing equipment, motor and generator coil rewinding, and general servicing equipment for electrical systems.

Caridoc has agents in the U.K., Denmark, Germany, Greece and Cyprus, Holland and Belgium, Hong Kong, Norway and Sweden, and Venezuela.

For more information on Caridoc
Circle 113 on Reader Service Card

Attwood Introduces New Bilge Pump, V750

Attwood Corp., a supplier of accessories for pleasure boats, introduced the V750 bilge pump to complement its existing line of V-Series pumps: the V450, V625, V900 and V1250. The V750 features a .75-inch hose outlet and a powerful mid-range pump that performs at 760 gallons per hour at open flow and 633 gallons per hour at a three-foot head, drawing only 2.8 amps for long pump and battery life. The V750's compact height allows for easy installation underboard/outboard engines. All pumps in the V-

Series feature high-efficiency magnet motors with composite brushes and permanently lubricated bearings for longer life, along with a volute chamber design that moves more water with fewer amps.

Other features of the V-Series pumps include powerheads that attach to the base with a twist-lock action; heavy-duty, 16-gauge caulked wires; multi-position mounting bracket offering three different 90-degree positions; stainless steel motor shaft; a large filter/strainer area; an angled hose outlet; and an impeller constructed of high-impact thermoplastic.

For more information on Attwood
Circle 127 on Reader Service Card

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Circle 324 on Reader Service Card

Lovejoy, Inc. Opens First European Warehouse

Lovejoy, Inc. opened its first European warehouse at Almere-Haven, The Netherlands. The new facility will stock a full-range of Lovejoy power-transmission product lines, including jaw couplings, S-Flex® (rubber-in-shear) couplings, gear couplings, variable-speed pulleys and universal joints. This location will also service products for Diamond Chain and Leeson Motors. From The Netherlands location, Lovejoy can offer same-day stock shipments to European customers.

For more information on Lovejoy, Inc.
Circle 129 on Reader Service Card

Lake Shore Signs Letter Of Intent For Davit

Lake Shore Inc. received a letter of intent from National Steel & Shipbuilding Co. (NASSCO) for a double-pivot link (strongback) davit for AOE-10. Lake Shore supplies similar strongback davits to Avondale for LSD-49 class ships.

For more information on Lake Shore
Circle 128 on Reader Service Card

CALENDAR

AUGUST

Offshore Northern Seas (ONS) '94: August 23-26, Stavanger, Norway
 Contact: ONS, P.O. Box 410, N-4001 Stavanger, Norway, tel: +47 51 55 81 00; fax: +47 51 55 10 15.

ogy and Tomorrow's Preservation": September 13-16, Parc de Penfeld, Brent, France
 Contact: Oceans '94, Computer Science Dept., Texas A&M University, College Station, Texas 77843, fax: (409) 847-9284.

6th Annual National Maritime Heritage Conference: September

14-17, Charlestown Navy Yard, Boston, Mass. Contact: **Patricia I. Conn**, National Maritime Alliance (NMA), tel: (207) 443-4550

Propellers/Shafting '94 Symposium: September 20-21, Cavalier Hotel, Virginia Beach, Va. Contact: **J.E. Ancarrow, Jr.**, tel: (804) 688-1070.

World Gaming Congress & Expo: September 26-28, Las Vegas Convention Center, Las Vegas, Nev.
 Contact: World Gaming Congress & Expo, Gaming & Wagering Business, Seven Penn Plaza, New York, N.Y. 10001-3900, tel: (212) 594-4120 or (800) 223-9638; fax: (212) 714-0514.

(Continued on page 78)

SEPTEMBER

Baltexpo '94: September 6-9, Gdansk, Poland
 Contact: Agpol Promotion Ltd., ul. Sniadeckich 17, 00-654 Warsaw, Poland, tel: +628 72 95.

4th International Conference on High Speed Marine Craft: September 7-9, Hotel Caledonien, Kristiansand, Norway
 Contact: **Lise Olausen**, Norwegian Society of Chartered Engineers, P.O. Box 2512 Solli, N-0201 Oslo, Norway, tel: +47 22 94 75 00, fax: +47 22 94 75 02.

AWO Fall Convention: September 8-9, Fairmont Hotel, San Francisco, Calif.
 Contact: The American Waterways Operators, 1600 Wilson Boulevard, Arlington, Va. 22209, tel: (703) 841-9300; fax: (703) 841-0389.

International Survival and Safety At Sea Exposition & Symposium: September 8-10, Renaissance Center's Westin Hotel, 403 Midland St., Detroit, Mich. 48243.
 Contact: **Irwin I. Chaitin**, managing director, International Survival and Safety at Sea Exposition and Symposium, tel: (313) 865-1000; fax: (313) 865-7030.

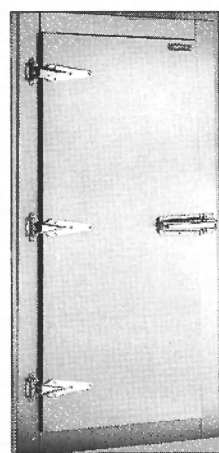
SAE International Off-Highway and Powerplant Congress and Exposition: September 12-14, MECCA, Milwaukee, Wis.
 Contact: SAE Communications and Meeting Promotion Division, tel: (412) 772-7131; fax: (412) 776-1830.

International Ship and Offshore Structures Congress (ISSC), 1994: September 12-16, St. Johns, Newfoundland, Canada
 Contact: Institute of Marine Dynamics, P.O. Box 12093, Station A, St. Johns, Newfoundland A1B 3T5, Canada; tel: (709) 772-2469; fax: (709) 772-2462.

Conference on Computer Aided Design, Manufacture and Operation (CADMO) in the Marine and Offshore Industries: September 13-15, Novotel, Southampton, England.
 Contact: **Sue Owen**, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton SO4 2AA, U.K., tel: +44 703 293 223; fax: +44 703 292 853.

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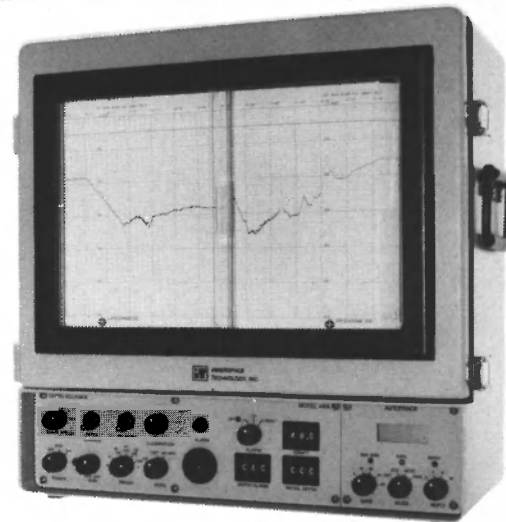
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CALENDAR (Continued from page 77)

Shipbuilding Machinery & Marine (SMM) Technology Exhibition & Conference: Sept. 27-Oct. 1, Hamburg, Germany
Contact: tel: +49 40 3569 2146; fax: +49 40 35 69 2149.

OCTOBER

American Association of Port Authorities (AAPA)

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83rd Annual Convention: October 3-7, Wyndham Franklin Plaza Hotel, Philadelphia, Penn.
Contact: AAPA, 1010 Duke St., Alexandria, Va. 22314, tel: (703) 684-5700; fax: (703) 684-6321.

3rd International Conference on Safety in the Port Environment: "The Impact of Port Services on Safety and the Environment:" October 10-12, Bremen, Germany
Contact: **Nargis Rashid**, Ports of Bremen/Bremerhaven, U.S./Canada Representation, Carl F. Ewig, Inc., 910 Oak Tree Road, S. Plainfield, NJ 07080, tel: (908) 756-3944; fax: (908) 756-2575.

Propeller Club of the U.S. 68th Annual Convention And 1994 Conference: October 10-14, Royal Sonesta Hotel, New Orleans, La.
Contact: The Propeller Club of the U.S., 3927 Old Lee Highway, #101A, Fairfax, Va. 22030

NACE Conference and Exhibition - Partnering for Corrosion Control: October 12-14, Orlando, Fla.
Contact: **Louis MacDowell**, Conference Chairman, NASA, Mail Code DM-MSL-22, Kennedy Space Center, Fla. 32899, tel: (407) 867-3400. For exhibitor information, contact: **Kyle Greenfield**, P.O. Box 126, Cocoa, Fla. 32923, tel: (407) 631-2659.

Fish Expo '94: October 13-15, World Trade Center, Boston, Mass.
Contact: Diversified Expositions, 5 Milk Street, Portland, Me. 04112, tel: (207) 772-3005; fax: (207) 772-5059.

CINAVAL (Congress of Naval and Marine Engineering and Oceanic Sciences)/ SYMMREPAIR (Symposium on Maintenance and Repair)/EXPONAVAL (Shipping and Offshore Exhibition): October 17-20, Veracruz, Mexico
Combined CINAVAL/SYMMREPAIR/EXPONAVAL conference and exhibition
Contact: **Ing. Fernando Olavarrieta**, tel: +52 29 34 9962 34 6561; fax: +52 29 34 5910 34 5089.

International Tug, Towage & Salvage Convention & Exhibition (ITS '94): October 17-21, Grand Harbour Hotel, Southampton, U.K.
Contact: **Allan Brunton-Reed**, managing director, The ABR Company Limited, Dunelm, Church Road, Claygate, Esher, Surrey KT10QJP, U.K., tel: +44 372 468 387; fax: +44 372 468 388.

Pacific Fishing Expo: October 20-22, Pier 48, Port of Seattle, Wash.
Contact: **Bruce Bults**, Pacific Fishing Expo, 1515 Northwest 51st St., Seattle, Wash. 98107, tel: (206) 789-5333; fax: (206) 784-5545.

Techno-Ocean '94 Exhibition & Conference on the Exploration, Development & Management of Oceans and Coastal Zones: October 26-29, Kobe International Exhibition Hall, Port Island, Kobe, Japan
Contact: Secretariat, Techno-Ocean '94, c/o International Communications Specialists, Inc., fax: +81 3 3273 2445, attn: Ms. Kokubo, Mr. Kito or Ms. Miyashi.
Society of Environmental Toxicology and Chemistry (SETAC) Annual Meeting: October 30-November 3, Colorado Convention Center, Denver, Col.
Contact: **Rod Parrish**, SETAC, tel: (904) 469-1500.

NOVEMBER

"Fundamentals of Corrosion and its Control" Course: November 1-3
Contact: **Sherree Darden**, LaQue Center for Corrosion Technology, P.O. Box 656, Wrightsville, Beach, N.C. 28480, tel: (910) 256-2271; fax: (910) 256-9816.

The International WorkBoat Show: November 3-5, Ernest N. Morial Convention Center, New Orleans, La.
Contact: Diversified Expositions, 5 Milk Street, Portland, Me. 04112, tel: (207) 772-3005; fax: (207) 772-5059.

