FEB. 1991

MARITIME REPORTER
AND
ENGINEERING NEWS

NAVY ANNUAL

Washington Up-Date:

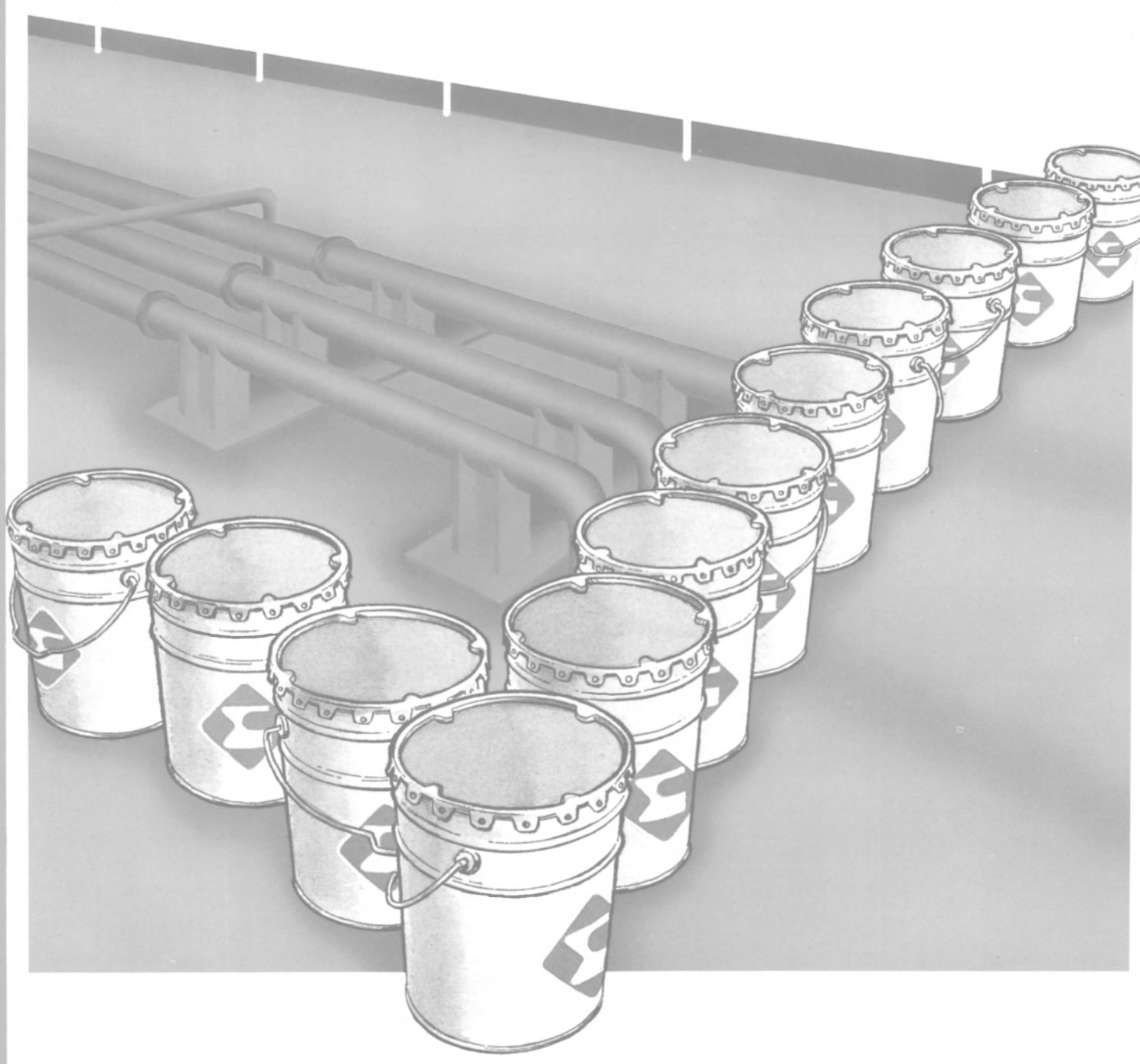
Desert Shield Operation places strong support for a 5-year sea lift program by Defense Department.
Special appropriations and additional funding are under consideration by Congress...See Inside!

CANADIAN SHIPBUILDING and Offshore Conference

Ottawa, Canada
February 11-12

MARINE COATINGS and Corrosion Control

New High-Technology Coatings Available To The Marine Industry



SIGMA CM SYSTEM

SIGMA EP UNIVERSAL PRIMER

Sigma EP Universal primer is a general purpose epoxy primer offering excellent corrosion protection and good adhesion to steel, galvanised steel and non-ferrous metals.

Its cathodic protection compatibility and outstanding performance make this versatile primer ideal for use as a touch up and damage control primer during construction, as a holding primer during refurbishment in drydock, or as a holding primer during wet blast cleaning operations.

SIGMA CM MIOCOAT

Sigma CM Miocoat is an anticorrosive, high build, epoxy primer/midcoat with unlimited overcoating intervals.

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SIGMA CM COATING

Sigma CM coating is an anticorrosive, high build epoxy finish coat which forms the "topcoat" of Sigma's CM systems for boottops, topsides, decks and superstructures.

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For your free copy of the Sigma CM System File, write to the address below.

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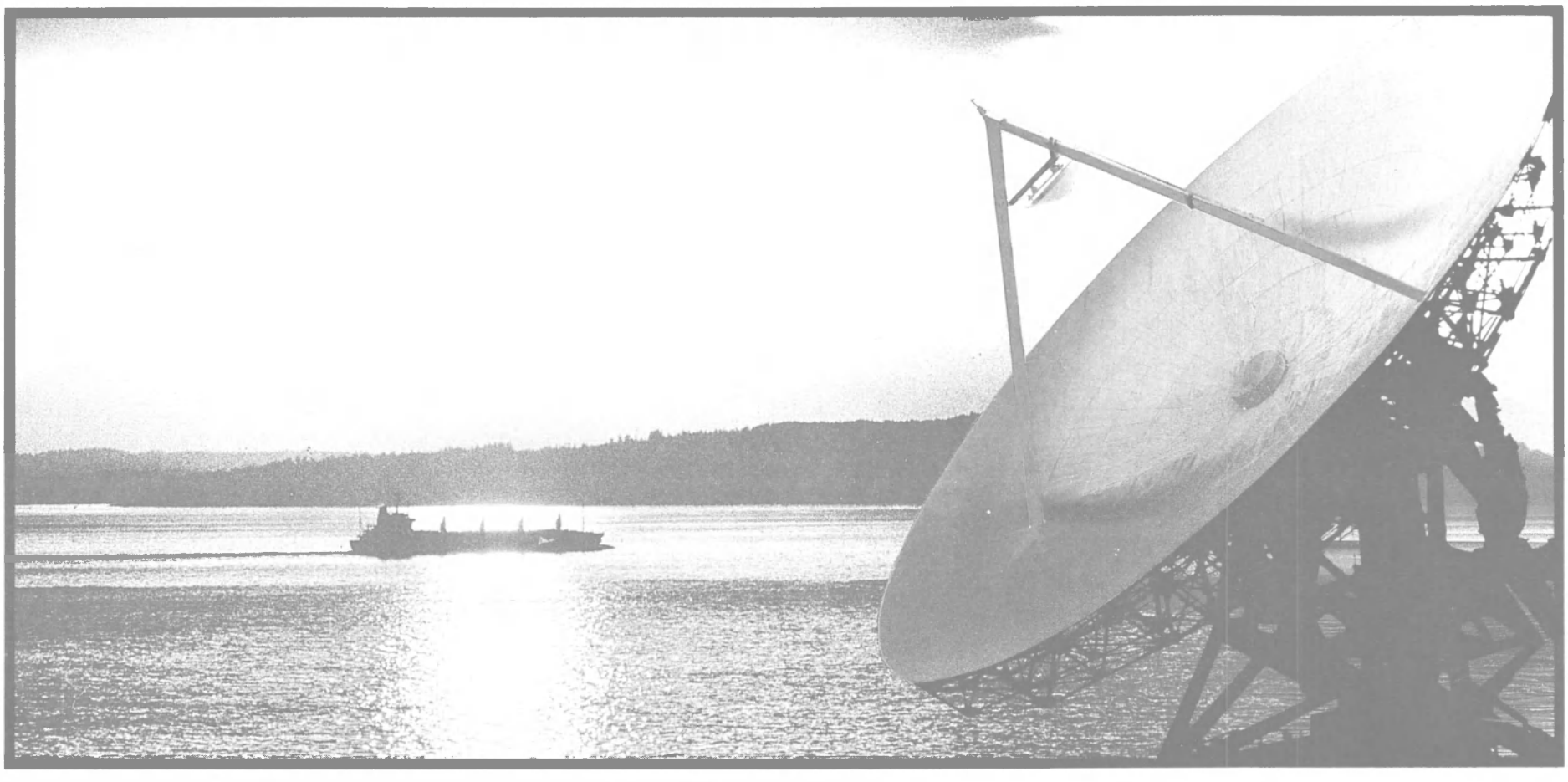
Houston, Tx 77029.
Tel: (713) 672 1175
Fax: (713) 672 1418

SIGMA COATINGS

SIGMA CM SYSTEM

THE RIGHT CHOICE



Maritime Satellite

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MREN

Circle 31 on Reader Service Card

ON THE COVER

Air to air view of an F-14A Tomcat Aircraft from Fighter Squadron 102 (VF-102) after taking off from the Aircraft Carrier USS America (CV-66). The Aircraft is armed with two Aim-54 Phoenix Missies; center-line, two Aim-7 Sparrow and two Aim-9 Sidewinder Missies mounted on the wing pylons. *Official U.S. Navy Photograph.*
Photographer: CWO 2 Joel Leo
Cover Design: Alex Brown / Artwork Production

INSIDE

AESA Receives Conversion Contract For Two Ferries

Spanish shipbuilder and repairer AESA has received a contract from Campania Trasmediterranea for the conversion of two 2,753-ton passenger/car ferries.

The two ferries, Ciudad de Ceuta and Ciudad de Zaragoza, will have their passenger and car capacities increased. Following conversion at AESA's Santander yard, the ferries will be able to carry 859 passengers and 348 cars.

Turecamo Awarded $3.8-Million Contract For Towing Services

Turecamo Coastal & Harbor Towing Company, Philadelphia, Pa., was recently awarded a $3,831,570 contract for tugboat towing services by the Naval Regional Contracting Center, Philadelphia Naval Base, Philadelphia, Pa.

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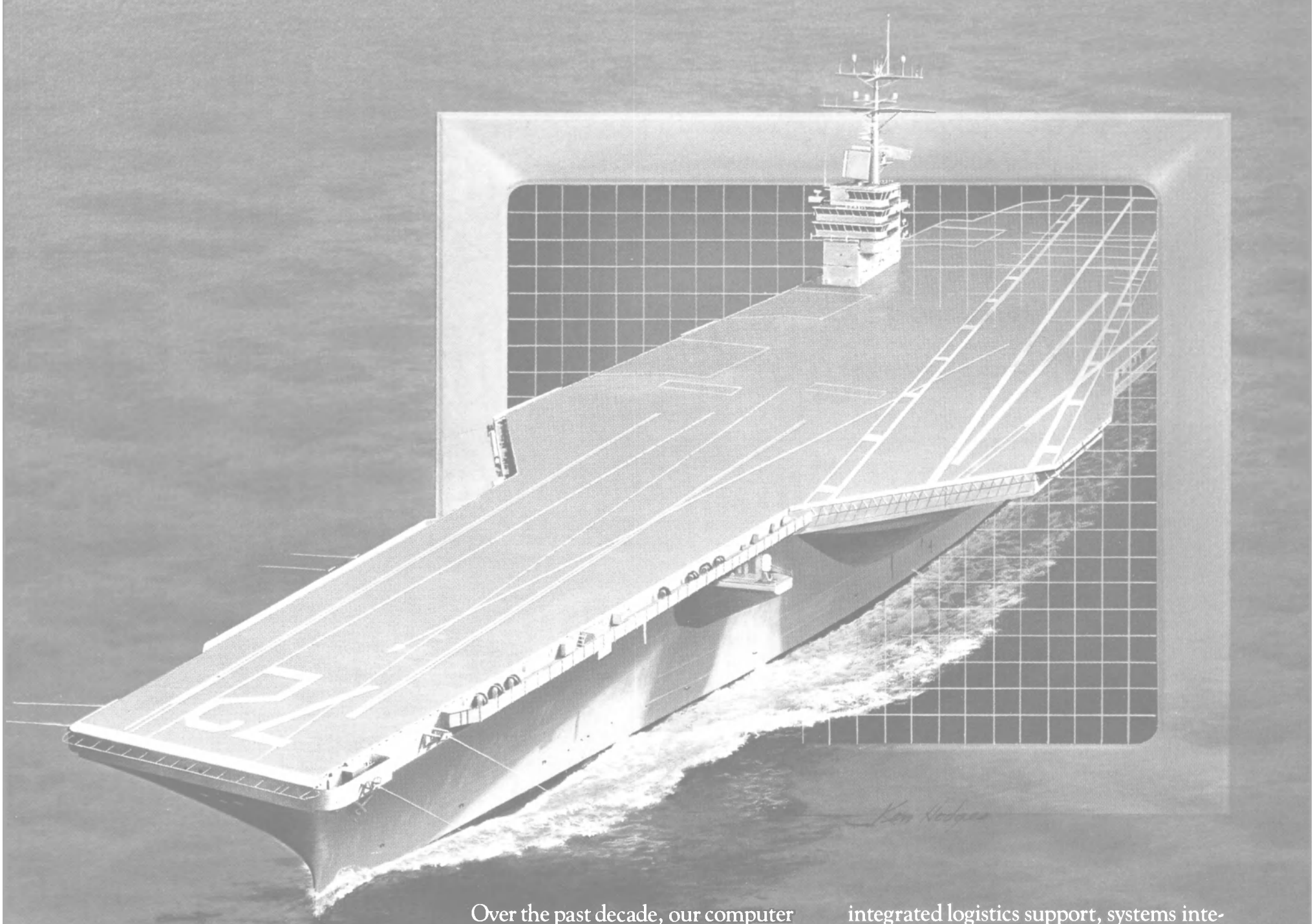
From Shipbuilding to Information Services



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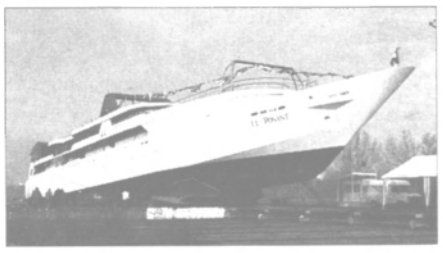

The cruise sailing ship Le Ponant, recently launched in Villeneuve-la-Garenne, is destined for operation in the Caribbean.

The cruise sailing ship Le Ponant was recently launched at the Societe Francaise de Construction Navales (SFCN) shipyard in Villeneuve-la-Garenne. The ship will be operated by the Compagnie des Isles du Ponant and is destined for cruising in the Caribbean. A regular cruising program is scheduled to start in the spring of 1991.

The Le Ponant, which is approximately 289 feet long, will be rigged as a three-master, with all three masts carrying triangular sails of nearly equal size and the fore and main masts additional head sails. With a total sail spread of 1,300 square meters, she will reach 15 knots.

The Le Ponant has been powered with a 16-cylinder Deutz MWM main engine of the 604B series delivering a power of 1,695 kw at a speed of 1,800 rpm. The onboard power supply will be covered by two generator sets with Deutz MWM engines of the 234 series (generator output 262 kw each). In addition, a harbor set has been installed which is driven by an air-cooled Deutz FL 913 engine (generator output 44 kw). The SFCN has become active in many fields during the past few years. It supplies ships both for military and civil applications, including patrol boats and light frigates, as well as fast catamaran ferries and expedition vessels, such as the UAP Transantarctic, a sailing ship for a South Pole expedition.

Vancouver Shipyards Wins $35-Million Contract To Overhaul Ferry

Vancouver Shipyards of North Vancouver, Canada, has been awarded a $35-million contract to install a new upper vehicle deck and re-engine the 4,903-gross-ton Queen of New Westminster, a ferry belonging to British Columbia Ferry Corporation.

The ferry will go into Vancouver Shipyards in the spring to have her two existing engines removed and replaced by four units to increase speed to 21 knots. New gearing and controllable pitch propellers will also be supplied. The hull will be fitted with sponsons, a modified stern, bulbous bow and a second bow thruster. This work is expected to be completed by June.

The vessel will return to the yard in November for the second phase which is expected to take three months to complete.

Vancouver Shipyards, which is equipped with a Syncrolift for vessels up to 90 meters (about 295 feet), repairs many of the tugs and barges employed in the forest products industry.

For free literature on the facilities and capabilities of Vancouver Shipyards,

Circle 32 on Reader Service Card

Kone Corp. Transfers Marketing/Servicing Work To MacGregor-Navire

The marketing and servicing of shipboard cranes and elevators was recently transferred by Kone Corp. to its MacGregor-Navire Group subsidiary, MacGregor-Navire reported.

A Finnish company, Kone is a leading manufacturer of cranes and related lifting equipment for both ports and vessels.

MacGregor-Navire Group, based in London, formed a new marine cranes and elevators division to handle the added product lines.

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Circle 227 on Reader Service Card

AK-WA Converts Incinerator Ship, Wins Contract To Modernize LCMs And Rebuilds Fishing Vessel

AK-WA Shipyard, Tacoma, Wash., is converting the 369-foot Apollo One to a bottom fish processor for an early March delivery to the Seattle-based Dona Fisheries. In addition, the yard won a contract to repower and modernize eight LCMs.

The Apollo One, launched in 1984 as an incinerator ship for burning hazardous chemical wastes miles offshore, will be renamed the Dona Karen Marie upon completion of the $4,500,000-plus conversion.

Half of the ship's cargo holds will be used for fish processing, while the rest of the incinerator system will be retained to allow the vessel to be returned to its original intended use. The conversion required removal of thousands of feet of sophisticated piping and the installation of a processing house and refrigeration machinery space along with the respective processing and refrigeration equipment.

The Dona Karen Marie will process gray cod, yellow fin sole, and pollack caught in Alaska waters by the four smaller catcher boats of the Dona Fisheries fleet. The vessel will be capable of processing and freezing 350,000 pounds of fish per day with frozen storage capacity of 2.7 million pounds.

The LCM contract was awarded to AK-WA shipyard by the Army National Guard and requires the landing craft to be repowered with two Detroit Diesel 12V-71s, including new foundations and shafting. Along with the repowering, the LCMs will have all lead-based paint and asbestos removed. All eight LCMs will have modifications made to the hydraulic, bilge, engine cooling and fuel oil piping systems as well as the electrical systems.

The F/V Northern Cascade, rebuilt by AK-WA Shipyard, in shown during recent sea trials.

AK-WA has completed a contract with Northern Cascade Boat Co. to rebuild the F/V Northern Cascade (Ex-American Beauty).

This project, worth in excess of $700,000 dollars, required extensive hull repairs, 40-foot new bow stem, 80 percent of bottom plating, and hull modifications, which included new shelter deck, new crane and many miscellaneous interior modifications. The refurbishment included replacing and modifying most of the piping systems, installing new owner-furnished engines, auxiliary engines, and main switchboard. Along with the switchboard installation, much of the electrical system was replaced from engine room to the pilothouse.

For complete details on the shipbuilding and repair facilities of AK-WA Shipyard,

Circle 28 on Reader Service Card

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Circle 274 on Reader Service Card

Southwest Marine Celebrates RCCL Cruise Ship Contract

Southwest Marine, San Diego, Calif., recently hosted a celebration of its contract award from Royal Caribbean Cruise Lines to convert the M/S Viking Serenade cruise ship. Deputy Secretary of Transportation **Elaine Chao** was on hand for the occasion.

Southwest Marine is the first U.S. yard to have successfully won a foreign export order in excess of $50 million in more than 30 years. The yard was successful in winning the contract despite the existence of extensive subsidies in the countries against whom it was competing. No subsidies are received by U.S. yards.

Application For Use Of Foreign-Flag Vessels By U.S. Operator Receives Close Attention By Both MarAd And Congress

The responses to an October application filed with the Maritime Administration (MarAd) by Lykes Bros. Steamship Company have generally not been supportive. Lykes, one of the largest subsidized U.S.-flag liner shipping companies, is seeking permission to replace U.S.-flag vessels in its fleet with ten foreign-flag vessels, while continuing to receive government operating differential subsidies (ODS) for the remaining vessels in the fleet. Some of the responses have strongly opposed the request to permit the subsidized carrier to replace U.S.-flag vessels coming to the end of their subsidizable lives with foreign-built, foreign-crewed ships. However, one U.S.-flag company has supported the request.

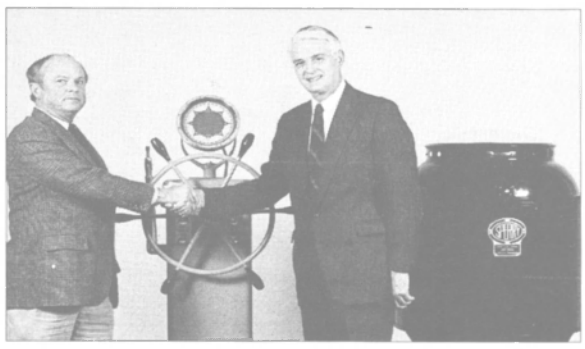
C.E. "Gene" DeFries, president of the National Marine Engineers' Beneficial Association, strongly opposed the Lykes application because, if approved, "it would cost hundreds and eventually thousands of vital maritime jobs." In a December 14 letter, Mr. **DeFries** argued that "this loss of jobs not only would be a crushing blow to men and women who have long served—and serve now in Desert Shield—our nation and our industry faithfully, but it would run counter to the clear agreement, both military and civilian, that our merchant marine manpower base needs to grow not shrink. It would also severely diminish America's sealift capability as many Lykes vessels are highly-useful breakbulk vessels in the extremely short demand in the U.S-flag fleet."

U.S.-flag shipping companies, including Farrell Lines Inc. and Sea-Land Service Inc., also criticized the Lykes application. These shipping companies are concerned about the damaging effects the use of foreign-flag ships might have on the subsidized U.S.-flag fleet. One representative from Sea-Land summed up a general consensus that MarAd's action on the Lykes request might either help or hurt the prospects for changes to strengthen the operating differential subsidy program. He noted that granting the application might "simply diminish the prospects of and arguments for any form of ODS to promote and maintain a U.S.-flag, U.S.-manned merchant marine," while rejection might force action necessary to rejuvenate the program.

One U.S.-flag shipping company, American President Lines, Ltd., supported the Lykes application. American President Line based its argument on the precedent set in the early 1980's when MarAd granted extensive waivers to operators of subsidized U.S.-flag bulk vessels to operate foreign-flag bulk vessels in the U.S. foreign commerce in order to renew their fleets. According to American President Lines, "the waivers were grounded on hardship on the applicants deriving from the existing statutory environment in which U.S.-flag operators have virtually no means to acquire new tonnage due to the unavailability of [subsidies] to construct U.S.-built vessels and their inability to acquire foreign-built vessels for subsidized operation; the applicant's need for additional business opportunities; and the recognition that by granting the waiver for foreign-flag operation, MarAd is promoting the existing U.S.-flag breakbulk fleet."

MarAd will review the comments submitted before making any final decision on the Lykes application. The application is also expected to receive close attention from the recently-converted 102nd Congress, already concerned about the capabilites of and necessity for sealift made clear by the extensive military build-up in the Middle East.

Sperry Marine Donates Historic Gyrocompass To Museum



Thomas N. Hunnicutt III (left), president of the board of trustees, Mariner's Museum of Newport News, Va., and **C. Richard Kenney**, vice president and general manager of Sperry Marine, Inc., alongside Sperry Marine's "Iron Mike" gyropilot (center) and the binnacle of a Mk XIV gyrocompass. The historic equipment was donated to the museum to mark the company's 80th anniversary.

Sperry Marine Inc., Charlottesville, Va., has donated several pieces of historic marine equipment to the Mariners' Museum in Newport News, Va., to mark the company's 80th anniversary. **C. Richard Kenney**, senior vice president and general manager of Sperry Marine, officially presented the items to **Thomas N. Hunnicutt III**, president of the museum's board of trustees.

The donated equipment includes a Sperry Marine Mk XIV Gyrocompass complete with binnacle, control panel, amplifier and generator; a Sperry Marine "Iron Mike" Gyropilot with steering stand and repeater; and a framed photograph of the company founder, Elmer A. Sperry. The Mariner's Museum plans to exhibit the equipment in its Seapower Gallery when it reopens in the mid-1990s.

Elmer A. Sperry is the developer of the gyrocompass. In 1910 he founded the Sperry Gyroscope Company to manufacture this new device which could guide iron as well as wooden ships. The Mk XIV gyrocompass donated to the museum was developed in 1936.

The Sperry "Iron Mike" gyropilot was developed during the 1920s as a logical outgrowth of the gyrocompass.

Sperry Marine Inc. is a leading developer and manufacturer of marine guidance, control and communication equipment.

Saab's Computerized Cargo Handling System Selected By United Tankers Of Sweden

Saab's new computerized cargo handling system, the MaC/501, was recently selected by Swedish shipowner United Tankers for installation on its new product tankers. The two vessels have been ordered at the Uljanik shipyard in Yugoslavia (hull nos. 406 and 407) and are scheduled for delivery in 1993.

The ships are 70,000-dwt product tankers. They are to serve the Caribbean and American East Coast and will load and discharge frequently, hence the emphasis put on efficient cargo handling. Loading and discharging is dealt with at a work station in the cargo control room, where the valves and FRAMO pumps are operated by simply pointing at the screen with a light pen.

The cargo handling system is integrated with Saab's well-known level gaging system TankRadar. Levels in the 10 cargo tanks are read on the same screen as used for cargo handling. This means that the operator can top off the tanks with the utmost accuracy. The temperature sensors for the cargo tanks are integrated into the radar transmitters used for level gaging so as to avoid unnecessary cabling.

For more information and free literature on Saab,

Circle 17 on Reader Service Card

Chevron Awards Sonsub Long-Term Rig Support Contract

Chevron has awarded Sonsub Services, Inc. a one-year rig support contract for telerobotic services on the semisubmersible Ocean America, which is working in 2,700 feet of water in the Gulf of Mexico. Sonsub will provide the Challenger 1A Advanced Remotely Operated Work System (AROWS) for drill rig support as well as its remotely operated dredge to clear the seafloor around the wellheads.

Sonsub is an internationally recognized leader in the field of developing and operating remotely controlled underwater vehicles and specialized tooling systems.

For further information, contact **Cliff Chamblee** at Sonsub Services, Inc., 10905 Metronome, Houston, Texas 77043 (713) 984-9150.

Wellington Leisure Purchases America's Cup; Now Offers Marine Life Saving Equipment

Wellington Leisure Products, a manufacturer of Wellington Puritan® rope and cordage, has purchased America's Cup of La Puente, Calif. Since 1960, America's Cup has been a leader in the design and fabrication of life saving equipment.

Wellington now offers a full line of industrial Type 1, Type 3, Type 4, and Type 5 USCG-approved PFDs (personal flotation devices).

These include standard flotation vests, work vests, float coats, deck suits, and ring buoys.

For more information and a free copy of Wellington Leisure Products' current catalog,

Circle 18 on Reader Service Card

Jered Brown Brochure Describes Vacuum Sewage Collection Systems

A new two-color technical bulletin that describes its vacuum flush sewage systems for shipboard wastewater handling is now available from Jered Brown Brothers, Troy, Mich.

Jered Brown systems include standard and custom-designed vacuum collection tank (VCT) units, vacuum flush toilets, urinals with low flow flush valves, and vacuum interface valves for urinal and graywater drain connections.

The bulletin offers, in narrative form, detailed product information and system description, along with a listing of the system's features.

The back of the bulletin is a schematic drawing of a typical vacuum sewage and wastewater collection and transfer system.

Jered Brown Brothers is an operating unit of Vickers Marine Engineering Division, which in turn is a major division of Vickers P.L.C., the London, England, parent company of Rolls-Royce Motors, and a worldwide supplier of systems and equipment for business, medical and scientific as well as for aerospace, defense, and marine industries.

For further information and a free copy of the bulletin from Jered Brown Brothers,

Circle 19 on Reader Service Card

NABRICO To Build Four Chemical Barges For Maryland Marine

Maryland Marine, Inc., Houston, Texas, recently contracted Nashville Bridge Company (NABRICO), Nashville, Tenn., to build four 30,000-barrel double-skin tank barges.

According to **Caroll Bjornson**, owner of MMI, the 297-1/2-foot barges will be built to Coast Guard Type II standards and will be equipped with the latest technology in closed gauging, high level alarms, spill valves, sight glasses and liquid level indicators.

The barges will be chartered to Stolt Transportation Service under a long term agreement for use in the petrochemical trade along the Gulf Coast.

The new barges, scheduled for delivery beginning May 1, 1991, will bring the MMI fleet to 32 units, all double skin.

For free literature detailing the boat and barge building services of NABRICO,

Circle 50 on Reader Service Card

Cummins Marine Diesels Power Fire/Rescue Boat For City Of Avalon

The Cummins-powered fire/rescue vessel recently delivered to the Avalon Harbor Patrol of Catalina Island.

A pair of Cummins 6BTA5.9-M1 marine diesels were selected to power a new rough-water fire/rescue vessel recently delivered to the Avalon Harbor Patrol of Catalina Island. The 7-1/2-ton, 12-foot-beam, 32-foot-long boat was built by Seaway Boat Company of Long Beach, Calif. It has been placed in service handling emergency boating situations in and around the Catalina Island waters.

The high-performance 6BTA5.9-M1 diesels are turbocharged and after cooled. They produce 250 horsepower at 2,600 rpm and turn 21-inch by 24-inch propellers through 1-1/2-inch shafts that nets a top speed of 30 knots.

Other equipment includes a 36-mile Furuno radar, Micrologic Loran C, Polaris VHF/ADF, standard VHF, and department radios. The design, construction, and performance of Rescue 2 has been so well received that Los Angeles County is having a duplicate craft built by Seaway. It is also expected to be stationed at Catalina Island.

For free literature giving full information on Cummins engines,

Circle 20 on Reader Service Card

Sud Marine Offers New Brochure On Ship Repair And Conversion Facilities

Sud Marine, Marseille, France, has published a new six-page, full-color brochure on the yard's ship repair and conversion facilities.

Sud Marine offers one of the largest equipment and production facilities in the Marseille area for general repairs and voyage repairs of all types of vessels; annual, special and damage surveys; conversions; industrial work (offshore, nuclear, naval equipment); and large subcontracting availability (cleaning, blasting, painting, insulating, electrical work, electronics).

The well-illustrated brochure gives specifics on drydocks, repair berths, cranage, mechanical shops, plate shops and pipe and boiler shop.

Information on Sud Marine's facilities in Fos-Sur-Mer is also included.

For more information and free copies of the new brochure from Sud Marine,

Circle 10 on Reader Service Card

ON WATCH WHEN YOU'RE NOT

Introducing the M-400 Series Marine Smoke Detectors from ESL

Moisture, salt air, wind, spray, vibration, corrosion. On the water or by it, conditions can be tough, and they take their toll. Yet the essential job of helping to provide life safety and property protection against smoke and fire hazards goes on, no matter how rugged the weather.

That's why the M-400 Series Smoke Detectors from ESL are built to take it. They're the first smoke detectors ever to be UL Marine Listed. Proven photoelectronics technology help to provide reliable performance, while a special conformal coating helps protect against the ravages of a damp, corrosive environment.

Easy-to-install, low-profile M-400 Series Smoke Detectors are ideal for use afloat or ashore, on pleasure craft and working boats, as OEM equipment, or retrofitted for marinas, docks, boat yards, offshore oil rigs and other coastal structures and dwellings.

Put a marine-tough detector on watch where you are. Call or write for the ESL M-400 Series Smoke Detectors brochure today.

We're part of your life safety team.

Please send me the M-400 Series brochure.

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In Massachusetts: 1-617-740-3800

Circle 253 on Reader Service Card

Stewart & Stevenson Receives $20-Million Order For Gensets

Stewart & Stevenson Services, Inc., Houston, Texas, a leading manufacturer of diesel and gas turbine-powered equipment, recently received a $20-million order for 24 diesel-powered generator sets. The generators will be used aboard patrol frigates being built for the Republic of China (Taiwan) Navy.

Each unit will produce 1,000 kw of electrical power and will be installed in the ships being built by the China Shipbuilding Corporation of Taiwan.

These new ships are of the same design as the U.S. Navy's Oliver Hazard Perry Class frigates (FFG-7) on which 280 Stewart & Stevenson generators provide electrical power.

For free literature detailing Stewart & Stevenson Services power equipment,

Circle 58 on Reader Service Card

Danish Yard Receives Order For Three Boxships

Danish builder Orskov Christensen's Frederikshavn shipyard recently received an order worth about $129 million to build three 1,000-TEU containerships from Sanexco Invest A/S.

The boxships, which will have an overall length of 488 feet, will be administered by Terkol Shipowners and Maersk Brokers will serve as shipping agents. The multi-ship order will keep 800-man yard fully employed until at least 1993, when the last ship is scheduled for delivery.

Simrad Inc. Opens Washington, D.C., Office

Simrad Inc. of Lynnwood, Wash., recently opened a new sales office in the Washington, D.C., area.

The office has been formed to further expand Simrad's growing market share in the U.S. Government sectors. Simrad reports that over the past few years, the naval, hydrography, and harbor surveillance sectors have become an increasingly more important part of their overall business.

The new office is in Alexandria, Va., and can be reached at (703) 519-7488.

Moran Towing Appoints Three New Vice Presidents

Malcolm W. MacLeod, president and CEO of Moran Towing Corporation, recently announced the appointment of three new vice presidents of Moran Towing and Transportation Co., Inc., the New York operating subsidiary of the corporation.

The new vice presidents are **Bruce D. Richards**, chartering and contract administration, **William P. Muller**, operations, and **David A. Beardsley**, construction and repair.