SPE Asia Pacific Oil & Gas Conference (APOG): November 7-10, Grand Hyatt, Melbourne, Australia
Contact: **Fred Herbst**, Public Relations Manager, Society of Petroleum Engineers, P.O. Box 833836, Richardson, Texas 75083-3836, tel: (214) 952-9393.

Ship Repair & Conversion '94: November 8-9, Olympia 2, London
Contact: **John Gwynn-Jones** or **Jon Chaplin**, tel: +44 923 776363; fax: +44 923 777206.

Dredging '94 - The Second International Conference On Dredging And Dredged Material Placement: November 13-16, Buena Vista Palace at the Walt Disney World Village, Lake Buena Vista, Fla.
Contact: **Russell K. Tillman**, Dredging '94 Management Chair, Attn: CEWES-EP-L, 3909 Halls Ferry Road, Vicksburg, Miss. 39180-6199, tel: (601) 634-4201; fax: (601) 634-3528.

SNAME 1994 Annual Meeting and International Maritime Exposition: November 16-19, New Orleans, La.
Contact: Tel: (201) 798-4800.

The Society of Boat and Yacht Designers Symposium: November 19, The Seattle International Trade Center, Seattle, Wash.
Contact: The Society of Boat and Yacht Designers, 117 East Louisa Street No. 268, Seattle, Wash. 98102-3203, fax: (206) 882-7327.

Ausmarine '94: November 22-24, Fremantle, Western Australia
International Maritime Industry Exhibition
Contact: 4A Carmelite Street, London, EC4Y 0BN, England, tel: +44 71 353 1085; fax: +44 71 353 1084 or 10 Oxford St., South Yarra, 3141, Australia, tel: +613 826 8741; fax: +613 827 0704.

DECEMBER

AWO Winter Convention: December 6-7, Madison Hotel, Washington, D.C.
Contact: The American Waterways Operators, 1600 Wilson Boulevard, Arlington, Va. 22209, tel: (703) 841-9300; fax: (703) 841-0389.

China Portex '94: 4th International Trade Exhibition for Port and Waterway Construction, Shipbuilding Industry, Marine and Offshore Technology: December 6-10, Shanghai, People's Republic of China
Contact: **Martin Greve** or **Wolfram Diener**, Hamburg Messe und Congress GmbH, tel: +49 40 3569 2140 or +49 40 3569 2190.

BUYERS DIRECTORY

This directory section is an editorial feature published in every issue for the convenience of the readers of MARITIME REPORTER/Engineering News. A quick-reference readers' guide, it includes the names and addresses of the world's leading manufacturers and suppliers of all types of marine machinery, equipment, supplies and services. A listing is provided, at no cost for one year in all issues, only to companies with continuing advertising programs in this publication, whether an advertisement appears in every issue or not. Because it is an editorial service, unpaid and not part of the advertiser's contract, MR/EN assumes no responsibility for errors. If you are interested in having your company listed in this Buyers Directory Section, contact John C. O'Malley at (212) 477-6700.

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Chesapeake Specialty Products, 5055 Northpoint Blvd., Baltimore, MD 21219
Erwin Industries, Inc., 3683 Research Park Drive, Ann Arbor, MI 48106-1666
Standard Abrasives, 3000 River Rd., P.O. Box 988, Harvey, LA 70059

ABSORBENT PRODUCTS

Haz-Mat Response Technologies, 5841 Box Canyon Rd., La Jolla, CA 92037
First Northern Environmental, Inc., 32 Brill St., Newark, NJ 07105

ACOUSTICAL INSULATION

The Claremont Co., Inc., 174 State St., Meriden, CT 06450

ADHESIVES

Life Industries, Corp., 205 Sweet Hollow Rd., Old Bethpage, NY 11804

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ABB Fluid Marine, Box 1043, 436 21 ASKIM, SWEDEN
Adriac Marine, 1410 Central Ave., Farmingdale, NY 11735
Bailey Group, 2323 Randolph Ave., Avenel, NJ 07001
Bill Brown Enterprises, Inc., 4695 Ocean Pines, Berlin, MD 21811
Carrier Transicold, P.O. Box 4905, Syracuse, NY 13221
Johnston Brothers, 180 Enterprises Avenue, Patterson, LA 70392

ANODES/CATHODIC PROTECTION

American Corrosion Services, 216 Rue Beaujeu, Ste. B., Lafayette, LA 70508

ANTENNAS—Rate of Turn Indicator

Hivertronics, 2624 East Broadway, Alton, IL 62002

ASBESTOS ABATEMENT

Chemplex Environmental Prod., Inc., 3405 Highway 33, Neptune, NJ 07753

AUCTIONEER

Forke Bros., 3901 Faulkner Drive, Lincoln, NE 68516

BALLAST

Chesapeake Specialty Products, 5055 Northpoint Blvd., Baltimore, MD 21219
Genesis Stone Products, Executive Plaza W, Hunt Valley, MD 21101
Mineral Research & Recovery Inc., 4565 S. Palo Verde, Ste. 203 Tucson, AZ 85714

BARGE BUILDING

Central Industries, P.O. Box 790, Morgan City LA 70381

BASKET STRAINERS

Beard Industries, P.O. Box 31115, Shreveport, LA 71130

BEARING—Rubber, Metallic, Non-Metallic

B.F. Goodrich, Engineered Polymer Products, 150 Division Dr., Wilmington, NC 28401
Blomh & Voss AG, P.O. Box 100720, D-2000 Hamburg 1, GERMANY
U.S.A. Reqs: Simplex-Turner Inc., P.O. Box 168, Little Neck, NY 11363-0168
Kahlenberg Bros. Co., P.O. Box 358, Two Rivers, WI 54241
Thornton Bearings Inc., 3225 Mainway, Burlington, Ont., CANADA L7M 1A6

BILGE OIL/FUEL ABSORBER

The Blige Rat, P.O. Box 4244, Fort Walton, FL 32549
Northstar Marine, 84 Wall Street, Farmingdale, NY 11735

BROKERS

151 Maritime Services, 34022 El Encanto B, Dana Pt. CA 92629
Captain Astad Company, Inc., P.O. Box 350486, Ft. Lauderdale, FL 33335
Emerald Yacht & Ship Brokers, 759 N. Milwaukee St., # 552, Milwaukee, WI 53202
Jack Faulkner, 2419 Caddy Lane, P.O. Box 371, Flossmoor, IL 60422
Mowbray's Yacht & Barge Sales Corp., 35 De Hart St., Morrisstown NJ 07960

BULKHEAD SEALS

Blomh & Voss AG, P.O. Box 100720, D-2000 Hamburg 1, GERMANY
U.S.A. Reqs: Simplex-Turner Inc., P.O. Box 168, Little Neck, NY 11363-0168
John Crane Marine USA, 1536 Barclay Blvd., Buffalo Grove, IL 60089

CABINETRY

Fenco, 1901 Route 130, Burlington, NJ 08016

CELLINGS, DECORATIVE METAL

The Gage Corp., 805 S. Black River St., Sparta, WI 54656

CELLULAR TELEPHONE SERVICE

Celnet Corp., 400 Main St., Ste. 800, Stamford, CT 06901-3004

CHAINS

Crane Dry Dock Engineers Inc./Marit Chain, 21 Pottery Lane, Dedham MA 02026
Milligan Marine Supply, 5832 Harvey Wilson, Houston, TX 77020
Washington Chain & Supply, Inc., Box 2645, Seattle, WA 98124
Waterman Supply Co., P.O. Box 596, Wilmington, CA 90748

CHAIRS

Gasser Chair Co., 4136 Loganway, Youngstown, OH 44505
Infant Chair Mfg. Corp., 3075 Richmond Terrace, Staten Island, NY 10303
Shelby Williams Industries, Inc., 150 Shelby Williams Dr., Morrisstown, TN 37813
Tanzini, Inc., 3918 134th St. N.E., Marysville, WA 98271

CHEMICALS

Drew Aermold Marine, One Drew Plaza, Broomfield, NJ 07005
Vicom Polimeros S.A., 1001 Corbin St., Elizabeth, NJ 07201

CIRCLE-THRUSTER

W. Bolman, Holtenbroekseind 40, 8031 ER Zwolle, The Netherlands

CLAMPING—Pipe, Tubes, Hose

ZSI, 12749 Richfield Ct., Livonia, MI 48150

CLASSIFICATION SOCIETY

American Bureau of Shipping, 2 World Trade Center, 106th Fl., New York, NY 10048

COMPACTORS

A/S Vestia, Skudehavsvej 27, DK-2100 Copenhagen, DENMARK
Sales Agents: American United Marine Corp., 5 Broadway, Rt. 1, Saugus, MA 01806
International Compactor, 1088 Lighthouse Ln., Hilton Head Island, SC 29928

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TW Philadelphia Resins, 130 Commerce Dr., Montgomeryville, PA 18936

COMPUTER LOFTING

Barataria Lofting Co., Inc., 1616 Barataria Blvd., Ste. 4, Marrero, LA 70072

COMPUTERIZED INFORMATION SYSTEMS

Autoshop Systems Corp., #403, 611 Alexander St., Vancouver, BC, Canada V6A 1E
Creative Systems, Inc., P.O. Box 1910, Port Townsend, WA 98368
Intergraph Corporation, 2051 Mercator Drive, Reston, VA 22091-3413
Kockum Computer Systems AB, PO Box 50555, S-202 15 Malmö, SWEDEN
Kockum Sonics, Inc., 819 Veterans Blvd., Suite 201, Kenner, LA 70068
TIMSCO, P.O. Box 91360, Mobile AL 36691

CONDENSERS/SEPARATORS

Beard Industries Inc., P.O. Box 31115, Shreveport LA 71130

CONTROL SYSTEM—Monitoring

Autonica Marine A/S, Drammensveien 126, N-0277 Oslo 2, NORWAY
Electronic Design Inc., 3020 20th St., Melaine, LA 70002
IMO Industries, Gens Sensors Division, One Cowles Rd., Plainville CT 06062
Kobell Manufacturing Co., Ltd., 11720 Horseshoe Way, Richmond, BC, Canada
MMC International, 60 Inp Dr., Inwood NY 11696
Marine Electric RPD, Inc., 50 Canal St., P.O. Box 1135, Clifton, NJ 07014-1135
Robertson Marine Systems, 3000 Kingman St., Suite 207, Melarie, LA 70006
Telex Naval technologies, 205 Church Rd., North Wales, PA 19454

CONTROL SYSTEM—Steering

KGW Schwenner, Wismarsche Strasse 380, 19055 Schwerin, GERMANY
Kobell Manufacturing, 11720 Horseshoe Way, Richmond, BC, CANADA, V74 4V5
Kockum Sonics, Inc., 819 Veterans Blvd., Suite 201, Kenner, LA 70068