Mr. **Richards** joined Moran while an undergraduate at St. John's University, Long Island, N.Y. In his new position, he will market the Moran fleet of oil and dry bulk barges and oversee all contracts.

Mr. **Muller** started with the Moran organization in the New York sales department in 1977 and has been involved in labor relations, business development, project coordination and subsidiary management. He will direct the New York tug and barge fleet, as well as overseeing the coastwise transportation of coal and oil. He succeeds Capt. **Russell G. McVay**, who is now corporate vice president, environmental protection and safety.

In his new position as vice president, Mr. **Beardsley** will be in charge of repairs to Moran's tug and barge fleet and will oversee all newbuildings.

Mr. **Beardsley** succeeds **Robert M. Loftus**, who is retiring after a 29-year career. Succeeding Mr. **Beardsley** as assistant manager of the construction and repair department will be **Theodore Andreadis**, a 1979 engineering graduate of Massachusetts Maritime Academy and former tugboat chief engineer.

Hampton Roads Complex Poised For Substantial Expansion In 1991

In line with a new $106 million, five-year capital development program, Hampton Roads port complex in Virginia is poised for substantial expansion in 1991.

Hampton Roads' largest container terminal, Norfolk, will double in capacity in the next three to five years with the development of a 300-acre site acquired by Virginia Port Authority (VPA) to the north of the existing facility.

The Norfolk terminal expansion will add 4,000 feet of berthing, 250 acres of backup land and a 50-acre rail yard.

Portsmouth and Newport News, Hampton Roads' two other terminals, are also targeted for expansion next year, with the addition of new container capacity.

Portsmouth's east waterfront and connecting Sea-Land berths are to be upgraded, adding 1,500 feet of new berthing space and 16 acres of container storage area.

At Newport News work has recently been completed on a new entrance facility and the paving of 35 acres of land. Its number-one pier is to be extended and renovated and a new crane installed to facilitate container handling by the end of 1991.

Container traffic is expected to show a continuation of strong growth over last year's total 685,295 TEUs, up from 611,677 handled in 1988, and reflecting a 15 percent increase in traffic at Norfolk.

Third quarter performance indications show an increase in container trade of around 14 percent, further boosted by the U.S. Military Sealift Command's Desert Shield operation, which has used Newport News for a substantial amount of tonnage.

Singmarine Acquires Two Docks To Cope With Increased Work Volume

To cope with the increasing volume of work in both shipbuilding and repair, Singmarine Dockyard & Engineering, the shipbuilding arm of Keppel Corporation of Singapore, has acquired two floating docks, one from Belgium and the other from Ireland. The docks are expected to become operational by the end of the year.

The Belgian dock, with a length of 374 feet long and a lifting capacity of 5,000 tons, can accommodate vessels up to 10,000 dwt. The 176-foot-long dock from Ireland can accommodate vessels up to 30,000 tons and has a 10,000-ton capacity.

Newbuilding and repair contracts secured recently by Singmarine from owners in the Asia-Pacific region and Europe include building a 9,300-ton chemical tanker for Mediterranean di Navigasionea, and a containership for a Papua New Guinea owner; conversion of two Korean fishing vessels and upgrading an Australian fishing vessel.

A spokesman for Singmarine said the group would continue to expand its market share in the region.

For free literature on the facilities and capabilities of Singamarine,

Circle 31 on Reader Service Card

Marinexpo '91 Set For September 30-October 3 In Buenos Aires, Argentina

The Pan-American Institute of Naval Engineering (IPEN) has announced that Marinexpo '91, the exhibition that accompanies the 12th Copinaval Congress, has been scheduled to take place in Buenos Aires, Argentina, from September 30 to October 3, 1991.

Experts from the shipbuilding industry, shipping sector and port administration field meet a Copinaval to discuss the latest developments in shipbuilding, marine and offshore technology, port and waterway construction.

The Marinexpo '91 exhibition accompanying this congress will be organized by Hamburg Fair authorities.

For further details, contact: Marinexpo '91, Hamburg Messe und Congress GmbH, Project Management MA 3, P.O. Box 302480, W-2000 Hamburg 36, Germany.

Circle 210 on Reader Service Card

Versatile Pacific Delivers Search And Rescue Vessel To Canadian Coast Guard

The VPS Esquimalt, built by Versatile Pacific Shipyards, is shown during sea trials.

Versatile Pacific Shipyards Inc., Victoria, B.C., Canada, recently delivered the medium-endurance, search and rescue patrol vessel Esquimalt to the Canadian Coast Guard.

The 164-foot-long by 36-foot-wide Esquimalt is of fully molded form, and has a single continuous main deck with a fully enclosed, raised forecastle deck extending from aft of midships forward. The superstructure consists of a single tier deckhouse, with the wheelhouse above, flanked by twin exhaust casings. The vessel has a transom stern with notched stern ramp for launch and recovery of a fast rescue boat.

The vessel is twin-screw, powered by two pair of medium-speed diesel engines, each driving through a twin input/single output reduction gear to a controllable pitch propeller.

The vessel is of all-welded steel construction, with the exception of a wheelhouse and masts which are of welded aluminum alloy construction.

For free literature on the facilities and capabilities of Versatile Pacific Shipyards,

Circle 21 on Reader Service Card

SNAME And SSC To Sponsor MSIMMS '91 Symposium In Arlington, March 18-19

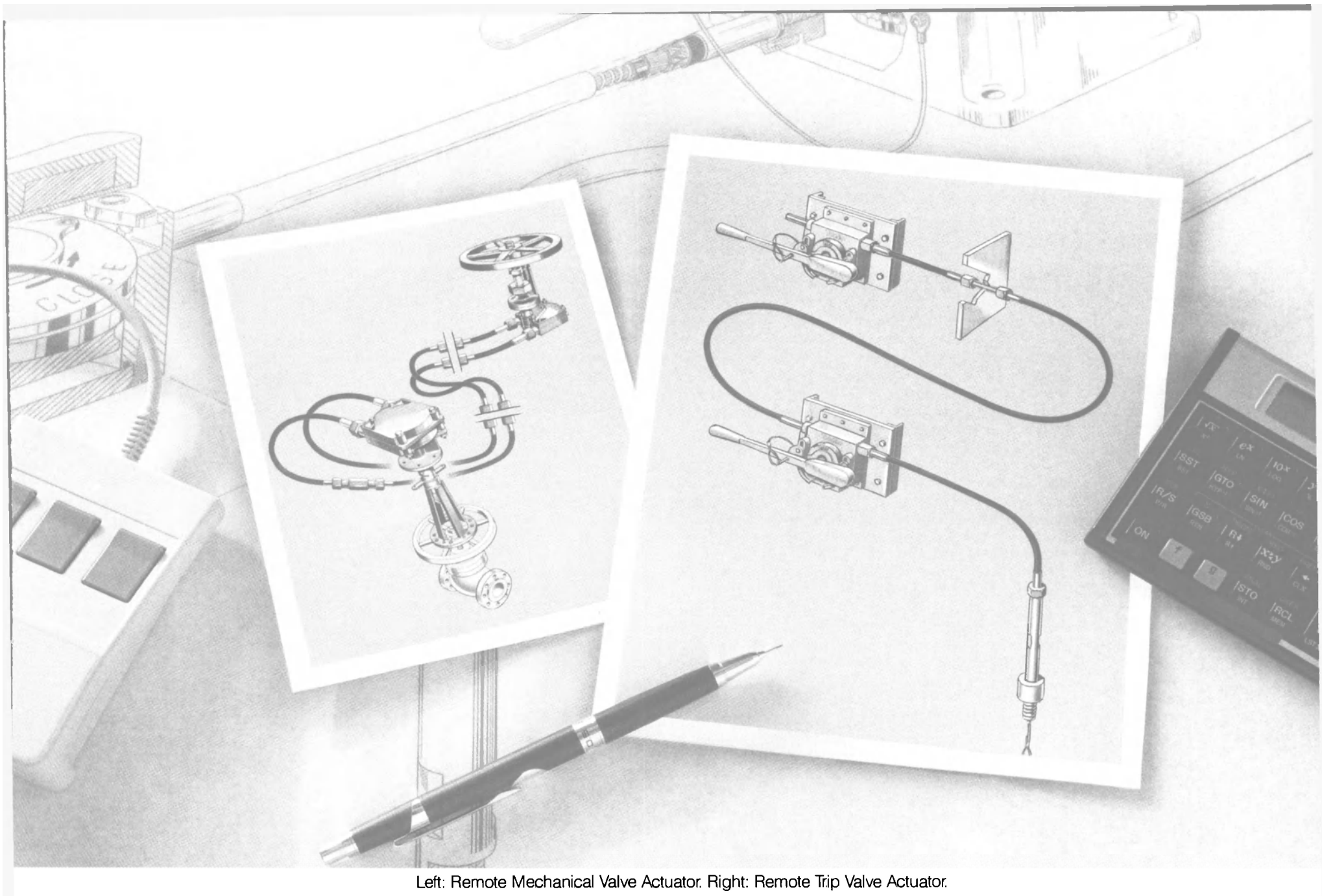
A "Marine Structural Inspection, Maintenance, and Monitoring Symposium" has been scheduled for March 18-19, 1991, at the Sheraton National Hotel in Arlington, Va.

This is the sixth symposium jointly sponsored by The Society of Naval Architects and Marine Engineers (SNAME) and the interagency Ship Structure Committee (SSC). Member agencies of the SSC are the U.S. Coast Guard, Maritime Administration, Military Sealift Command, Naval Sea Systems Command, and American Bureau of Shipping.

The theme of the meeting is Problems, Background and Goals. Sessions will deal with Structural Standards and Design Requirements; Maintenance Concepts and Approaches to Aging Structures; Hull Loading and Response Monitoring Instrumentation; Detection Equipment and Inspection Techniques; and Implications for New Construction—Lessons Learned.

The advance registration fee of $275 includes admittance to all technical sessions, luncheons, receptions, banquet, and a set of symposium papers.

For full information, contact **A.J. Attermeyer**, Military Sealift Command (N741), Washington Navy Yard, Building 210, Washington D.C. 20398-5100.



Left: Remote Mechanical Valve Actuator. Right: Remote Trip Valve Actuator.

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Teleflex engineers solve problems using first-hand knowledge gained through years of experience on Naval vessels.

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For RMVA Brochure, circle 319 on Reader Service Card. For RTVA Brochure, circle 320 on Reader Service Card.

Bird-Johnson Appoints Peter J. Gwyn New President & COO

Peter J. Gwyn

Bird-Johnson Company, Walpole, Mass., recently appointed **Peter J. Gwyn** to the position of president and chief operating officer. Mr. **Gwyn** brings over 30 years of marine industry experience to his new position and is joining Bird-Johnson from the Massachusetts Shipbuilders Corporation, where he had been president and chief executive officer for the past three years.

In his new position, Mr. **Gwyn** is second in command to **Charles A. Orem**, president and chief executive officer, who plans to retire later this year. Until his retirement, Mr. **Orem** will serve as vice chairman and chief executive officer at Bird-Johnson. Mr. **Gwyn** will assume Mr. **Orem's** responsibilities upon his retirement.

In addition to his presidency at Massachusetts Shipbuilder's Corporation, where he headed an effort to form a coalition of government, labor and industry concerns towards reopening the Quincy Shipyard, Mr. **Gwyn** is a former president of the Marine Division of AMCA International. During his tenure at AMCA he saw the completion of several major marine offshore construction contracts including the building of the Fort McHenry tunnel tubes under Baltimore Harbor, a coastwise self-unloading coal barge system, offshore marine terminals for the oil industry, floating offshore oil processing and storage systems, and a Panamax floating drydock. He has also held management positions with General Dynamics, the Charlestown and Quincy Shipyard Divisions, Massachusetts; and Davie Shipbuilding Ltd. of Quebec, Canada.

Bird-Johnson Company, additionally, announced the promotion of **Gary W. Dayton**, former director, marine marketing and services, to the position of vice president, marketing and sales. Mr. **Dayton** has been with Bird-Johnson for over 15 years in a variety of marine sales capacities and will, in his new position, be responsible for the marketing and sales of all non-marine Bird-Johnson Company products and services as well.

Bird-Johnson Company is a world leader in the supply of naval and commercial marine controllable pitch and fixed pitch propeller systems and provides castings and precision machined products to the aerospace, automotive and energy industries.

In addition to their Walpole headquarters, they maintain manufacturing facilities in Mobile, Ala.; Pascagoula, Miss.; and Seattle, Wash. They are a subsidiary of Axel Johnson Inc., New York, N.Y., and a member of the Axel Johnson AB group of companies headquartered in Stockholm, Sweden.

Alan B. Nierenberg Named President And CEO, American Ship Building

American Ship Building, Tampa, Fla., has named **Alan B. Nierenberg** president and chief operating officer. Mr. **Nierenberg** was formerly with Avondale Industries of New Orleans, La.

Lloyd Werft To Refit Stena Sealink Ferry Under $11.7-Million Pact

Lloyd Werft, Bremerhaven, Germany, recently received an $11.7-million contract to refit the 7,836-gross ton passenger/car ferry St. Columba from Sealink Stena Line.

Under the refit contract the German ship repairer will refurbish two passenger decks. The work is scheduled to take 60 days.

For free literature detailing the repair facilities of Lloyd Werft,

Circle 51 on Reader Service Card

Reis Appointed Director Of DARPA

Secretary of Defense **Dick Cheney** recently announced the appointment of **Victor H. Reis** to the position of Director of the Defense Advanced Research Projects Agency (DARPA).

Prior to this appointment, Mr. **Reis** served as Deputy Director of DARPA; special assistant to the director, Lincoln Laboratory, MIT; senior vice president for strategic planning, Science Applications International Corporation; and in senior level positions at the Office of Science and Technology Policy, Executive Office of the President; and other positions in industry, academia and government.

Expansion Of Cosco's Trans-Pacific Service Is Virtually Complete

China Ocean Shipping Co. doubled its ship capacity across the Pacific over the past 16 months, deploying five large new containerships built in Germany and Scotland at a total cost of $200 million.

The Gao He, last of the new ships, arrived in New York on its maiden voyage recently and is currently en route to the Far East, where it will join Cosco's weekly service to and from the U.S. West Coast. Like its four sister ships, the Gao He has a capacity of 2,700 twenty-foot containers (TEUs).

Cosco's volume and market share have grown in line with its capacity. In the third quarter fo 1990, Cosco ranked 10th in international container volume among all carriers serving all U.S. ports; its quarterly volume of 79,871 TEUs was 62 percent above the figure for the corresponding period of 1989.

According to **Liu Songjin**, president of the Beijing-based line, the expansion of Cosco's trans-Pacific service is virtually complete.

SpillStop® Technique Prevents Oil Spillage After Tanker Accidents

An active inert gas-controlled system utilizing vacuum technique (SpillStop™-Patent Pending) from Western Products, Ventura, Calif., drastically reduces or totally prevents oil spill from tankers after an accidental rupture of the hull.

Existing inert gas systems installed are modified to provide underpressure in tank ullage space during the voyage so that if tank rupture occurs, oil spillage above the line of the rupture is prevented. The actively and dynamically controlled underpressure is set to insure that pressure forces inside and outside the tank are equalized at the line of the rupture and there is no inducement for flow to occur.

The underpressure requirement is generally moderate (2 - 4 psi) and is within the structural capability of the tankers. Also, hazardous operations resulting from loading/unloading cargo that can cause explosions are strictly under the control of the existing inert gas system designed primarily to prevent such accidents.

The system, in conjunction with the existing inert gas system, can be used as a primary oil containment device or as a backup to other costly approaches. It is a simple, practical approach that can be easily retrofitted in a timely manner into existing tankers at minimal costs and logistic impacts.

For further information,

Circle 63 on Reader Service Card

Los Angeles Shipyard Corporation Looks To Lease Todd Facility

Reports It Will Build Two Tankers For OSCO

Los Angeles Shipyard Corporation, based in San Pedro, Calif., recently announced it had secured its first production contract and has been awarded the exclusive negotiating rights from the Port of Los Angeles for leasing arrangements for a shipyard formerly leased by Todd Shipyard Corporation. The 100-acre site is located at the Port of Los Angeles, just north of the Vincent Thomas Bridge.

The Los Angeles Shipyard Corporation has been awarded an $82-million contract with the Norwegian shipping firm OSCO Group for the construction of two 40,000-ton oil tankers pending finalization of lease negotiations, according to **John Stupakis**, chief executive officer of the company.

The Los Angeles Shipyard Corporation was formed to take advantage of the renewed interest in domestic shipbuilding and repair at one of the world's largest port facilities. The corporation was formed by Mr. **Stupakis**, a former aerospace executive and other experienced corporate managers who are looking forward to employing production specialists formerly associated with the Todd Shipyards.

Once on line, The Los Angeles Shipyard Corporation will employ an estimated 2,000 people, many of whom lost their jobs in 1989 with the closure of Todd Shipyards's San Pedro facility.

John Chernesky, manager, human resources for the company and a retired Navy Captain, said that negotiations for a possible labor contract with Local Lodge S-9 of the Industrial Union of Marine & Shipbuilding Workers of America-IAM have begun.

"We are pleased to already have more than 1,500 job applications from individuals anxious to work with our company," said Mr. **Chernesky**.

Price Waterhouse is representing The Los Angeles Shipyard Corporation in the acquisition and financing of the debt and equity required to complete the transaction. Financing is currently being put in place to meet ongoing capital requirements for the company.

Tests Begin On Engine Developed By MAN B&W, SEMT Pielstick

A comprehensive trial and test program has begun on a four-stroke, medium-speed V-configuration diesel engine jointly developed by MAN B&W Diesel and S.E.M.T. Pielstick.

The V-version of the 48/60 four-stroke engine was started on the Augsburg test bench of MAN B&W Diesel. This medium-speed engine is a joint development between MAN B&W Diesel and French large-bore diesel engine manufacturer S.E.M.T. Pielstick, in which MAN B&W Diesel and MTU have equal shares of a majority ownership.

The four-stroke engine, with a cylinder bore of 480 mm, piston stroke of 600 mm, cylinder output of 1,326 hp and speed of 450-500 rpm, was developed on the basis of the in-line version of the 48/60 engine. The newly developed diesel rounds off MAN B&W Diesel's successful large-bore, medium-speed engine family, which includes the L 40/54, L 48/60 and L 58/64, all in-line models.

For free literature detailing the complete line of marine engines offered by MAN B&W Diesel,

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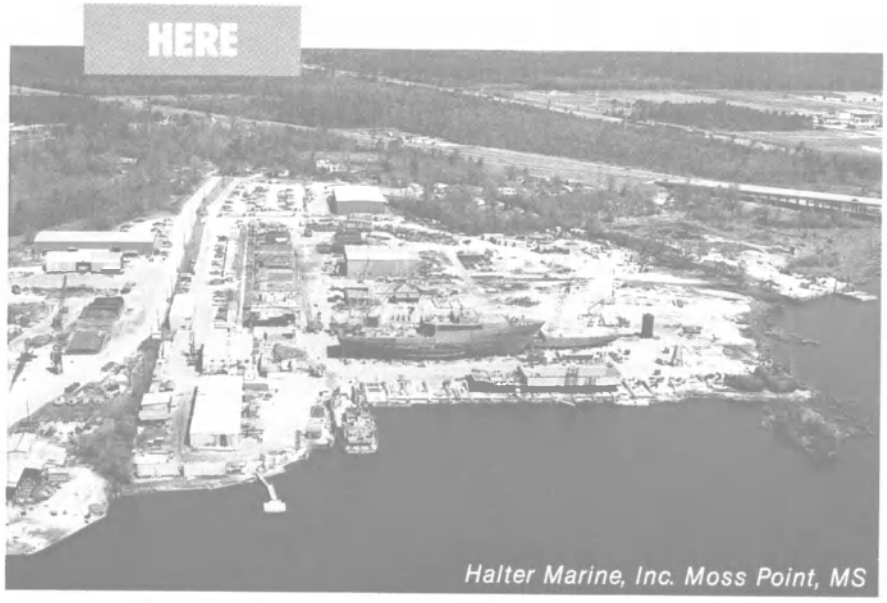

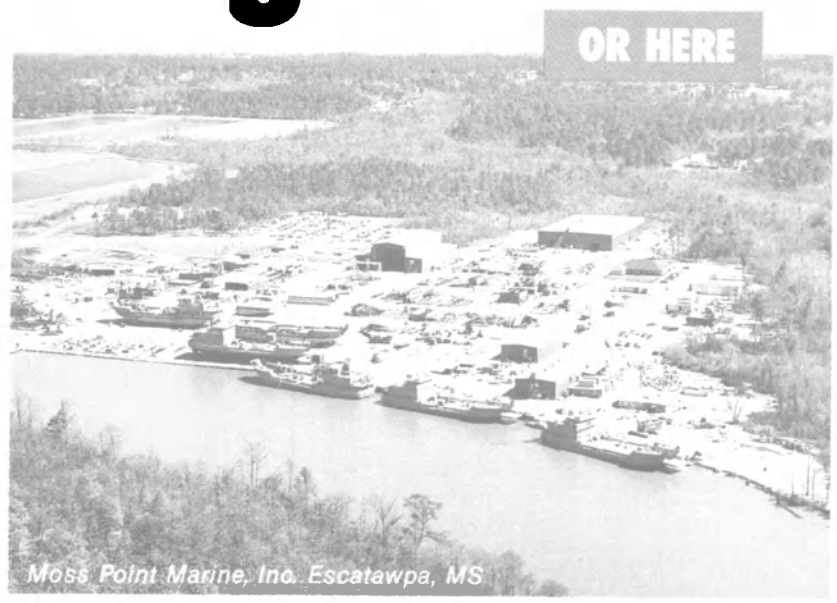

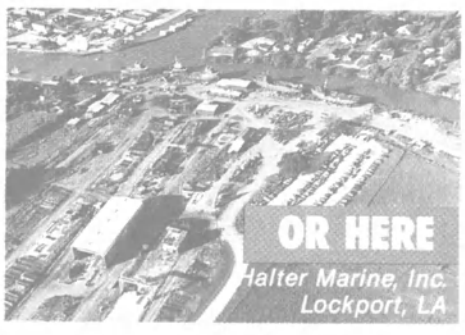

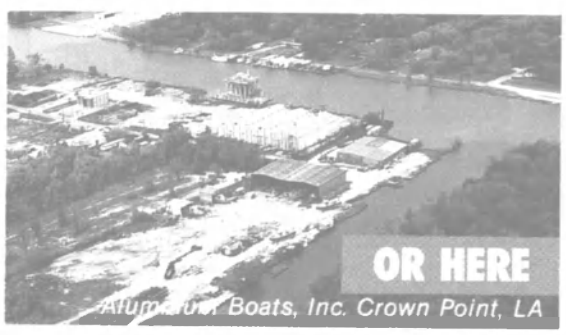

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Circle 197 on Reader Service Card

Southern Marine Industries

Owners, Operators, Suppliers Enter 1991 With Renewed Optimism

Maritime Reporter Staff

Optimism is certainly the prevailing feeling among owners, operators, builders and equipment suppliers of the workboat fleet serving the Gulf of Mexico as they enter 1991. This renewed optimism can be traced in part to the belief that current supply vessel day rates, which are hovering around the $3,000 mark for a 180-foot supply boat, will climb to higher levels. Earlier in 1990, optimists thought day rates might rise to as much as $3,500 by mid-year. However, for the last half of 1990 rates remained stable around the $3,000 mark.

But, without a doubt, the domestic supply boat sector has improved markedly as compared with the mid- to late-80s. According to a spokesman for Offshore Services, which tracks rig and supply boat activity in the Gulf of Mexico, of the supply boats they track, 223 were working and 19 were idle, a 92 percent utilization. Of the anchor handlers the company tracks in the Gulf, 30 of 35 were employed, or 85 percent.

"The oversupply of boats in the Gulf has been solved by a number of fleet consolidations, equipment being moved to other sectors and conversions for the fishing and passenger markets," said **Tom Marsh** of Offshore Services.

The present domestic supply boat fleet reportedly stands at about 280, discounting crew, utility and small supply vessels. Most vessels are on term charters, while still others effectively work the spot market.

First Supply Boat Orders Placed

This past year domestic boat owners placed their first supply boat orders since the market downturn. Among the first orders placed was Oil & Gas Rental Services Inc., Morgan City, La. The Louisiana company ordered three 220-foot supply boats from Southern builder Trinity Marine Group, a leader in the small ship construction sector. Oil & Gas Rental's supply boats will be built at Trinity's Halter-Lockport yard at costs in excess of $5 million each. The Oil & Gas Rental boats, intended for production support, are scheduled for delivery in June 1991. Since this initial order, Trinity Marine received a follow-on contract from Oil & Gas Rental for an additional boat.

Oil & Gas Rental's order spurred both optimism and speculation that offshore vessel industry giants Tidewater and Zapata would soon follow suit. However, Tidewater officials restated their plans to only consider fleet replacements until day rates topped the $4,500 mark in the Gulf.

Over the past several months, in fact, Tidewater Marine has increased its fleet by acquiring existing support vessels. The New Orleans-based boat owner acquired 10 support vessels and one supply boat this past summer. All the boats are now part of Tidewater's West Coast fleet off California. Last fall, Tidewater acquired two 110-foot aluminum crewboats and one 110-foot utility vessel for use in the Gulf of Mexico.

Houston-based Kilgore Offshore also contracted with Trinity Marine to build a single 202-foot supply boat with an option to build three more craft.The order is for a new Trinity design, the Economax, which offers high capacities for liquid and dry mud and increased cargo space. Each boat will have a total capacity of 2,000 bbl of liquid and 7,200 cft of dry mud. Construction began late last year and delivery is scheduled for September 1991.

The rapid expansion of the Trinity Marine Group has meet with great success. Most of the shipyards in the group, all of which are based in the South except HBC Barge, have a 12-month backlog.

"We are always looking for new acquisitions if the price is right," said **John Dane III,** president of the Trinity Marine Group. "We intend to expand when the market and prices are right. At present a lot of operators, particularly in the offshore market, are putting off decisions about new construction because of the Iraqi situation. Once things get settled there, we could be in for a rush of new construction, but we hope this time we can learn from the lessons of the last oil crisis. We want expansion, but this time we want it to be slow and steady."

Mr. **Dane** is confident that the group will be able to land at least ten of sixteen 220-foot oil pollution control vessels currently being bid by the government.

Another major project underway at Trinity's Halter Marine-Moss Point, Miss., shipyard, is the construction of a huge $50-million dustpan dredge for the Army Corps of Engineers.

Jennings, Louisiana-based Leevac Shipyards delivered a new 200-foot, 3,000-hp supply boat to Sea Mar Operators, Lafayette, La., in mid-December. Leevac began the construction of the vessel in 1982, but halted construction when a buyer could not be found.

In a similar delivery, Candy Fleet, Morgan City, La., purchased two 180-foot supply boats from Houma Fabricators, Houma, La., for $2.5 million each. Construction of the boats had begun in the early 1980s, but was halted because of the downturn in the market.

The crewboat sector has seen a jump in activity as well. Several boats are on order for Gulf Coast operators at Southern yards. Companies that placed orders last year include Gulf Craft, Crewboats, Inc., McCall Enterprises, Inc., and John E. Graham.

"There has been a definite increase in activity the last year, year and a half, in oil-related construction," said **Scott Tibbs II,** general manager of Gulf Craft, Inc., Patterson, La. "About 80 percent of our business has been from that sector," he said.

Gulf Craft has four crewboats on its ways. The vessels, three of which are for McCall Enterprises and one for Offshore Oil Services, vary in length from 160 to 130 feet. The company has orders for two other crewboats in hand.

Galveston Expects Rise In Activity

Galveston Shipbuilding Company, Galveston, Texas, located at Intracoastal Mile 355A, is projecting increased demand for their services in the 1990s. The 24-year-old marine repair and construction yard developed and built some of the nation's first double-skinned ITB units. The owners, the **Fiegel** family, see their yard's experience in both barge and repair and new construction techniques, including its ability to retrofit single-skin vessels, as a valuable resource to barge operators.

Bollinger Machine Shop & Shipyard, Inc., Lockport, La., reports it experienced growth in all areas during 1990 and expects a continuation of that growth to last through 1993. During the last 12 months, the yard produced three 130-foot lift boats for Gulf operation.

Last year the yard also delivered the Doc Candies, a 117-foot tug, to Otto Candies, Inc., Des Allemands, La., and will deliver two similar boats to Hawaiian Tug & Barge Corp. this year. Other activity at Bollinger includes the production of eight 170-foot coastal patrol boats and eight personnel landing craft for the U.S. Navy.

With two separate yards located along the Intracoastal Waterway, Quality Shipyards, Inc., of Houma, La., is able to provide direct access to the Gulf of Mexico. According to new company president **Jim Crawford,** Quality is in the process of negotiating contracts for fish boat conversions for a domestic West Coast operator.

"Activity in the repair and conversion market, in particular, is on the upswing," said Mr. **Crawford.** "There seems to be a definite upward trend in the vessel repowering market as well. We are looking forward to the resumption of new construction of offshore vessels in the latter part of 1991, after the Middle East situation is settled," he added.

Quality Shipyards recently completed two major repowering projects for domestic owners. The work for Hunter Marine Transport involved the repowering, refurbishment and modernization of a river tug, which was refitted with an EMD engine. The other project was for Brix Maritime which involved a Caterpillar repowering.

New Gambling Laws Spur Orders

At the intersection of the Intracoastal Waterway and the St. Johns River in Jacksonville, Fla., Atlantic Marine, Inc., received a $12.6-million contract to build three stern-

(continued on page 24)

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Circle 217 on Reader Service Card

Southern Marine

(continued from page 22)

wheel casino/dinner boats from the Steamboat Development Corporation. The contract is an outgrowth of new legislation permitting riverboat gambling in the state of Iowa.

Colette Murray, marketing director for Freeport Shipbuilding & Repair, said, "We are extremely busy. We have had several inquiries about riverboat gambling vessels. I am very optimistic about the future."

The Freeport, Florida, yard has four vessels in various stages of construction. Two, a 110-foot private steel yacht for a Texas owner and a 65-foot paddlewheeler for a New Jersey owner, are scheduled for delivery this month.

Jacksonville Reopens

The recently reopened Jacksonville Shipyards, Inc. (JSI) has completed a major dredging project to deepen the berths of its two large floating drydocks of 33,000 and 30,000-ton lifting capacity. Great Lakes Dredge & Dock Company performed the work. The deepened docking berths will permit JSI to accommodate larger vessels, including Florida-based cruise ships.

Since resuming operations in August of last year, the Jacksonville facility has completed a number of repair jobs for major ship operators.

Hvide Shipping's reconstruction of the 46,300-dwt chemical carrier M/V Seabulk America was undertaken by two Southern yards, Norfolk Shipbuilding & Drydock Company (NORSHIPCO), Norfolk, Va., and North Florida Shipyards, Jacksonville, Fla. The project involved the fitting of a forebody from a barge onto a wrecked tanker.

Other Southern yards, particularly Bender Shipbuilding & Repair in Mobile, Ala., and Eastern Shipyards, Panama City, Fla., have also been busy as of late with a number of extensive conversion and repair projects in the commercial fishing, passenger, and Navy sectors. Eastern Shipyards is constructing two molten sulfur tankers for the U.S.-flag fleet and recently completed a major conversion of a 308-foot Circle Line dinner boat, the nation's largest. Bender has been extremely active in the commercial fishing vessel conversion market, delivering several vessels to Arctic Alaska Fisheries, among them the 190-foot fish tender Arctic V.

In neighboring Mississippi, Homeport Marine Services, located at Moss Point, recently signed a $3-million contract to build a 152-foot all-steel crabber for the North Pacific and Alaska commercial crab fisheries. The firm also launched a 195-foot, 78,000-cubic-foot-capacity fish tender for AASC Shipping, Inc., a subsidiary of Arctic Alaska Fisheries, Inc.

The Navy has been a steady supplier of new construction work to builders Newport News Shipbuilding, Newport News, Va., Ingalls Shipbuilding in Pascagoula, Miss., and Textron Marine Systems and Avondale Industries, Inc., both of New Orleans. Newport News Shipbuilding is involved in the Navy's aircraft carrier and attack submarine programs, Avondale, the fleet oiler, dock landing ship, minehunter and deep ocean survey ship programs, Ingalls, the cruiser, destroyer and amphibious assault ship projects, and Textron Marine delivers air cushion landing craft.

On the commercial side, Avondale's Boat Division, Westwego, La., and Harvey Quick Repair, located at Harvey, La., have been the beneficiaries of inland waterways work. Late last year, the Boat Division secured separate contracts to build three Viking Class towboats for National Marine and a 3,900-hp tugboat for E.N. Bisso & Son.

Suppliers Benefit As Well

With the rise in construction activity, the fortunes of equipment suppliers to the yards improved as well. Karl Senner, Inc., for example, supplied two Reintjes model WAV 4450 reverse reduction gears, 4.75:1 ratio, with internal hydraulically actuated propeller shaft brake for the Caterpillar-powered towboats under construction at Avondale. Senner also supplied Rexroth (WABCO) pneumatic remote controls for each vessel.

Another Southern equipment supplier, Marine Gears, Inc., benefited from the resurgence in construction and repowering activity.

"There has been a pick-up in activity," said **Kyle Haley,** vice president and general manager of the Greenville, Miss., company. "Nineteen-ninety was a good year, but potentially, 1991 can be absolutely tremendous," stated Mr. **Haley.** "We have as many bookings in January 1991 as we had in all of 1990."

Marine Gears, Inc. was involved in supplying a number of new construction and repowering projects. The firm supplied six Haley RV2835 reverse/reduction gears for 4:1 ratios for three EMD-powered twin-screw towing tugs constructed for Bay-Houston Towing Co., Houston, Texas, by Houma-based builder Main Iron Works. Marine Gears also supplied Haley auxiliary drive units which power deck-mounted capstans, towing winches, etc. Marine Gears also supplied equipment for another Main Iron Works project,

(continued)

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A Zapata Gulf Marine Company

Southern Marine

(continued from page 24)

the repowering of three 3,500-hp towboats for Crescent Towing.

According to **Dave Hackney,** vice president, Robertson Marine Systems, Inc., Metairie, La., his company started to see a dramatic increase in sales last summer. "Our sales began to rise dramatically in July and August of 1990, primarily for the offshore industry," he stated. Robertson Marine supplies joystick, DP, trackline, main steering and other integrated control systems for self-propelled vessels.

The three supply boats ordered by Oil & Gas Rental Services from Trinity, for example, will be fitted with Robertson's DP with joystick capability.

According to **Bill Hidalgo,** vice president and general manager of Oil & Gas Marine Service, a subsidiary of Oil & Gas Rental Services, the new generation supply boats will be capable of operating along side deep-water platforms and floaters for extended periods without having to anchor or tie off to the structure.

Other orders garnered by Robertson Marine Systems include a joystick installation on the Kilgore newbuilding at Trinity, as well as several DP and joystick installations on oilfield boats for Edison Chouest Offshore, Tidewater Marine and an unidentified Morgan City, La., offshore company.

Robertson Marine Systems equipment will also be fitted aboard a 300-foot icebreaker under construction at North American Shipyards, Larose, La., the U.S. Navy vessel Thomas C. Thompson (AGOR-23), being built by Trinity Marine, and the R/V Melville (AGOR-15), which is undergoing a midlife conversion at McDermott Shipyard, Amelia, La.

Consolidated Switchgear, Inc., a manufacturer of marine electrical controls and switchgear, supplied projects in the offshore, fishing, passenger, inland, Great Lakes, and government marine sectors.

According to **Ralph Lindfors,** vice president and general manager, for the Mandeville, Louisiana-based firm, the marine industry accounts for about 50 percent of the company's business. Some notable company projects included the supply of $300,000 worth of modified marine motor controls for four YTT boats built at McDermott, as well as miscellaneous equipment for the Knorr and Melville midlife conversion work.

In the inland market, Con-Select supplied a marine generator control distribution switchboard for a Corps of Engineers crane barge built by NABRICO, as well as smaller switchboards for refueling barges at the same yard.

Con-Select also supplied equipment for the passenger (SES Metro Manhattan, built by Avondale, a Hawaiian cruise boat operated by Windjammer Cruises Inc., and a gambling boat operating out of Mississippi), commercial fishing (304-foot factory trawler Island Enterprise, from Bender Shipbuilding) and offshore ($400,000 worth of prime power switchgear for Pemex, as well as work for Texaco, Union Oil, Freeport McMoRan, Chevron and Kerr McGee) industries.

Datrex Inc., Kinder, La., is a marine safety equipment manufacturer and U.S. distribution agent of products which fulfill the mandatory U.S. Coast Guard and SOLAS marine safety equipment requirements.

Pyrotechnics, emergency rations and drinking water, life ring buoys and thermal protective aids are just a few of the items that are available from one of the company's three locations: Kinder, La.; Jacksonville, Fla.; and Miami, Fla.

With the opening of its new headquarters, Datrex Inc. is now able to provide comprehensive coverage of the U.S. Southern yards with greatly enhanced customer service.

ASRY Appoints Frisk General Manager

Hans Frisk

The Arab Shipbuilding and Repair Yard Co. has announced the appointment of **Hans Frisk**, until recently, managing director of Karlskrona Varvet of Sweden, as general manager and chief executive of ASRY, Bahrain. Mr. **Frisk** has taken over from **Antonio Machado Lopes**, who has been with ASRY since the yard was inaugurated in 1977.

Mr. **Frisk** joins ASRY at an important period in the yard's development. Following a year of record results in 1989, when ASRY achieved a revenue of over $46 million and an operating profit in excess of $10 million with a high drydock occupancy, the board of directors approved the construction of a second graving dock to complement ASRY's 500,000-dwt facility.

Sperry Marine Chosen For Japan Corporate Program

Secretary of Commerce **Robert A. Mosbacher** recently announced that Sperry Marine Inc. of Charlottesville, Va., is one of the 20 U.S. companies chosen for the "Japan Corporate Program." Sperry Marine was among 120 finalist companies considered by the Commerce Department and is the only winner chosen from the marine industry.

The program is a new initiative to bolster U.S. exports to Japan and is, according to Mr. **Mosbacher**, the "latest step in the Commerce Department's long-term efforts to help U.S. companies compete more effectively in Japan." To assure that only the most promising and qualified U.S. companies were accepted into the initiative, the Department took over six months to select the 20 winners.

Sperry Marine, headquartered in Charlottesville, is a world leader in the development and manufacture of marine navigation, control and communications equipment. It is a subsidiary of Newport News Shipbuilding, a Tenneco company.

Detyens Shipyards Refits 465-Foot Bulk Carrier

Detyens Shipyards, Inc., Charleston, S.C., recently completed a 55-day major refit of the 465-foot, ice-class bulk carrier Eagle.

The renewal of the 15,850-dwt Eagle, operated out of the Port of Savannah, Ga., by Colonial Marine Industries, Inc., involved the structural repair of major ice damage to her bow, midship regions, stern and transom, along with structural modifications to the bulwark and forecastle, an 8-foot steel plate extension to the forepeak, installation of recessed anchor pockets, and complete repainting.

The overall refit consisted of the cropping and renewal, and fabrication and installation of 175 tons of steel plate. Of this total, 65 tons of 1-inch plate were fabricated into the bow and forepeak, and 110 tons of 3/4-inch doubler plate and angle-bar stiffeners were placed along the 350-foot midship regions—port and starboard. The extensive modifications and repairs will allow the M/V Eagle to service ports in extreme conditions.

The Eagle was serviced by about 100 Detyens employees, working two shifts for 55 days.

Detyens Shipyards has on average 300 employees, with a 450-foot, 10,000-dwt-capacity drydock, five piers, an enclosed work area of 50,000 square feet, a pier crane capacity of 25 tons and a floating crane capacity of 80 tons.

For free literature detailing Detyens Shipyards,

Circle 60 on Reader Service Card

Sumitomo To Launch $59 Million Double-Skin, Double-Bottomed Tanker

The first double-hulled, double-bottomed tanker built at its Oppama yard will soon be launched in Japan by Sumitomo.

The Olympic Serenity, ordered by Onassis subsidiary Dover Marine Panama at a cost of about $59 million, has been constructed in line with U.S. antipollution laws enacted last August following the Exxon Valdez spill in March 1989. The 95,000-dwt tanker is scheduled to be delivered next month.

Meanwhile, Ishikawajima-Harima is constructing two 140,000-dwt double-bottomed tankers for Dover Marine Panama. The first is due for delivery next month, and the second in September.

An order for one double-bottomed 150,000-dwt tanker has been received from OMI Corporation of New York by Mitsubishi Heavy Industries. The tanker is to be delivered in January next year.

Japanese shipbuilders had orders for 32 dual structure tankers as of August 1990, according to the Japan Maritime Research Institute (Jamri). Included in the total were 23 double-hulled and double-bottomed tankers, five double-bottomed ships, and four double-hulled ships.

For free literature detailing Sumitomo shipbuilding services,

Circle 64 on Reader Service Card

Conoco To Increase Spending To $2 Billion In 1991

Conoco, Inc., the Houston-based oil firm, recently announced it would increase its capital spending by 25 percent to $2 billion in 1991.

According to company president **Constantine Nicandros**, Conoco's increased spending is not in response to present high oil prices brought on by the Middle East crisis, but rather on a positive view of the energy industry's economics.

"We do not believe in making decisions based on short-term jumps in price," said Mr. **Nicandros**. "Once the crisis ends oil prices will fall back to $20 or so per barrel."

Conoco's budget plans for 1991 call for another ultra-deep well and deepwater platform in the Gulf of Mexico. Additionally, Conoco will spend $90 million for two double-hulled tankers now under construction at Samsung Shipbuilding & Heavy Industries in South Korea. The tankers will be delivered in 1992.

Conoco will also spend $75 million for an offshore water separation system for the Gulf of Mexico.

The remaining 60 percent of the firm's spending will be outside the U.S., in Norway, Ecuador, the U.K. sector of the North Sea and Indonesia.

Aquamaster Brochure Describes Products And Services Offered

Aquamaster-Rauma Ltd., Rauma, Finland, has published free literature on products and services offered by the company.

Included is a discussion of electric Rauma deck machinery aboard the M/S Silja Serenade, one of the world's biggest car and passenger ships. This winch package consists of six double-drum electric autotension mooring winches, each with a nominal pull of 30 tons.

Also discussed is Aquamaster (Propulsion) Ltd. which has been distributors for Aquamaster units for over 20 years, and during that time has supplied Aquamaster packages to a variety of countries in addition to the U.K.

Aquamaster-Rauma Ltd. has references for over 100 offshore vessels, including rigs, support vessels, and special purpose vessels related to offshore oil production.

Aquamaster-Rauma can supply an ideal product and system solution for every offshore-related vessel. For more information and copies of the free literature,

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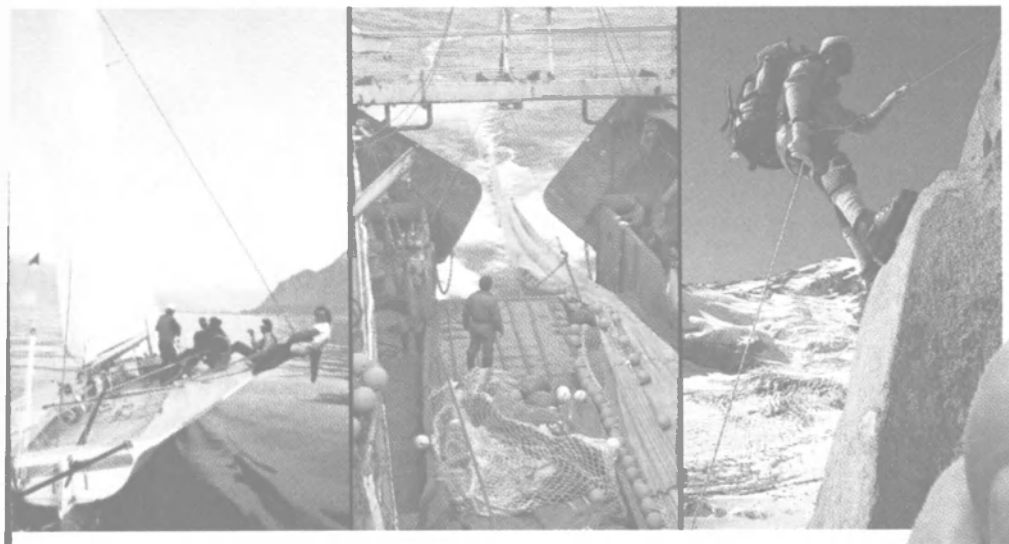

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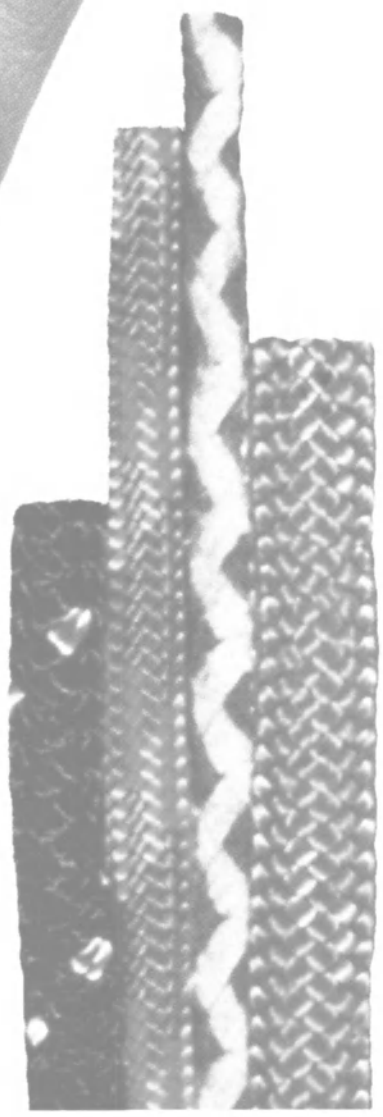

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MARCO-Seattle Yard Busy With Fishing Vessel Construction, Conversion

MARCO's Seattle, Washington, shipyard recently began the construction of two new freezer longliners for the North Pacific fishery and also completed the conversion of a crabber under a separate contract.

In the area of new construction, MARCO is building a 135-foot freezer longliner for Alaska Frontier Co. (AFCO) of Edmonds, Wash., and a 141-foot version for Deep Pacific Fishing Co. of Seattle.

Virtually identical to two boats built for AFCO and now in their second year of operation, the first boat will have a beam of 309 feet 10 inches, depth of 14 feet 11 inches and carrying capacity of 560,000 pounds of fish.

The slightly larger vessel for Deep Pacific will measure 141 feet 4 inches in length and will hold about 816,000 pounds of fish.

The two boats are scheduled for deliveries this summer and fall. According to MARCO officials, the yard also has an opening to build a third vessel for delivery prior to the end of 1991.

Under the the recently completed conversion contract, MARCO lengthened the Gulf Wind (ex-Pelagos) for owner Arctic Alaska. MARCO lengthened the crabber by adding a 30-foot section forward of the aft house. The conversion increased the 161-foot vessel's carrying capacity to 14,800 ft³ of freezer hold. The Washington yard also enlarged and modified the boat's superstructure, adding a new galley, mess and additional crew quarters.

New equipment and systems installed during the Gulf Wind's conversion included two 400-kw 12V71-TA gensets for Pacific Detroit Diesel-Allison, crab handling equipment by Flohr Metal Fabricators.

For free literature detailing the building services of MARCO,

Circle 62 on Reader Service Card

Damen Shipyards Names Kalis Managing Director

Damen Shipyards B.V., Gorinchem, the Netherlands, recently announced the appointment of **P.D.H. Kalis** to managing director.

Mr. **Kalis** replaces **K. Dames**, who plans to devote himself completely to his duties as chairman of the board of directors of the Damen Group.

Schuyler Rubber, Marine Fender Firm, Receives Recycling Award

Schuyler Rubber Company, Inc., Woodinville, Wash., which custom designs and builds rubber fender products for the marine industry, has received the "Outstanding Achievement in Market Development Award" for the second consecutive year from the Washington Department of Ecology.

The company designs, manufactures and markets marine and industrial laminated rubber products from recycled truck tires. During 1990, Schuyler utilized 4,350,000 pounds of recycled laminated rubber.

The Washington-based firm's fendering systems are used aboard vessels ranging from tugs, barges and pushboats to trawlers, supply vessels and workboats. Other applications for Schuyler's laminated rubber fenders include shoreside facilities, such as ports, docks and marinas, and offshore platforms and rigs.

According to owners **Greg Armfield** and **Dennis Kerber**, the company's products are economical, durable, and ecologically sound alternative to virgin rubber.

Founded in 1950 by the late Fred Schuyler, Schuyler Rubber continues to expand its product line and customer base in the private and public sectors.

For free literature detailing the company's rubber fendering systems,

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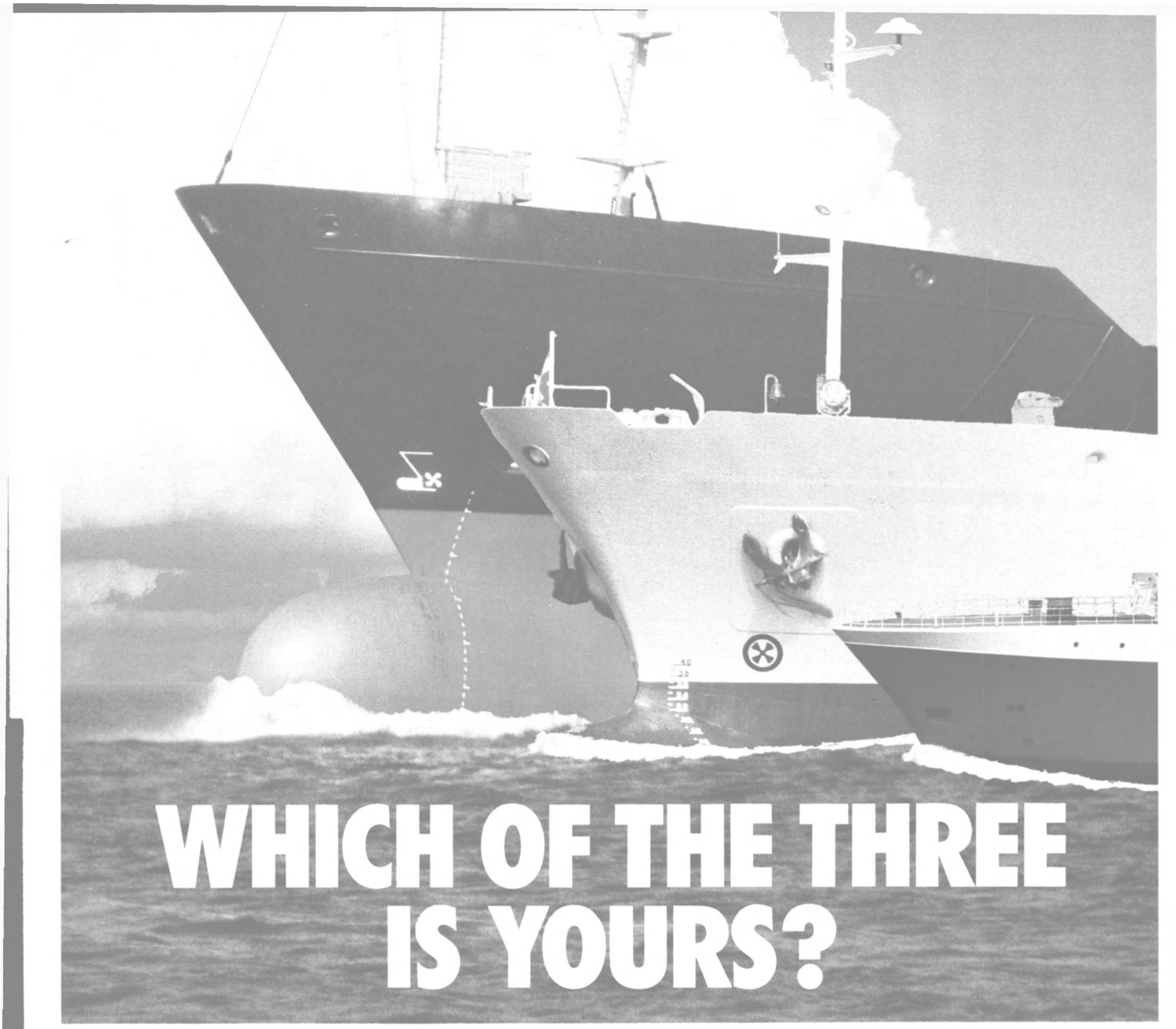

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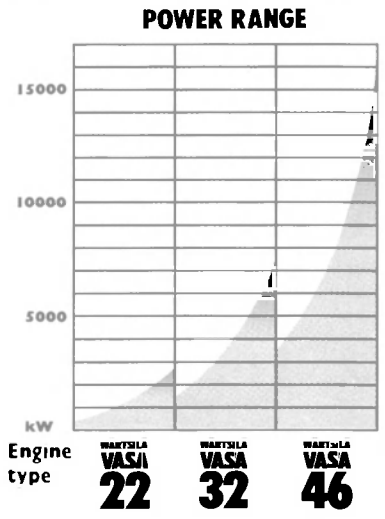

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COATINGS & CORROSION CONTROL

Prior to the 1970s, drydocking intervals were determined primarily based on the speed with which a vessel became fouled.

Today, of course, this is no longer true because of the introduction of self-polishing copolymer antifouling paint by major marine suppliers almost two decades ago. Now ships can be specified to remain free from serious fouling between drydockings required by engineering maintenance schedules. In the case of some larger vessels, this could mean being out of drydock for as long as five years. As a result, ship operators have reaped enormous cost savings. Some estimates indicate that improved ship bottom maintenance, due for the most part to self-polishing copolymer antifoulings, has netted operators a savings of $2.4 billion annually. These estimates do not include additional savings in drydock costs and off-hire charges.

Now, however, because of imminent or already enacted legislation around the world limiting the use of self-polishing copolymer antifoulings containing tributyltin compounds, major coatings suppliers are or have introduced new TBT-free systems.

This review examines some of the new TBT-free coatings offered by the major marine suppliers, as well as corrosion control systems, surface preparation and application equipment.

FOR FURTHER INFORMATION—If you would like further information on any of the products listed in this review, circle the corresponding Reader Service number on the postpaid cards bound into the back of this magazine.

AMERON

Ten years ago, Ameron developed the formulation techniques which now permit the manufacture of coatings that can stand up in today's tough regulatory climate while maintaining high levels of performance.

In the early 1980s, Ameron introduced Amerlock 400, a high-solids, high-build epoxy which offers surface-tolerant corrosion protection. Even today, Amerlock 400 surpasses all EPA VOC requirements. Several years later, Amershield, a high-build VOC-compliant polyurethane, joined Amerlock.

Based on the experience gained from the successes of Amerlock and Amershield, Ameron now offers its "Environmentally Designed" line—high-performance coatings for users who require the alternative of environmentally sound products.

An Ameron ED coating is made to perform as well as the conventional coating it replaces. This strict adherence to performance extends throughout the product line, from alkyds and latexes used in less critical areas to tank linings and antifoulings which see the most demanding service.

All ED coatings meet the most stringent VOC regulations in effect in California AQMDs. At this time California is the only state that has imposed VOC regulations on marine coatings.

Furthermore, since OSHA has established reportable limits for lead, arsenic, selenium, mercury, etc., Ameron monitors its raw materials so that all ED coatings contain less than reportable levels of heavy metals.

Ameron reports its ED coatings do not contain methyl and ethyl cellosolves or their acetates. Additionally, ED coatings technology makes it possible to duplicate with lead- and chrome-free pigments the same colors as with conventional lead and chrome pigments.

ED coatings are applicable using standard application techniques and are no more difficult to apply than their conventional predecessors.

For free literature detailing Ameron's ED coatings,

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BARTELL

Improper surface preparation can be a major source of coating failures. Bartell Industries Inc., Brampton, Ontario, Canada, offers what it believes is a cost-effective, efficient solution.

Called the S.P.S.®, the unit is an extremely versatile surface preparation device. Equipped with optional power plants, including air for marine applications, and a variety of multipurpose interchangeable tools that make surface cleaning easy, the S.P.S. can be operated by one man, combining light weight with compact size and high performance.

S.P.S. removes coatings such as standard and epoxy paints, oil and grease deposits, urethane, rubber membranes, and marine non-skid. Developed specifically for marine usage, the silicon carbide disc attachment cleans aluminum and removes coatings from aluminum and stainless steel surfaces.

Engineered to be durable, the S.P.S. offers users a scabbler and shot blast in one machine and has been used around the world in fleet maintenance and surface preparation applications.

For further information on Bartell's S.P.S.,

Circle 36 on Reader Service Card

CARBOLINE

Carboline Company, a division of RPM, Inc., a leading developer and manufacturer of protective coatings and linings distributed worldwide, reports a one-coat application of C-Gard 1207, applied directly to blasted steel, concrete surfaces or fusion bonded epoxy coated pipe provides a high build, impact-resistant coating for floors, platforms, risers, structural steel and decks in harsh environments.

Resistant to chloride and water, C-Gard can be applied in splash zone areas which are continuously immersed in aerated seawater, such as offshore piers and legs.

The three-component epoxy cladding is 100 percent solids by volume, suitable for airless spray application. C-Gard's one-coat coverage, on vertical and horizontal surfaces, can be used for over fusion bonded coatings or directly on bare blasted steel—no primer needed. Topcoating is not required.

For further information on C-Gard 1207,

Circle 37 on Reader Service Card

CHESAPEAKE SPECIALTY PRODUCTS

Chesapeake Specialty Products, the manufacturer of METgrain steel abrasives, has developed an abrasive reclaiming system that effectively cleans and separates steel abrasive blast media from mill scale, paint chips and dust. **Don Sanchez**, president of Chesapeake Spe-

cialty Products, said that by blast cleaning and recycling abrasives, blast cleaning costs far less than blasting with mineral abrasives, and disposal problems are drastically reduced. Mr. **Sanchez** claims steel abrasives can typically be recycled up to 1,000 times, reducing the effective cost of steel abrasive to pennies per ton.

Chesapeake Specialty Products, Inc., located in Baltimore, Md., provides high-quality steel abrasives used in steel surface preparation for the maritime industry, steel fabrication, bridge resurfacing and railcar industry. The firm also produces ferrous oxides used in magnetics and foundries.

For more information and free literature from Chesapeake Specialty Products,

Circle 73 on Reader Service Card

CORROLESS INTERNATIONAL

Corroless International, a specialist corrosion control company, has just secured its first Lloyd's Register "Certificate of Approval of Corrosion Control Coatings" for use in vessels classed by LR. The approval is for the company's Corroguard EP range in the limited experience category for use in ships' ballast tanks.

Project management can effectively relieve a shipowner of all the headaches associated with corrosion control within his entire fleet.

Operational managers will organize trained riding squads to undertake all aspects of preparation and application of the chosen anti-corrosion systems, while the vessel is onroute between ports.

Upon completion of a project, a full inspection is undertaken to ensure that all work has been completed to the required standards and then a managed maintenance agreement is incorporated, which monitors the applied systems throughout the agreed contract period, thus enabling both parties to react quickly and effectively and thereby ensuring the integrity of the anti-corrosion system throughout the extended operational life of the vessel.

Corroless International plans to launch a new range of corrosion control systems developed specifically for the marine industry during the first quarter of this year.

For free literature detailing the corrosion control products and services of Corroless International,

Circle 74 on Reader Service Card

CTI INDUSTRIES

CTI Industries, Inc., Stratford, Conn., is a full service organization providing restoration and preventive maintenance service and products for heat exchangers, condensers and associated equipment. CTI's Coating Division specializes in the formulation of high performance NOVOS® coatings amd technically demanding specialty applications.

NOVOS coatings are a 100 percent solids epoxy based for superior protection in harsh environments found in the marine, utility and chemical industries. NOVOS 151 is unique in combining excellent physical and chemical properties with complete tolerance of wet—even submerged—surfaces. Turnkey specialty applications have been successfully completed worldwide on high value and critical equipment. Particular evidence is offered in the marine and utility industries where solutions to unusual or difficult problems are required.

CTI Industries' patented tube restoration system eliminates the need to replace condenser and heat exchanger tubing in over 85 percent of tube failure situations. For various forms of erosion/corrosion in tube inlets, CTI Shield/Seals® have reportedly proved to be a very successful and cost-effective tube restoration technique.

Operating worldwide, CTI serves the merchant marine, the U.S. Navy, major utilities, refineries, desalination plants, and chemical processing plants.

For free literature detailing the products of CTI,

Circle 38 on Reader Service Card

ESGARD

Esgard, Inc., Lafayette, La., has been protecting marine vessels and offshore equipment for almost 20 years. Primary products are ballast and void coatings, protective gears oils and a complete line of paints.

Of particular interest to marine operators is the introduction of an improved Bio Kote for protection of ballast and void areas. While still offering the same safe, nonpolluting, nonhazardous properties as before, the new formulation cures more quickly, has enhanced resistance to immersion and chemicals and therefore increased protective performance. It is still a single package coating which goes on over minimally prepared surfaces and is easy to apply. An interesting use for Bio Kote is as a primer on the underside of hatch covers. After curing, it can be overcoated with ordinary alkyd paint.

Both Bio Kote and Bio Float are available worldwide as Esgard stocking locations are Lafayette, Rotterdam, Hamburg, Piraeus and Singapore. Sales and service representatives are located on the U.S. Gulf Coast, in the New York area, Germany, Norway, Holland, Great Britain, Greece and Singapore.

Another Esgard product, PL-2, has recently received qualification under Mil-C-16173D Grade 2 (p-2 preservatives). The intended use of PL-2 is during manufacturing or lay-up of machined metal parts, power transmissions, gears, reducers, prefabricated piping, fill and drain voids, lube oil lines and other inaccessible, nonpainted areas. Product features include superior protection, ease of removability and VOC compliance. PL-2 was recently selected by Long Beach Naval Shipyard for lay-up protection of the USS New Jersey (BB-62) due to the above features.

For further information and free literature on Esgard products,

Circle 39 on Reader Service Card

EUREKA CHEMICAL

Under soft coatings and lubricants, Eureka Chemical Company, South San Francisco, Calif., manufactures the wool-wax-based Fluid Film® product line. The products consist of long term corrosion preventive gels, liquid coatings for general maintenance and grease lubricants which are used in numerous applications from salt water ballast tank protection, rudder void, stern tube, anchor chain-locker, winch, wire-rope, valve, pump, piping, electronic equipment, container turnbuckle, to other topside appendages, as well as vessels in lay-up.

The Fluid Film product line offers ship, offshore drill rig, barge, floating drydock, and shipyard operators preventive maintenance of structures and components at low cost because the coatings and lubricants can be applied over light rust or heavily corroded surfaces with minimal or no surface preparation. Ship operators are electing to initially apply the Fluid Film liquid coatings by spray or flotation as an interim measure to impede further corrosion in salt water ballast tanks, penetrating the rust-scale, thereby causing exfoliation. After several months to one year, a re-application is made to the cleaned surface to provide ongoing protection. Costly labor intensive or mechanical cleaning is not required in such procedures and often the work is performed by the ships' crew.

Recently, Eureka Chemical Company expanded its wire-rope dressings to include a new product, WRO-EP, which is manufactured to Mil-G-18458. This addition complements a full range of liquid to stiff grease wire-rope dressings manufactured by the company.

Because the Fluid Film product line is non-solvent based, the company claims it will last longer and will not evaporate nor dry out compared with solvent-based products.

For free literature detailing Eureka Chemical products,

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GRACO

For over 60 years, Graco, headquartered in Golden Valley, Minn., has been a leader in spray finishing and paint circulating technology. Graco offers its customers a wide array of products ranging from manual and automatic atomizing devices, fluid circulation and application systems, and finishing robots and their associated hardware and software.

Graco products fill the needs of virtually every segment of the fluid handling market, from inplant lubrication and cleaning systems to computer-driven robotic finishing systems. Its primary product line consists of: airspray guns; airless spray guns; air-assisted airless spray guns; electrostatic spray guns; centrifugal atomizers (bell and discs); spray painting robots; high volume circulation systems; and related programmable controls and monitoring devices.

For free literature detailing the products of Graco,

Circle 41 on Reader Service Card

(continued)

COATINGS

(continued)

GLOBALTECH

Globaltech, Houston, Texas, offers Premier Pro-Tec 900 hull coating, an overcoat which is applied over a ship's antifoulant paint.

According to the company, an application of Premier Pro-Tec 900 will allow antifoulant paint to remain active, repelling marine growth for over two years.

Globaltech reports Premier Pro-Tec 900 controls the leaching of toxins in the antifoulant paints. Because of this, the integrity of the antifoulant lasts longer. A special sunscreen ingredient retards the biodegradation of most antifoulant paints caused by exposure to intense sunlight. Premier Pro-Tec 900 sets up a barrier between the antifoulant system and any pollutants that might be in port to prolong life of most antifoulant paint systems.

Premier Pro-Tec 900 has been developed, tested and used for over six years on a total of 2.5 million tons of commercial ships, pleasure boats and watercraft around the world.

For free literature on Premier Pro-Tec 900,

Circle 42 on Reader Service Card

HEMPEL COATINGS

Hempel Marine & Protective Coatings, one of the world's largest independent suppliers of marine paint, has developed a full range of tin-free compositions which includes the EPA compliant Olympic-Hi 7660 to complement the existing EPA-approved copolymer antifoulant Combic 7699. All of these coatings provide excellent antifouling performance and economic hull management when tailored to a vessel's individual operating parameters.

Because of emerging Volatile Organic Content (VOC) regulations, which concern the nature/volume of solvent released by a coating, Hempel has developed two distinct product ranges which are both environmental and user friendly.

One is Hempadur 4514/15, a high solids mastic group possessing low VOC characteristics, low temperature tolerance, inherit generic toughness and exceptional wetting properties which enables them to provide performance on marginal substrates where practical, budgetary or environmental aspects restrict the degree of surface preparation.

A second range of waterborne acrylic coatings known as Hemucryl is suitable for use on steel, other metals and concrete. Environmental and user friendly alternatives to single pack solvent-borne coatings, Hemucryl exposure tests have shown equal and indeed superior corrosion protection. For vessel interiors they offer additional benefits, having a VOC of only 0-85g/Ltr (a traditional alkyd being around 340 g/Ltr) and gloss retention .

For free literature detailing Hempel Marine's line of coatings,

Circle 43 on Reader Service Card

INTERNATIONAL PAINT

International Paint, one of the world's leading marine coatings manufacturers, is continuing its introduction of new and ecologically sound products to the marine industry.

Intergard KB400 Series is a two-pack modified epoxy ballast tank coating which offers a tough, resilient system specially formulated to be extremely water resistant and is designed specifically for salt or fresh water ballast tank service.

Intergard KB400 is a long life high-performance coating with surface tolerant characteristics that may reduce costs at initial application.

Intergard KB400 is also an environmentally friendly material which complies with all existing VOC requirements. Coatings application may be safely accomplished anywhere in the world due to this compliance plus excellent health and safety benefits.

Interviron BRA600 Series antifouling offers better performance through improved biocide release mechanisms. This feature coupled with higher solids to reduce costs and assured cleaner chemistry is based on proven Interclene BRA500 Series performance on vessels operating in all the oceans of the world.

Based upon 10 years of proven tank coating technology Intergard TH600 Series is the latest addition to the international tank coating range.

Specifically designed for the requirements of the U.S. product tank coating market, Intergard TH600 is a high solids, high flash VOC compliant coating that provides a tough, hard, easily cleaned semi-gloss finish.

A user friendly product, formulated with the applicator in mind, Intergard TH600 offers a wide cargo resistance list and completes the current international range of superior coatings for nearly any tank coating situation from ballast tanks to aggressive chemicals.

For free literature detailing the coatings products of International Paint,

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MARINE COATINGS INTERNATIONAL

Marine Coatings International, Atlanta, Ga., offers Barnacl-X, a two-part epoxy coating that contains pure copper (not cuprous oxide or TBT). Barnacl-X dries to an extremely hard, yet flexible finish that is achieved with only one 15 mil coat. Barnacl-X may be applied to any clean steel, concrete, fiberglass or wood surface without a primer.