CONVERSIONS & REPAIRS

Gulf Coast Fabrication, Inc., P.O. Box 539, Lakeshore, MS 39558
Vancouver Shipyard, 50 Pemberton Ave., N. Vancouver, B.C. CANADA V7P 2R2

CONVEYOR BELT REPAIR

Kietzma Rubber Engineering, GERMANY
U.S. Rep: Simplex-Turner Inc., P.O. Box 168, Little Neck, NY 11363-0168

CORROSION CONSULTANTS

S.G. Pinney & Assoc., P.O. Box 9220, Port St. Lucie, FL 34985

COUPLINGS

American Vulkan, P.O. Drawer 673, Winter Haven, FL 33882
Aquadine Systems, Inc., 55 Elm St., Ocean Grove, NJ 07756
Hobart Engineering, 1320 Kemper Meadow Drive, Cincinnati, OH 45240
Lo-Rex Vibration Control Ltd., 156 West 8th Avenue, Vancouver, BC CANADA, V5Y1N2

CRANE—HOIST—DERRICK—WHIRLEYS

Mapco Products, 90 Forest Avenue, P.O. Box 982, Locust Valley, NY 11560
Ovako Steel Inc., 1447 New Litchfield St., Torrington, CT 06790

CRANE

Bisco Marine Co., P.O. Box 4113, New Orleans, LA 70178
Del Gavo Marine Hydraulics Inc., 619 Industrial Rd., Carlstadt, NJ 07072
Hagglunds Inc., Marine Div., Headq., 50 Chestnut Ridge Rd., Montvale, NJ 07645
Leibherr-Werk Nenzing GES.mbh, P.O. Box 10, A-6710 Nenzing, AUSTRIA
Marine Travelift, Inc., 49 E. New St., Sturgeon Bay, WI 54255
J.D. Neuhaus Hebesysteme GmbH, D-5810 Witten, GERMANY
McElroy Machine & Mfg Co., Inc., P.O. Box 4454, Bloom MS 39535-4454
New England Trawler Equipment Co., 231 Eastern Avenue, Chelsea, MA 02150
Petibone-Tiffin Corp., 235 Miami St., Tiffin, OH 44883

CRANES

Lakeshore, Inc., P.O. Box 809, Iron Mountain, MI 49801
Morgan Marine, 1300 Nomandy Place, Santa Ana, CA 92705
Pattner Inc., 8040 Dorchester Rd., Niagara Falls, Ontario, CANADA L2E 6V6
Tech-Trol, Inc., 1130 Timberland Dr., Lacombe, LA 70445

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Schoellhorn Albrecht, P.O. Box 22110, St. Louis, MO 63116
DECK MACHINERY—Cargo Handling Equipment
Plymouth Int'l., Hwy 3, P.O. Box 80, Chester, Nova Scotia, CANADA B0J 1J0
MacGregor-Navire Group, 34 Bedford Rd., Clapham North, London SW4 7HF
Markey Machinery Co., Inc., P.O. Box 24788, Seattle, WA 98124-0788
McElroy Machine & Mfg Co., Inc., P.O. Box 4454, Bloom MS 39535-4454
New England Trawler Equipment Co., 231 Eastern Avenue, Chelsea, MA 02150
Skookum/Rope Master, P.O. Box 280, Hubbard, OH 97032
Smith Berger Marine Inc., 516 South Chicago Street, Seattle, WA 98108
Willems Pol v.v., P.O. Box 29102, 3021 Gc Rotterdam, The Netherlands

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Hawdon Int'l., Hwy 3, P.O. Box 80, Chester, Nova Scotia, CANADA B0J 1J0
McElroy Machine & Mfg Co., Inc., P.O. Box 4454, Bloom MS 39535-4454
NEI Clarke Chapman Canada, 1075 N. Service Rd. W., Unit 4, Oakville, Ontario, CANADA L6M 2G2
New England Trawler Equipment Co., 231 Eastern Avenue, Chelsea, MA 02150
Pusnes, PO Box 102, N-4818, Faerøy, NORWAY
Skookum/Rope Master, P.O. Box 280, Hubbard, OH 97032
Smith Berger Marine Inc., 516 South Chicago St., Seattle, WA 98108
Waterman Supply Co., P.O. Box 596, Wilmington, CA 90748

DESALINATION—REVERSE OSMOSIS

Reclaim Separation Systems, Inc., 3904 Del Amo Blvd., Ste. 801, Torrance, CA 90503
Rocham Separation Systems, P.O. Box 156, 54 Rue Agasse, 1211 Geneva 17, SWITZERLAND
Watermakers Inc., 2233 South Andrews Ave., Ft. Lauderdale, FL 33316

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Innerspace Technology, Inc., 38 Industrial Dr., Walswick, NJ 07463

DIESEL ACCESSORIES

General Thermodynamics Corp., 210 South Meadow Rd., P.O. Box 1105, Plymouth, MA 02266
Hatch & Kirk Inc., 601 McFarland Rd., Houston, TX 77011
Kiene Diesel Accessories, 325 S. Fairbanks St., P.O. Box 386, Addison, IL 60101

DIESEL ENGINE—Spare Parts

ABB Industry Oy, 100 Madison Corp. Park Rte. 6, Brewster, NY 10509
Alaska Diesel, 4420 14th Ave. NW, Seattle, WA 98107
Caterpillar, Inc., Engine Div., P.O. Box 610, Mossville, IL 61552-0610
Cummins Engine Co., 4500 Leeds Ave., Ste. 301, Charleston, SC 29405-8521
Cummins Mid-South, Inc., 110 E. Airline Highway, Kenner, LA 77062
John Deere, John Deere Rd., Moline, IL 61705
Diesel Engine & Parts Co., 8123 Hillsboro Ave., Houston, TX 77029
Electro-Motive Division-GMC, 9301 W. 55th St., LaGrange, IL 60525
Gagep Truck Parts, P.O. Box 365, Watseka, IL 60974
Giro Engineering Ltd., Talsman, Duncan Road, Park Gate, South Hampton, SO3 7BX ENGLAND
Gothens Worldwide, 160 Van Brunt St., Brooklyn, NY 11231
Hall-Toledo, Inc., 525 West Sophia St., Maumee, OH 43437
Hatch & Kirk Inc., 601 McFarland Rd., Houston, TX 77011
Klatterberg Marine, 17 Grandview Ave., W. Orange, NJ 07052
MAN B&W Diesel AG, Stadthausstrasse 1, D-86153 Augsburg 1, GERMANY
MAN B&W Diesel A/S, Center Syd, Slottsholmen 161, DK-2650 Hvidovre, DENMARK
MAN B&W Diesel, 17 State St., New York, NY 10004
MTU of North America, 10450 Corporate Dr., Houston, TX 77478
Markisches Werk GmbH, P.O. Box 1442, D-5884 Halver 1, GERMANY
Motor Service AB, Box 2115, S 144 04 Roninge, SWEDEN
Molter Service-Hugo Stamp, 3190 S.W. 4th Ave., Ft. Lauderdale, FL 33315
New Sulzer Diesel, Inc., 200 Park Ave., New York, NY 10166
Paxman Diesels, P.O. Box 8, Paxman Works, Colchester, Essex, CO1 2HW, ENGLAND
Paxman Diesels USA (A Div. of Ruston Gas Turbines, Inc.), 15950 Park Row, Houston, TX 77064
Textron Locomotion, 550 Main St., Stratford, CT 06497
Ulstein Bergen AS, PO Box 924, N5002 Bergen, NORWAY
Wartsila Diesel, 201 Defense Highway, Annapolis, MD 21401

DIVING & SALVAGE

Russo Marine Co. P.O. Box 4113, New Orleans, LA 70178
H.J. Menthas, P.O. Box 23123, New Orleans LA 70163
Muldron Marine Services, Inc., P.O. Box 3221, Terminal Island, CA 90731

DOORS—MARINE & INDUSTRIAL

Mapco Products, 90 Forest Ave., Locust Valley, NY 11560
Marine Accommodations Inc., 8535-3 Baymeadows Rd., Jacksonville, FL 32256

DRILLING & BLASTING

Marine Drilling & Blasting, PO Box 10455, Jacksonville, FL 32247-0455
Houston, TX 77094
Textron Locomotion, 550 Main St., Stratford, CT 06497
Ulstein Bergen AS, PO Box 924, N5002 Bergen, NORWAY
North Florida Shipyards, P.O. Box 3255, Jacksonville, FL 32206

DRY DOCKS—Design

Conrad Industries, 1501 Front Street, P.O. Box 790, Morgan City, LA 70381
North Florida Shipyards, P.O. Box 3255, Jacksonville, FL 32206

ELECTRICAL EQUIPMENT

Bender Inc., 400 Gordon Dr., Bldg 501, Exton, PA 19341
L. F. Gaudert & Co., Inc., P.O. Box 50500, New Orleans LA 70150
MTC International, 60 Inp Dr., Inwood NY 11696
SPD Technologies, 13500 Roosevelt Blvd., Philadelphia PA 19116

ELECTRICAL WIRE DEVICES

Meltr Corp., 1951 15th West Wide Lane, Cudahy, WI 53110

ELECTRONIC CONTROLS

MCR Engineering, 206 Dedham St., Norfolk, MA 02056

ELECTRONIC DISPLAY

Kockum Sonics, Inc., 819 Veterans Blvd., Suite 201, Kenner, LA 70068
Scandinavian Micro Systems, P.O. Box 155, N-1411, Kolbotn, NORWAY

ELECTRONIC INFORMATION SUPPORT

Scandinavian Micro Systems, P.O. Box 155, N-1411, Kolbotn, NORWAY

ELECTRONIC SALES & SERVICE

Fishermans Wholesale Marine Supply Co., Inc., 4540 B. Downman Road
New Orleans, LA 70126

GMT Electronics, Inc., 171 Main St., South River, NJ 08882

EMERGENCY MEDICAL ASSISTANCE

International SOS Assistance, 8 Neshaminy Interplex, Ste., 207, Tevose, PA 19053

EMISSION CONTROLS

ABB Fluid Marine, Box 1043, 436 21 ASKIM, SWEDEN
Haldor Topsøe Nymvold 55, DK-2800 Lyngby, Denmark
Seaworthy Systems, Inc., P.O. Box 965, Essex, CT 06426

ENGINEERING SERVICES

MCR Engineering Co., Inc., 206 Dedham St., Norfolk, MA 02056
Seaworthy Systems, Inc., P.O. Box 965, Essex, CT 06426

ENGINE CONTROLS—SHIFT AND THROTTLE

Marine Systems, Inc., 1000 NW First Avenue, Bldg 20, Boca Raton, FL 33432

ENGINE REPAIR

Marine Spares Int'l., 53 Richards St., Brooklyn, NY 11231
ENGINE ROOM LIGHTING
Pauluhn Electric Mfg. Co., Inc., 1616 N. Main, P.O. Box 53, Pearlman, TX 77581