According to the company, because Barnacl-X is a 100 percent solids coating and is non-ablative, there is no adverse impact on the environment from solvents released into the atmosphere or from toxins being released into the oceans, lakes and rivers.

With only one coat required using Barnacl-X (drying time—12 hours to launch), the amount of time that your product is tied-up in the coating operation is reduced considerably, making expensive labor and valuable work space more productive. Existing marine paint systems require several coats of different products and each of these coatings require several manhours per application and several hours to cure before the next coating may be applied. Barnacl-X can cure while under water, making repairs and patching with the product much easier and more cost effective.

An epoxy coating is much more durable than some other coatings and will not chip, blister or peel. The company claims that Barnacl-X, which can be applied by airless spray, roller or brush, is eight times more abrasive resistant than some premium marine anti-fouling paints and has an anti-fouling service life three to five times longer than commercial anti-fouling paints.

Enviro Coatings, Inc., Dallas, Texas, is the exclusive distributor for Barnacl-X.

For free literature detailing Barnacl-X,

Circle 45 on Reader Service Card

NORTHSTAR MFG.

Northstar Manufacturing Company, Inc., Spring, Texas, produces the innovative protective equipment designed for coaters, blasters and painters. The ASH-301 has approval through MSHA/NIOSH as a type C or CE respirator. The approvals permit the respirator to be used as a paint hood, as well as an abrasive blast hood. The hard shell meets ANSI standards for face and eye protection, yet the complete unit weighs less than 5 pounds. The foam inner liner gently holds the head in order to hold the wide viewing window in place. The foam also distributes quieter air throughout the inner chamber and fits over the ears for additional hearing protection.

The 301-14 airline filter was designed to provide cleaner, safer air on a more stable base for use in blasting yards or in a shop environment. The replaceable filter cartridge traps and removes 98 percent of impurities down to 1/2 micron in size. Northstar also manufactures a disposable hood, full face constant flows respirator and approved breathing air hoses.

For further information on Northstar Manufacturing protective equipment,

Circle 46 on Reader Service Card

REED MINERALS

Moisture in your blasting system costs you money in labor and wasted abrasives. Therefore, Reed Minerals, Highland, Ind., a division of Harsco Corporation, recently announced the release of two products for its Moisture Removal System for use in surface preparation:

An air-cooled aftercooler removes reportedly up to 70 percent of the damaging water from your compressed air;

A pre-cooler/re-heater reheats the air, to expand the volume of your compressed air and separate the dewpoint further to assure no moisture condensation is in your system.

This new system virtually eliminates the need to "choke" your valves, according to Reed Minerals. No more wasted labor cleaning and discarding saturated abrasives. No more wasted abrasive that clogs your system instead of cleaning your surface. This system can also prevent motor freeze-ups due to moisture.

Lines for air-fed hoods may be tapped in after the aftercooler, providing cool, moisture-free air in the summer, and after the re-heater in the cold months to provide warm moisture-free air.

For further information on the Moisture Removal System distributed by Reed Minerals,

Circle 47 on Reader Service Card

SCHMIDT MFG.

Schmidt Manufacturing, Inc., Fresno, Texas, established in 1972, is a major manufacturer of quality abrasive blasting equipment. The firm has manufactured custom-made equipment and engineered systems for companies around the world. Their patented valves are frequently used by other manufacturers of brand name abrasive blasting equipment.

Schmidt manufactures the Accustrip System, a specialized depainting system used by the Texas Parks & Wildlife Department in the restoration of the Battleship Texas at the Houston Ship Channel.

The Accustrip System is a new generation of safe, non-toxic abrasive blasting equipment. Designed in conjunction with a patented formulated blend of sodium bicarbonate called Armex Blast Media, the Accustrip System gives the user the ability to blast soft substrates and sensitive surfaces with virtually no damage.

The Armex Blast Media is water soluble, non-sparking, free of silicate dust and toxic fumes. The Accustrip System and Armex Blast Media is an environmentally safe process that can help you eliminate costly labor hours and give you a better surface finish for those sensitive substrates and components.

When blasting rotating equipment, the Accustrip System will not damage pumps or motor bearings, packing, mechanical seals or polished rods. The Accustrip System will remove dirt, grease and oil which eliminates the need to prewash.

This is the only process, according to the company, that can remove typical surface corrosion and the coating in the same step from alumi-

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The Shipbuilders of Spain

Circle 350 on Reader Service Card

COATINGS

(continued)

num without additional tools or chemicals.

The Accustrip System is manufactured and designed with the user in mind and can be operated and maintained with minimal operator training.

For free literature detailing Schmidt Manufacturing abrasive blasting equipment,

Circle 48 on Reader Service Card

SIGMA COATINGS

Sigma Coatings provides an economic answer to the problem of upgrading paint systems on the decks, hatch covers, piping systems and topsides of vessels currently coated with conventional alkyd or chlorinated rubber paints. This is in order to meet the Volatile Organic Compound (VOC) regulations and increase overall coating life expectancy.

When due consideration of the increasing costs of these Alkyd and CR types of paint systems is compared to their normal service life, owners are constantly looking for stronger, more durable types of coatings which have higher tolerances to adverse weather conditions and ease of application in dock or at sea. The extent of the VOC regulations is becoming increasingly evident which will result in the older conventional types of coatings from being used.

Sigma Coatings' answer is based on the epoxy Sigma CM system. This consists of 7465 Sigma CM Miocoat as the direct to steel primer followed by 7466 Sigma CM Coating. It can be used in conjunction with 7417 Sigma Universal primer which has a strong water-repelling composition when utilizing Hydroblasting techniques and an intermediate coat of 7461 Sigma EP Multiguard can be applied where high abrasion is required on deck or in dry cargo holds. The Sigma CM system can be applied in a two-coat system directly to steel due to its tolerance to low grade surface operation.

Ian J. Scarth, national marine manager for the U.S., said, "The numerous owners worldwide and in the U.S. who have adopted this system are very pleased with the Sigma CM's performance especially due to its resistances to the spillage of oil products and its high resistance to chalking giving good color retention, durability to abrasion and impact damage. Furthermore the CM system gives the owner an ease of maintenance and total flexibility in overcoating existing Chlorinated Rubber and Alkyd paint systems so there is no need for costly surface preparation in order to upgrade."

For free literature detailing Sigma Coatings products,

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SSPC Coating Conference Set For April 29-May 3 In Pittsburgh, Pa.

The Steel Structures Painting Council (SSPC) Coating Evaluation and Durability Conference will be held from April 29 to May 3, 1991 at the Westin William Penn Hotel in Pittsburgh, Pa. The conference will be comprised of approximately 10 to 12 papers, two current full day courses on performance evaluation methods and technology, three to four workshops, and an exhibit of products and services for performance evaluation of coatings.

The purpose of the conference is to assess the state of the technology in performance evaluation of coatings, and to set directions for establishing an industry-wide consensus on standard methods for testing coatings, characterizing their condition, using statistics to interpret test data, and reporting results. The long-term outcome of this work should be the capability to develop understandable test data on coatings that reliably predict their service lives.

For further information about the presentation of papers or participation in workshops, contact: **Dan Zarate** at (805) 982-1057; **Brian Skerry** at (216) 566-2731; or **Simon Boocock** at (412) 268-3325.

Thomas E. Moran Retires; MacLeod Appointed New CEO Of Moran Towing

Malcolm W. MacLeod

Thomas E. Moran, chairman and CEO of Moran Towing Corporation has announced his retirement from the corporation, remaining as chairman of the board of directors.

Malcolm W. MacLeod, president of Moran Towing Corporation, has been appointed by Mr. **Moran** to assume the additional duties of CEO.

Mr. **Moran** is a veteran executive with some 45 years' experience in the maritime industry. He is the great-grandson of the company's founder, **Michael Moran**, and the fourth-generation Moran to head the 130-year-old family firm. He has been a director of the corporation since 1954 and was elected chairman in 1980.

MarAd Approves Two Requests By Lykes Bros. To Terminate Voyages

The Maritime Administration (MarAd) has approved two separate requests by Lykes Bros. Steamship Co., Inc. to terminate the current voyages of the Nancy Lykes and Ruth Lykes in a North European port before beginning a time charter with the Military Sealift Command (MSC) for three to four weeks, with the MSC's option for two further round trips.

MarAd noted that this does not constitute a precedent for action in any similar case.

Study Finds No Causal Link Between Crew Size And Maritime Safety

A two-year study of the effect of crew sizes on maritime safety, recently completed by the Marine Board of the National Research Council, was unable to identify a causal link between manning levels and safety. The study was commissioned by the U.S. Coast Guard in light of the worldwide trend toward reduced crews and concerns about the impact on vessel and personnel safety.

Compared to a level of about 45 seafarers 30 years ago, the crew of a typical, newly built U.S.-flag vessel today averages 20 to 24. Some highly automated foreign ships operate with as few an eight to 12 crew members on board.

A "measurable and substantial reduction in vessel casualties and personnel injuries" have been witnessed over the past 20 years while crew size was declining.

The following recommendations were offered at the conclusion of the study by the Marine Board:

Congress should modernize manning laws to allow innovation without degrading safety;

The U.S. maritime industry, with the aid of the Department of Transportation, should implement a program to demonstrate the conditions under which reduced crew size can be considered safe;

The industry, with the aid of DOT, should undertake a research program to determine how human factors such as fatigue and stress affect maritime safety;

DOT should gather, standardize, evaluate and disseminate maritime safety data; and

The Coast Guard should use formal analytical methods to make manning decisions. The goal should be to develop an internationally accepted method for establishing minimum safe manning levels.

Avondale Boat Division To Build 3,900-HP Tug For U.S. Owner

Avondale Industries, Inc., New Orleans, La., was recently awarded a contract by E.N. Bisso & Son, Inc., to design and construct a new 3,900-hp versatile tug which will be capable of river and harbor work, as well as full ocean service.

The tug will be constructed primarily for handling and docking ships in river traffic while retaining the ability to work offshore. Initial detailed engineering and construction of the vessel will begin immediately at Avondale's Boat Division, Westwego, La., facility.

According to **Barry Heaps**, Boat Division vice president, the tug will be 110 feet long and designed for unlimited ocean towing and for harbor ship docking. She will be powered by two EMD 16-645 E6 diesel engines for a total of 3,900 horsepower. The tug will have quarters for 10 and large galley and mess facilities. The vessel will be certified by the U.S. Coast Guard and classed A1, unlimited ocean service towing vessel by the American Bureau of Shipping.

Delivery of tug is scheduled for the latter part of 1991. Work on this contract will provide additional employment at Avondale for approximately 50 people through 1991.

E.N. Bisso & Son, Inc., has been established in the Port of New Orleans since 1880 and offers many marine services including towing, heavy lift and marine contracting.

Avondale Industries, Inc., headquartered in metro New Orleans, is one of the nation's leading marine fabricators, with shipbuilding, boat construction and repair operations for the commercial and Navy sectors.

For free literature detailing the vessel building and repair services of Avondale Industries,

Circle 53 on Reader Service Card

China's Principal Ports Show 26 Percent Increase In Container Cargo

Officials said recently that China's principal ports handled the equivalent of 1.5 million 20-foot containers (TEUs) last year, the most since it began box container services.

This is nearly 26 percent higher than the ports handled in 1989, according to the Ministry of Communications.

Though the precise figure of overall capacity is not known, the ministry said there are 74,000 container berths. China constantly upgrades ports and adds container facilities.

In the last decade, 20 container berths were added, with aggregate capacity of 1.3 million TEUs. Along with expansion of intermodal and interior land transport, more are scheduled for the five-year plan that recently began.

Pre-Swaging Tool Makes Tube Fitting Installation Easier

A tool for pre-swaging Swagelok tube fitting ferrules prior to actual fitting pull up is available from Swagelok Co., Solon, Ohio.

The pre-swaging tool is especially useful with closely spaced connections, difficult-to-reach installations, and other applications where wrenches are difficult to use.

According to the company, pre-swaging ferrules with the pre-swaging tool is quick and easy. The installer inserts the tubing through the nut and ferrules and bottoms the tubing in the pre-swaging tool. The nut is tightened 1-1/4 turns (3/4 turn for 1/16-inch, 11/8-inch and 3/16-inch size tube fittings), the nut is loosened, and the tubing with the pre-swaged ferrules is removed from the pre-swaging tool. The installer completes the assembly by following the normal Swagelok tube fittings retightening instructions.

The pre-swaging tool is made of heat-treated tool steel and is available for Swagelok tube fitting sizes 1/6-inch through 1/2-inch.

For more information and free literature,

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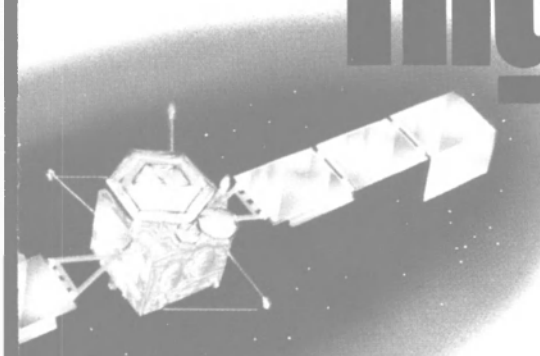

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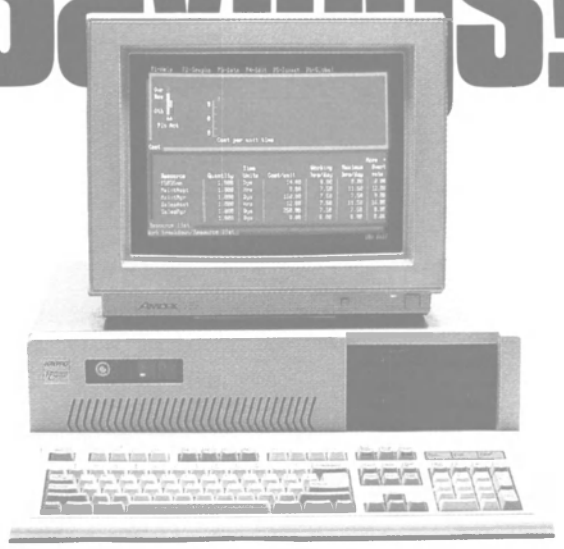

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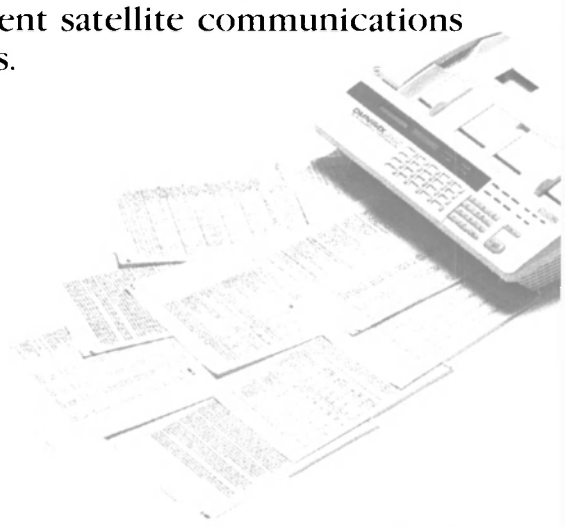

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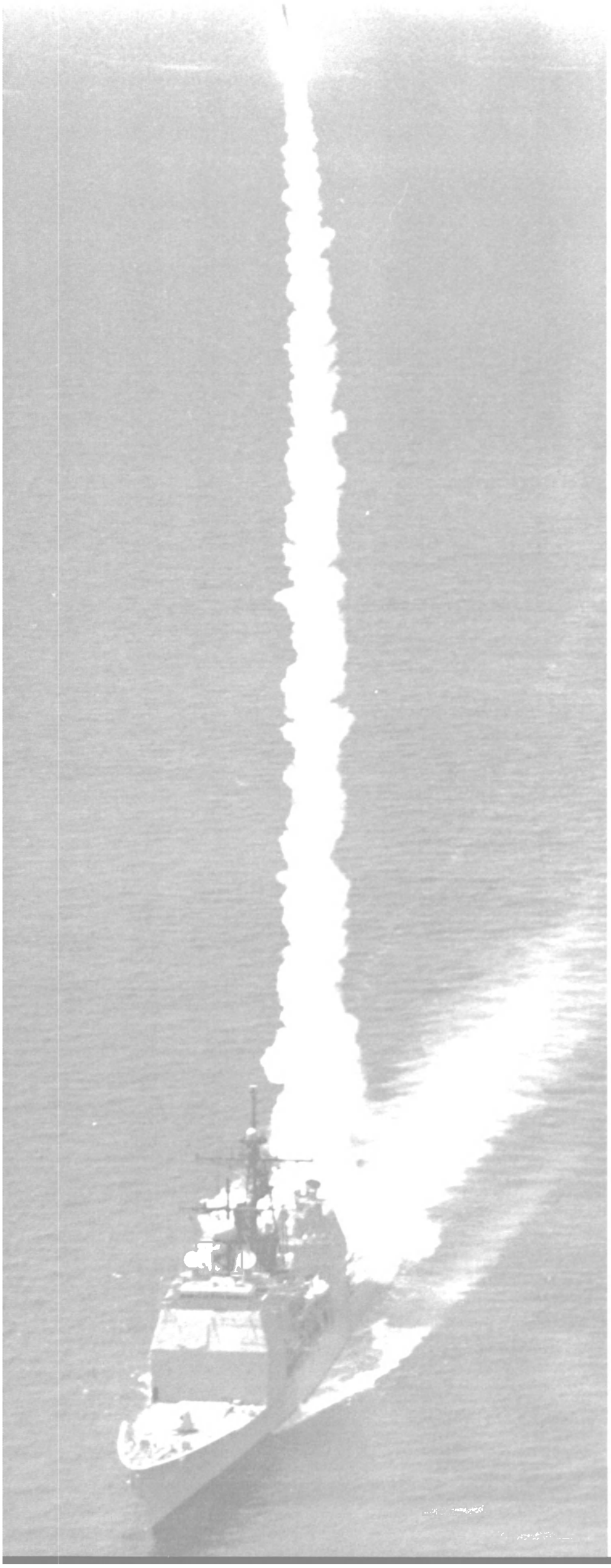


Gulf Crisis Confir

Sealift

Editor's Note: The U.S., like its European Community and Japanese counterparts, is dependent upon the Persian Gulf for a large percentage of its oil needs.

In recently published comments, Commander **W.H. Nelson**, U.S. Navy, a strategic analyst at the Center for Naval Warfare Studies at the Naval War College, Newport, R.I., points out that much of the industrialized West will continue to depend upon Persian Gulf oil reserves to sustain their energy needs. He states that "free and unfettered access" to the region's resources is vital to the West.

"The United States cannot have a complete energy policy without the types of military forces that guarantee regional stability in the Persian Gulf," stated Commander **Nelson.**

"We should sustain some form of multinational naval presence in the Persian Gulf. The current force could be replaced with a multinational squadron much like NATO's Standing Naval Force Atlantic. This 'beefed up' Middle East Force, operating in conjunction with Gulf Cooperation Council navies, would be the most effective way to ensure allied participation while eliminating the problem of a unilateral U.S. presence."

In a recent speech in Virginia Beach, Va., the Honorable **H. Lawrence Garrett III**, Secretary of the Navy, further emphasized the need for the U.S. to maintain a forward-deployable, combat-ready striking force.

The following is an excerpt from that speech.

My overriding concern is to ensure that the Navy and the Marine Corps maintain their ability to defend America's interests in a world that is changing rapidly.

The Cold War—which some say should have been called the Cold Peace—is possibly, all but over. The fall of the iron curtain freed millions from political oppression, but those who expected a bright new world of peaceful commerce and congenial values to immediately follow failed to reckon on **Saddam Hussein's** bid to write his own violent chapter in history.

To its credit, the world community has shown an unprecedented determination—in the current crisis—to defend the self-evident principle that every nation must live free from the threat of armed aggression by another. Defending that principle, however, depends on the credible will and ability to use military force against an aggressor if and when all other options fail. In this new geopolitical environment, the remote and abstract shadow of a World War III has been replaced by violent, sophisticated, and very real threats to our vital interests around the globe.

To meet such threats, our military will have to concentrate its strategic energy on projecting force—or the threat of force—wherever and whenever needed.

Operation Desert Shield is clearly illustrating the important and complementary force-projection capabilities of all of the services. But—I submit—the Navy/Marine Corps team offers a unique and proven ability to put a comprehensive, self-contained, forward-deployed combat package almost anywhere on the globe within days—even hours.

A carrier battle group in combination with a Marine Expeditionary Unit, for example, is able—with little or no outside support—to establish local air superiority, to deliver ordnance far inland by aircraft and naval gunfire, and put troops ashore covertly or in mass. It possesses, furthermore, the deterring ability to threaten such action—subtly, if desired, or more visibly if necessary—without an enormous, intrusive, and difficult-to-reverse commitment of men and material on the ground.

American naval forces have been called on over 200 times since World War II to employ such capabilities in crises around the world; and Desert Shield has made it clear that their role as an integrated, forward-deployed, combat-ready striking force is going to become even more important over the next few years. Our strategy, our training, and our hardware must reflect that fact.

Our planning must also reflect the fact that we are facing a time of dramatically declining resources. By 1995 America's defense budget is likely to be the smallest—as a percentage of GNP—that it has ever been since 1939.

The enormous investment the American people made over the last decade in their military forces is now paying off in our ability to deploy against Iraqi aggression in the Middle East. But—we must ask ourselves—what if our young people in uniform are called again a decade from now? Will we be prepared as

Photo at left: USS Chancellorsville (CG-62) on training exercises in the Gulf of Mexico firing an SM-1 vertical launch missile.

ms Need For Global Naval Force

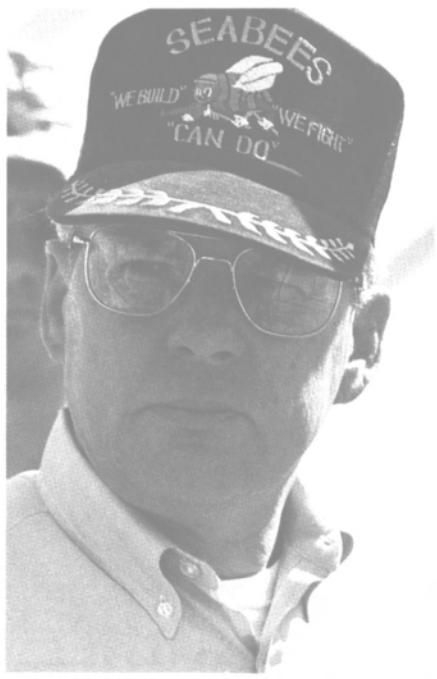
Program Receiving $1.3 Billion

H. LAWRENCE GARRETT III,
Secretary Of The Navy

Born on June 24, 1939 in Washington, D.C., **H. Lawrence Garrett III** *became the 68th Secretary of Navy on May 15, 1989. He enlisted in the U.S. Navy in October 1961 and subsequently qualified in submarines as a machinist mate. Mr.* **Garrett** *was commissioned in April 1964 upon completion of flight training, serving as a Naval Flight Officer aboard maritime patrol aircraft. He retired from the Navy in 1981.*

Most recently, Mr. **Garrett** *was Executive Assistant to the President and Chief Operating Officer of the U.S. Synthetic Fuels Corporation. In 1983, he was Associate Counsel to the President. Mr.* **Garrett** *served as General Counsel of the Department of Defense from February 1986 to August 1987. Prior to his appointment as Secretary, Mr.* **Garrett** *served as Under Secretary of the Navy from August 6, 1987.*

Mr. **Garrett** *earned a B.S. degree in Business Management from the University of West Florida in Pensacola, and received his J.D. degree from the University of San Diego School of Law, San Diego, Calif., graduating cum laude. A member of the California and District of Columbia Bars, he is licensed to practice before the U.S. Supreme Court, the Supreme Court of California, the District of Columbia Court of Appeals, U.S. Court of Military Appeals, and the U.S. District Court for the Southern District of California.*



Secretary of the Navy **H. Lawrence Garrett III** on a recent trip to Saudi Arabia.

we were in 1990-1991? Will we have the right weapons, incorporating the right technology, and in the right quantities?

Possibly—but only if all of us, in government and in industry, make the kind of smart, hardnosed business decisions now that will preserve as much capability that we as a nation can afford. . . decisions that will protect, to the degree we are able, a healthy, creative, and productive defense industrial base into the 21st century.

Our priority on the government side must be to achieve the greatest possible value for every budget dollar we spend, both on our own internal organization and on the products we buy. Money ill-spent represents a squandered resource. It contributes nothing to the material strength of our defense or to the constructive growth of the industrial market.

At the same time, our industrial suppliers must react quickly and decisively to the realities of a declining defense budget—they will have to respond by streamlining their processes and maximizing their productivity. The companies that survive into the next century will be the companies that invest in their own long-term viability and not just in short term profits.

Together we have to embrace the obvious truth that a commander's success—at sea or on the battlefield—and a company's success in the marketplace at some point serve the same end. It only makes sense that government and industry build a trusting, innovative and farsighted relationship that will provide for a cost-effective defense of the nation's interests.

But my most important priority is people. Last year, when Soviet naval leaders visited our ships here in Norfolk, they said over and over: "If only I had sailors such as these."

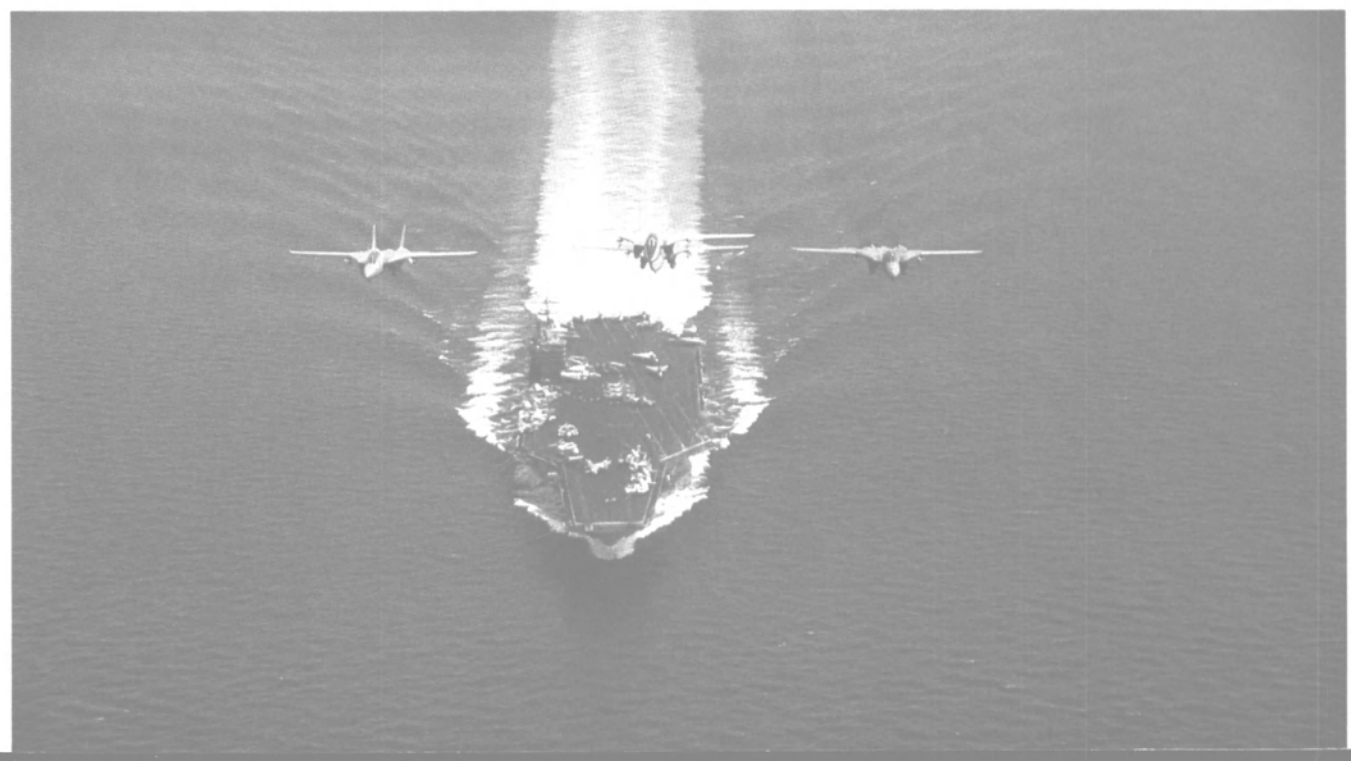
It is a fact—and I state it simply—that the men and women of our Navy and Marine Corps are the finest, best trained, most highly motivated individuals of any maritime force anywhere. They are the Navy and Marine Corps. They are the sailors that saved the Stark and the Roberts. They are the pilots that successfully confronted **Khaddafi's** jets. They are the Marines that fought door to door in Panama. They are our sons and daughters who serve every day and night, in good times and in bad, in every corner of the world. They willingly put their lives on the line, not just when a **Saddam** rears his ugly head, but year in and year out, even when the society they serve has forgotten that they are there.

America possesses in these young people an asset beyond valuation—and the nation's continued ability to prevail over thugs like **Saddam Hussein** will depend on this nation's commitment—through its elected representatives—to the morale, education, leadership, and quality of life of our servicemen and women.

I will not take the costs of a declining budget out of the hides of our men and women. We've done that before, and we ended up with a demoralized, hollow Navy with undermanned and barely-functional ships. That will not happen again. . . not on my watch. Our people deserve better, and our nation deserves better.

In concrete terms, this policy mandates that a reduction in the number of our personnel be accompanied by a reduction in our force structure—that is, the numbers of our ships and airplanes. I think it is important for everyone to know and understand—where naval forces are concerned—that we must maintain the proper and effective balance between manpower and force structure.

Sealift is essential both to executing this country's forward- deployment, combat-ready defense strategy. Toward this end, Congress has provided strong support for a sealift program and over the last two years has made over $1.3 billion available for the acquisition of sealift vessels. Sources within the Department of Defense have indicated plans for additional funding for a five-year program.



Aircraft carriers have played a vital role in projecting an American combat-ready striking force in the Persian Gulf. Photo: T.L. Didas

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Navy Announces Ship Repair Schedule For FYs 91-92

The U.S. Navy's ship repair schedule was recently released covering an anticipated 356 availabilities for the Fiscal Years (FYs) 1991-92, as well as Phased Maintenance Availabilities (PMA) for amphibious and auxiliary ships for FYs 1993-95. One hundred and ninety-one of the availabilities will be on the East and Gulf Coasts and the remaining 165 will be on the West Coast. Nine Ballistic Missile Nuclear Submarine (SSBN) Availabilities are also included in the total. No start/stop dates were released for security purposes.

Close examination of the figures in Exhibit 2, "U.S. Navy Availabilities By Region And Ship Type," reveals that the Navy has decreased its frigate availabilities from a scheduled 71 as of the March 1990 ship repair schedule to 57 in its updated schedule. This would indicate that the Navy intends to retire the Knox Class (FF-1052) frigates from active service beginning in 1992. Reportedly eight of the class will be assigned to the Naval Reserve fleet as training frigates. Of the remaining 38 Knox Class frigates, 32 will be mothballed, while no plans have been revealed for the remaining six ships. Overall, the

Exhibit 3—Availabilities For FYs 91-92, By Homeport And Quarter

	Fiscal Year 91			
Location	1st Qtr.*	2nd Qtr.	3rd Qtr.	4th Qtr.
Norfolk, VA	—	2	6	3
Charleston, SC	—	1	1	2
Newport, RI	—	1	1	2
Mayport, FL	—	1	2	2
San Diego, CA	1	7	9	6
S.F., CA	—	1	2	—
Long Beach, CA	1	4	3	—

*Data does not include ships already awarded.

	Fiscal Year 92			
Location	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Norfolk, VA	2	4	3	2
Charleston, SC	1	4	—	3
Newport, RI	—	—	—	2
Mayport, FL	1	1	—	2
San Diego, CA	6	7	6	2
S.F., CA	2	3	1	—
Long Beach, CA	1	4	2	—

Source: Shipbuilders Council of America

VADM. John W. Nyquist Calls For Stable Shipbuilding Budget

Long Range Study—"Revolution At Sea 2020" Will Provide Blueprint For The Future

In an address delivered to the Board of Directors of the Shipbuilders Council of America, VADM. **John W. Nyquist,** USN, Assistant Chief of Naval Operations for Surface Warfare (OP-03), called for stability in the Navy's Shipbuilding and Conversion, Navy (SCN) appropriation. The Admiral, who is the sponsor for the SCN appropriation within the Office of the Chief of Naval Operations, stated his concern that fiscal year 1992 and following years would present "tough times" for the industry. In his opinion, shipbuilding and ship repair will take a "disproportionate hit" in the allocation of funds within a reduced Department of Defense budget request. He expressed hope that the decision of the Secretary of Defense to build 1.5 SSN-21s and 4 DDG-51s per year would be sustained. These building rates were determined by the Major Warship Review after intense study and scrutiny "of the present and future world situation, threat and the industrial base."

Adm. **Nyquist** noted that the Surface Warfare community has commissioned the Center for Naval Analyses to conduct another requirement study to revisit the Surface Combatant Force Requirements Study (SCFRS) in the context of a low intensity conflict environment. In addition, a long range study, ***"Revolution at Sea 2020"***, is also underway. This study will provide the R&D technology blueprint and priority for the Battle Force Combatant of the 21st Century. Adm. **Nyquist** believes that the Surface Force of the future will have greatly increased commonality in hull design. Ship mission capabilities will be influenced by the combat system loaded into the ship and the "traditional concepts of cruiser, destroyer, frigate and even amphibious ships will become less important."

The Admiral envisions their 21st century combatant will be built with a "generic hull and a baseline combat system." These ships could be built in numbers to ensure economies of scale and will be designed with greater survivability. Hopefully, this ship of the 21st century will incorporate Integrated Electric Drive (I&D) which will permit greatly reduced acoustic signatures, improve fuel economy, provide large amounts of electrical power for the weapons of the future, and permit new and more efficient ship designs.

Adm. **Nyquist** linked the future of the Navy to the shipbuilding industry. Calling the shipbuilding industry one of the Nation's greatest assets, he said that "there is no Navy without shipbuilding. We must find a way to protect the shipbuilding industry during this period so that there is a Navy of tomorrow!"

Exhibit 1—U.S. Navy SRAs For FY91-92 And PMAs For FY93-95*

Fiscal Year 91	134
Fiscal Year 92	142
Fiscal Years 93-95	71
Total—	**347**

*Phased Maintenance Availabilities for amphibious and auxiliary ships only.

number of availabilities in the new schedule remains unchanged, except for a substantial increase in amphibious ship availabilities on the Atlantic and Gulf Coasts in FYs 91-92, from 18 to 29, and a drop in submarine availabilities on the Atlantic and Gulf Coasts, from 34 to 24.

Exhibit 2—U.S. Navy Availabilities By Region And Ship Type

Ship Type	Atlantic & Gulf Coasts	Pacific Coast
Amphibious	66 (37)*	53 (22)*
Auxiliaries	35 (1)*	39 (10)*
Carriers	1	5
Cruisers	7	17 (1)*
Destroyers	12	11
Frigates	27	30
Mine/PHMs	19	10
Submarines	24	0
Totals—	**191 (38)***	**165 (33)***

*Indicates availabilities for FY 93 95

Exhibit 3, "Availabilities For FYs 91-92, By Homeport And Quarter," is based on figures published by the Shipbuilders Council of America (SCA), a national organization representing major U.S. shipbuilders and repairers, in a recent analysis of availabilities reserved for homeports during FY 1991-92. According to SCA, the number do not include ships competed under Phased Maintenance programs, or which are involved in coastwide or extended solicitation area bidding. SCA's analysis does not take into consideration any possible impact of ship movements connected with Operation Desert Shield.

The Shipbuilders Council believes that long-range requirements for Navy depot-level maintenance will decrease over the next five years, and is projecting a 450-ship Navy fleet by FY 95. Also impacting on the number of shipyard mandays that will be required for naval ship maintenance is the Navy's transition from steam propulsion to gas turbine and diesel power. The SCA's projections indicate that the Navy market will decline by 25 percent by the end of FY 95.

Two Maritime Measures Revived In New Congress

Two maritime measures that failed to advance in the last Congress are among those recently reintroduced by legislators.

Michigan Representative **William S. Broomfield** reintroduced his bill to require the government to dispose of the oldest vessels in the national defense reserve fleet. Last year, the measure stirred controversy and drew the opposition of the Maritime Administration, which maintains the mothball fleet.

A second holdover maritime bill that would levy fines against subsidized foreign vessels that enter U.S. ports was reintroduced by Maryland Representative **Helen Delich Bentley**. It is designed to encourage an end to foreign governments' shipbuilding subsidies.

Procurement Integrity Certification Now In Effect

Suspension of the requirement for procurement integrity certification has now expired, meaning that government contractors will be required to execute a certification for all contracts or modifications in excess of $100,000 that are awarded or executed on or after December 1, 1990.

This certification affirms that no one affiliated with the contractor in any capacity has directly or indirectly discussed employment opportunities with a government procurement official, except as specifically authorized by law; offered such individuals gifts or gratuities of any type; or solicited proprietary or source selection information regarding such procurement from any officer or employee of the governmental agency.

NAVY SEALIFT SHIP PROGRAM TO INJECT $1.3 BILLION INTO U.S. MARITIME INDUSTRY

DEFENSE DEPARTMENT PLANNING 5 YEAR PROGRAM

By Jim McCaul, President, IMA Associates, Inc.

Sealift is essential both to executing this country's forward defense strategy and to maintaining a wartime economy. The United States' national sealift objective is to ensure that sufficient military and civil maritime resources will be available to meet defense deployment, and essential economic requirements in support of the U.S. national security strategy. The broad purpose of the sealift policy is to ensure that the U.S. maintains the capability to meet Sealift requirements in the event of the crisis of war. Congress has provided strong support for a sealift program and over the last two years has made over $1.3 billion available for the acquisition of sealift vessels. Sources within the Department of Defense have indicated plans for additional funding for a five-year program.

The Middle East Crisis has shown the importance of sealift in implementing the Navy's forward-deployment defense strategy. Shown above is the prepositioning ship Pfc. Eugene Obregon.

National Security Sealift Policy

The President has approved the following Sealift policy guidelines:

First, the U.S.-owned commercial ocean carrier industry, to the extent it is capable, will be relied upon to provide Sealift in peace, crisis and war. This capability will be augmented during crisis and war by reserve fleets comprised of ships with national defense features that are not available in sufficient numbers or types in the active U.S.-owned commercial industry. The Department of Transportation is responsible for determining whether adequate manpower is available to support the operation of reserve ships during a crisis. In peacetime, the Department of Defense will operate the minimum number of sealift ships, including reserve ships to meet the Joint Chiefs of Staff exercise requirements and shipping requirements that cannot be accommodated by U.S.-flag commercial ocean carriers.

Second, we must be prepared to respond unilaterally to security threats in geographic areas not covered by alliance commitments. Sufficient U.S.-owned sealift resources must be available to meet requirements for such unilateral response.

Third, in addition to the U.S.-flag fleet, we will continue to rely on U.S.-owned and allied shipping resources to meet strategic commitments to our established alliances. The Department of Transportation is responsible for ensuring that the appropriate legal and procedural mechanisms for exerting effective control over "effective U.S. control" ships are in place. The Department of Transportation shall also continue to seek commitment of sealift resources from NATO allies to meet alliance requirements. The Departments of State and Defense shall examine the extent to which agreements with other maritime nations should be negotiated to provide additional sealift.

Fourth, the Department of Defense will determine the requirements for sealift of deploying forces, follow-on supply and sustainment, shipbuilding and ship repair. In coordination with the Department of Defense, the Department of Transportation will determine the capacity of our merchant marine industries to meet these requirements and to provide the sealift required to support essential industrial activity during wartime. Both Departments will promote the incorporation of national defense features in new and existing ships.

Fifth, the Departments of State and Transportation, the Special Trade Representative, and other appropriate agencies shall ensure that international agreements and federal policies governing use of foreign flag carriers protect our national security interests and do not place U.S. industry at an unfair competitive disadvantage in world markets. During peacetime, federal agencies shall promote, through efficient application of laws and regulations, the readiness of the U.S. merchant marine and supporting industries to respond to critical national security requirements. U.S. Government policies and programs shall provide for an environment which fosters the competitiveness and industrial preparedness of all industries including the maritime industry.

Finally, development and implementation of specific sealift and supporting programs will be made with full consideration of the costs and benefits involved. New programs to enhance our ability to meet national security sealift requirements shall compete for resources with other national security programs.

Progress towards implementation of this policy will be overseen by the Policy Coordinating Committee on Emergency Preparedness and Mobilization Planning. Issues associated with implementation of this policy may be resolved through this structure.

The Iraqi invasion of Kuwait created an urgency previously absent from sealift construction. Suddenly sealift has become a high priority program. As a result, construction of sealift ships represents one of the best business opportunities available to the U.S. maritime industry.

Mideast Crises Create Impetus For Sealift

It's ironic that two Mideast oil producing countries created the impetus for building sealift ships—on two separate occasions over the past 10 years. Iran created the first impetus, when it seized the U.S. embassy in Teheran and held Americans hostage during late 1979 to 1981.

Iraq provided the second impetus when it invaded Kuwait and created a military stand-off between Iraqi and U.S. forces which has yet to be resolved as of press time. In both cases military planners found lack of adequate sealift to be a serious deficiency.

When Iran took Americans hostage, military planners in this country found a serious shortage of capability to field and support military equipment in the Persian Gulf. While it was possible to get troops to the area quickly by transport aircraft, it was not possible to quickly field tanks, guns, equipment and supplies to support military operations. This serious shortage gained much attention in the Pentagon during the final months of the **Carter** Administration and initial years of the **Reagan** Administration.

Period Between Mideast Hostilities

Settlement of the Iranian hostage crisis took the pressure off strategic sealift requirements. The Navy and other DOD planners retreated to a series of studies which examined sealift requirements from every possible point of view. These studies substituted for action.

Iraq Invasion Changes Picture

Iraq's invasion of Kuwait created a flurry of concern about sealift capability. As in the Iranian hostage crisis, sealift suddenly became a priority interest to the military. As a result, Congress injected $900 million in the FY 1991 budget for sealift ship construction—and told DOD to get on with the program.

House Appropriation Committee Directions

In the October 9, 1990 report accompanying the House defense appropriations bill, the House Appropriations Committee expressed its desire to get on with a new sealift program:

". . . The Committee directs the Navy to immediately develop an acquisition plan to build new Roll On/

Roll Off type ships to transport one additional heavy Army division. The Committee notes that the speed of these ships need not be equal to the speed of current SL-7 ships, but in other respects should resemble the existing SL-7 ships. The Committee expects that the ships would be maintained, manned and exercised as is the case with the SL-7 ships. The design should also focus on commercial rather than military standards in order to control cost. The Navy is to provide a report on this aspect of the program by March 1, 1991 and to begin contracting the program 30 days after submitting the report."

Senate Appropriations Committee Directions

The Senate Appropriations Committee also addressed the sealift issue in the October 11, 1990 report accompanying the Senate defense appropriations bill:

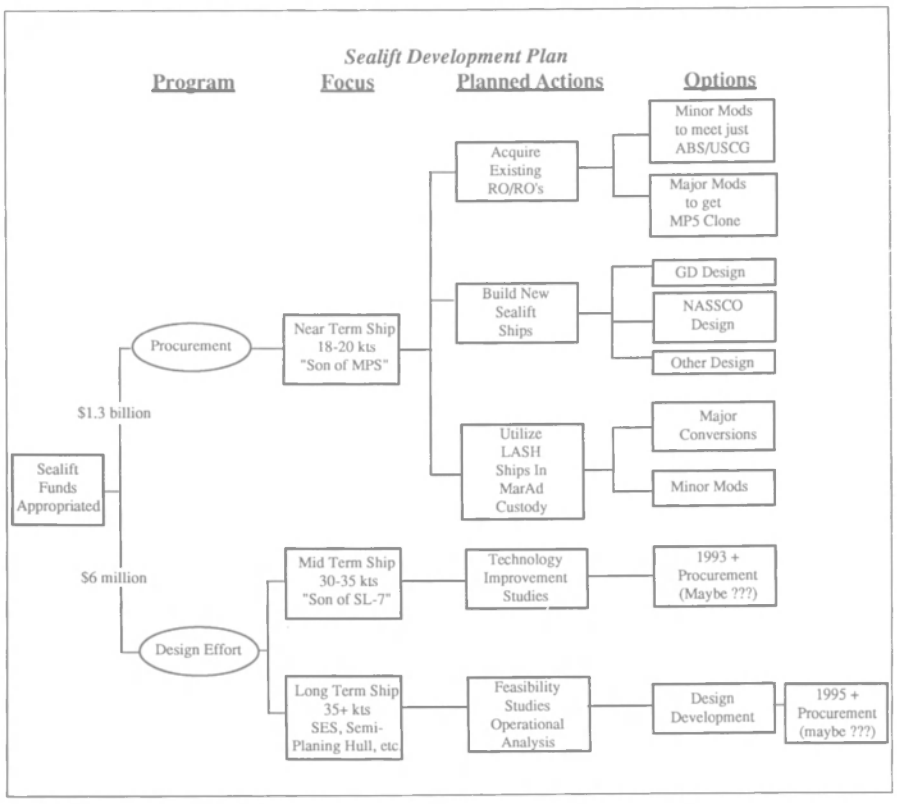
"The Committee believes the Defense Department should use the funds provided for the construction of ships for Maritime Prepositioning (MPS) for Army equipment. It is understood that the funding recommended would be sufficient to provide for at least one additional squadron of MPS ships. Considering that the MPS ships demonstrated their utility in the recent operation, the Committee believes additional ships of this type could provide a much needed capability to deploy equipment rapidly. Furthermore, as equipment is withdrawn from overseas locations, the Committee believes the military departments should examine storing this equipment on prepositioned ships instead of retiring or otherwise disposing of it."

FY 1991 Defense Authorization Bill

In authorizing a new fast sealift program, the Congress gave loose guidelines to the Navy and required a detailed report be prepared within six months describing how the program will be implemented:

"The Conferees agree to establish a fast sealift program for the construction and operation of cargo vessels that incorporate features essential for military use of the vessels. The Secretary of the Navy would be responsible for the design and construction of the vessels after consultation with the Administrator of the Maritime Administration. Ships constructed under the program could be dedicated to military use if the Secretary of the Navy determines that it is in the national interest for the ships to be immediately available. Ships dedicated to military use would be required to have a full or partial crew. The Conferees are aware that there may be a number of options for dedicated military use with a full or partial crew and intend that it include operation of ships as is presently done with the prepositioned ship programs and with the SL-7 ship program, in which ships are maintained in a reduced operational status with a nucleus crew and planned to be able to deploy in four days. Ships not dedicated to military use would be leased for commercial operation.

The Conferees agree not to recommend a particular design for ships built under the program.



Scene Is Set

Congress has authorized a new sealift ship program and has provided funds for this purpose. All that's required is for DOD to get on with the activity. A flurry of activity is now taking place in DOD, Navy and Army to determine the size and composition of future sealift spending.

The Navy now has available substantial funds to initiate the sealift program. Almost $1.3 billion has been provided by Congress for sealift ship construction. An additional $500 million is available for ship operation and $15 million is available for fast sealift technology development.

Two Prong Approach Likely

As shown in the accompanying exhibit, Navy planners have divided sealift activities into near and mid/long term programs. The near term program deals with satisfying the current sealift deficiency by acquiring new ships which are within the state-of-the-art. The mid/long term program seeks to develop new designs and technology which improve strategic sealift mobility.

IMA has just published an in-depth assessment of this new sealift program. The report analyzes options being considered, acquisition planning, likely contracting rules, business situation of likely competitors and identifies points of program responsibility. Over the next 12 months, IMA will update the report with advisory memos as the sealift program matures into ship construction contracts.

The report is available for $1,200. The price includes the initial report plus 12 months of advisory memos. To order, contact: IMA Associates, Inc., 2600 Virginia Avenue, NW, Suite 901, Washington, DC 20037; telephone: (202) 333-8501; and fax: (202) 333-8504.

MAJOR NAVY CONTRACTS

(Compiled by Maritime Reporter Staff)

Telephonics Corporation, Command Systems Division, Farmingdale, N.Y., was awarded a **$23,371,700** firm-fixed-price contract for five AN/TPX-42A(V)12 amphibious air traffic control direct altitude and identity readout systems for LHD 2, LHD 3, LHD 4, CVN 74 and various support activities. The work is expected to be completed in May 1994. The Naval Air Systems Command, Washington, D.C., is the contracting activity (N00019-90-C-0219).

General Electric Company, Electronic Systems Department, Moorestown, N.J., was awarded a **$75,000,000** cost-plus-fixed-fee contract for combat system engineering services to assess and evaluate candidate systems, modifications, and equipments for inclusion in potential Aegis weapon system baseline upgrades. The work is expected to be completed September 30, 1995. The Naval Sea Systems Command, Washington, D.C., is the contracting activity (N00024-91-C-5128).

IBM Corporation, Federal Sector Division, Manassas, Va., was awarded a **$9,466,709** firm-fixed-price contract modification for the upgrade and conversion of AN/BQQ-5 submarine acoustic 21B64 trainers. The work is expected to be completed in August 1995. The Naval Sea Systems Command, Washington, D.C., is the contracting activity (N00024-89-C-6081).

TRW Systems Division, Federal Systems Group, Fairfax, Va., was awarded an **$87,000,000** (with all options exercised) cost-plus-award-fee contract for systems engineering and integration support services for integrated undersea surveillance programs for the Space and Naval Warfare Systems Command's Undersea Surveillance Project Office. The work is expected to be completed September 30, 1995. The Space and Naval Warfare Systems Command, Washington, D.C., is the contracting activity (N00039-91-C-0047).

General Dynamics Corporation, Electric Boat Division, Groton, Conn., was awarded an **$11,060,832** cost-plus-award-fee contract modification for combat control system engineering and technical services for Ohio class submarines. The work is expected to be completed September 30, 1991. The Naval Sea Systems Command, Washington, D.C., is the contracting activity (N00024-90-C-2109).

General Dynamics Corporation, Electric Boat Division, Groton, Conn., was awarded a **$56,082,270** cost-plus-fixed-fee contract modification for engineering and technical services for Ohio class submarines. The work is expected to be completed September 30, 1991. The Naval Sea Systems Command, Washington, D.C., is the contracting activity (N00024-90-C-2115).

Todd Pacific Shipyard Corporation, Seattle, Wash., was awarded a **$63,361,566** cost-plus-award-fee contract with options for the Phased Maintenance Program for fast combat support ships (AOEs) homeported in Seattle, Wash. The work is expected to be completed May 19, 1995. The Naval Sea Systems Command, Washington, D.C., is the contracting activity (N00024-91-C-8503).

Detyens Shipyards, Mount Pleasant, S.C., was awarded a **$9,152,126** firm-fixed-price contract for the regular overhaul of USS Oak Ridge (ARDM 1). Work will be performed in Wando, S.C., and is expected to be completed July 5, 1991. The Supervisor of Shipbuilding, Conversion and Repair, Charleston, S.C., is the contracting activity (N00024-85-H-8639).

Raytheon Company, Equipment Division, Wayland, Mass., was awarded a **$9,891,633** modification to a previously awarded cost-plus-award-fee contract to perform operation and maintenance servcies for the Relocatable Over-the-Horizon Radar on Amchitka Island, Alaska, and its test bed in Chesapeake, Va. This modification covers the period from December 1, 1990, to September 30, 1991. The work is expected to be completed September 30, 1991. The Space and Naval Warfare Systems Command is the contracting activity (N00039-90-C-0007).

General Electric Company, Machinery Apparatus Operation, Schenectady, N.Y., was awarded an **$88,328,000** cost-plus-fixed-fee contract for naval nuclear propulsion components. The Naval Sea Systems Command, Washington, D.C., is the contracting activity (N00024-91-C-4007).

Westinghouse Electric Corporation, Plant Apparatus Division, Wilkins Township, Pa., was awarded a **$76,257,000** cost-plus-fixed-fee contract for naval nuclear propulsion components. The Naval Sea Systems Command, Washington, D.C., is the contracting activity (N00024-91-C-4055).

Techniarts Engineering, Silver Spring, Md., was awarded a **$14,333,330** firm-fixed-price contract for shipboard information, training and entertainment systems for various ship classes. The work is expected to be completed in July 1991. The Naval Sea Systems Command, Washington, D.C., is the contracting activity (N00024-91-C-4157).

North Atlantic Industries, Inc., Hauppauge, N.Y., was awarded a **$18,491,008** firm-fixed-price delivery order for 1,175 U.S. Navy standard teleprinters for shipboard use. The work is expected to be completed in March 1992. The Space and Naval Warfare Systems Command, Washington, D.C., is the contracting activity (N00039-84-D-0192).

Raytheon Company, Missile Systems Division, Bristol, Tenn., was awarded a **$64,942,180** firm-fixed-price contract to produce and assemble 213 Standard Missile Two (Block III) guidance, control airframe and autopilot battery missile sections for

(continued)

Major Navy Contracts

(continued)

Aegis and Terrier class ships. The work is expected to be completed in December 1992. The Naval Sea Systems Command, Washington, D.C., is the contracting activity (N00024-91-C-5304).

Swiftships, Inc., Morgan City, La., was awarded a **$13,841,000** firm-fixed-price contract to construct two 88-foot Route Survey Vessels (RSVs). Also included are training, associated data and technical manuals. Work is expected to be completed June 9, 1992. This contract fulfills a requirement for the Arab Republic of Egypt under the Foreign Military Sales Program. The Naval Sea Systems Command, Washington, D.C., is the contracting activity (N00024-91-C-2205).

Norfolk Naval Shipbuilding and Drydock Corporation, Norfolk, Va., was awarded a **$46,774,732** cost-plus-award-fee contract including options for the Phased Maintenance Program for tank landing ships (LSTs) homeported in Norfolk, Va. Work is expected to be completed August 25, 1995. The Naval Sea Systems Command, Washington, D.C., is the contracting activity (N00024-91-C-8505).

Newport News Shipbuilding and Dry Dock Company, Newport News, Va., was awarded a **$26,576,237** cost-plus-fixed-fee contract for expanded planning yard services for SSN-688 class submarines. Work is expected to be completed September 30, 1991. The Naval Sea Systems Command, Washington, D.C., is the contracting activity (N00024-91-C-2103).

Falcon Carriers Incorporated, Houston, Texas, was awarded a **$9,436,040** firm-fixed-price with reimbursables contract to provide ocean transportation for point-to-point delivery of petroleum products to armed services users throughout the world. The Military Sealift Command, Washington, D.C., is the contracting authority (N00033-91-C-1701).

Texaco Incorporated, Port Arthur, Texas, was awarded an **$11,265,952** firm-fixed-price with reimbursables contract to provide ocean transportation for point-to-point delivery of petroleum products to armed services users throughout the world. The Military Sealift Command, Washington, D.C., is the contracting authority (N00033-91-C-1702).

Philadelphia Tanker Corporation, care of Maritime Overseas Corporation, New York, N.Y., was awarded a **$12,595,736** firm-based-price with reimbursables contract to provide ocean transportation for point-to-point delivery of petroleum products to armed services users throughout the world. The Military Sealift Command, Washington, D.C., is the contracting authority (N00033-91-C-1700).

Ingalls Shipbuilding Incorporated, Pascagoula, Miss., was awarded a **$30,110,620** cost-plus-fixed-fee modification for planning yard services to support the Fleet Modernization Program for DD 963/DD 993 class ships. Work wil be completed September 30, 1991. The Naval Sea Systems Command, Washington, D.C., is the contracting activity (N00024-88-C-2081).

General Dynamics Corporation, Electric Boat Division, Groton, Conn., was awarded a **$5,608,300** cost-plus-fixed-fee contract for reactor plant planning yard services for nuclear-powered guided missile cruisers. The Naval Sea Systems Command, Washington, D.C., is the contracting activity (N00024-91-C-4030).

General Dynamics Corporation, Electric Boat Division, Groton, Conn., was awarded a **$9,904,000** cost-plus-fixed-fee contract for reactor plant services for nuclear-powered submarines. The Naval Sea Systems Command, Washington, D.C., is the contracting activity (N00024-91-C-4029).

Hazeltine Corporation, Braintree, Mass., was awarded a **$6,300,538** firm-fixed-price contract to produce 1,382 acoustic device countermeasures for submarines. Work will be completed in November 1993. The Naval Sea Systems Command, Washington, D.C., is the contracting activity (N00024-91-C-6201).

Raytheon Company, Equipment Division, Wayland, Mass., was awarded a **$15,260,000** firm-fixed-price contract for 18 transmitters for the MK-92 fire control system and two ordnance alteration (ORD-ALT 15433) New Threat Upgrade (NTU) subkits. The work will be completed June 30, 1993. This contract combines the purchases of the U.S. Navy with the governments of Taiwan and Spain under the Foreign Military Sales Program. The Naval Sea Systems Command, Washington, D.C., is the contracting activity (N00024-90-C-5634).

Bath Iron Works Corporation, Bath Maine, was awarded a **$5,145,046** cost-plus-fixed-fee option to a previously awarded contract for planning yard services for DDG 51 class Aegis destroyers. Work will be completed September 30, 1991. The Naval Sea Systems Command, Washington, D.C., is the contracting activity (N00024-90-C-2801).

PROPOSALS/BIDS

The *Commerce Business Daily* lists notices of proposed government procurement actions, contract awards, sales of government property, and other procurement information. The following is a brief listing of some of the proposed government contracts available.

BID DUE DATE TO BE DETERMINED for **the restricted availability of YRBM-10**. The commencement date will be in the third quarter of fiscal year 1991. Characteristics of the vessel are: overall length, 111 feet 3 inches; beam, 35 feet 3 inches; draft (full load): 3 feet 5 inches; full load displacement: 250 tons; and light load displacement: 230 tons. Contact: Suzanne Kennedy (804) 743-3834, procurement assistant, Janet Lietha, contracting officer, Supervisor of Shipbuilding, Conversion and Repair, Naval Base, Charleston, S.C.

PROPOSALS DUE DATE MARCH 12 for **drydocking and repair of U.S. tug Stanley**. Sol. DACW49-91-B-0005. Contractor to provide all plant, equipment, materials and labor to drydock and repair vessel. Main characteristics: 86-foot 5-inch overall length; 23-foot beam; 10-foot 4-inch depth and 229-ton displacement. Requirement includes towing from Buffalo, N.Y., to drydocks and return to Buffalo. Contact: Richard W. Reffner (716) 879-4250 at Department of the Army, U.S. Army Engineer District, Buffalo, N.Y. 14207-3199.

PROPOSALS DUE APRIL 23 FOR **the restricted availability of the USS Copeland (FFG-25).** Sol. N62791-91-B-0035. Replace galley equipment. Work to be performed at Naval Station San Diego. Contract dates are May 6 through June 14, 1991. All San Diego area sources who currently hold, or are qualified for and willing to enter into a Master Agreement for Repair and Alteration of Vessels (DFARS 17.71) prior to award, may submit a bid which shall be considered by agency. Contact: Charlotte Senhen, contract specialist (619) 556-2311, Supervisor of Shipbuilding, Conversion and Repair, Naval Station Box 119, San Diego, Calif. 92136-5119.

PROPOSALS DUE FEBRUARY 11 for **miscellaneous ship repairs, drydock of YOGN-125**. Sol. N47456-91-R-0006. The work to be accomplished on the island of Oahu, Hawaii during the period the period from April to May 3, 1991. The contractor must have (or be able to execute) Master Ship Repair Agreement/Agreement for Boat Repair with the Naval Sea Systems Command, U.S. Navy. Request for copies of the solicitation should be received no later than 10 days prior to the closing date. Contact: Dwight N. Jackson (808)474-5502, contracting officer, Officer in Charge, Supervisor of Shipbuilding, San Diego Detachment, Code 9400, Pearl Harbor, Hawaii 96860-5353.

BIDS DUE FEBRUARY 11 for **dockside repairs to the U.S. Coast Guard cutter Escanaba (WMEC-907).** Sol. DTCG80-91B-3FA841. Furnish all labor, equipment materials, and services required for the dockside repair at the vessel's homepier in Boston, Mass. The major base items which may be performed include but are not limited to the following: 1. Temporary logistics; 2. Clean/visual inspect DSL/JP-5 tanks; 3. Install gaged Scup. Valve 4. Mod. visual ident. SA29; 5. Clean/inspect sewer tanks; 6. Repair shipboard vent system; 7. Renew engine room machine insulation. Optional items include but are not limited to the following: Work pertaining to: 1. Pre-seal water tank; 2. Pre-Vac collection tank; 3. Pre for grey water tank; 4. Pre Aft grey water tank; 5. Pre seal water tank. The 270-foot vessel's availability is scheduled for March 20, 1991. The proposed contract listed here is part of the Small Business Competitiveness Demonstration Program. Contact: David Bahary, contract specialist (212) 668-3377, Sharon Hunter, contracting officer, at Commander, U.S. Coast Guard Maintenance & Logistics Command Atlantic (vpl), Bldg. 400, Section M, Governors Island, N.Y. 10004-5085.

PROPOSALS DUE MARCH 12 for **restricted availability for the USS Kinkaid (DD-965)**. Sol. N62791-91-B-0042. Work to be performed at the Naval Station San Diego for the contract dates April 29 to May 19, 1991. All San Diego sources who currently hold, or are qualified for and willing to enter into a Master Agreement for Repair and Alteration of Vessels (DFARS 17.71) prior to award, may submit a bid which shall be considered by the agency. Contact: Charlotte G. Senhan, contract specialist (619) 556-2312, at Supervisor of Shipbuilding, Conversion and Repair, Naval Station, San Diego, Calif. 92136-5119.

BIDS DUE FEBRUARY 12 for **restricted availability of the USS Truxton (CGN-35).** Sol. N62799-91-B-0001. Contact: Barbara Huot (206) 526-3315, contracting officer, R.R. Morrison (206) 526-3376.

BIDS DUE FEBRUARY 20 for **drydocking selected restricted availability for the USS Flatley (FFG-21).** Sol. N62670-91-R-0006. The work will include hull, machinery, electrical, electronics, and piping work. Referenced plans will be available for pick-up at the Office of the Supervisor of Shipbuilding, Conversion and Repair, Jacksonville, Fla., or examined at the Offices of the Supervisors of Shipbuilding, Conversion and Repair in Jacksonville, Charleston, S.C., Bath, Maine, Boston, Mass., Brooklyn, N.Y., Newport

(continued)

Proposals/Bids

(continued)

News, Va., New Orleans, La., Pascagoula, Miss., and Portsmouth, Va. Offers restricted to holders of Master Agreement for Repair and Alteration of Vessels. Solicitations are being extended to bidders in the East and Gulf Coast areas of the continental U.S. Contact: William T. Show (904) 246-5741, Supervisor of Shipbuilding, Conversion and Repair, Mayport Naval Station, Jacksonville, Fla. 32228-0158.

BIDS DUE FEBRUARY 15 for the **drydocking selected restricted availability for the USS Spruance (DD-963).** Sol. N62670-91-R-0007. The project will include hull, machinery, electrical, electronics, and piping work. Referenced plans will be available for pick-up at the Office of the Supervisor of Shipbuilding, Conversion and Repair, Jacksonville, Fla. This data may also be examined at the Office of the Supervisor of Shipbuilding, Conversion and Repair, Jacksonville, Charleston, S.C., Bath, Maine, Boston, Mass., Brooklyn, N.Y., Newport News, Va., New Orleans, La., Pascagoula, Miss., and Portsmouth, Va. Offers restricted to holders of Master Agreement for Repair and Alteration of Vessels. Solicitation is being extended to bidders in the East and Gulf Coast areas of the Continental United States. Contact: William T. Show at (904) 246-5741, Supervisor of Shipbuilding, Conversion and Repair, P.O. Box 20158, Mayport Naval Station, Jacksonville, Fla. 32228-0158.

Litton Wins $28.7-Million Contract To Overhaul Navy Destroyer

Litton's Ingalls Shipbuilding division, Pascagoula, Miss., has won a $28.7-million U.S. Navy contract for the regular overhaul of the Spruance-class multimission destroyer USS Peterson (DD-969).

The Peterson, in service since 1977, is the seventh of 31 Spruance-class ships built by Ingalls in the 1970s and early 1980s.

The 563-foot, 8,800-ton ship is slated to arrive at Ingalls in March 1991 for the 13-month overhaul. Work will include combat systems upgrades, general machinery refurbishment and drydock work on the hull.

ABS Signs Contracts With U.S. Navy And NSF

A three-year contract with the U.S. Navy, Naval Sea Systems Command for engineering analysis and survey services totaling $7,600,000 was recently signed by the ABS Government Services Unit. The contract will include work on combatant and noncombatant vessels. ABS work for the Navy in the past has involved research vessels, torpedo test craft, assault landing vessels, helicopter support vessels, special mission and service ships, tankers, drydocks and other auxiliary-type vessels of all kinds.

A four-year contract from the National Science Foundation (NSF) was also received by the ABS Government Services Unit for a detailed ship inspection program of up to 12 vessels owned by the U.S. Government and operated by oceanographic research institutions. The program provides for vessel material-condition surveys on an annual basis covering structural, mechanical, and electrical systems as well as at-sea surveys of scientific instrumentation and laboratory equipment.

Persian Gulf Merchant Shipping Threatened By Drifting Mines

A new threat to Persian Gulf shipping may be posed by drifting mines near Saudi Arabia's offshore oil fields. Western naval sources are unclear whether the mines are freshly sown or left over from the Iran-Iraq war.

Sailors in the busy waterway, which is conduit for two-thirds of the Western world's oil, were worried over the discovery of at least six mines off the kingdom's northern gulf coast during December.

Shipping executives said the number of mines and the short period of time in which they were discovered suggested they were new.

Coast guard patrols from northern gulf states have spotted and destroyed only a few isolated mines before this discovery.

Saudi and American disposal teams dealt with the six floating mines last month, U.S. Navy sources said, but their origin and age were not known.

ASSESSMENT OF THE U.S. NAVY SEALIFT SHIP PROGRAM

Report No. 7116 -- $1,200 per copy
January 1991

Navy has $1.3 billion available to procure sealift ships. Construction and/or conversion of these ships represents one of the best near term business opportunities available to shipbuilders, equipment manufacturers and other firms in the maritime industry.

A new, in-depth report by IMA assesses Navy's plans and options for sealift ship procurement. The report provides information needed to develop a business strategy and plan of action for involvement in the sealift program.

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- - - - - OUTLINE OF REPORT - - - - -

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As the program is still in a formative stage, advisory memos will be sent to subscribers over the next 12 months. These memos will report and analyze all major sealift program developments as they occur.

To order please contact: **IMA Associates, Inc. - 2600 Virginia Avenue, NW - Suite 901 - Washington, D.C. 20037 - Telephone (202) 333-8501 - Fax (202) 333-8504.** Telephone or telefax orders will be accepted.

Lasers For Ship Defense Examined By U.S. Navy

The U.S. Navy is examining lasers for detection, identification and destruction of targets in light of more stealthy and speedy threats, according to **Aaron Budgor**, former Navy program manager for the SDI Firepond laser radar program, who is doing long-range planning for the Naval Research Laboratory.

Navy researchers contend lasers could have a lower cost per engagement than tactical missiles. Mr. **Budgor** said the cost of tactical defensive missiles have risen from $50,000 to $250,000 a shot. The cost of a chemical laser has been estimated at $5,000 to $10,000 per engagement, after factoring in hardware and crew training, he said.

Mr. **Budgor** noted that proposals for all-electric ships are calling for 50- to 100-megawatt power supplies. "With that kind of power it is not hard to envision using a free-electron laser" for shipboard defense. He added there are research opportunities in examining nuclear reactor-pumped lasers, "which in principle would have an unlimited magazine."