ENGINE TEST EQUIPMENT

General Thermodynamics Corp., P.O. Box 1105, 210 S. Meadow Rd., Plymouth, MA 02266
Instruments, Computers, & Controls, Inc., 6942 Haven Creek Dr., Katy, TX 77449

ENVIRONMENTAL SYSTEMS

Foss Environmental Services, 7440 West Marginal Way So., Seattle, WA 98108-4141
NWR, Inc., Environmental Systems Division, Box 58626, Salt Lake City, UT 84158

EPHIBS

ACR Electronics, Inc., 5757 Ravenswood Rd., P.O. Box 5247, Ft. Lauderdale FL 33310-5247
Athen Electronics, 40 Washington St., Westborough, MA 01581

EQUIPMENT—Marine

Bohnet & Associates, 1150 Rue Rochelle, Sidel, VA 70458
Fishermans Wholesale Marine Supply Co., 4540 B Downman Rd., New Orleans, LA 70126
Ocean Technical Services, Inc., 634 Peters Road, Harvey, LA 70068

EVALUATORS

Alfa-Laval Separation, Inc., 555 Meams Rd., Warrminster, PA 18974
Beard Industries Inc., P.O. Box 31115, Shreveport, LA 71130
NEI Clarke Chapman Canada, 1075 N. Service Rd. W., Unit 4, Oakville, Ontario, CANADA L6M 2G2

EXPANSION JOINTS (RUBBER/METALLIC)

Arcon Industries, 200 Williams Street, Portchester, NY 10573
FANS - VENTILATORS - BLOWERS
Jon M. Liss Associates, Inc., 411 Borel Ave., San Mateo, CA 94402

FASTENERS

Shenstone Distributors, 28 Naragansett Ave., P.O. Box 348, Jamestown, RI 02835
Orake Co., Inc., 645 Forest Edge Drive, Vernon Hills IL 60061

FENDERING SYSTEMS/BUOYS—Deck & Vessel

B.F. Goodrich, 150 Division Drive, Wilmington, NC 28401
Kahlenberg Bros. Co., P.O. Box 358, Two Rivers, WI 54241
Kahlenberg Marine Supply, 5832 Harvey Wilson, Houston, TX 77020
Schuyler Mfg. Co., Inc., 16501 Woodville-Redmond Rd., Woodsville, WA 98072
Seaward International, Inc., Clearbrook Industrial Park, P.O. Box 98, Clearbrook, VA 22624

FIBERS

Aired Signal, Meyer I, Box 101 Columbia Rd., Morrisstown, NJ 07962

FIBERGLASS PIPE & FITTINGS

Amron Fiberglass & Pipe, 61 Executive Ave., Edison, NJ 08817

FILTER SYSTEMS

Evergore Inc., 660 N. Blackhawk Dr., Westmont IL 60559

FIN STABILIZERS

Blomh & Voss AG, P.O. Box 10 07 20, D-2000 Hamburg 1, GERMANY
U.S.A. Reqs: Simplex-Turner Inc., P.O. Box 168, Little Neck, NY 11363-0168

FINANCIAL SERVICES

John Deere, John Deere Rd., Moline, IL 61705
Klatterberg Marine, P.O. Box 120013, Stamford, CT 06912-0013

FIRE DETECTION SYSTEMS

ABB Fluid Marine, Box 1043, 436 21 ASKIM, SWEDEN
Beard Industries Inc., P.O. Box 31115, Shreveport LA 71130
Beard Industries Inc., P.O. Box 31115, Shreveport LA 71130
B.F. Goodrich, 150 Division Drive, Wilmington, NC 28401
Kahlenberg Bros. Co., P.O. Box 358, Two Rivers, WI 54241
Kahlenberg Marine Supply, 5832 Harvey Wilson, Houston, TX 77020
Schuyler Mfg. Co., Inc., 16501 Woodville-Redmond Rd., Woodsville, WA 98072
Seaward International, Inc., Clearbrook Industrial Park, P.O. Box 98, Clearbrook, VA 22624

FLAME CUTTING MACHINE

Bug-O-Systems, 3003 West Carson St., Pittsburg, PA 15204

FLEXIBLE COUPLINGS

American Vulkan, P.O. Drawer 673, Winter Haven,

Maritime Services Corp., 3457 Guinand Dr., Hood River, OR 97031
JONER-Waterlight Door-Paneling-Ceiling System-Decking
 Hopeman Brothers, Inc., P.O. Box 820, Waynesboro, VA 22980
 Insulations, Inc., 1101 Edwards Ave., Hanahan, LA 70123
 Marine Accommodations Inc., 8535-3 Baymeadows Rd., Se 140, Jacksonville, FL 32256
 Maritime Services Corp., 3457 Guinand Drive, Hood River, OR 97031
 Walz & Krenzer, Inc., 90 Forest Ave., Locust Valley, N.Y. 11560
KEEL COOLERS
 R.W. Farmstead & Co., 1716 Eleventh Ave., Menominee, MI 49858
 Kahlenberg Bros. Co., P.O. Box 358, Two Rivers, WI 54241
 The Water Machine Co., Inc., 84-98 Cambridge Avenue, Jersey City, NJ 07307
LIFEBOTS/SPLITS
 American Eagle Mfg., Inc., 780 Pearle Jensen Way, LaConner, WA 98257
 Boston Whale, Inc./Commercial Products Div., 1149 Hingham St., Rockland, MA 02370
 Caley Ocean Systems, Mayor Avenue, East Kilbride, Scotland, G74 4PU
 Ft. Fostner GmbH & Co., D-2676 Breme 2, Wese, GERMANY
 Norsale AS, P.O. Box 115, N-4818 Faervik, Norway
 Willard Marine Co., Inc., 1250 N. Grove St., Anaheim, CA 92806
 Zodiac of North America, P.O. Box 400, Silverville, MD 21666
LIFESAVER EQUIPMENT
 Shams Manufacturing, P.O. Box 1498, St. Cloud, MN 56302
LIGHTING EQUIPMENT-Lamps, Fixtures, Searchlights
 ACR Electronics, Inc., 5757 Ravenswood Rd., P.O. Box 5247, Ft. Lauderdale, FL 33310-5247
 Fishermans Wholesale Marine Supply Co., Inc., 4540 B Downman Road
 Lighting Supply Co., 2729 Second Ave., Seattle, WA 98121
 New Cleans, LA 70126
 Glamco, 44 Austin Street, P.O. Box 13522, St. John's, NF CANADA A1B 4B8
 Gullen Marine, 160 Van Bunt St., Brooklyn, NY 11231
 Kookum Systems, Inc., 819 Veterans Blvd., Suite 201, Kenner, LA 70068
 Julian A. McDermott, 639 Stephens St., Ridgewood, NY 11385
 Pauluhn Electric Mfg. Co., Inc., 1616 N. Main, P.O. Box 53, Pearland, TX 77581
 Franca Searchlights/Slam Supply Co., 4415 6th N.W., Seattle, WA 98107
LINE BLINDS
 StacyFetherolf, P.O. Box 103, Skippack, PA 19474
LIQUID LEVEL INDICATORS
 Meltrape, P.O. Box 2366, Littleton, MA 01460
 Sator, 2 Dean St., Teaneck, NJ 07670
LIQUID OVERFILL PROTECTION SYSTEMS
 E.R.L. Marine Products, P.O. Box 1026, New Albany, IN 47151-1026
 Meltrape, P.O. Box 2366, Littleton, MA 01460
 Sator, 2 Dean St., Teaneck, NJ 07670
LOCK SETS
 Marine Hardware, 333 W. Merrick Road, Valley Stream, NY 11580
LOGISTICS
 Chand Corporation, 157 Hwy 854, Matthews, LA 70375
 QED, 4644 N. Wilcox Road, Virginia Beach, VA 23465
 V.L. Logistics Consultants, Inc., 3420 Bienville Blvd., Ocean Springs, MS 39564
LUBRICANTS
 Texaco International, 2000 Westchester Avenue, White Plains, NY 10650
MACHINERY MAINTENANCE, REPAIR, OVERHAUL, AND TESTING
 Del Gario, 619 Industrial Rd., Carlstadt, NJ 07072
 Gullen Marine Company Inc., 160 Van Bunt Street, Brooklyn, NY 11231
 New England Trawler Equipment Co., 291 Eastern Avenue, Chelsea, MA 02150
MACHINERY MONITOR AND CONTROL SYSTEMS
 Electronic Marine Systems, 801 Farnfield Pl., Eatwhay, NJ 07065
MARINE ACCOMMODATIONS
 Directors in Design Inc., 633 Emerson, Suite 100, St. Louis, MO 63141
 Hopeman Brothers, P.O. Box 630, 435 Essex Ave., Waynesboro, VA 22980
 Jamestown Metal Marine Sales, Inc., 4710 Northwest Second Ave., Boca Raton, FL 33431
 Marine Accommodations Inc., 8535-3 Baymeadows Rd., Se 140, Jacksonville, FL 32256
 Maritime Services Corp., 3457 Guinand Dr., Hood River, OR 97031
MARINE BATTERIES
 Rae Storage Battery Mfg. Co., Inc., 51 Deming Rd., Berlin, CT 06037
MARINE CEILING
 The Gage Corp., 803 S. Black River St., Sparks, WI 54586
 Hydro-Aluminum, Vik Verk, N-5880 Vik 1 SOGN, Norway
 Marine Accommodations, Inc., 8535-3 Baymeadows Rd., Jacksonville, FL 32256
MARINE ELECTRONICS
 Frank L. Beer/Radio, 2001 Ridgeway Drive, Metairie, LA 70001
 Kookum Systems, Inc., 819 Veterans Blvd., Suite 201, Kenner, LA 70068
 Seah Marine Electronics AG, Box 1944, 402 St Gotteborg, SWEDEN
MARINE ELEVATORS
 Atlantic Elevator Co., 1100 Boston Ave., Bridgeport, CT 06601
MARINE ENGINEERS
 CDI Marine Co., 4040 Woodcock Dr., Suite 200, Jacksonville, FL 32207
MARINE FENDERS
 Vinding Fender Co., 340 Lehigh Ave., Perth Amboy, NJ 08861
MARINE FIRE PROTECTION
 The Hydrex Systems, 3710 Lakeside Court, Mobile, AL 36683
MARINE FURNITURE
 Directions in Design, 633 Emerson, Ste. 100, St. Louis, MO 63141
 Engineered Data Products, P.O. Box 5045, Woodbury, NJ 08869-7565
 Johnson Metal Marine Sales, Inc., 4710 NW Second Ave., Boca Raton, FL 33431
 Marine Accommodations Inc., 8535-3 Baymeadows Rd., Se 140, Jacksonville, FL 32256
 Maritime Services Corp., 3457 Guinand Dr., Hood River, OR 97031
MARINE GEARS
 Cincinnati Gear Co., 5657 Wooster Pike, Cincinnati, OH 45227
MARINE HARDWARE
 HMS Hardware, 333 W. Merrick Rd., Valley Stream, NY 11580
 Marine Accommodations Inc., 8535-3 Baymeadows Rd., Jacksonville, FL 32256
MARINE INTERIORS
 Johnson Construction Specialties, Inc., 3420 Rusik P.O. Box 1360 Houston Texas 77251
MARINE PLUMBING
 Bill Brown Enterprises, Inc., 4995 Ocean Pines, Berlin, MD 21811
MARINE PUMP
 Gilles Inc., P.O. Box 628, Seabrook, TX 77586
MARINE SHIP MANAGEMENT
 Barbo/Ankron, 1610 Chapel Ave. West, Cherry Hill, NJ 08002
MARINE SURPLUS SALES
 Defense Reutilization & Marketing Service, 2163 Airways Blvd., Memphis, TN 38114
METAL PRODUCTS
 Engineered Data Products, P.O. Box 505, Woodbury, NJ 08869-7565
MONITOR CONTROL ALARM
 Tracor Marcon, 600 Farnfield Pl., Eatwhay, NJ 07065
MULTI-CABLE PENETRATION DEVICE
 NMP, 12437 E. 69th St., Tulsa, OK 74153
NAVAL ARCHITECTS, MARINE ENGINEERS, SURVEYORS
 Advanced Marine Enterprises, Inc., 1725 Jefferson Davis Hwy., Arlington, VA 22202
 CDI Marine Co., 4040 Woodcock Dr., Suite 200, Jacksonville, FL 32207
 Childs Engineering Corp., Box 333, Medfield, MA 02052
 Crandall Dry Dock Engrs., Inc., 21 Pottery Ln., Dedham, MA 02026
 Crane Consultants, 15301 First Ave. S., Seattle, WA 98148
 C.R. Coaling, 18 Vesey St., New York, NY 10007
 Arthur D. Darden, 3200 Ridgeway Dr., Suite 403, Metairie, LA 70002
 Dalong & Label, Inc., 1734 Emerson Street, Jacksonville, FL 32207
 Design Associates Inc., 14360 Chef Menteur Highway, New Orleans, LA 70129
 Diversified Technologies, 812 Live Oak Dr., Chesapeake, VA 23320
 Enzon Mgmt & Engineering Consultant Services, P.O. Box 7700, Beaumont, TX 77706
 GHM Inc. (Ind. Measurement Consultants), P.O. Box 1836, Newport News, VA 23601
 Gibbs & Cox, Inc., 50 West 28th St., New York, NY 10010
 John W. Gilbert & Assoc., Inc., 86 Long Wharf, Boston, MA 02110
 The Glosien Assoc., Inc., 600 Mutual Life Bldg., 605 First Ave., Seattle, WA 98104
 Guilio Perla & Assoc., 4029 21st Ave., Ste. 300, Seattle, WA 98199
 Morris Gardner Associates, Inc., 130 Sutter St., Ste. 400, San Francisco, CA 94104
 C. Raymond Hunt Associates, 69 Long Wharf, Boston, MA 02110
 Hydrocomp, Inc., 45 James Farm-Lee, P.O. Box 865, Dutton, NH 03824
 J.H. Inc., No. 4 Executive Campus, Culbert Blvd. & Route 70, P.O. Box 5031, Cherry Hill, NJ 08034
 P.D. Jacobs & Associates, 11405 Main St., Roscoe, IL 61073
 James S. Krogan, 1515 NW 7th St., Ste. 124, Miami, FL 33125
 Rodney E. Lay & Associates, 13891 Atlantic Blvd., Jacksonville, FL 32225
 MCA Engineers, Inc., 2960 Arroyo Ave., #A-103, Costa Mesa, CA 92626
 Alan C. McClure Associates, Inc., 2600 South Gessner, Houston, TX 77063