Williard Marine Wins U.S. Navy RIB Contract

Williard Marine, Inc., a leading manufacturer of rigid inflatable boats (RIBs) and other ship's boats, was recently awarded a contract for the 24-foot RIB, MKII. The award was made by the Naval Sea Systems Command, Washington, D.C., for the construction of 41 RIBs. The contract also contains options for up to 65 additional boats for FY92. Williard Marine built 34 of these boats for NAVSEA in 1990 under a previous contract. The RIB is designed for service as a standard ship's boat for general purpose use.

Williard Marine produces RIBs for commercial and military markets in 18-, 22- and 24-foot sizes at its manufacturing plant in Anaheim, Calif. The RIBs are available with various diesel inboard and outboard power options.

For free literature detailing Williard Marine RIBs,

Circle 70 on Reader Service Card

TMSA Holds Annual Naval Outlook And Assessment Conference In Washington

"The Technical Marketing Society of America (TMSA) held its Annual Naval Outlook and Assessment Conference on December 3-5, 1990, at the Ritz-Carlton Pentagon City Hotel in Washington, D.C. The event, attended by more than 100 government and industry professionals, was highlighted by presentations from 11 industry executives and 10 high-ranking Navy officials.

The conference was organized for dissemination of information, and provided attendees the chance to ask questions and interact with the presenters and colleagues.

For more information regarding TMSA, call (714) 821-8672.

J.D. Bolger & Associates Expands Services

J.D. Bolger & Associates of Virginia Beach, Va., recently announced the addition of marketing and sales support to the list of management support efforts now offered to the marine industry. This expanded service allows them to more fully assist their clients.

J.D. Bolger & Associates was started in 1989 by **James Bolger**. Its first contract provided support to SPAR Associates on their Proof-of-Concept contract. Work on this contract included planning, scheduling and cost schedule control implementation for DSRAs on the USS Virginia (CGN-38) at Norfolk Naval Shipyard and the USS Hawes (FFG-53) at the Charleston Naval Shipyard.

Prior to the inception of J.D. Bolger & Associates, Mr. **Bolger** had been the assistant general manager of marketing, estimating and planning at Colonna's Shipyard, Inc., Norfolk, Va.

J.D. Bolger & Associates can be reached at (804) 498-2776 or by fax: (804) 479-3497.

Bath Iron And Ingalls Win Contracts Worth Over $500 Million Each

Navy contracts worth over $500 million each were recently won by Bath Iron Works and Ingalls Shipbuilding Inc.

Bath Iron Works was awarded a $513.5 million contract to build two DDG-51 missile destroyers.

Also, Ingalls Shipbuilding Inc., a unit of Litton Industries Inc., won a $500.9 million contract for two DDG-51 missile destroyers.

Nuclear Sub Launched Using NEI Syncrolift For First Time Ever

The U.K. nuclear hunter killer submarine HMS Triumph was recently launched at the Devonshire Dock complex of Vickers Shipbuilding and Engineering Ltd. (VSEL), Barrow-in-Furness. This was the first time a nuclear submarine had ever been launched using an NEI Syncrolift.

This event represents another major achievement for NEI Syncrolift of Miami, Fla., which designs and builds the articulated shiplifts, platforms and transfer systems.

The Barrow Syncrolift was commissioned in December 1986 as part of the massive modernization of the Vickers shipbuilding facilities. It is sized to handle the extensive range of submarine designs which VSEL offers, including the very largest, and will be used to launch the HMS Vanguard, first of the U.K.'s Trident submarines.

NEI Syncrolift is a business unit of NEI Clarke Chapman Ltd., itself part of Northern Engineering Industries plc, the major energy conversion, materials handling and project management company based in Newcastle-upon-Tyne. NEI is a member of the Rolls-Royce plc Group.

For more information and free literature,

Circle 30 on Reader Service Card

U.S. Government Awards Ship Repair Contracts

Several small contracts were recently awarded to U.S. shipyards for various ship repair and overhaul work.

Merce Industries, Inc., Toledo, Mich., was awarded a $304,200 contract to repair three ships by the U.S. Army Engineer District, Detroit, Mich.

Detyens Shipyards, Inc., Mt. Pleasant, S.C., was awarded a $781,959 contract for the regular overhaul of the non-self-propelled open lighters YC-360, YC-1444 and YC-1553. The contract was awarded by the Supervisor of Shipbuilding, Conversion and Repair, Jacksonville, Fla.

Furthermore, Detyens was also awarded a $297,578 contract for the post shakedown availability and drydocking of the USS Relentless (T-AGOS-18).

Continental Maritime, San Diego, Calif., received a $155,382 contract from the Supervisor of Shipbuilding, Conversion and Repair, San Diego, Calif., for the regular availability of USS Berkley (DDG-15).

In addition, Continental Maritime was also awarded a $428,276 contract for work on the USS Ranger (CV-61).

Comar Industries, Inc., Charleston, S.C., was awarded a $200,659 contract for various repairs on the USS William V. Pratt (DDG-44). The contract was awarded by the Supervisor of Shipbuilding, Conversion and Repair, Charleston, S.C.

Reedsport Machine & Fabrication, Reedsport, Ore., was recently awarded a $346,979 contract for haulout and repairs of U.S. Coast Guard 44-foot motor lifeboats.

Pacific Dry Dock & Repair Co., Oakland, Calif., was awarded a $288,350 contract for the drydocking and repair of the U.S. Coast Guard cutter Sherman. The contract was awarded by the Commander (vpl), Maintenance and Logistics Command Pacific, Coast Guard Island, Alameda, Calif.

The USS Chosin , the 13th of 19 Ticonderoga Class Aegis guided missile cruisers built for the U.S. Navy by Ingalls Shipbuilding division of Litton in Pascagoula, Miss., sails through the Gulf of Mexico during predelivery sea trials.

USS Chosin Joins Pacific Fleet —13th Aegis Cruiser By Ingalls

The USS Chosin (CG 65), the 13th Aegis guided missile cruiser to be built for the U.S. Navy by Ingalls Shipbuilding division of Litton, recently joined the U.S. Pacific Fleet after being commissioned at the shipyard last month.

The Navy and Ingalls invited the general public to attend the ceremony, and to participate in guided tours aboard the CG 65 immediately following the commissioning at the company's facilities on the west bank of the Pascagoula River.

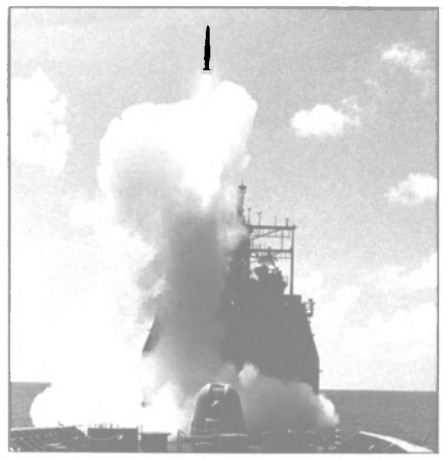
Gen. **Raymond G. Davis**, USMC (ret.), delivered the principal address at the commissioning. General **Davis** earned the Congressional Medal of Honor as a lieutenant colonel during the lst Marine Division's historic fight to breakout, during the bitter-cold winter of 1950, from a Chinese Communist encirclement at the Chosin Reservoir during the Korean War, the battle for which CG 65 is named.

There, against overwhelming odds, he led his battalion in a four-day battle which saved a rifle company from annihilation, and opened a mountain pass for the escape of two trapped Marine regiments. Some 400 members of "The Chosin Few," an organization of the survivors of the breakout at Chosin, were on hand for the commissioning. The general's wife, **Willa**, served as ship's sponsor for the USS Chosin, and participated in the commissioning ceremony. As sponsor, Mrs. **Davis** christened the ship with the traditional bottle of champagne during ceremonies at Ingalls in October 1989.

Also participating in the commissioning were Adm. **John W. Nyquist**, USN, Assistant Chief of Naval Operations, Surface Warfare; Vice Adm. **Peter M. Hekman Jr.**, USN, Commander, Naval Sea Systems Command; Vice Adm. **David M. Bennett**, USN, Commander, Naval Surface Force, U.S. Pacific Fleet; Rear Adm. **John T. Hood**, USN, Aegis Shipbuilding Program Manager; Capt. **R. Bruce Woodruff**, USN, Supervisor of Shipbuilding, Conversion and Repair, Pascagoula; and **Jerry St. Pe**, senior vice president of Litton Industries and president of Ingalls Shipbuilding. Col. **Charles R. Frissell**, USAF, Staff Chaplain, Keesler Air Force Base in Biloxi, Miss., offered the invocation.

Capt. **Martin J. Mayer**, USN, assumed command of the USS Chosin, with Lt. Comdr. **Michael A. LeMieux**, USN, as his executive officer.

The CG 65 joins the fleet as one of the U.S. Navy's most capable battle group surface combatants. Her Aegis Combat System is an extensive integration of electronic detection, engagement and control equipment, which provides the ship with truly multimission capabilities. Four fixed array radar antennae, mounted on the ship's superstructure, replace conventional rotating radars, enabling the ship and her crew to scan in all directions simultaneously. The CG 65 is also equipped with the MK 41 Vertical Launching System (VLS). Four GE LM2500 gas turbine engines power the 9,500-ton ship to speeds in excess of 30 knots. The vessel is 567 feet long, with a 55-foot beam.



BIRD AWAY—A standard surface-to-air missile is fired from the forward missile magazine aboard the USS Chosin during predelivery sea trials.

Ingalls, lead shipbuilder for five of the latest classes of Navy surface combatants, has delivered 54 major warships into the Navy's Fleet since 1975, a major portion of the surface combatants delivered during the period. Twelve Ingalls-built Aegis cruisers have preceded the USS Chosin into the U.S. Navy's Fleets since 1983. Following CG 65, Ingalls has six additional Aegis cruisers and six Arleigh Burke (DDG 51) Class Aegis destroyers in various stages of production.

USS Wasp (LHD 1), first of a new class of multipurpose amphibious assault ships being built by Ingalls, was commissioned in July 1989, and construction is well under way on three additional ships of the class, Essex (LHD 2), Kearsarge (LHD 3) and Boxer (LHD 4).

A/S Deif Offers Automatic Control For Auxiliary Engines

A few years ago, the Danish manufacturer of control systems, A/S Deif, introduced its Delomatic automatic control system for ships auxiliary engines capable of controlling up to four diesel alternators, a turbo alternator and a shaft alternator. The system automatically shares the load between operating generators and in one operating mode two operating machines are asymmetrically loaded for 12-hour alternative periods for the most economical manner of operation.

The Delomatic system is characterized by being especially designed for marine and rugged, modular construction of high flexibility. So that the system can easily be adapted to almost all common types of maritime electric power generating plants.

Physically, the Delomatic system consists of a common control panel for the system and a diesel control panel for each diesel generator set, all designed for desk mounting.

The common control panel has been equipped with auto/manual switch for changeover between automatic operation and manual operation via push-buttons on the diesel control panels.

For further information and free literature from A/S Deif,

Circle 67 on Reader Service Card

FCC Proposes New Ship Distress System

The Maritime distress and safety system will be modernized by a Federal Communications Commission proposal which will also phase out the use of the Morse code.

The new system will change international distress communications from the manual ship-to-ship system based on Morse code telegraphy to a fully automated ship-to-shore distress alerting system based on satellites and digital technology.

During the 1992-99 transition period, both the current manual Morse code system and the new equipment will be permitted.

Under the proposal, all cargo vessels 300 tons and over and all passenger ships that carry over 12 passengers must be equipped with the new system by February 1, 1999.

Benmar Offers New Fuel Management System To Commercial Industry

Benmar Marine Electronics, Santa Ana, Calif., which has supplied the pleasure boat market with reliable fuel management systems over the last five years, is now offering a commercial grade system.

Benmar's FMS-300 fuel management system was recently interfaced with several satellite transmitted vessel position tracking systems to report fuel consumption, vessel speed, and engine revolutions per minute back to the homeport for cost savings analysis. Because of the many variables involved, such as load and trim and engine, bottom and sea conditions, it can sometimes be hard to determine which throttle settings are best for optimum performance. Benmar uses durable stainless steel temperature compensated turbine type fuel flow transducers to measure both supply and return fuel flow rates up to 750 gph. Its advanced microprocessor computes engine burn rates, rpm, vessel speed through the water and will even receive speed over the ground from a loran, as well as many real time computations such as time to destination and fuel to destination. FMS-300 also provides an excellent monitoring source for engine operating conditions to help identify a problem before it causes a costly failure and reduces valuable operating time.

Benmar offers the system for both gasoline- and diesel-powered vessels.

For free literature detailing Benmar Marine Electronics' FMS-300,

Circle 55 on Reader Service Card

LARGEST CLEAN PRODUCT CARGO THROUGH PANAMA CANAL—The M/T Zidona passing through the Pedro Miguel Locks of the Panama Canal in mid-November. She carried a cargo of 53,100 tons of Jet Al aviation fuel from Texas City/Houston to the Far East. According to Shell, the vessel's operator, this is thought to be the largest clean product parcel ever to transit the canal. The Zidona is one of the series of 17 sister vessels built by Burmeister & Wain Shipyard in Denmark and was delivered in late 1989. She is a Panamax double-hull design, type CPT 54E, and has proved to be very successful for the company. The vessel is one of four ships from the series bareboat chartered by Shell International Marine Ltd., in London. For further information on B&W Shipyard,

Circle 59 on Reader Service Card

Jurong Shipyard Signs Norwegian Contract Deal

An exclusive long-term repair agreement with Westfal Larsen & Co. AS of Norway has been signed by Singapore' Jurong Shipyard Ltd.

The company is a joint venture between Temasek Holdings Ltd., a government investment agency, and Ishikawajima-Harima Heavy Industries Co. of Japan, which holds 30 percent.

No fixed monetary amount was attached to the contract. A spokesman said it will depend on the vessels that come for repairs.

Similar long-term agreements are held by Jurong with Chevron Shipping unit of Chevron Corp., San Francisco; Stolt Nielsen Inc., Panama City, Fla.; Indonesia's state energy monopoly Pertamina, and Jo Management, a chemical carrier operator based in Norway.

Simrad To Supply Electronic Equipment For Advanced Ocean Research Vessel

Simrad has signed a contract with Mjellem & Karlsen A/S for delivery of electronic equipment for an ocean research vessel being built in Bergen, Norway, for Korean Oceanographic Research and Development Institute (KORDI). The value of the contract is approximately NOK17 million (about $2.9 million).

The delivery consists of an advanced data management system integrating the research vessel's total instrumentation. The object is to achieve maximum efficiency of data collection and data utilization.

The contract also embraces equipment for navigation, dynamic positioning, fishery research, hydrographic seabed analysis and communication.

This contract confirms Simrad's strong position as a supplier of instrumentation systems for ocean research vessels. It also confirms the trend of integrating various instrumentation in advanced vessels.

For free literature giving more information on products from Simrad,

Circle 16 on Reader Service Card

Gretna Machine Awarded Contract To Build RO/RO Barge For Matson

Matson Navigation Co. has been awarded a $9 million contract by Matson Navigation Co. to design and build a 345-foot, roll-on/roll-off barge. The barge will be employed by Matson in its Hawaii Neighbor Islands service.

Det Norske Veritas Moves N.Y. Regional And Survey Office

The New York Regional and Survey Office of Det norske Veritas recently relocated its headquarters from Teaneck, N.J., to River Edge, N.J. The new address for the company is 80 Grand Avenue, Suite 201, River Edge, N.J. 07661; telephone: (201) 488-0112; telex: 139072 (W.U.) Veritas NYK; and facsimile: (201) 488-1778.

Oil Spill Response Center To Be Set Up At Port Hueneme

Marine Response Corporation, Washington, D.C., will set up the first U.S. marine spill response center funded by the oil industry in the Port of Hueneme, Calif., following a recent lease agreement.

The Marine Spill Response Corp., a non-profit organization funded by oil companies, shippers, receivers of oil and others, is designed to respond to oil spills which exceed the local capability to clean up.

Under a 20-year lease signed with Oxnard Harbor District, which is in charge of the Port of Hueneme, Marine Spill Response Corp. will pay the port $1.03 million annually to lease about 4 acres of office, warehouse and pier space.

The California facility, just one of five planned along the coasts of the U.S., will be fully operational in 1993. It will have a staff of 68, as well as crews and several ships.

Other facilities are planned for the New York area, Port Everglades, Fla., Seattle, Wash., and Lake Charles, La.

PSRY Contractors Complete Busy Year —Literature Offered

As 1990 drew to a close, the Portland Ship Repair Yard (PSRY) counted still another year of solid performance as one of the West Coast's leading commercial shipyards.

PSRY is now handling approximately 50 percent of all commercial ship repair on the coast as well as projects for the Navy and Coast Guard, Military Sea Lift Command, Maritime Administration, and other government ship repair customers.

PSRY and its three ship repair contractors—Cascade General, Inc. (Cascade), Northwest Marine, Inc. (Northwest), and West State, Inc. (WSI)—and its oil module fabricator Wright, Schuchart Harbor Co., registered more than $200 million in gross sales during the past year.

Employment at PSRY soared during 1990 to a peak total of 3,470 jobs and an average job rate of 2,222 workers. This is the highest employment in 45 years at the Swan Island ship facility.

Wright Schuchart Harbor Company completed the biggest oil modules ever fabricated for ARCO Alaska Inc., which were part of a $40 million project sealifted from PSRY to the Alaskan North Slope oil fields.

A major activity during the year was the breakout and activation of four Ready Reserve Force ships layberthed at PSRY by Cascade and Northwest for Persian Gulf service.

With the rehabilitation of Berth 301 at PSRY late in the year, all five of the original repair berths have been upgraded and are ready to serve today's vessels.

About $8.8 million has been invested from shipyard revenues in the rehabilitation program which started in 1981.

For free literature on the facilities and capabilities of PSRY,

Circle 25 on Reader Service Card

Sonsub Services Receives Letter Of Intent To Supply Two ROVs

Sonsub Services, Inc., Houston, Texas, has received a letter of intent from Coflexip Services to provide two remotely operated vehicles (ROVs) aboard the M/V Flex Service Three. The ROVs will be employed to support the laying of electric power cable for the SYU Harmony and Heritage jackets off the West Coast of California. Sonsub's ROVs will perform construction tasks. Work is expected to take place in the fall of 1991.

Sonsub is a leader in the development and operation of remotely controlled underwater vehicles and specialized tooling systems, and owns and operates a variety of ROV systems. The company maintains offices in the U.S., Australia and Southeast Asia.

HMS Marine Appointed East Coast Representative By Aluma*Feather

HMS Marine Hardware, Inc., Valley Stream, N.Y., now represents the Marine Interiors Division of Aluma*Feather from Maine to New Jersey, including New Hampshire, Massachusetts, Connecticut and New York.

Marine Interiors Division designs and manufactures lightweight aluminum shipboard furniture products including interior and exterior seating, tables, dining tables and seats, storage lockers, seat-lockers, and crew bunks. These products are designed to meet U.S. Coast Guard standards. Additionally, special configuration requirements are typically provided for by Aluma*Feather.

The use of lightweight aluminum furniture offers fuel-cost savings and greater payloads. In addition, aluminum construction offers higher reliability and reduced maintenance costs.

For further information and free literature,

Circle 33 on Reader Service Card

VIS Appoints Frank L. Beier Radio As Authorized Dealer

Vessel Information Systems, Inc. (VIS) recently announced the appointment of Frank L. Beier Radio, Inc. as an authorized dealer of their Vessel Instrumentation and Alarm System—VIAS System-128. The computer-based instrumentation and alarm system is now available at Frank L. Beier Radio.

Frank L. Beier Radio specializes in marine electronics packages for the commercial vessel market.

VIS selected Frank L. Beier Radio because of their outstanding performance in the marine electronics field.

For more information and free literature,

Circle 14 on Reader Service Card

Johansen Appointed GM Of McAllister Towing Of Baltimore

Edward T. Johansen

Brian A. McAllister, president of McAllister Towing and Transportation Company, Inc., New York, N.Y., has announced the appointment of **Edward T. Johansen** as general manager of McAllister Towing of Baltimore, Inc., formerly The Baker-Whiteley Towing Co. Mr. **Johansen**, whose appointment follows the recent retirement of **Richard C. Gross**, was operations manager.

Mr. **Johansen** has spent most of his professional career with Baker-Whiteley/McAllister, and brings to his new position an extensive background in the maritime industry, including all phases of tug and barge operations.

McAllister Towing and Transportation, Inc. is one of the oldest and largest tugboat companies on the U.S. East Coast, servicing the ports of Baltimore, New York, Philadelphia, Hampton Roads, Wilmington, N.C., Charleston, and Jacksonville, and port in Puerto Rico.

Marine Electronic Dealers Honor Robertson Shipmate With NMEA Autopilot Award

Robertson Shipmare has been honored for the sixth consecutive year with the National Marine Electronics Association (NMEA) 1990 Autopilot Award for "Product Excellence."

Robertson-Shipmate was cited for its extensive line of autopilots for power and sail boats from small recreational boats to the largest oceangoing vessels. The award is determined through voting by the 500 NMEA members around the U.S. who sell, install and service autopilots.

The NMEA annually honors marine electronic manufacturers and distributors in 27 categories of marine electronics.

New Decrees Will Free Brazilian Ship Operators From Previous Regulations

Brazilian infrastructure minister **Ozires Silva** recently signed decrees freeing Brazilian ship operating companies from regulations that previously limited their activities in international and cabotage, or coastal, transport, in port services and in offshore oil platform support services. The deregulating decrees should lower the current high transport costs for Brazil's exports and imports.

Rules that formerly limited ship operators to certain types of cargoes and services and to specific routes with prescribed vessels were ended with the signing of the decrees.

Paulo Cotta, director superintendent of Alianca Navegacao, the dominant private Brazilian operator serving the conference routes between Brazil and Europe, said the new rules will favor private ship operators willing to make investments.

Some private Brazilian ship operators are already planning to diversify activities and increase their share of conference trade between Brazil, the U.S. and Europe.

Constitutional backing of the state oil monopoly is sidestepped in the new rules by redefining it, limiting it to petroleum of domestic origin. The new rules also recognize ship operators working as unscheduled outsiders in trades served by ship conferences, in effect opening the trades to newcomers.

Fifty percent of all conference cargoes reserved for Brazilian-flag carriers were assured to state-owned general cargo carrier Companhia de Navegacao Lloyd Brasileiro under the previous legislation.

Shipbuilders Council Announces 1991 Legislative Agenda

The 1991 legislative agenda of the Shipbuilders Council of America will emphasize the following, in addition to supporting a strong Navy shipbuilding and repair budget in FY 1992:

• Passage of a trade bill to discipline international shipbuilding subsidy practices—The SCA will urge the Senate Finance and House Ways and Means Committees to hold hearings early in the year on the status of the trade negotiations to end foreign ship construction and repair subsidy practices.

• Implementation of a sealift program—The SCA will urge Congress to keep pressure on the Administration to respond to the nation's sealift shortfall by providing additional sealift monies in the fiscal year 1992 budget.

• Provision of government-supported export financing for commercial ships—The Council will urge Congress to explore with the Export Import Bank the possibility of a comparable ship export finance program for U.S. yards to match the government programs available to shipyards in Europe, Japan, and Korea.

• Revival of the U.S. cruise ship industry—Congressman **Gene Taylor** of Mississippi intends to reintroduce legislation in the 102nd Congress to amend current law to allow gambling on U.S. ships.

Boni New Director Of Maritrans GP Inc.

Robert E. Boni was recently elected a director of Maritrans GP Inc., an operator of tugs and tank barges on the U.S. Gulf and Atlantic Coasts.

Mr. **Boni** was the former director of Armco Inc. He retired from that post in November 1990 after 34 years with the company.

Subsidized Shipowners Use Foreign-Flag Bulkers Under MarAd Waiver

Special waivers have been granted by the Maritime Administration so that nine U.S. companies being paid operating-differential subsidies (ODS) by the U.S. Government to operate U.S.-flag ships in foreign commerce can use foreign-flag bulk vessels as well.

The approvals by MarAd do not include the right to divert ODS payments to operate the foreign-flag ships.

Esso International Installs AMOS-D On Board Tanker Fleet

John Avila, president of SpecTec General, Inc., recently announced that the AMOS maintenance software system will be used for all ships in the Esso International Shipping fleet. The contract was awarded to SpecTec General's Benelux (economic union comprising Belgium, the Netherlands, and Luxembourg) allied company, SpecTec Consult B.V.

Mr. **Avila** stated, "The Esso International Shipping (Bahamas) Co. Ltd., operating out of their Schiedam, Netherlands, office, selected AMOS-D from a number of international competitors for spare part control and administration of maintenance history on board their ships.

AMOS-D will be installed on all 27 Esso crude oil tankers ranging from 25,000 dwt to more than 300,000 dwt. The construction and installation of all databases for the six different classes of ships will take 22 months and will be performed by Esso engineers under supervision of SpecTec Consult B.V. More than 60 engineers and superintendents will be trained in the use of PCs and AMOS-D.

For further information and free literature,

Circle **66** on Reader Service Card

Bender To Overhaul, Drydock Patrol Hydrofoil

Bender Shipbuilding & Repair Co., Inc., Mobile, Ala., was recently awarded a base contract worth $1.3 million for the overhaul and drydocking of the USS Gemini (PHM-6), a patrol hydrofoil based at Key West, Fla.

The Gemini was scheduled to arrive at Bender's facility in Mobile in mid-January. The work is expected to take 100 days.

Solidur Plastics Offers 16-Page Brochure Titled 'Fendering Solutions'

"Fendering Solutions," a 16-page brochure that provides product descriptions and application drawings necessary to select a specific component and grade of Ultra-High Molecular Weight Polyethylene (UHMW-PE), is available from Solidur Plastics Co., Delmont, Pa.

Typical applications include dock fenders, rub rails, sealing strips for lock gates, bushings for pivots, spud well linings and guides, wear bars and slides, among others.

Solidur's PFG (Premium Fender Grade) and 2090 components are made from a specially formulated grade of UHMW-PE which, according to the manufacturer, meets all the requirements for impact strength, wear and corrosion resistance and service life needed in the maritime industry.

Selection guides and ordering details highlight the brochure.

For a free copy of "Fendering Solutions" from Solidur Plastics,

Circle 65 on Reader Service Card

Sulzer Diesel Changes Name Following Majority Stock Transfer

Following the transfer of the majority of shares in the company to a group of shareholders, Sulzer Diesel Ltd. will now be known as New Sulzer Diesel Ltd.

The group of shareholders is comprised of Fincantieri Cantieri Navali Italiani SpA of Trieste, Bremer Vulkan AG of Bremen, Germany, and Deutsche Maschinen- und Schiffbau AG of Rostock. The remaining shares are to be held by Sulzer Brothers Ltd. and the management of New Sulzer Diesel Ltd.

The agreement for this transfer was announced in the summer of 1990. It is an important development for New Sulzer Diesel Ltd. The new shareholder structure provides a stable, long-term solution to the maintaining of the New Sulzer Diesel marque as a leading force in the world market for low-speed and medium-speed diesel engines for marine propulsion, marine auxiliary and stationary power plant applications. The shareholding structure is strong and will be capable of providing the continuity required in an industry whose products are expected to have a long service life.

Although the company name has been changed to New Sulzer Diesel Ltd., the company will retain the use of the trade name Sulzer for its diesel engine products, which will thus be referred to as Sulzer diesel engines.

Based in Winterthur, Switzerland, New Sulzer Diesel Ltd. has the following subsidiary companies:

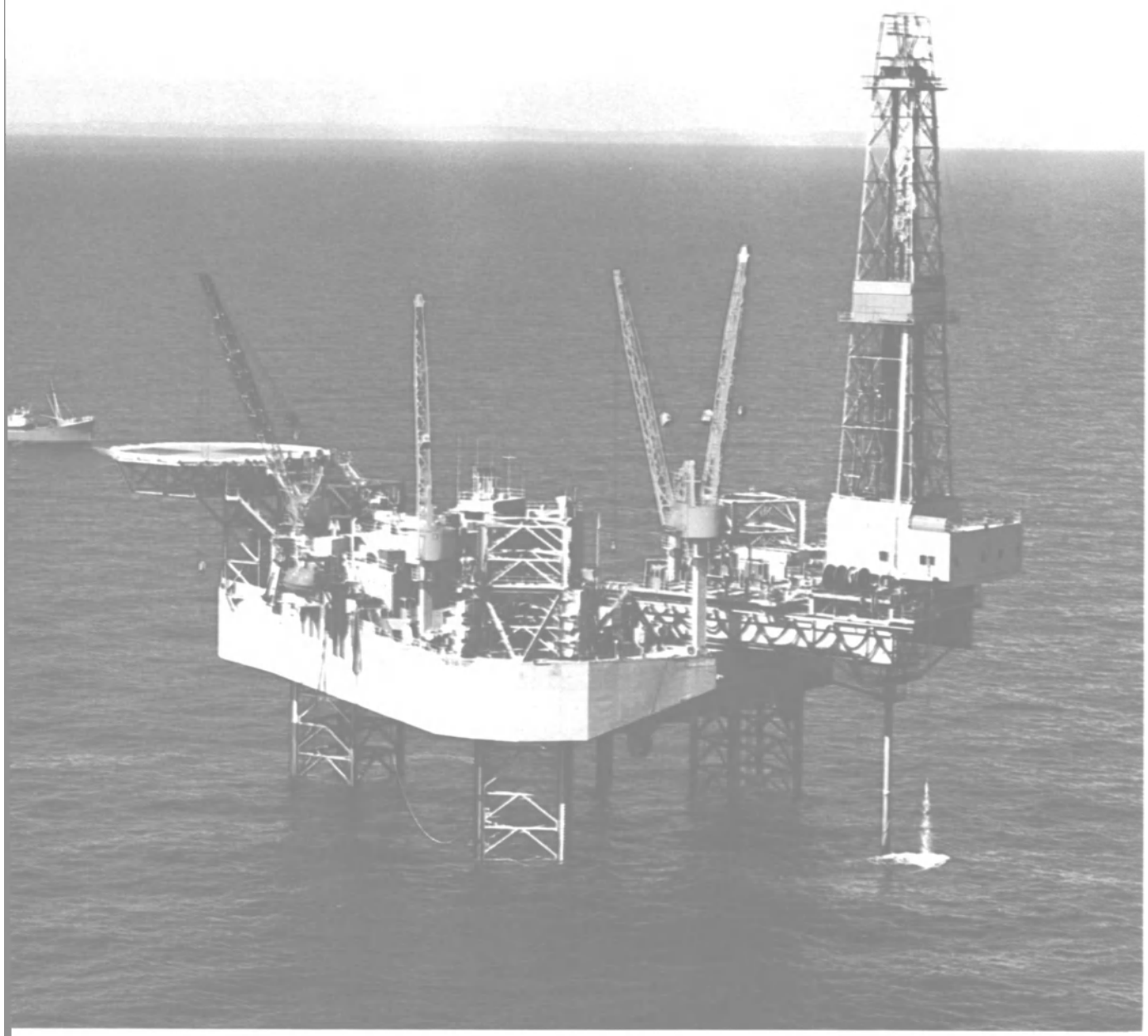
- New Sulzer Diesel France SA, with offices and works in Mantes, France;
- New Sulzer Diesel Japan Ltd., Kobe;
- New Sulzer Diesel Hong Kong Ltd.;
- New Sulzer Diesel U.K. Limited, Farnborough and London;
- New Sulzer Diesel US Inc., New York, Savannah, Ga., Fremont, Calif., and Wilmington, Calif.;

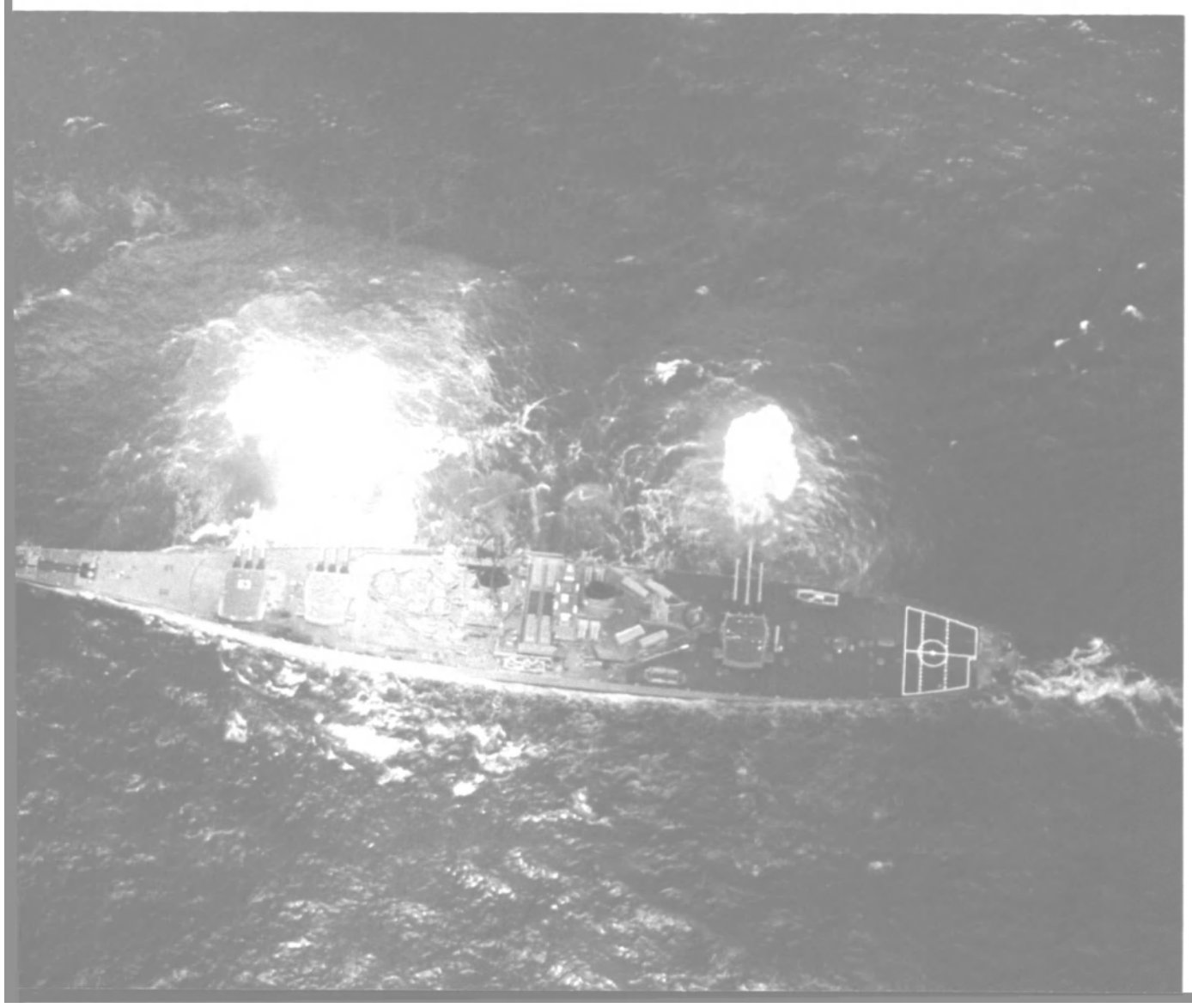
and associated companies in Germany and Korea.

The New Sulzer Diesel Group employs some 900 people and the worldwide order intake for 1990 is anticipated to be more than $304 million. This figure, however, excludes orders received by the licensees of New Sulzer Diesel Ltd. in 18 countries around the world.

For free literature detailing the low-speed and medium-speed diesel engines offered by New Sulzer Diesel Ltd.,

Circle 52 on Reader Service Card





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E Advertisement . . . At ONE Cost

Be There AT TWO BIG SHOWS

IE BIG APRIL EVIEW ISSUE OF TIME REPORTER

TRA BONUS DISTRIBUTION at both . . .

OTC '91

Houston—May 6-9

April Double Issue will feature a comprehensive preview of the Offshore ce in Houston, Texas.

neers, scientists and dignitaries are expected at OTC '87. These leaders nore industry will discuss all aspects of offshore drilling, production, t. The April Double issue of MARITIME REPORTER will be there . . .

and

NE DAY '91

Washington, DC—May 2-3

sponsored by the highly respected American Society of Naval Engi- area for both civilian and Navy decision-makers who now design, build air the world's most powerful Navy. Exhibits representing the world's s . . . attended by the world's most influential Navy buyers. The April TIME REPORTER will be there . . .

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MARITIME REPORTER has a circulation to marine industry buyers thousands larger than any other marine magazine in the entire world. Your April Double Show Issue advertisement will reach all these decision makers . . . plus . . . enjoy extra sales building distribution at two of the most important industry events of 1989.

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ng date for the April Double Show Issue is March 5.

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- **THOUSANDS** MORE BUYING INFLUENCE READERS
- **THOUSANDS** MORE U.S. NAVY BUYERS
- **"NAVAL TECHNOLOGY & SHIPBUILDING"** SIX SPECIAL PULL-OUT MAGAZINE SUPPLEMENTS
- **100% REQUESTED CIRCULATION** . . . in writing . . . by each individual reader
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- **BEST READ AND MOST WANTED**—MR is asked for, requested, by thousands more marine industry readers than any other marine magazine in the world.
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Advertisers report MARITIME REPORTER produces more sales leads than any other marine magazine in the entire world . . . two times to five times more sales leads than the next nearest marine publication.

Aerial view of the Lauzon, Quebec, shipyard of MIL-Davie, Inc.

CANADIAN MARITIME INDUSTRIES ASSOCIATION'S 43RD ANNUAL TECHNICAL CONFERENCE

FEBRUARY 12-13, 1991, OTTAWA, CANADA

Arrangements are being finalized for the Canadian Maritime Industries Association's 43rd Annual Technical Conference, which will be held at the Ottawa Congress Center and the Westin Hotel, Ottawa, Ontario, on Monday, February 11 and Tuesday, February 12, 1991.

"As a result of the resounding success of the Canadian Shipbuilding & Offshore Exhibition, we have decided to include the Canadian Shipbuilding and Offshore Exhibition (CSOE '91) on the program for our 1991 Conference," said Canadian Maritime Industries Association (CMIA) president **James Y. Clarke.** "This added feature has resulted in a tremendous interest in the conference, the largest technical marine conference held in Canada. CSOE '91 will be a major component of the conference."

Mr. **Clarke** pointed out that the technical conference's open sessions, which begin at 9 a.m. on February 12, will be presented in adjacent rooms on the Capital Hall level at the Ottawa Congress Center. The preliminary list of technical presentations is attached.

CSOE '91 will be located in the Congress Hall at the Ottawa Congress Center. Exhibitions such as CSOE '91 help bring together all interested parties in the marine industry. Some 150 booths are available and it is expected that they will all be occupied.

Exhibition hours will be 10 a.m. to 6 p.m. on Monday, February 11 and 10 a.m. to 5 p.m. the following day.

Mr. **Clarke** noted that the 1990 technical conference and exhibition (CSOE '90) attracted over 900 persons from across Canada and around the world, including international media and government officials.

For registration or exhibit information, contact: Mrs. **Joy MacPherson**, director, administration & finance, Canadian Maritime Industries Association, P.O. Box 1429, Station B, Ottawa, Ontario, Canada K1P 5R4; telephone: (613) 232-7127; telex: 053-4848; fax: (613) 232-2490.

TECHNICAL CONFERENCE PRESENTATIONS

"Combined Propulsion Plants for Fast Vessels. Realization Through Advances in Diesel Technology," by a representative from MTU.

"Hybrid Propulsion for Oceangoing Submarines," by **Carel A. Prins**, RDM, and **Douwe Stapersma**, NEVESBU.

"Canadian Research on Ship Capsizing in Severe Seas," by **Stefan Grochowalski**, National Research Council, Institute for Marine Dynamics.

"Build It or Buy It," by Lt. Comdr. **Douglas V.P. Thoreson**, Maritime Combat Systems National Defense.

"Canadian Naval Initiatives in

CSOE '91
Exhibitors

Alfa-Laval Ltd.
ARMX '91
CAE Electronics
Canadian Shipbuilding & Engineering
Canadian Welding Bureau
John Crane Canada
Deutsch Metal Components
DHB Resources
Fenco Engineers
Fleet Technology Ltd.
Hamworthy Canada Ltd.
IMO Industries (Canada)
Indal Technologies
Industry, Science & Technology Canada
National Research Council—
Institute for Marine Dynamics
International Paints (Canada) Ltd.
Jastram Ltd.
Jeumont Schneider & Merlin Gerin
Jordair Engineering
JSC
Key Marine Industries
Krupp MaK Diesel
MAN B&W Diesel Canada
The MIL Group
Montreal Valve Reseating Ltd.
Paramax Electronics
Patlon Aircraft & Industries Ltd.
Peacock
Pol-E-Mar
Pumps & Power Ltd.
RDM Naval Engineering
Saint John Shipbuilding Ltd.
Siemens Electric Ltd.
St. Lawrence College
Stone Marine Canada Ltee.
Thomson-Gordon Ltd.
United Marine Electronics
& Communications
Verreault Navigation
Vickers Shipbuilding & Engineering Ltd.
Westinghouse Canada

Environmental Engineering and the Associated Business Opportunities," by Cmdr. **R.K. Johnson**, Marine and Electrical Engineering, National Defense.

"NRC Hull Form Series for Surface Ships," by **I. Datta** and **W.D. Molyneux**, National Research Council, Institute for Marine Dynamics.

"Ship Trials Capabilities of the Institute for Marine Dynamics," by **D. Cumming, J.P. Millan,** and **F.M. Williams**, National Research Council, Institute for Marine Dynamics.

"Alfa-Laval Transfers ALCAP Technology to New LOPX Lube Oil Separation System," by a representative from Alfa-Laval Limited.

"Coast Guard—A Pollution-Free Stern Sealing System," by **Brian Rowland**, Deep Sea Seals Ltd.

"High Speed Vertical Pump Drive Motors for Offshore Platforms," by **P.D. Richardson**, Siemens Electric Limited.

"Large Scale Military Software Development in Canada," by **Alan Steele**, Paramax Electronics Inc.

"The Why, What and How of Ada Software Development," by **Paul D. Hamilton**, Paramax Electronics Inc. ■

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FELS signed a letter of intent several months ago with its engineering partner Tenege, the paper said.

When concluded, the contract will be the largest FELS has won so far.

AT&T Radiotelephone Service Helps Keep In Touch On The High Seas

AT&T High Seas Radiotelephone Service is a two-way operator-handled service that provides voice communications between ships on the high seas (or aircraft) and land telephones or other mobile single-sideband radio stations. The communications link between ship and shore is via high-frequency (HF) single-sideband radio with coast station equipment provided and operated by AT&T, and ship equipment provided and operated by the customer or agent.

AT&T Radiotelephone Service provides passengers on cruise ships (and other ships and aircraft with SSB radio), via the ship's radio room, a way to keep in touch with friends, relatives and associates ashore.

With a ship-to-shore call, a passenger may pay for the call on board the ship, place the call collect, charge the call to a third number (i.e., residence, business, etc.) provided someone answers for verification billing, or preregister prior to sailing for billing to home, business or AT&T Card by dialing 1-800 SEA CALL (732-2255).

Cruise passengers are encouraged to utilize preregistration without cost or obligation. It is for their convenience.

Cruise ships are using AT&T's Radiotelephone Service and thousands of commercial and private boats, including U.S. Navy vessels are registered for the service.

The service is generally used when a ship is more than 30 miles offshore, where other forms of short-range radio transmission begin to fail. However, the service can be used even while docked.

AT&T provides free weather broadcasts through the service and gives special priority to calls from ships in distress, making fast connections to rescue authorities and holding the line until all is safe.

For free literature about AT&T's High Seas Radiotelephone Service,

Circle 34 on Reader Service Card

AESA To Build Car/Passenger Ferry For Moroccan Owner

Moroccan shipowner Limadet (Lignes Maritimes du Detroit) has ordered a car/passenger ferry from Spanish shipbuilder Astilleros Espanoles, S.A. (AESA) for service between Morocco and Spain across the Strait of Gibraltar.

The ferry, which will be built by H.J. Barreras, the Vigo-based yard of the AESA Group, will have capacity to carry 1,300 passengers and 283 cars or 29 trucks.

The contract was signed by **Farid Dellero**, chairman of Limadet, and **Juan Saez**, chairman of AESA, at the shipbuilder's office in Madrid.

Limadet has been planning to offer a wider range of services across the Strait of Gibraltar with a new ferry since 1986, as demand has been consistently increasing over the last few years.

Limadet placed its order with AESA after evaluating offers from several shipyards. Talks between Limadet and AESA have gone on for more than a year.

For free literature detailing the full shipbuilding and ship-repair services of AESA,

Circle 57 on Reader Service Card

World Shipyards Capable Of Producing 'Only 40 VLCCs A Year'

According to a new Japanese survey, the world shipbuilding industry is capable of producing only 40 VLCCs a year because of capacity restrictions, workforce ability, technological standards and price competition.

Thirty-seven shipbuilding berths around the world capable of producing in theory 70-110 VLCCs a year were identified by the Tokyo-based Japan Maritime Research Institute (Jamri).

"We can easily find out, however," the survey noted, "that in reality they can construct only 40 VLCC-class tankers today when we take their workforces' ability, technological standards and price competition into consideration."

Given present circumstances, construction of more than 30 VLCCs a year is undesirable, according to the survey. Shipowners are asked to place orders "in a disciplined, orderly fashion without disrupting the supply-and-demand situation of VLCCs in the world market."

The 37 berths identified by Jamri include docks measuring 57 meters (about 121 feet) in width, capable of building the new generation of "wide" VLCCs.

Drewry Study Concludes Era Of Cheaply Acquired And Run Ships Has Ended

In a recent study titled "Ship Costs: Their Structure and Significance," by Drewry Shipping Consultants of London, Drewry argues that cost-cutting for shipowners has gone as far as it can go. As a result, "the outlook is for an end to cheaply acquired and cheaply run ships, as both the marketplace and environmental concerns exert potentially irresistible pressures."

Indirect costs have been pruned by flagging out to new registers, hiring third-world crews and increasing the use of automated equipment to cut down on crew numbers. Although operators are still focusing on cheap labor, the focus will soon have to turn to labor per se. According to the report, "Staff shortages will increase the market muscle of the various manning agencies, and perhaps, create a new power base within the shipping industry. This, plus a need to cover the cost of training commitments, could fuel the pace of cost increases.

Transportation costs had already risen before the latest Persian Gulf crisis, predicting that repair and maintenance costs are likely to double by the year 2000. Insurance costs are also likely to rise as a result of higher repair and maintenance costs, pollution liabilities and increased hull values. Also, Bunker costs could increase by 50 percent over early 1990 levels.

Dixie Machine Appoints Roussel New President

Dixie Machine Welding & Metal Works, Inc., New Orleans, La., recently announced the appointment of **Carl M. (Dick) Roussel** as president. Mr. **Roussel** has been with the firm for 35 years in various capacities, most recently as executive vice president. The announcement was made by chairman **H.D. Hughes**, and **E.T. Motter**, vice president, Marine Division of Diversified Group Incorporated, parent company of Dixie Machine.

Global Maritime Fabricates First Swirling Flow Research Combustor

Global Maritime Services, Inc. (GMSI), Fort Lauderdale, Fla., a ship repair, machine shop, welding and fabrication facility, has completed the fabrication and assembly of the first Swirling Flow Research Combustor for Florida Atlantic University.

This stainless steel combustor will determine the effects of swirling air flow on a combustion process such as fuel-air mixing, flame stability and the reduction of pollutant formation. The research results will help in the design of more efficient combustion devices such as furnaces, gas turbines and ramjet engines.

The combustor will be used at the Transport Phenomena Laboratory of the mechanical engineering department at Florida Atlantic University (FAU) in Boca Raton, Fla. Dr. **Davood Moslemian**, assistant professor of mechanical engineering, will head the project and work along with **Ceji Li,** the graduate student who designed the combustor.

It took more than a year to design the combustor and four months to build it using type 316 stainless steel and various state-of-the-art certified welding techniques. GMSI also supported FAU with the final assembly design methods which resulted in the efficient construction and testing procedures.

For more information on Global Maritime's capabilities and services,

Circle 23 on Reader Service Card

CSOE '91 Exhibitors

Alfa-Laval Ltd.
ARMX '91
CAE Electronics
Canadian Shipbuilding & Engineering
Canadian Welding Bureau
John Crane Canada
Deutsch Metal Components
DHB Resources
Fenco Engineers
Fleet Technology Ltd.
Hamworthy Canada Ltd.
IMO Industries (Canada)
Indal Technologies
Industry, Science & Technology Canada
National Research Council—
Institute for Marine Dynamics
International Paints (Canada) Ltd.
Jastram Ltd.
Jeumont Schneider & Merlin Gerin
Jordair Engineering
JSC
Key Marine Industries
Krupp MaK Diesel
MAN B&W Diesel Canada
The MIL Group
Montreal Valve Reseating Ltd.
Paramax Electronics
Patlon Aircraft & Industries Ltd.
Peacock
Pol-E-Mar
Pumps & Power Ltd.
RDM Naval Engineering
Saint John Shipbuilding Ltd.
Siemens Electric Ltd.
St. Lawrence College
Stone Marine Canada Ltee.
Thomson-Gordon Ltd.
United Marine Electronics
& Communications
Verreault Navigation
Vickers Shipbuilding & Engineering Ltd.
Westinghouse Canada

Environmental Engineering and the Associated Business Opportunities," by Cmdr. **R.K. Johnson**, Marine and Electrical Engineering, National Defense.

"NRC Hull Form Series for Surface Ships," by **I. Datta** and **W.D. Molyneux**, National Research Council, Institute for Marine Dynamics.

"Ship Trials Capabilities of the Institute for Marine Dynamics," by **D. Cumming, J.P. Millan,** and **F.M. Williams**, National Research Council, Institute for Marine Dynamics.

"Alfa-Laval Transfers ALCAP Technology to New LOPX Lube Oil Separation System," by a representative from Alfa-Laval Limited.

"Coast Guard—A Pollution-Free Stern Sealing System," by **Brian Rowland**, Deep Sea Seals Ltd.

"High Speed Vertical Pump Drive Motors for Offshore Platforms," by **P.D. Richardson**, Siemens Electric Limited.

"Large Scale Military Software Development in Canada," by **Alan Steele**, Paramax Electronics Inc.

"The Why, What and How of Ada Software Development," by **Paul D. Hamilton**, Paramax Electronics Inc. ■

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AT&T Radiotelephone Service provides passengers on cruise ships (and other ships and aircraft with SSB radio), via the ship's radio room, a way to keep in touch with friends, relatives and associates ashore.

With a ship-to-shore call, a passenger may pay for the call on board the ship, place the call collect, charge the call to a third number (i.e., residence, business, etc.) provided someone answers for verification billing, or preregister prior to sailing for billing to home, business or AT&T Card by dialing 1-800 SEA CALL (732-2255).

Cruise passengers are encouraged to utilize preregistration without cost or obligation. It is for their convenience.

Cruise ships are using AT&T's Radiotelephone Service and thousands of commercial and private boats, including U.S. Navy vessels are registered for the service.

The service is generally used when a ship is more than 30 miles offshore, where other forms of short-range radio transmission begin to fail. However, the service can be used even while docked.

AT&T provides free weather broadcasts through the service and gives special priority to calls from ships in distress, making fast connections to rescue authorities and holding the line until all is safe.

For free literature about AT&T's High Seas Radiotelephone Service,

Circle 34 on Reader Service Card

AESA To Build Car/Passenger Ferry For Moroccan Owner

Moroccan shipowner Limadet (Lignes Maritimes du Detroit) has ordered a car/passenger ferry from Spanish shipbuilder Astilleros Espanoles, S.A. (AESA) for service between Morocco and Spain across the Strait of Gibraltar.

The ferry, which will be built by H.J. Barreras, the Vigo-based yard of the AESA Group, will have capacity to carry 1,300 passengers and 283 cars or 29 trucks.

The contract was signed by **Farid Dellero**, chairman of Limadet, and **Juan Saez**, chairman of AESA, at the shipbuilder's office in Madrid.

Limadet has been planning to offer a wider range of services across the Strait of Gibraltar with a new ferry since 1986, as demand has been consistently increasing over the last few years.

Limadet placed its order with AESA after evaluating offers from several shipyards. Talks between Limadet and AESA have gone on for more than a year.

For free literature detailing the full shipbuilding and ship-repair services of AESA,

Circle 57 on Reader Service Card

World Shipyards Capable Of Producing 'Only 40 VLCCs A Year'

According to a new Japanese survey, the world shipbuilding industry is capable of producing only 40 VLCCs a year because of capacity restrictions, workforce ability, technological standards and price competition.

Thirty-seven shipbuilding berths around the world capable of producing in theory 70-110 VLCCs a year were identified by the Tokyo-based Japan Maritime Research Institute (Jamri).

"We can easily find out, however," the survey noted, "that in reality they can construct only 40 VLCC-class tankers today when we take their workforces' ability, technological standards and price competition into consideration."

Given present circumstances, construction of more than 30 VLCCs a year is undesirable, according to the survey. Shipowners are asked to place orders "in a disciplined, orderly fashion without disrupting the supply-and-demand situation of VLCCs in the world market."

The 37 berths identified by Jamri include docks measuring 57 meters (about 121 feet) in width, capable of building the new generation of "wide" VLCCs.

Drewry Study Concludes Era Of Cheaply Acquired And Run Ships Has Ended

In a recent study titled "Ship Costs: Their Structure and Significance," by Drewry Shipping Consultants of London, Drewry argues that cost-cutting for shipowners has gone as far as it can go. As a result, "the outlook is for an end to cheaply acquired and cheaply run ships, as both the marketplace and environmental concerns exert potentially irresistible pressures."

Indirect costs have been pruned by flagging out to new registers, hiring third-world crews and increasing the use of automated equipment to cut down on crew numbers. Although operators are still focusing on cheap labor, the focus will soon have to turn to labor per se. According to the report, "Staff shortages will increase the market muscle of the various manning agencies, and perhaps, create a new power base within the shipping industry. This, plus a need to cover the cost of training commitments, could fuel the pace of cost increases.

Transportation costs had already risen before the latest Persian Gulf crisis, predicting that repair and maintenance costs are likely to double by the year 2000. Insurance costs are also likely to rise as a result of higher repair and maintenance costs, pollution liabilities and increased hull values. Also, Bunker costs could increase by 50 percent over early 1990 levels.

Dixie Machine Appoints Roussel New President

Dixie Machine Welding & Metal Works, Inc., New Orleans, La., recently announced the appointment of **Carl M. (Dick) Roussel** as president. Mr. **Roussel** has been with the firm for 35 years in various capacities, most recently as executive vice president. The announcement was made by chairman **H.D. Hughes**, and **E.T. Motter**, vice president, Marine Division of Diversified Group Incorporated, parent company of Dixie Machine.

Global Maritime Fabricates First Swirling Flow Research Combustor

Global Maritime Services, Inc. (GMSI), Fort Lauderdale, Fla., a ship repair, machine shop, welding and fabrication facility, has completed the fabrication and assembly of the first Swirling Flow Research Combustor for Florida Atlantic University.

This stainless steel combustor will determine the effects of swirling air flow on a combustion process such as fuel-air mixing, flame stability and the reduction of pollutant formation. The research results will help in the design of more efficient combustion devices such as furnaces, gas turbines and ramjet engines.

The combustor will be used at the Transport Phenomena Laboratory of the mechanical engineering department at Florida Atlantic University (FAU) in Boca Raton, Fla. Dr. **Davood Moslemian**, assistant professor of mechanical engineering, will head the project and work along with **Ceji Li**, the graduate student who designed the combustor.

It took more than a year to design the combustor and four months to build it using type 316 stainless steel and various state-of-the-art certified welding techniques. GMSI also supported FAU with the final assembly design methods which resulted in the efficient construction and testing procedures.

For more information on Global Maritime's capabilities and services,

Circle 23 on Reader Service Card

South Korean Yard Orders Boosted By 40 Percent

South Korean shipyard orders soared by more than 40 percent last year.

According to the Korea Shipbuilders Association (KSA), foreign and domestic orders placed with the country's yards during 1990 increased by 42.4 percent to 4.94 million gross tons, while the value of contracts showed an increase of 18 percent at $4 billion compared with 3.39 billion last year.

Value of ships constructed last year increased 68.3 percent to $2.59 billion as the effect of increased shipbuilding prices began to be felt.

South Korean yards had a backlog of 7.26 million tons valued at $6.29 billion by the end of the year, up sharply from the previous year which stood at 5.89 million tons worth $4.83 billion.

Novatech Designs Introduces New 'Oil Spill Tracker'

Novatech Designs Ltd. of Canada recently introduced the RF 700C/OS200 Oil Spill Tracker. It is a unique instrument for tracking and predicting the position of marine oil spills.

The Oil Spill Tracker is a battery powered VHF radio transmitter in an aluminum case; fitted to the case is an oil spill tracking skirt.

The RF 700 C/OS 200 provides oil spill response teams with a simple and reliable method of keeping track of an oil spill. It is especially useful as a spill approaches the shore when little time is left for containment and clean-up. Time lost looking for the spill during that critical period can be greatly reduced simply by deploying several Novatech Oil Spill Trackers from aircraft or vessels. Once on the oil spill, the Trackers drift with the oil. Aircraft or vessels then home in on the radio signal from up to 20 miles away, ensuring quick relocation of the oil spill.

For details on Novatech's Oil Spill Tracker,

Circle 71 on Reader Service Card

Ship Safety Achievement, Jones F. Devlin Awards Announced By AIMS

The American Institute of Merchant Shipping (AIMS) has announced the 1991 kickoff for two contests designed to publicly recognize high schievements in safety at sea, the Ship Safety Achievement and the Jones F. Devlin Awards. Announcements for each contest, which cover safety achievements in calendar year 1990, have been mailed to chief executives and safety directors of U.S.-flag mechant shipping companies. The awards are sponsored by AIMS and the Marine Section of the National Safety Council (NSC). The Ship Safety Achievement Awards are conferred on vessels representing all segments of the U.S.-flag merchant marine which have performed outstanding feats of rescue or seamanship illustrative of the high safety standards in the nation's fleet. Such feats may include, but are not limited to: rescue; assistance to distressed vessels; transfer of ill or injured persons under difficult sea conditions; and outstanding demonstrations of safety and ship operation which contributed to saving a life or a ship.

The Jones F. Devlin Awards are given to any self-propelled U.S.-flag vessel which operates for two consecutive years without a crew member losing a full turn at watch because of an occupational injury. Higher honors are given to vessels completing four accident-free years, and special awards are given for vessels exceeding five years.

These awards have the endorsement of AIMS and NSC, and are supported by the U.S. maritime industry and the federal agencies concerned with safety at sea.

Entries should be submitted as soon as possible, but not later than March 31, 1991. All entries should be sent to: **Renee H. Estep**, Coordinator of Public Relations, American Institute of Merchant Shipping, 1000 16th Street, N.W., Suite 511, Washington, D.C. 20036-5705, phone (202) 775-4399.

Impact Of Lifting Alaskan North Slope Oil Export Ban On The U.S. Maritime Industry

G.A.O. Assesses Nation's Energy Security And The Negative Effect On Maritime Industry

The Export Administration Act of 1979 places restrictions on the export of Alaskan North Slope crude that effectively ban its export. The act states that "no domestically produced crude oil transported through the Alaska pipeline may be exported from the United States." The purpose of this ban was to restrict "the export of goods where necessary to protect the domestic economy from excessive drain of scarce materials and to reduce the serious inflationary impact of foreign demand." This provision of the law was part of the compromise that permitted the construction of the Trans-Alaska Pipeline. The act allows the ban to be lifted only upon the President's certification that the export of Alaskan oil is in the national interest and meets several other specified conditions.

If the ban on exporting Alaskan North Slope crude oil remains in place, Alaskan North Slope production will, of course, continue to go to U.S. ports. However, because of declining Alaskan North Slope production, shipments to eastern U.S. ports, i.e., those on the East Coast, the Caribbean, and the Gulf of Mexico, will probably cease at some time in the next several years. Producers of Alaskan North Slope crude prefer to sell their crude to West Coast refiners, given the cost of transporting it to East Coast refiners.

If the ban on exporting Alaskan North Slope crude oil is removed, some of it is likely to be exported to Pacific Rim countries. Since transportation costs to Pacific Rim ports are much less than those to eastern U.S. ports, oil that is currently transported to the eastern United States is likely to be exported. In addition, some Alaskan North Slope crude that would have gone to the U.S. West Coast may also be exported, since the cost of transporting oil to some Pacific Rim destinations is comparable to, if not lower than, the cost to U.S. West Coast ports. In this regard, the heavier weight of Alaskan North Slope crude is more likely to be attractive to refiners in Pacific Rim countries that it is to U.S. West Coast refiners, who refine more of their oil into light products, such as gasoline.

The probable economic effects of lifting the ban on Alaskan North Slope crude (as compared with leaving it in place) will be to

- increase the price of Alaskan North Slope crude at the wellhead—because of the reduction in transportation costs and the attractiveness of Alaskan North Slope crude to Pacific Rim refiners—and, consequently, the price that West Coast refiners pay for crude oil;
- promote economic efficiency by reducing transportation costs in the Alaskan North Slope crude oil trade, increasing domestic oil production, allowing better use of refinery processing resources, and ensuring that Alaskan North Slope oil is allocated to its highest valued uses; and
- accelerate the decline in tanker demand and hurt the U.S. maritime industry because Alaskan North Slope exports are likely to be transported on foreign-flag rather than U.S.-flag tankers.

The energy supply disruption resulting from Iraq's invasion of Kuwait has focused attention on U.S. energy security and, in particular, our reliance on imported oil. From an energy security standpoint, the effect of lifting the Alaskan North Slope export ban would probably be to increase total U.S. oil imports but possibly decrease net imports (total imports minus exports) to the extent that refinery efficiency is improved and Alaskan North Slope oil production increases in response to higher prices. Finally, lifting the ban could also contribute to the integrated world market's smooth and efficient functioning.

Since 1987, the amount of Alaskan North Slope oil shipped to eastern ports has declined as a result of decreasing Alaskan North Slope production and increasing West Coast consumption. Because transportation costs to eastern ports are considerably higher than those to the West Coast, Alaskan producers sell most of their oil to West Coast refiners.

This trend is expected to continue, so that in the near future Alaskan North Slope crude shipments to eastern ports will cease. The exact timing of this development will depend to a large extent upon the rate of decline of Alaskan production. Using the Energy Information Administration's (EIA) base case assumption of Alaskan production, shipments to eastern ports could cease by 1992, even if West Coast demand for Alaskan production remains constant.

If the ban on exports of Alaskan North Slope crude is lifted, industry and public authorities generally agree that the oil now shipped to eastern U.S. ports—about 300 mbd—will be exported to Pacific Rim countries. This will occur, to a large extent, because such action would reduce transportation costs by a considerable amount. This reduction in transportation costs would increase the amount Alaskan North Slope producers receive for the oil. Figure 2 illustrates the resultant pattern of oil distribution. Conceptually this figure illustrates the minimum impact of lifting the ban.

In addition, some of the oil that is now shipped to the West Coast may also be exported, but opinions vary on how much. A possible maximum impact of lifting the ban might be one in which the only Alaskan North Slope oil that would continue to be shipped to the West Coast would be oil used by integrated oil companies, that is, those that produce oil in Alaska and transport it to their own refineries on the West Coast. In 1989, these companies used around 570 mbd of Alaskan North Slope crude.

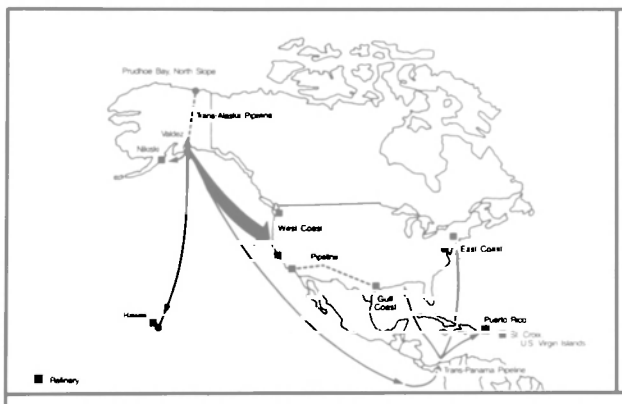

Figure 1: Alaskan Oil Export Ban In Place—1990

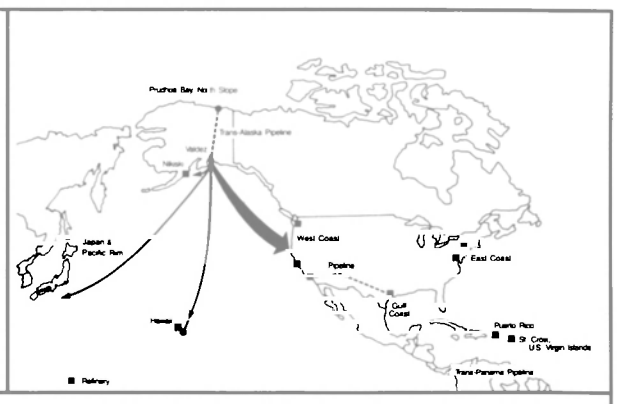

Figure 2: Alaskan Oil Export Ban Lifted—Minimum Export Scenario

Figure 1 illustrates the current pattern of Alaskan North Slope crude oil shipments on U.S. tankers with the ban in place. In 1989, these shipments totaled about 1,700 thousands barrels per day (mbd). About 1,300 mbd went to the West Coast; about 300 mbd to eastern U.S. ports via the Trans-Panama Pipeline—the U.S. Gulf Coast, East Coast, and Caribbean; and the remainder to ports in Alaska and Hawaii.

Impact On U.S. Shipping

The U.S. maritime industry also stands to lose from lifting the ban on Alaskan North Slope crude exports. As a result of the Jones Act (the Merchant Marine Act of 1920), U.S.-flag tankers transport virtually all Alaskan North Slope crude. In 1989, U.S.-flag tankers transported 93.4 percent of all Alaskan North Slope crude oil loaded al Valdez, Alaska. If the ban is lifted and some of this oil is exported, foreign-flag tankers, because their costs are lower, are likely to transport that oil. This will accelerate the loss of U.S. ships, which will be laid up, scrapped, or sold anyway as Alaskan North Slope production decreases.

Between 1989 and 1995, the Maritime Administration (MarAd) estimates that 32 ships will be lost because of declining Alaskan North Slope production, even if the ban stays in place. However, if the ban is lifted and exports begin in 1991, the same losses occur as in the minimum exports case, but earlier. An additional seven ships are lost if there are maximum exports.

The loss of these ships would also affect the national defense through reduced availability of U.S.-flag, "militarily useful" tankers; the federal budget through possible guaranteed loan defaults; and national unemployment by threatening seafarers' jobs.

Lifting the ban on Alaskan crude exports would affect U.S. energy security in three ways. First, it would increase total, or gross, U.S. imports. Second, it would possibly lead to a decrease in net imports. Finally, in an integrated world oil market, U.S. energy security depends in large part of this market's smooth and efficient functioning.

Lifting the ban would probably lead to gains in economic efficiency. However it would also have a negative effect on independent refiners on the West Coast and certainly on the U.S. maritime industry.

Bender To Construct Two Jackup Vessels For Work In Gulf Of Mexico

Bender Shipbuilding & Repair Co., Inc. of Mobile, Ala., has received an order from Nolty J. Teriot, Inc. of Golden Meadow, La., for two 175-foot class self-elevating workboats designed for maintenance of offshore production platforms.

The order calls for the first vessel to be completed by midyear 1991, and the second vessel by late summer.

The self-elevating workboats, commonly called jackup vessels, will be used for maintenance work on production platforms in the Gulf of Mexico. In these maintenance programs, the vessels are positioned beside the platform and can jack up next to it for repairs and maintenance.

Powered by Caterpillar engines, the vessels are being designed to work in waters in excess of 100 feet and will be equipped with one 60-ton crane and one 15-ton crane.