McElroy Machine & Mfg Co., Inc., P.O. Box 4454, Bixvi, MS 39335-4454
 John J. McMullen Associates, Inc., 1 World Trade Ctr., Ste 3000, N.Y. NY 10048
 Fendall Marbury, P.O. Box 2321, Annapolis, MD 21401
 Marine Design & Operators, Inc., 226 Chestnut St., Roselle Park, NJ 07204
 Marine Management Systems Inc., 102 Hamilton Ave., Stamford, CT 06902
 Marine Power Associates, 1010 Turquoise St., Ste 217, San Diego, CA 92109
 Maritech, Seacraft, Bay Road, Newmarket, NH 03857
 Maritime Design, Inc., 3020 Hartley Rd., Jacksonville, FL 32257
 R.J. Mellusi & Co., 71 Hudson St., New York, NY 10013
 Nautical Designs, Inc., 2101 S. Andrews Ave., Suite 202, Ft. Lauderdale, FL 33316
 Olsen Marine Surveyors Co., P.O. Box 283, Port Jefferson, NY 11777
 OED Systems Inc., 4646 Whitlock Rd., Virginia Beach, VA 23455
 M. Rosenblatt & Son, Inc., 350 Broadway, New York, NY 10013 and 620 Fulson St., Ste. 301, San Francisco, CA 94107
 Sargent & Herkes, 225 Baronne St., Suite 1405, New Orleans, LA 70112
 Sea Search, 19814 Grand Boulevard, St. Petersburg, FL 33702
 Seaworthy Systems Inc., P.O. Box 965, Essex, CT 06426; 17 Battery Pl., New York, NY 10004; P.O. Box 975, Barnegat Light, NJ 08006; 2 Skyline Pl., 5203 Leesburg Pike, Suite 700, Falls Church, VA 22041;
 50 Vashell Way, Orlando, CA 94633
 George S. Sharp, Inc., 100 Church St., New York, NY 10007
 R.A. Steam, Inc., 253 N. 1st Ave., Sturgeon Bay, WI 54235
 TWSICO, P.O. Box 91360, Mobile AL 36691
NAVIGATION & COMMUNICATIONS EQUIPMENT
 American Radio Corp., 914 164th St. S.E., B-1698, Mill Creek, WA 98012
 AT&T, High Seas Dept., 412 Kermie Ave., Room C380, Morristown, NJ 07960
 Autotica Marine AS, Drammensveien 128, N-0277 Oslo 2, NORWAY
 CAST, Inc., 5450 Katalia Ave., Los Alamitos, CA 90720
 Canine Corp., 400 Main St., Stamford, CT 06901-3004
 ComNav Marine Ltd., 1429 Frobair St., Vancouver, BC, CANADA V5L 1Y9
 Comsat Maritime Services, 950 L'Enfant Plaza SW, Washington DC 20024
 C-Path, 222 Seventh Ave., Annapolis, MD 21403
 CruisePhone, Inc., 2100 Park Centre Pl., Pompano Beach, FL 33064
 Electronic Marine Systems, 800 Farnfield Pl., Eatwhay, NJ 07065
 Furuno U.S.A., 271 Harbor Way, San Francisco, CA 94960
 Hose-McCann, 1241 W. Newport Center Dr., Deerfield Beach, FL 33442
 IDB Mobile Communications, 1828 L Street NW, Suite 660, Washington, D.C. 20036
 Jachery Communications, 300 Columbus Circle, Edison, NJ 08837
 Marine Electric RPD, Inc., 50 Carol St., P.O. Box 1135, Clifton, NJ 07014-1135
 Matrix Technologies, Inc., 342 Pennywell Rd., St. Johns, N.F., CANADA A1C 5J2
 Megapulse, Inc., 6 Preston Court, Bedford, MA 01730-2360
 Norwegian Telecom, 840 Bond Street, Elizabeth, NJ 07201
 Norwegian Telecom, P.O. Box 6701, Oslo 1, NORWAY
 Orlshore Systems Int., 19015 36th Ave., W. Ste. Bc, Bldg F, Lynnwood, WA 98036
 Pauluhn Electric Mfg. Co., Inc., 1616 N. Main, P.O. Box 53, Pearland, TX 77581
 RD Instruments, 9925 Buena Vista Ave., San Diego, CA 92131
 Raytheon Marine Co., 46 River Road, Hudson, NH 03051
 SPD Technologies, 13500 Roosevelt Blvd., Philadelphia, PA 19116
 Scandinavian Micro Systems P.O. Box 155, N-1411, Kolbotn, NORWAY
 Summers Equipment Ltd., 24 West 4th Ave., Vancouver V7Y 1G3, CANADA
 Trimble Navigation, 585 North Main Avenue, P.O. Box 3642, Sunnyvale, CA 94086
 Waterway Communications System, Inc., 453 E. Park Pl., Jeffersonville, IN 47130
OIL SERVICE
 Mobil Oil Corporation, 3225 Galloves Road, Fairfax, VA 22037-0001
 Texaco International, 2000 Westchester Avenue, White Plains NY 10650
OIL SPILL CONTROL
 Foss Environmental, 7440 W. Marginal Way S., Seattle, WA 98108-4141
OIL SPLIT KIT
 First Northern Environmental, Inc., 32 Brill St., Newark, NJ 07105
OILWATER SEPARATORS
 Alfa Laval Separators, Inc., 955 Meams Rd., Westminster, PA 19374-0556
 Blohm & Voss AG, P.O. Box 10 07 20, D-2000 Hamburg 1, GERMANY;
 U.S.A. Repts Simplex-Turnar Inc., P.O. Box 168, Little Neck, NY 11363-0168
 Fast Systems, 3240 North Broadway, St. Louis, MO 63147
 MMC International, 60 Inip Dr., Inwood, NY 11696
 National Fluid Separators, 827 Harley Industrial Ct., St. Louis, MO 63144
 Nelson West, Stoughton, WI 53589
PAINT-COATING-CORROSION CONTROL
 The Amreson Corp., Corrosion Dynamics Div., 1100 Walnut St., Rosell, NJ 07203
 Corrosel, Inc., 145 12th Ave., WVA, Issaquah, WA 98027
 Espard, Inc., P.O. Drawer 2698, Lafayette, LA 70502
 Jarrestown Dairies, 26 Narragansett Ave., P.O. Box 348, Jamestown, RI 02835
 Hempel Coatings, Food of Culture Avenue, Wallingford, NJ 07057
 Microphor, Inc., Marine Div., 452 E. Hill Rd., P.O. Box 1460, Willits, CA 95490
 Riedel Chemical, 2705 Concord Road, Chesapeake, VA 23033
 Sigma Coatings, 8979 Market St., Houston, TX 77029, 330 River Rd., Harvey, LA 70059, 1100 Adams St., Hoboken, NJ 07030
 Technologies Ltd., Box 3114, Route St. RPO, Halifax Nova Scotia Canada B3K5T9
 Vecom USA, 236 S. George Avenue, Jefferson, LA 70121
PAINT REPAIR
 White Metals, Inc., 6300 Midvale, Houston, TX 77087
PIPE FITTING/CONNECTING SYSTEMS
 Del Oro Corp., 296 E. 1st Ave., Portland, OR 97204
POLLUTION CONTROL (PRODUCTS Marine)
 Foss Environmental, 7440 W. Marginal Way S., Seattle, WA 98108-4141
POLLUTION PACKER COMPACTORS
 TFC Corporation, 77415 Cahill Rd., Minneapolis, MN 55439
PORT SERVICES
 Port of Portland, 5555 N. Channel Ave., Portland, OR 97217
PROJECT TRACKING, PLANNING & MANAGEMENT
 Tracking Systems of America, 8780 San Jose Blvd., Jacksonville, FL 32217
PROPULSION EQUIPMENT-Bowthrusters, Diesel Engines, Gears, Propellers, Shafts, Turbines
 Avondale Industries, Harvey Quick Repair, P.O. Box 116, Harvey, LA 70058
 American Air Filter, P.O. Box 35690, Louisville, KY 40432
 ABB Drives Inc., P.O. Box 372, Milwaukee, WI 53201-0372, USA
 ABB Industry Oy, P.O. Box 105, 02881 Helsinki, FINLAND
 ABB TURBOCHARGER, Inc., 1460 Livingston Avenue, N. Brunswick, NJ 08902
 Aquamaster-Rauuma Ltd., Box 220, SF-26101, Rauma, FINLAND
 Aquamaster-Rauuma Inc., 2315 North Woodlawn Ave., Ste. 103, Metairie, LA 70001
 Brit Johnson Company, P.O. Box 1528, Pascagoula, MS 38667
 Brunvoll AS, P.O. Box 378, N-6401, Molde, Norway
 Caterpillar, 100 NE Adams Street, Peoria, IL 61629-2320
 Cincinnati Gear Co., 5657 Wooster Pike, Cincinnati, OH 45227
 Finccardier, Diesel Engines Division, Bagnoli della, Roanoke 334, Trieste, ITALY
 GE Naval & Drive Turbine Systems, 166 Boulder Dr., Fitchburg MA 01420
 Hobart Engineering, Inc., 1320 Kemper Meadow, Ste. 500, Cincinnati, OH 45240
 Kahlenberg Bros. Co., P.O. Box 358, Two Rivers, WI 54241
 Knupp Mak, 7555 Danbro Crescent, Mississauga, Ontario, CANADA L5N 6P9
 Kahlert Manufacturing, 11720 Horseshoe Way, Richmond, BC Canada V7A 4V5
 LIPS B.V., P.O. Box 6, 5151 RH Dronhe, The Netherlands
 LIPS U.S.A. Inc., 3617 Koppers Way, Chesapeake, VA 23323
 Lohmann & Stohleht, P.O. Box 1860, D-52408 Willich, Germany
 Maspec Products Inc., 90 Forest Ave., Locust Valley, N.Y. 11560
 Markisches Werk, P.O. Box 1442, D-5884 Halver GERMANY
 MAN B&W Diesel, 17 State St., New York, NY 10004
 MAN B&W Diesel AS, Osterve 2, DK-4960 Huleby, DENMARK
 Friedrichshafen, DENMARK
 MAN B&W Diesel GmbH, Stadtbachstrasse 1, D-86153 Augsburg 1 GERMANY
 Marners Controls, 875 Passa Rd., Burlington, WA 98107
 Mitsubishi Heavy Industries America, Inc., 630 Fifth Ave., Ste. 3450, NY, NY 10101
 MTU of N.A., 10450 Corporate Dr., Sugar Land, TX 77478
 New Sulzer Diesel Ltd., CH-8401, Winterthur, SWITZERLAND
 North American Marine Jet, P.O. Box 1232, Benton, AR 72015
 Omnitrust Inc., 9615 Sorenson Ave., P.O. Box 2144, Santa Fe Springs, CA 90670
 Rols SP Propellers SA, Via Silvio S. P.O. Box 251, 6828 Baterna SWITZERLAND
 Rols SP Propellers USA, 4030 Mustang Road, Melbourne, FL 32934, USA
 Kar Sennar Inc., 25 W Third, Kenner LA 70062
 Schottel-Werft, Marzener Strasse 9, D-93522 Spayrheim, GERMANY
 Schottel North America, Inc., 1505 Corbin Ave., Hammond, LA 70403
 Shipwrights, Inc., 855 Worcester Rd., Farmingham, MA 01781
 Sound Propellers, 1608 Fairview Ave. E., Seattle, WA 98102
 Stewart & Stevenson, 1400 Drestrhan, P.O. Box 8, Harvey LA 70059-0008