Bender Shipbuilding was also recently awarded a $350,000 contract for the topside repair and modification of the USNS Lynch (AGOR-7). The Lynch is a 207-foot-long oceanographic research vessel operated by MAR Ship Operators, Rockville, Md., for the U.S. Navy.

Bender Shipbuilding & Repair Co. is a full-service shipyard that builds, converts and repairs vessels for commercial and government owners and operators. Founded in 1919, Bender is a major supplier of offshore supply vessels for use in the Gulf of Mexico.

For free literature on the facilities and capabilities of Bender Shipbuilding and Repair,

Circle 11 on Reader Service Card

Air-Independent Mini-Sub Designed By Thyssen

Thyssen Nordseewerke GmbH of Germany has designed a new submarine capable of extended underwater endurance using a closed-cycle diesel engine.

The 98.4-foot-long by 18.7-foot-beam mini-sub, dubbed the TR-300, would displace 300 tons submerged and carry a crew of eight sailors.The dimensions give a 5:1 length-to-beam ratio which is traditional in modern German submarines.

The design would use a closed-cycle diesel running on oxygen drawn from a cryogenic tank. Thyssen is known to have signed an agreement with Cosworth Deep Sea Systems of Britain to use its patented gas management system.

The Cosworth system eliminates exhaust compressors which in the past limited the depth a submarine could operate with a closed-cycle diesel.

The TR-300 would have only a 45-nautical-mile (nm) range when running submerged on batteries, but a 2,000-nm submerged range when running on closed-cycle diesel.

Circle 226 on Reader Service Card

New Diesel Engine Maintenance Tool Brochure Offered By Chris-Marine

Chris-Marine, a world leader in diesel engine maintenance equipment, has published a full-color brochure on diesel engine maintenance tools for large-bore, medium-speed and auxiliary diesel engines.

Solving the emerging problems of diesel engine maintenance has been the main drive at Chris-Marine in developing new equipment. Research and development is carried out in close cooperation with the major engine builders.

The product range at Chris-Marine includes exhaust valve grinding machines, valve spindle grinding machines, cylinder liner and cover grinding machines, valve seat grinding machines, valve spindle grinding machines, and piston ring groove grinders. Special equipment includes pocket grinders for fuel valve pockets, etc., side impact wrenches, hydraulic nuts and tools, and scaffolding.

For further information and a free copy of the brochure on diesel engine maintenance tools from Chris-Marine,

Circle 15 on Reader Service Card

Principals at the recent Avondale Industries' pre-fabrication ceremony for the USS Harpers Ferry (LSD-49) are (L to R): **David Gordon**, Avondale Industries Inc., program manager; Lt. Commander **B. Martinez**, SSNO, Program Manager's Representative; Lt. Commander **R. Bryant**, NAVSEA, Business Manager, PMS-377E; **E.E. Shoults**, NAVSEA, Program Manager, PMS-377; Colonel **W. Harley**, USMC, Liaison/Advisor, PMS-377M; **Carey Agregaard**, Avondale Industries, Inc., program manager; **Chris Sprague**, Avondale Industries Inc., configuration manager; **Mike Lusick**, NAVSEA, Acquisition Manager, PMS-377G; **George Bryan**, NAVSEA, Director Operations Dis., PMS-3773; **Paul Neely**, SSNO, Program Manager; Lt. Commander **W.A. Dicken**, SSNO, Project Officer; and **Gary Smith**, NAVSEA Assistant Acquisition Manager, PMS-377G.

Avondale Begins Construction Of Cargo Variant Ship

In a brief ceremony recently, Avondale Industries' Shipyards Division began construction of the first LSD-41 Class, Cargo Variant Ship (LSD-49) to be named USS Harpers Ferry.

Scheduled for delivery in November 1993, the USS Harpers Ferry is the first of a five-ship contract awarded by the U.S. Navy on June 17, 1988. These ships are similar to the LSD ships 41 to 48, but have been reconfigured to accommodate a different cargo mix.

Avondale Industries is one of the nation's leading marine fabricators. In addition to its shipbuilding operations, the company specializes in boat construction and is a major repair contractor for commercial and Navy ships. It is also involved in modular construction of plants and components for a variety of land-based industries.

For free literature detailing the shipbuilding and repairing facilities and capabilities of Avondale,

Circle 68 on Reader Service Card

Ships Built With Foreign Subsidies Might Face Sanctions

After 18 months of talks, the international negotiators have failed to meet their own deadline for a trade agreement to end shipbuilding subsidies, the Shipbuilders Council of America (SCA) recently announced.

"We are extremely disappointed," said **John Stocker**, president of the SCA, the national trade association for the country's major private shipyards. "We are now going to pursue more aggressive courses of action, such as the sanctions legislation against ships built with foreign subsidies."

The final round in the subsidy talks conducted under the auspices of the Organization for Economic Cooperation and Development (OECD) was supposed to take place in December 1990. The negotiations were scheduled to culminate on December 14, 1990 in a signed agreement among 16 nations to terminate government support of commercial shipbuilding and repair activities. However, the parties continued to be unable to resolve their differences.

While Japan and European Community yards continue to benefit from subsidy programs, U.S. yards have received no subsidies since 1981. As a consequence, there have been no ships ordered from foreign commerce since that time. Ironically, the lack of U.S. shipbuilding aid programs has seriously hampered the American negotiators in the OECD talks precisely because they have so little to give up.

One of the SCA's next actions will be to press for quick passage of the sanctions bill when Congress reconvenes. This bipartisan legislation, introduced in both houses of Congress on July 25 of this year, provides for fines to be levied against subsidized foreign ships that enter U.S. ports. The penalty would end when the subsidizing government terminated all shipbuilding-related aid.

Mr. **Stocker** emphasized that the SCA is not abandoning the OECD negotiations, but made it clear that U.S. shipbuilding and repair industry can no longer depend solely on the trade talks to bring a satisfactory resolution to the subsidies problem. "Three deadlines have come and gone," he declared. "That's 18 months in which our shipyards have continued to suffer damage from foreign subsidies which shut us out of the commercial marketplace."

Demand For LPG Carriers To Continue Into Mid-90s

A recent report issued by the Japan Maritime Research Institute indicates that Liquefied Petroleum Gas (LPG) Carrier demand will be sustained into the mid-1990s.

According to the report, there will be a demand for 35 additional LPG carriers of 60,000-cubic-meter capacity on top of the vessels already on order. The world order book at the end of September 1990 stood at 42 vessels of 15,000-cubic-meter or more capacity, with a total volume of 2.32 million cubic meters—a near record level.

Japan Maritime Research Institute statistics show that of the 88 vessels of 30,000-cubic-meter capacity and above in service, almost half were built from 1976 to 1980.

Replacements for some of those ships and 20 others built earlier are now being sought.

Because of an anticipation in rising construction prices, a number of owners are expected to place their orders early.

Juan Saez Elected President, European Shipbuilders Associations

Juan Saez, chairman of the Spanish state-owned shipbuilder Astilleros Espanoles, has been unanimously elected president of the Committee of European Shipbuilders Associations (CESA) at their last meeting in Brussels. His election came about after he was proposed for the post for the next two years.

CESA represents the interests of the shipbuilders of the European Community with the European Commission.

Mr. **Saez** was vice president of this body over the last year and his election as president reflects the continuity of the policy of increasing cooperation among the European shipbuilders not only to face competition from the Far East but also to contribute to the creation of a new Europe.

Shipbuilders Council Of America Seminar On Ship Marketing, Finance To Be Held February 12-13

As a follow-on to last year's marketing conference on international shipbuilding and repair, the Shipbuilders Council of America is planning an expanded 1-1/2 day seminar to be held on February 12-13, 1991, at the Capital Hilton in Washington, D.C.

The seminar will be divided into three half-day segments on commercial shipbuilding, ship repair and ship financing. Among the invited speakers will be **Dennis Stonebridge**, director of Drewry Shipping Consultants; **Paul Slater**, chairman of the First International Financial Corp.; and **Andy Penfold** or **Steve Hanrahan**, directors of Ocean Shipping Consultants.

This conference will be of interest to all shipbuilding, shipowning, and ship financing executives, as well as U.S. Government officials who are or may be potentially involved in the U.S. shipbuilding industry.

The registration fee for nonmembers of the Shipbuilders Council of America is $450. The fee includes the first day luncheon and cocktail party, and continental breakfast for both days. To register, contact: **Rita Sloan**, Shipbuilders Council of America, 1110 Vermont Avenue, N.W., Washington, D.C. 20005; phone: (202) 775-9060; or fax: (202) 775-9066.

Skaarup Announces Personnel Changes

Ole Skaarup, chairman of Skaarup Shipping Corporation of Greenwich, Conn., has announced that **William O. Gray** has been appointed president of Skaarup Oil Corporation and that Capt. **Lawrence Tzou** has assumed full responsibility for ship operations and management for Skaarup Shipping Corporation.

Mr. **Gray** assumes the position of president after several years as executive vice president of Skaarup Shipping Corporation, and 23 years with Exxon. He will continue to develop Skaarup Oil Corporation's historic businesses as well as explore oil and gas tanker shipping opportunities. Mr. **Gray** is also currently vice chairman of the National Academy of Sciences Committee which is studying the technical issues involved in tanker designs, including double bottoms and other alternatives.

Captain **Tzou** maintains operational control of the Skaarup owned and managed fleet from the Group's headquarters in Greenwich, Conn.

The Skaarup group of companies own, charter and manage vessels providing professional and innovative cargo transportation services to the industrial sector. The personnel moves are unrelated to the recently announced union of Mitsui O.S.K. Lines Ltd. and Skaarup Shipping Corporation.

Lips Offers New Brochure On Marine Propellers And Steerable Thrusters

Lips Thrusters B.V. of the Netherlands, one of the world's leading manufacturers of marine propellers, has published a full-color, 24-page brochure on marine propellers and steerable thrusters.

Since its founding in 1928, Lips has supplied over 45,000 fixed-pitch propellers, with sizes up to 11 meters diameter, and over 3,000 controllable-pitch propellers, for powers up to 48,000 kw, totaling in excess of 6,500,000 kw.

Of the latter, more than 300,000 kw is in transverse thrusters.

From its head office and main production facilities at Drunen in the Netherlands, Lips B.V. coordinates additional manufacturing plants, which it operates either as wholly owned subsidiaries or as joint ventures with local companies, in a number of important shipbuilding countries. In addition, the company maintains a worldwide network of agents and service/repair workshops.

The well-illustrated brochure contains descriptions of the thrusters offered by Lips, such as modular, can-mounted, containerized, retractable, and thrusters for underwater mounting. Also included is a discussion of technical features as well as other information.

For a free copy of the full-color, 24-page brochure from Lips,

Circle 22 on Reader Service Card

Offshore Symposium Set For Houston, April 4-5

The Society of Naval Architects and Marine Engineers (SNAME) has scheduled the 2nd Offshore Symposium, Design Criteria and Codes, for April 4-5, 1991, at the Westchase Hilton Hotel in Houston, Texas.

The event, which is being sponsored by the Texas Section of the society, will feature 22 papers and three panel discussion topics. Presented over two days, the papers will focus on the following areas of interest: "Mobile Offshore Drilling"; "Floating Production"; "Design Criteria Issues"; "Marine Operations"; and "Risk and Reliability."

The panel discussion presented on the afternoon of Friday, April 5, will focus on "The Offshore Code Development Process: Committees and Classification"; "The Role of Regulatory Agencies"; and "Internationalization of Design Codes."

For further information on the symposium, contact: **John J. Filson**, chairman, Second Offshore Symposium, C/O Omega Marine Engineering Systems, Inc., 11757 Kathy Freeway, Houston, Texas 77079; telephone: (713) 870-1111; or fax: (713) 531-9306.

Trinity Marine To Build Fourth Supply Boat For U.S. Owner

Oil & Gas Rental Services, Inc., Morgan City, La., has exercised its option with Halter Marine, Inc., Lockport, La., to build a fourth 220-foot all-steel offshore supply boat. Construction and delivery of the $5-million-plus boat will be in 1991.

In June 1990, the two companies announced a three-vessel contract, saying that they would be the first of their type designed and built from the keel-up since the downturn in the offshore energy industries in the early 1980s.

John Dane III, president of the Trinity Marine Group, which includes Halter Marine, said, "The exercise of this option is encouraging because it is a sign of a return to a more normal pattern of commercial shipbuilding activity."

Like her sisters, the new vessel will have an overall length of 220 feet, beam of 44 feet and 16-foot depth. She will be powered by two GM EMD 16-645-C diesel engines, rated at 1,950 hp each at 900 rpm.

For free literature detailing the full vessel building and repair services offered by the Trinity Marine Group,

Circle 49 on Reader Service Card

Oceaneering Awarded Mobile Offshore Production Systems Contract

Oceaneering Production Systems, Houston, Texas, recently announced that Amoco-Gabon Gombe Marin Company, a subsidiary of Amoco Production Company, has awarded Oceaneering International Services Limited a contract to provide a Floating Production Storage and Offloading (FPSO) system to be installed in the Gombe-Beta Field offshore Bagon.

Oceaneering will provide and operate a 78,000-dwt FPSOI, including the hookup to the wells and offloading systems for the shuttle tankers. The system, which will be installed using a disconnectable six-point spread mooring, will be able to process up to 15,000 barrels of oil per day and will handle production from two wells in the field. Oceaneering will serve as the production contractor, responsible for all engineering, vessel conversion, procurement, project management, installation, operation, and removal of the system following expiration of the least period. The system will then become available for leasing to other operators.

Oceaneering International, Inc., together with its affiliate companies, is one of the world's largest underwater services companies.

Marine Industries Northwest Repowers Washington State Ferry

Marine Industries Northwest, Inc., of Tacoma, Wash., recently repowered the 124-foot car ferry M/V Guenemes for Skagit County, Washington.

The primary conversion work on the double-ended ferry consisted of removing two existing skid-mounted angle drive propulsion units and related steerage systems. The new propulsion units consist of GM-Detroit Diesel 12V 92 turbocharged engines powering Ulstein Maritime outboard type right angle Z drive with 360-degree rotatable steerage system. The power upgrade installation required engine foundation fabrication, strengthening of hull brackets for outdrive attachements, extension of engine jacket water skin coolers, sea chest upgrades, and modifications to fuel, hydraulic, cooling, and ballast piping systems.

The pilothouse control console was rebuilt to accommodate a new control panel for the propulsion/steering units.

The Guenemes, with a capacity for 19 vehicles and 102 passengers, provides service between the city of Anacortes and Guenemes Island.

For free literature detailing the services of Marine Industries Northwest,

Circle 61 on Reader Service Card

Bethlehem Steel Sells Two Ore Carriers To Oglebay Norton

Bethlehem Steel Corporation, Bethlehem, Pa., recently announced it has completed the sale of two of its Great Lakes ore vessels, the Lewis Wilson Foy and the Sparrows Point, to Oglebay Norton Company, a Cleveland, Ohio-based raw materials and Great Lakes marine transportation company.

The Foy, built in 1978, is a 1,000-foot-long, self-unloading vessel, which can carry more than 61,000 tons of iron ore pellets. The Sparrows Point, built in 1952, is 698 feet long with an iron ore pellet capacity of almost 22,000 tons.

With the sale of the Foy and the Sparrows Point, Bethlehem Steel's Great Lakes fleet consists of two 1,000-foot vessels, the Stewart J. Cort and the Burns Habor, which are used to transport iron ore pellet from Minnesota to Bethlehem's Burns Harbor, Ind., plant on Lake Michigan.

Bethlehem said the sale of the two vessels is in keeping with its overall strategy of selling assets not required to support its core steel business. Bethlehem will recognize a gain in the fourth quarter of 1990 as a result of the sale.

Tidewater To Supply 41 Tugs, Barges Under Two Multiyear Contracts

Tidewater Inc., New Orleans, La., recently announced that its marine service division, Tidewater Marine Service, Inc., has signed two multiyear contracts that will place 41 pieces of inland towing equipment in service in West Africa.

The first contract signed with Noble Bawden Drilling (West Africa), Ltd., calls for Tidewater to provide 31 tugs and barges to service four marsh drilling rigs. The second contract, with Sedco Forex International Inc., provides 10 tugs and barges to service one marsh rig. All five rigs are contracted to Shell Oil of Nigeria under long-term arrangements.

According to Tidewater chairman, president and chief executive **John P. Laborde**, the two contracts involve a total of 15 tugs and 26 barges. "The equipment will come from a group of recently acquired tugs and barges and from Tidewater's Gulf of Mexico-based inland towing operations, Tidewater Marine Towing," said Mr. **Laborde**. "But," he added, "Tidewater fully intends to remain active in inland towing operations on the Gulf Coast."

Rauma Yards Launches Luxury Cruise Ship

The Rauma shipyard of Finnish builder Rauma Yards Oy recently launched a luxury expedition cruise ship for the German company Discoverer Reederei GmbH.

At the ceremony, the vessel was christened M/S Society Adventurer by Ms. **Ursel Klein**, wife of the president of Discoverer Reederei.

The vessel is due for completion this summer, following which she will begin expeditions of two to four weeks duration. Her destinations will include the Arctic and Antarctic, the Northwest and Northeast Passages, Indonesia, the Indian Ocean and the rivers and jungles of South America.

Marketing and sales, principally to American customers, will be handled by the owner's sister company, Society Expeditions in Seattle.

The ship has a length of 403 feet, breadth of 59 feet and draft of about 15 feet. She will accommodate 188 passengers in suites.

Other orders currently held by Rauma Yards include a sister ship to the Society Adventurer, as well as orders by Finnish owners fpr a 350-berth SSC cruiser for Diamond Cruise Ltd. and a 1,400-berth cruise liner for Oy Sally Line Ab.

For free literature detailing the shipbuilding capabilities of Rauma Yards,

Circle 56 on Reader Service Card

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ON
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BUYERS DIRECTORY

This directory section is an editorial feature published in every issue for the convenience of the readers of MARITIME REPORTER/Engineering News. A quick-reference readers' guide, it includes the names and addresses of the world's leading manufacturers and suppliers of all types of marine machinery, equipment, supplies and services. A listing is provided, at no cost for one year in all issues, only to companies with continuing advertising programs in this publication, whether an advertisement appears in every issue or not. Because it is an editorial service, unpaid and not part of the advertisers contract, MR/EN assumes no responsibility for errors. **If you are interested in having your company listed in this Buyers Directory Section, contact John C. O'Malley at (212) 477-6700.**

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UE Systems, Inc., 12 West Main Street, Elmsford, NY 10523

AIR CONDITIONING AND REFRIGERATION—REPAIR & INSTALLATION
Adrick Marine Corp., 320 Cantor Ave., Linden NJ 07036
Bailey Group, 2323 Randolph Ave., Avenel, NJ 07001
Stal Refrigeration AB, Butangsgatan 16, S-601 87 Norrkoping, SWEDEN
York Int'l, P.O. Box 1592-083G, York, PA 17405

BALLAST
Chesapeake Specialty Products, Inc., 5055 Northpoint Blvd., Baltimore, MD 21219
Genstar Stone Products, Executive Plaza IV, Hunt Valley, MD 21031
Mineral Research & Recovery Inc., 4565 S. Palo Verde, Ste 203, Tucson AZ 85714
Queen City Iron & Steel, P.O. Box 7205, Charlotte, NC 28241-7205

BARGE BUILDING
Conrad Industries, P.O. Box 790, Morgan City LA 70381

BARGES—Leasing
McDonough Marine Service, 2300 Surekote Road, New Orleans, LA 70117
Zidell Explorations, Inc., 3121 SW Moody Ave., Portland OR 97201

BASKET STRAINERS
Beaird Industries, P.O. Box 31115, Shreveport, LA 71130
Cleveland Gear, 3249 E. 80 St., Cleveland OH 44104

BEARINGS—Rubber, Metallic, Non-Metallic
B.F. Goodrich, P.O. Box 5550, Akron, OH 44313
B.F. Goodrich, Marine Products Group, 6061 B.F. Goodrich Boulevard, Jacksonville, FL 32226
Kahlenberg Bros. Co., P.O. Box 358, Two Rivers, WI 54241
Thomson Gordon Ltd., 3225 Mainway, Burlington, Ont., CANADA L7M 1A6
Waukesha Bearings, P.O. Box 1616, Waukesha WI 53187

BOILER CLEANING
Thomas C. Wilson, Inc., 21-11 44th Ave., Ste. 1, Long Island City, NY 11101

BOILERS—Manufacturers
Aalborg Ciserv (Miami), Inc., 1539 SW 21st Avenue, Ft. Lauderdale, FL 33312

BROKERS
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2900 Energy Centre, 1100 Poydras Street, New Orleans, LA 70163-2900
Diversified Marine Brokerage, 1201 Northern Blvd., Manhasset, NY 11030
Jack Faulkner, 2419 Caddy Lane, P.O. Box 371, Flossmoor IL 60422
Mowbray's Tug & Barge Sales Corp., 35 De Hart St., Morristown NJ 07960

BUNKERING
Zidell Explorations, Inc., 3121 SW Moody Ave., Portland OR 97201

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Baldt, Inc., 6 M. Butler St., Chester, PA 19013
Crandall Dry Dock Engineers Inc./Marit Chain, 21 Pottery Lane, Dedham MA 02026
Lister Chain & Forge, 3810 Loomis Trail Road, Blaine, WA 98230
Milligan Marine Supply Inc., 5832 Harvey Wilson, Houston TX 77020
Washington Chain & Supply, P.O. Box 3645, Seattle WA 98124

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Charlie Chemical & Supply, Inc., P.O. Box 4639, Greenville, MS 38704-4639

CHOCKING COMPOUNDS
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ZSI, 32497 Schoolcraft Road, Livonia, MI 48150

COMPACTORS
International Compactor, Inc., P.O. Box 5918, Hilton Head, SC 29938
A/S Vesta, Skudehavsvej 27, DK-2100 Copenhagen, DENMARK. Sales Agents: American United Marine Corp., 5 Broadway, Rt 1, Saugus, MA 01906, USA

COMPUTERIZED INFORMATION SYSTEMS
TIMSCO, P. O. Box 91360, Mobile AL 36691

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Eldec Corp., P.O. Box 100, Lynnwood, WA 98046-0100
Henschel, Inc., 9 Hoyt Drive, Newburyport MA 01950
IMO Industries, Gems Sensors Division, One Cowles Rd., Plainville CT 06062
MMC International, 60 Inip Dr, Inwood NY 11696
NAMCO Controls, 7567 Tyler Blvd, Mentor OH 44060
Robertson Marine Systems, 3000 Kingman St., Suite 207, Metairie, LA 70006
TANO Marine Systems Inc., 4301 Poche Court West, New Orleans LA 70129
Teleflex Inc., 771 First Ave., King of Prussia, PA 19406

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Marine Travelift, Inc., 49 E. Yew St., Sturgeon Bay, WI 54235
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Westmont Industries, 10805 Painter Ave., Santa Fe Springs, CA 90670
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Braden Carco Gearmatic, P.O. Box 547, Broken Arrow, OK 74013
Gearmatic—see 'Braden Carco Gearmatic' above.
Markey Machinery Co., Inc., P.O. Box 24788, Seattle, WA 98124-0788
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Seattle Crane & Equipment Co., Inc., 4403 20th Street East, Fife, WA 98424
Willem Pot b.v., P. O. Box 29102, 3001 GC Rotterdam, The Netherlands

DECKS
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DEHUMIDIFIERS
L&C Associates, 216 Lafayette Rd., North Hampton NH 03862

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Diesel America Inc., 5217 River Rd., New Orleans LA 70123
Gearhardt's Inc., P.O. Box 10161, Jefferson, LA 70181
General Thermodynamics Corporation, 210 South Meadow Road, P.O. Box 1105, Plymouth, MA 02360
Kiene Diesel Accessories, 325 S. Fairbanks St., P.O. Box 386, Addison IL 60101

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Cummins Engine Company, Mail Code 60011, Box 3005, Columbus, IN 47202-3005
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MAN B&W Diesel GmbH, Stadtbachstrasse 1, D-8900 Augsburg 1, GERMANY
MAN B&W Diesel, 50 Broadway, 18th Fl., New York, NY 10004
MTU of North America, 10450 Corporate Drive, Houston, TX 77478
Markisches Werk GmbH, P.O. Box 1442, D-5884 Halver 1, GERMANY
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ENGINE TEST EQUIPMENT
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Instruments, Computers, & Controls, Inc., 6942 Haven Creek Dr., Katy TX 77449

EPIRBS
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Cunningham Marine Hydraulics Co., 201 Harrison St., Hoboken NJ 07030
Del Gavio Marine Hydraulics Inc., 207 W Central Ave., Maywood NJ 07607

INCINERATORS
Teamtec A/S, P.O. Box 100, N-4912 Gjeving, NORWAY
A/S Vesta, 27 Skudehavnsvej, DK-2100 Copenhagen DENMARK. US Agent: American United Marine, 5 Broadway, Rte 1, Saugus, MA 01906

INSULATION
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IMAC AB, Berga Alle 1, S-252 55 Helsingborg, SWEDEN
U.S. Rep: Hopeman Brothers, Inc., P.O. Box 820, Waynesboro, VA 22980
Maritime Services Corp., 3457 Guignard Drive, Hood River, OR 97031
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The L.C. Doane Co., P.O. Box 975, Essex, CT 06426
Nautilus Equipment Ltd., P.O. Box 66, Station M, Halifax, Nova Scotia B3J 2L4, CANADA
Phoenix Products, 6161 N 64th St., Milwaukee WI 53218

LINE BLINDS
Stacey/Fetterolf, P.O. Box 103, Skippack, PA 19474

LOGISTICS
VL Logistics Consultants, Inc., 3420 Bienville Blvd., Ocean Springs MS 39564
QED, 4646 N. Witchduck Road, Virginia Beach, VA 23455

MACHINERY MAINTENANCE, REPAIR, OVERHAUL, AND TESTING
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Global Maritime Services, 247 SW 33 Court, Ft. Lauderdale, FL 33315
Golten Marine Company Inc., 160 Van Brunt Street, Brooklyn, NY 11231

MACHINING—On Site Repair
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Global Maritime Services, 247 SW 33 Court, Ft. Lauderdale, FL 33315

MARINE ACCOMMODATIONS
Hopeman Brothers, P.O. Box 820, 435 Essex Ave., Waynesboro, VA 22980

MARINE FURNITURE
Wilson & Hayes, 1601 Eastlake Avenue, East, Seattle, WA 98102

METAL PRODUCTS
Williams & Co., Inc., 901 Pennsylvania Avenue, Pittsburgh, PA 15233-1495

NAVAL ARCHITECTS, MARINE ENGINEERS, SURVEYORS
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Aero Nav Laboratories, Inc., 14-29 112 St., College Point, NY 11356
Amirikian Engineering Co., P.O. Box 15210, Chevy Chase MD 20815
B.C. Research, 3650 Wesbrook Mall, Vancouver, B.C. CANADA V6S 2L2
CDI Marine Co., 9487 Regency Square Blvd., Suite 500, Jacksonville, FL 32225
CT Marine, 18 Church Street, Georgetown, CT 06829
Childs Engineering Corp., Box 333, Medfield, MA 02052
Crandall Dry Dock Engrs., Inc., 21 Pottery Lane, Dedham, MA 02026
Crane Consultants, 15301 First Ave S., Seattle WA 98148
C.R. Cushing, 18 Vesey St., New York, NY 10007
Arthur D. Darden, 3200 Ridgelake Dr., Suite 403, Metairie LA 70002
Design Associates Inc., 14360 Chef Menteur Highway, New Orleans, LA 70129
Designers & Planners, 2611 Jefferson-Davis Highway, Suite 3000, Arlington, VA 22202
Diversified Technologies, 812 Live Oak Dr., Chesapeake VA 23320
Encon Management & Engineering Consultant Services, P.O. Box 7760, Beaumont, TX 77706
Fisher Maritime Transportation Counselors, Inc., 71 Valley Street, South Orange, NJ 07079
GHM Inc. (Industrial Measurement Consultants), P.O. Box 1836, Newport News, VA 23601
Gibbs & Cox, Inc., 50 West 23rd Street, New York, NY 10010
The Glosten Associates Inc., 600 Mutual Life Bldg., 605 First Ave., Seattle, WA 98104
Morris Guralnick Associates, Inc., 130 Sutter Street, Suite 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, Durham, NH 03824
JJH Inc., No. 4 Executive Campus, Culbert Blvd. & Route 70, P.O. Box 5031, Cherry Hill, NJ 08034
R.D. Jacobs & Associates, 11405 Main St., Roscoe, IL 61073
James S. Krogen, 1515 NW 7th St., Suite 124, Miami FL 33125
Rodney E. Lay & Associates, 13891 Atlantic Blvd., Jacksonville, FL 32225
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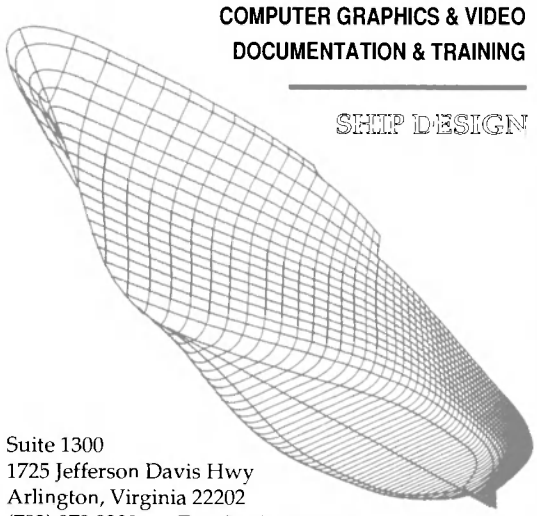

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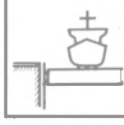

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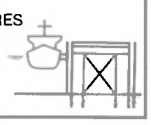

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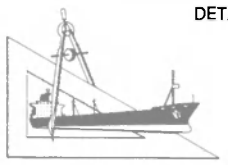

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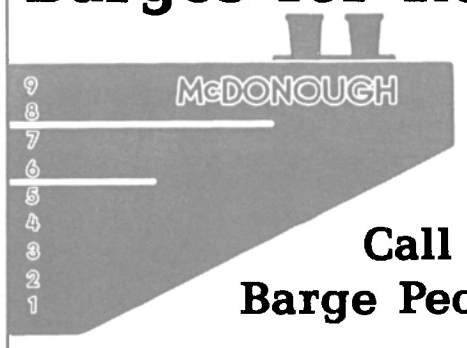

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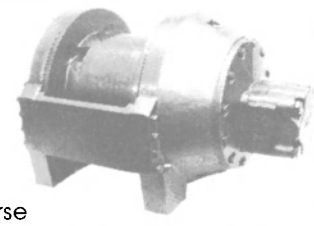

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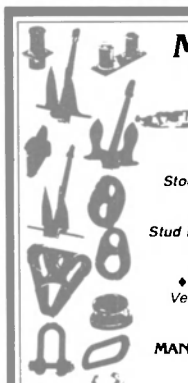

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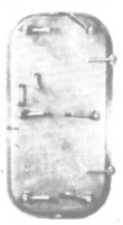

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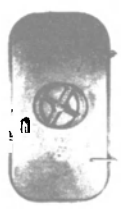

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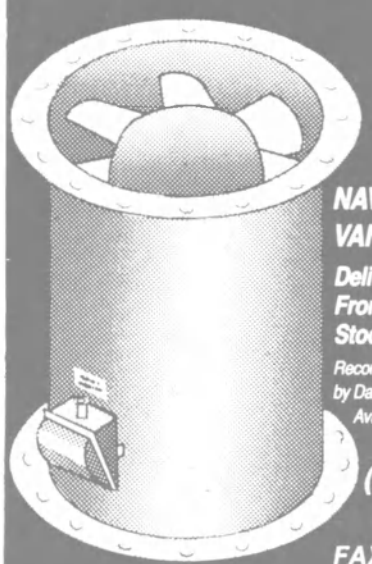

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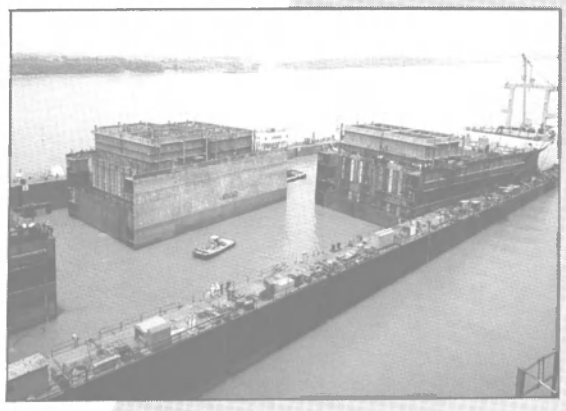

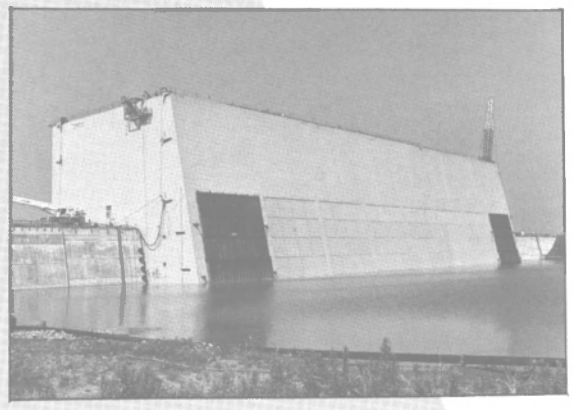

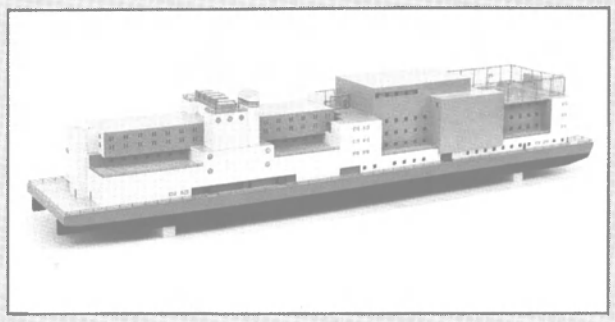

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