Taitron Lymocing, 550 Main St., Stratford, CT 06497
 Thrustmaster of Texas, 12227-K FM 529, Houston, TX 77041
 Ulsatan Bergen Diesel A/S, P.O. Box 824, N-5002, Bergen, NORWAY
 J. M. Voith GmbH, Marine Division, Postfach 1940, D-7620, Hedenheim/Brenz, GERMANY U.S. Rep: Voith Schneider America Inc., 121 Susquehanna Ave., Great Neck, NY 11021
 Oy Wärtsilä Ab, Vasa and Abi Divisions, P.O. Box 244, SF-65100 Vasa, FINLAND
PUMP-Repair-Drives
 Alwelter Marine Inc., USA Rep., 14812 S.E. 62nd court, Bellevue, WA 98006
 Alwelter Marine Inc., Postboks 149, 1351 nud, NORWAY
 Del Gario, 619 Industrial Rd., Carlstadt, NJ 07072
 Frank Mohr Houston, Inc., P.O. Box 1586, La Porte, TX 77572-1586
 Gilles, Inc., P.O. Box 628, Seabrook, TX 77586
 Jim's Pump Repair, 48-55 36th St., Long Island City, NY 11101
 Jerry S. Leach Co., Box 71, 847 State Rd., Chorro, SC 29530
 Lesmitz Corporation, 165 Chestnut Street, Allendale, NJ 07401
 Vite Motorale, 99 W Hawthorne Ave., Suite 622, Valley Stream NY 11580
REMOTE VALVE OPERATORS
 ELLIOTT MANUFACTURING, P.O. BOX 773, BINGHAMTON, NY 13902
RESISTANCE TAPE
 Meltrape, P.O. Box 2366, Littleton, MA 01460
REFRIGERATION EQUIPMENT/SERVICES
 Strick Marine, 1410 Central Ave., Farmingdale, NY 11735
 Bailey Refrigeration Co., 2333 Randolph Ave., Avenel, NJ 07001
 Vacom Refrigeration USA, 3913 Hartzdale Dr., Camp Hill, PA 17011
REMOTE VALVE OPERATORS
 American United Marine Corp., 5 Broadway, Rt 1, Saugus, MA 01906
 Tealair, Inc., 771 First Ave., King of Prussia, PA 19406
RIGID INFLATABLE BOATS
 American Eagle, 780 E. Pearle Jensen Way, LaConner, WA 98257
ROPE-Marlin-Nylon-Hawseers-Fibers
 Allied Signal Inc., Fibre Division, 1411 Broadway, New York, NY 10018
 Dupont, Montgomery 403, 1011 Centre Road, Wilmington, DE 19805
RUBBER STOCK SEALS
 Blohm & Voss AG, P.O. Box 100720, D-2000 Hamburg 1, GERMANY
 U.S.A. Repts: Simplex-Turnar Inc., P.O. Box 168, Little Neck, NY 11363-0168
 U.S.A. Repts: Simplex-Turnar Inc., P.O. Box 168, Little Neck, NY 11363-0168
SAFETY LIGHTING
 Dittax, Inc., P.O. Box 1150, Kinder, LA 70648-1150
SANITATION DEVICE-Pollution Control
 Byrne, Rice & Turner, Inc., 1172 Camp Street, New Orleans, LA 70130
 Etech International Corp., 1110 Industrial Blvd., Sugarland, TX 77478
 Envirovac, Inc., 1290 Turner Dr., Rockford, IL 61111
 Fast Systems, 3240 North Broadway, St. Louis, MO 63147
 Incochev, Inc., 452 E. Hill Rd., P.O. Box 1460, Willits, CA 95490
SATELLITE COMMUNICATIONS
 British Telecom, Room 203, 43 Bartholomew Close, London EC1A 7HP
 Cancom Mobile Communications, 23300 Conard Dr., Clarkburg, MD 20871-9475
 IDB Mobile, 10525 W. Washington Blvd., Culver City, CA 90232
 Norwegian Telecom, Postboks 6701 St. Olavs Plass, N-0130, Oslo, Norway
 Seacomm, Inc., 15 Hill Street, Telephone House, 2nd storey, Singapore 0617
SCALE MODELS
 Marknet, PO Box 225, Oconomowoc, WI 53066
 Scale Reproductions, 16346 County Road 13, Fairhope, AL 36532
 Sturgeon Bay Model Shop, 187 N Ninth Ave., Sturgeon Bay WI 54235
SCUTTLES/HATCHES
 Bickard & Assoc., 7527 NE 33rd Dr., Portland, OR 97211
SEALANTS
 Bestite, Inc., Div. of Life Ind., 205 Sweet Hollow Rd., Old Bethpage, NY 11804
SEALS
 John Crane Marine USA, 1536 Barclay Blvd., Buffalo Grove, IL 60089
SELF UNLOADING SYSTEM REPAIR
 U.S. Rep: Simplex-Turnar Inc., P.O. Box 168, Little Neck, NY 11363-0168
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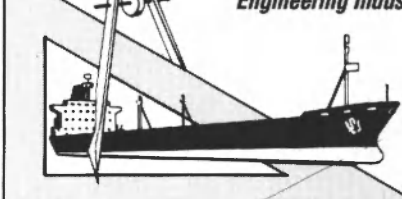
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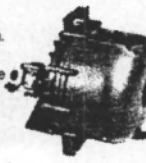
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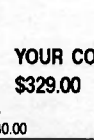
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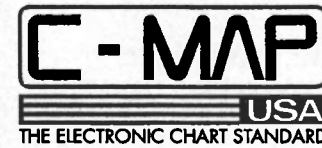
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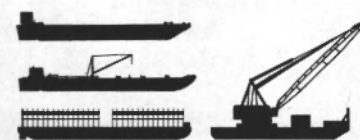
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AT PRESS TIME...

Singmarine To Build Hovercraft With Textron Marine

Singmarine Industries Ltd.'s subsidiary Singmarine Dockyard & Engineering Pte. Ltd. has entered into a licensing arrangement with Textron Marine Systems to build hovercraft for Vietnam, Myanmar and the ASEAN countries.

Under the agreement, Singmarine Dockyard will have the exclusive right to build the C7 hovercraft at its yards with full technical support from Textron, which develops the vessels.

The C7 hovercraft is a multi-purpose Air-Cushion Vehicle capable of travelling at high speed with low drag. Fully amphibious and highly versatile, it is able to move on difficult terrains, making it suitable for both commercial and military uses.

In May, Singmarine Dockyard and Textron delivered a hovercraft, Hover-Rescue, to the Civil Aviation Authority of Singapore (CAAS). The vessel was commissioned for airport rescue and fire fighting purposes.

Clinton Urges Passage Of Security Bill

President Clinton has urged Congress to pass the Administration's program to ensure the future of America's merchant marine.

"Our shipbuilding program is in place and is producing dramatic results," the President said. "Now we must act to be sure commercial ships will continue to fly the American flag, provide jobs for American seafarers, and be available to support our economic and defense needs."

The Administration's proposed Maritime Security and Trade Act of 1994 would establish a new 10-year, \$1 billion maritime security program. Program participants would agree to make their ships and other commercial transportation resources available during national emergencies, or as otherwise determined by the President. At press time, the House of Representatives was expected to vote on the maritime legislation, introduced as HR 4003, the week of August 1.

Enviro Groups Oppose Cutting Renewable Fuels Program

Five national environmental organizations are urging the U.S. Senate to vote against an oil-industry sponsored effort to bar the U.S. Environmental Protection Agency from implementing its program to require more use of renewable fu-

els, such as ethanol — a domestically-produced corn-based gasoline additive — to achieve clean air goals.

The effort was presented by Senator J. Bennett Johnston (D-La.). Following EPA's decision in June to institute the new program in 1995, Sen. Johnston moved to amend EPA's appropriations bill and prohibit any funds being spent for the renewable fuels program.

Friends of the Earth, Sierra Club, Natural Resources Defense Council, National Wildlife Federation, and Environmental Working Group are the agencies who support the program and who are fighting Sen. Johnston's effort.

The oil industry has strongly opposed the EPA program on ethanol, wishing to continue to use only a methanol-based derivative, much of it manufactured from foreign imports.

AAPA Testifies On WRDA Reauthorization

The president of the American Association of Port Authorities (AAPA) urged Congress to maintain its two-year cycle of reauthorizing the Water Resources Development Act (WRDA). The biennial legislation authorizes federal funding for water resources and navigation projects at the nation's ports. AAPA President Erik Stromberg said: "If there is one message I leave with the Subcommittee today, it is that we must maintain this two-year cycle. Continuation of biennial authorizations and maintaining adequate annual appropriations levels are essential to effective planning and budgeting for projects by state and local governments." Approximately 400 million cubic yards of sediment are dredged from federal navigation channels and berths each year, to keep them safe and open for international trade.

APL OK'd To Extend Subsidizable Life Of The Sue Lykes

MarAd and Maritime Subsidy Board have given approval to American President Lines, Ltd. (APL), to extend the subsidizable life of the *Sue Lykes* (ex-*President Wilson*, ex-*Hong Kong Mail*) through October 31, 1995 — and if Lykes exercises its option to extend its charter, until January 12, 1996. The vessel is currently under charter to Lykes Bros. Steamship Co., Inc.

In approving the application, the board required a reduction in the previously subsidizable life of the *Ruth Lykes* to August 19, 1994, the termination of the current outbound voyage and to apply the reduced amounts to the extension of the *Sue Lykes*. The board also stated that financial aid would be granted until the specified date or until the vessel

Clinton: Programs To Bring More Than \$1 Billion To U.S. Yards

The Administration's shipbuilding initiative could result in more than \$1 billion in orders for American shipyards, supporting thousands of jobs for American workers and signaling the industry's rebirth, President Clinton said.

"Our work for our maritime industries reflects what we're doing for the economy as a whole," Mr. Clinton said. "Given the right tools and opportunities, our shipbuilders can out-produce any competitors in the world. And American workers and American ingenuity can keep building a new prosperity across our country. Together, we will make it happen."

"The President's shipbuilding initiative is one part of our overall effort to ensure America's future as a maritime nation," Secretary of Transportation Federico Pena said. "Our proposed Maritime Security and Trade Act will ensure that merchant ships will continue to fly the American flag and be crewed by American seafarers. We urge Congress to enact it into law before the year is out."

As part of the program to boost the American shipbuilding industry, the President announced approval of a \$115 million loan guarantee to help Coastal Ship, Inc., Houston, finance construction of U.S.-flag RoRo barges to be built by Trinity Marine Group, Gulfport, Miss. The project is expected to support about 600 jobs for American shipyard workers.

Under legislation enacted last year, shipyard modernization projects are now also eligible for guarantees. The President announced approval of a federal loan guarantee for National Steel and Shipbuilding Co. (NASSCO) of San

Diego. NASSCO will use the \$22.7 million loan guarantee to invest in modern and advanced shipbuilding technologies.

In a May, 1992 visit to NASSCO, Mr. Clinton talked about the need to convert industries dependent upon military contracts to commercial uses.

Today the President said, "We now have proof positive that we can build real partnerships between government and private industry to preserve thousands of American jobs — and create thousands of new jobs — using the unique skills of defense workers for civilian commerce."

Under the ship financing program administered by the Maritime Administration (MarAd), the government does not make direct loans. Funds are secured in the private sector with repayment guaranteed by the government.

As the President requested, last year's legislation also expanded the program to foreign buyers who build ships in the U.S. Historically, the program was limited to U.S. purchasers. MarAd is now reviewing two applications to help finance ships to be built for export, the President said. The Saracen Group, headquartered in Geneva, Switzerland, requested \$726 million in guarantees to support construction of 30 multipurpose containerships at McDermott Shipyard in Louisiana. The project would support an estimated 2,600 shipyard jobs.

In addition, Fleves Shipping Corp., Piraeus, Greece, has applied for a \$133 million loan guarantee to build four oceangoing product tankers at Newport News Shipbuilding (NNS) in Newport News, Va. The project would support an estimated 500 shipyard jobs.

is replaced by new construction or otherwise withdrawn from the subsidy contract, whichever is earlier.

Waterman Alleges Dept. Of Ag. Is Violating Cargo Preference Acts

Waterman Steamship Corp. has filed an application requesting the Secretary of Transportation to require the Department of Agriculture to comply with the Maritime Administration's (MarAd) directives as it relate to ocean transportation of Title II preference cargoes.

In its application, Waterman stated that the Department of Agriculture is improperly administering its cargo preference program in three important respects, thereby impeding Waterman's participation in the cargo preference program. Waterman also alleges the Agriculture Department is allocating preference cargo to ports where all U.S.-

flag service is not available and later fixing the cargo on mixed service — U.S.-flag vessels with foreign-flag feeder vessels, which is a violation of MarAd's prioritization rule issued June 16, 1986. In addition, Waterman said the Department of Agriculture is violating the Cargo Preference Act of 1954 by failing to administer its P.L. 480 program in such manner as to ensure fair and reasonable participation of U.S.-flag vessels by geographic destination areas. Further, Waterman asserts that the Department of Agriculture is violating the 1954 Act through bidding procedures which requires U.S.-flag dry cargo liner vessels to bid against foreign-flag and/or non-liner U.S.-flag vessels for preference cargoes which should be reserved for U.S.-flag liner vessels. The application has been assigned Docket P-008 and is being published in the *Federal Register*. Comments should be filed in triplicate with the Secretary, Maritime Administration, Room 7300, Nassif Bldg., 400 - Seventh St., SW, Washington, DC 20590, by 5:00 p.m. August 17.

DREDGING

Year-To-Date Dredge Contract Awards

DST	Job	Bid Date	Quantity (cu. yds.)	Winning Bid	Winning Bidder	DST	Job	Bid Date	Quantity (cu. yds.)	Winning Bid	Winning Bidder
LMK	Red River	3/94	4.5mil	3.05mil	Pine Bluff Sand & Gravel	NCE	Green Bay Harbor	4/94	167,000	1.2mil	Roen Salvage Co.
LMK	Ouachita & Black Rivers	3/94	1mil	1.4mil	T.L. James & Co.	NCE	Leland Harbor	4/94	9,000	45,687	Mich. Hydraulic Dredging
LMN	LaBranche Wetland	9/93	2.5mil	2.49mil	T.L. James & Co.	NCE	Arcadia Harbor	4/94	2,000	25,653	Mich. Hydraulic Dredging
LMN	Outlets @ Venice Tiger Pass	10/93	2.3mil	2.2mil	T.L. James & Co.	NCE	Penwater Harbor	4/94	8,000	48,610	Mich. Hydraulic Dredging
LMN	Bayou Lecorpe	10/93	77,608	313,396	L&A Contracting	NCE	Saginaw River	4/94	143,000	486,150	B&B Dredging Corp.
LMN	Bayou Tech Calumet Flodgate	12/93	31,000	46,000	Great Lakes Drdg. & Dock	NCE	South Haven Harbor	4/94	14,000	92,820	Frost Engineering
LMN	Miss. Riv. Swp. LSD HOP	12/93	7.4mil	7.9mil	Natco Ltd. Partnership	NCR	Emer Louis Co. Dist. 11	10/93	0	586,400	King Co., Inc.
LMN	Miss. Riv. Swp. LSD HOP	1/94	2.3mil	2.9mil	Natco Ltd. Partnership	NCR	Emer Louis #8, Levee Rep.	10/93	0	546,675	Southwind Construction
LMN	Miss. Riv. New OrL Harbor	1/94	700,000	920,246	Mike Hooks Inc.	NED	New Haven Harbor	9/93	965,000	2.3mil	Great Lakes Drdg. & Dock/No. Atl.
LMN	Bayou Teche Mi. 0 to 5	1/94	450,000	587,052	River Road	NED	Conn. Riv. Below Hartford	11/93	102,000	277,660	Gulf Coast Trailing
LMN	Miss. Riv. Swp. Cutrhd	2/94	5mil	6.3mil	Constructions Inc	NPA	Anchorage Harbor	3/94	225,000	980,000	Manson Constr. & Engr.
LMN	Freshwater Bayou Mi. 1.3 to -4	3/94	1mil	961,000	Mike Hook Inc.	NPP	Irrigan Boat Basin	11/93	5,500	73,000	Nehalem River Dredging
LMN	Atchaf Riv. Bay&Bar LSD Cut	3/94	300,000	1.1 mil	T.L. James & Co.	NPP	Wahkiakum Ferry	11/93	17,000	77,600	Busco Tug & Barge
LMN	Miss. Riv. Swp LSD Hop	4/94	4.8mil	6.1mil	T.L. James & Co.	NPP	Winchester Coast Guard	12/93	2,000	99,825	Umpqua River Nav. Co.
LMN	Berwick Bay	4/94	1.2mil	1.9mil	Natco/Gulf Coast	NPP	Foster Dam Stilling Basin	2/94	300	92,100	Nehalem River Dredging
LMN	Atchaf Riv. Bay and Bar Chnl	5/94	8mil	6.4mil	Mike Hooks Inc.	NPP	Columbia River/Coos Bay	3/94	3.3mil	3.6mil	Manson Constr. & Engr.
LMN	Atch Riv Six Mi. LK Emer	5/94	2mil	1.1mil	T.L. James & Co.	NPP	Oregon South Coast Hopper	3/94	280,000	1.7mil	Natco Ltd. Partnership
LMN	Miss. Riv. Swp LSD HOP	5/94	2.3mil	3mil	Mike Hook Inc.	NPS	Seattle Hbr	1/94	60,000	161,120	A.H. Powers, Inc.
LMN	Miss. Riv. Swp LSD HOP	5/94	6mil	2.3mil	Natco Ltd. Partnership	NPS	Grays Hbr & Chehalis R.	1/94	815,000	1.5mil	Great Lakes Drdg. & Dock/Pacific
LMN	Miss. Riv. New OrL. Hbr	5/94	2mil	2.1mil	T.L. James & Co.	NPS	Grays Hbr & Chehalis R.	2/94	1.3mil	1.9mil	Manson Constr. & Engr.
LMN	Miss. Riv. Swp LSD HOP	5/94	2.3mil	3.1mil	T.L. James & Co.	SAC	Port Royal Ent. Maint.	10/93	490,000	777,750	Gulf Coast Trailing
NAB	Herring Bay, Md.	3/94	25,000	144,000	Bean Dredging	SAC	Georgetown Ent. Maint.	11/93	490,000	580,500	Natco Ltd. Partnership
NAN	Seabright	12/93	3.8mil	19.6mil	Ctrl Engineering	SAC	Wando River Est. New York	1/94	970,000	2.4mil	Weeks Marine
NAN	Jones Inlet	1/94	375,000	2.9mil	Weeks Marine/American Drdg.	SAC	Chas. Harbor Maint.	1/94	1.4mil	2.6mil	M. Operating Co. Inc.
NAN	Jamaica Bay	1/94	200,000	1.3mil	Gulf Coast Trailing Co.	SAC	Sampal River & Upper Winyah	1/94	1.5mil	1.8mil	Southern Dredging Co.
NAN	Coney Island	1/94	2.25mil	8.6mil	Bean Horizon Corp.	SAC	Naval Weapons & Chas Dredg.	4/94	1.5mil	1.5mil	Southern Dredging Co.
NAN	Hudson/Edgewater	4/94	500,000	1.6mil	Weeks Marine/American Drdg.	SAC	ANWW Chas. To Port Royal	—	806,000	1.2mil	Eastern Dredging & Const.
NAO	Lynnhaven Inlet	10/93	80,000	532,400	Ctrl Engineering	SAJ	Fi. Pierce Hbr.	9/93	98,000	668,000	Natco Ltd. Partnership
NAO	WCV Accomack Cty	11/93	100,000	887,296	Ctrl Engineering	SAJ	IWW Rockhouse	10/93	215,000	1mil	Woodington Corp.
NAO	Nansemond River	2/94	40,000	214,000	Ctrl Engineering	SAJ	Kings Bay/Fernandina	10/93	537,000	1.2mil	Gulf Coast Trailing
NAO	Whitings Creek	2/94	20,000	133,680	Ctrl Engineering	SAJ	Alafia River Channel	10/93	392,000	1.2mil	Woodington Corp.
NAO	Broad Creek	2/94	40,000	250,320	Ctrl Engineering	SAJ	IWW, Vic Bakers Haulover	12/93	50,000	287,000	Lake Michigan Contractors
NAO	Sewells Anchorage	2/94	300,000	1.6mil	Woodington Corp.	SAJ	Jacksonville Harbor	1/94	1mil	6.5mil	T.L. James & Co.
NAO	Chincolague Inlet	3/94	100,000	327,000	Natco Ltd. Partnership	SAJ	IWW, Matanzas, St. Johns	2/94	180,000	1.3mil	Lake Michigan Contractors
NAO	Rudee Inlet	3/94	100,000	530,000	C&G Excavating Inc.	SAJ	Palm Beach Hbr. Reprcurnt	2/94	170,000	1.3mil	Natco Ltd. Partnership
NAP	Wilmington Harbor	9/93	546,170	677,091	C.J. Langenfelder & Son	SAJ	Clearwater Pass	2/94	7,300	248,420	Great Lakes Drdg. & Dock/South
NAP	Del Riv. Com Bck St.	9/93	128,101	1.4mil	Great Lakes Drdg. & Dock/So. Atl.	SAJ	Dade Co. Contract #1	5/94	552,000	6.3mil	Great Lakes Drdg. & Dock/South
NAP	Schuykill River	10/93	203,962	1.2mil	Great Lakes Drdg. & Dock/So. Atl.	SAM	Theodore Ship Chnl 1	10/93	600,000	534,000	Mike Hooks Inc.
NAP	C&D Canal/G West	12/93	661,588	2.3mil	Great Lakes Drdg. & Dock/So. Atl.	SAM	GIWW, Apalachicola Bay	12/93	350,000	571,195	Hendry Corp.
NAP	NJWW/Cape May Harbor	3/94	350,000	1.2mil	Barnegat Bay Dredging	SAM	Gulport Harbor	2/94	2mil	1.8mil	Bean Dredging Corp.
NCB	Cleveland	1/94	250,000	1.7mil	Great Lakes Drdg. & Dock	SAM	Apcl/Chatt/Flint Rvs	3/94	1.5mil	2.8mil	Hendry Corp.
NCB	Toltec Open	2/94	200,000	469,000	Natco Ltd. Partnership	SAM	Tenn-Tom WWY, AL/MS	3/94	2.8mil	3.9mil	T.L. James & Co.
NCC	Michigan City Harbor	12/93	24,500	206,650	Donkersloot & Sons	SAS	Kings Bay FY94 Maint.	11/93	446,600	2.7mil	Southern Dredging Co.
NCE	Ontonagon Harbor	12/93	50,000	323,000	King Co., Inc.	SAS	Sav Hbr. Sta. 40 to 112.5	4/94	2.5mil	3.3mil	The M. Operating Co.
NCE	Holland Harbor	1/94	20,000	123,178	King Co., Inc.	SAS	Wilmington Harbor	11/93	950,000	1.8mil	Natco Ltd. Partnership
NCE	Grand Haven Harbor	1/94	20,000	148,178	King Co., Inc.	SAW	ANWW Inlet Kings	12/93	350,000	1.9mil	Ctrl Engineering
NCE	Frankfort Harbor	1/94	34,000	164,840	King Co., Inc.	SAW	Wrightsville Renourishment	1/94	937,000	2.6mil	Great Lakes Drdg. & Dock/So. Atl.
NCE	St. Joseph Harbor	3/94	50,000	275,068	King Co., Inc.	SPN	Mare Island Strait	4/94	140,000	318,000	Manson Constr. & Engr.
NCE	Manistee Harbor	3/94	25,000	166,500	Luedtke Engineering Co.	SPN	USCG (Horseshoe Cove)	4/94	4,800	42,200	Dutra Dredging
NCE	New Buffalo Harbor	3/94	15,000	218,732	King Co., Inc.	SWG	MSC-Mata Pen to Pt. Comport	10/93	5.3mil	2.4mil	King Fisher Marine Serv.
NCE	Duluth-Superior Hbr.	3/94	87,000	765,992	King Co., Inc.	SWG	MCR-Navi Ch & Impound Basin	10/93	1.3mil	1.4mil	Great Lakes Drdg. & Dock/Gulf
NCE	Manroe Harbor	3/94	117,000	557,250	King Co., Inc.	SWG	Ghston Hbr Bolivar	11/93	4.6mil	2.6mil	Mike Hooks Inc.
NCE	Duluth-Superior Hbr.	3/94	170,000	392,008	King Co., Inc.	SWG	GIWW-MN Ch in Aransas Bay	1/94	1mil	431,680	King Fisher Marine Serv.
						SWG	GIWW-Main Ch in Mata Bay	1/94	350,000	626,200	Mike Hooks Inc.

Legend

Corp of Engineers Divisions and Districts (in alphabetical order by organization code)

LMV Lower Mississippi Valley	NCE Detroit	SAC Charleston
LMK Vicksburg	NCR Rock Island	SAJ Jacksonville
LMN Memphis	NCS St. Louis	SAM Mobile
LMN New Orleans	NED New England	SAS Savannah
LMS St. Louis	NPD North Pacific	SAW Wilmington
MRD Missouri River	NPA Alaska	SPD South Pacific
MRK Kansas City	NPP Portland	SPK Sacramento
MRC Omaha	NPS Seattle	SPL Los Angeles
	NPW Walla Walla	SPN San Francisco
NAD North Atlantic	ORD Ohio River	SWD Southwestern
NAB Baltimore	ORH Huntington	SWA Albuquerque
NAN New York	ORL Louisville	SWF Fort Worth
NAO Norfolk	ORN Nashville	SWG Galveston
NAP Philadelphia	ORP Pittsburgh	SWL Little Rock
		SWT Tulsa
NCD North Central	POD Pacific Ocean	
NCB Buffalo	SAD South Atlantic	
NCC Chicago		

Source: U.S. Army Corps of Engineers

District By District Contract Totals (YTD)

District	Jobs	Quantity	Winning Bids
LMK Vicksburg	2	5.5mil	4.5mil
LMN New Orleans	19	50.6mil	51.4mil
NAB Baltimore	1	25,000	144,000
NAN New York	5	7.2mil	45.9mil
NAO Norfolk	8	780,000	4.5mil
NAP Philadelphia	5	1.9mil	6.9mil
NCB Buffalo	2	450,000	2.2mil
NCC Chicago	1	24,500	\$206,650
NCE Detroit	16	931,000	5.1mil
NCR Rock Island	2	0	1.1mil
NED New England	2	1.1mil	2.6mil
NPA Alaska	1	225,000	980,000
NPP Portland	7	3.6mil	5.7mil
NPS Seattle	3	2.2mil	3.6mil
NPP Portland	3	2.2mil	3.6mil
SAC Charleston	7	7.1mil	10.9mil
SAJ Jacksonville	11	3.2mil	21mil
SAM Mobile	5	7.3mil	9.6mil
SAS Savannah	2	2.9mil	6mil
SAW Wilmington	3	2.2mil	6.3mil
SPN San Francisco	2	144,800	360,200
SWG Galveston	5	12.5mil	7.4mil
Total	109	109.9mil	184.6mil

Harrab's, Vicksburg, Mississippi



Star Casino, Lake Pontchartrain, Louisiana



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