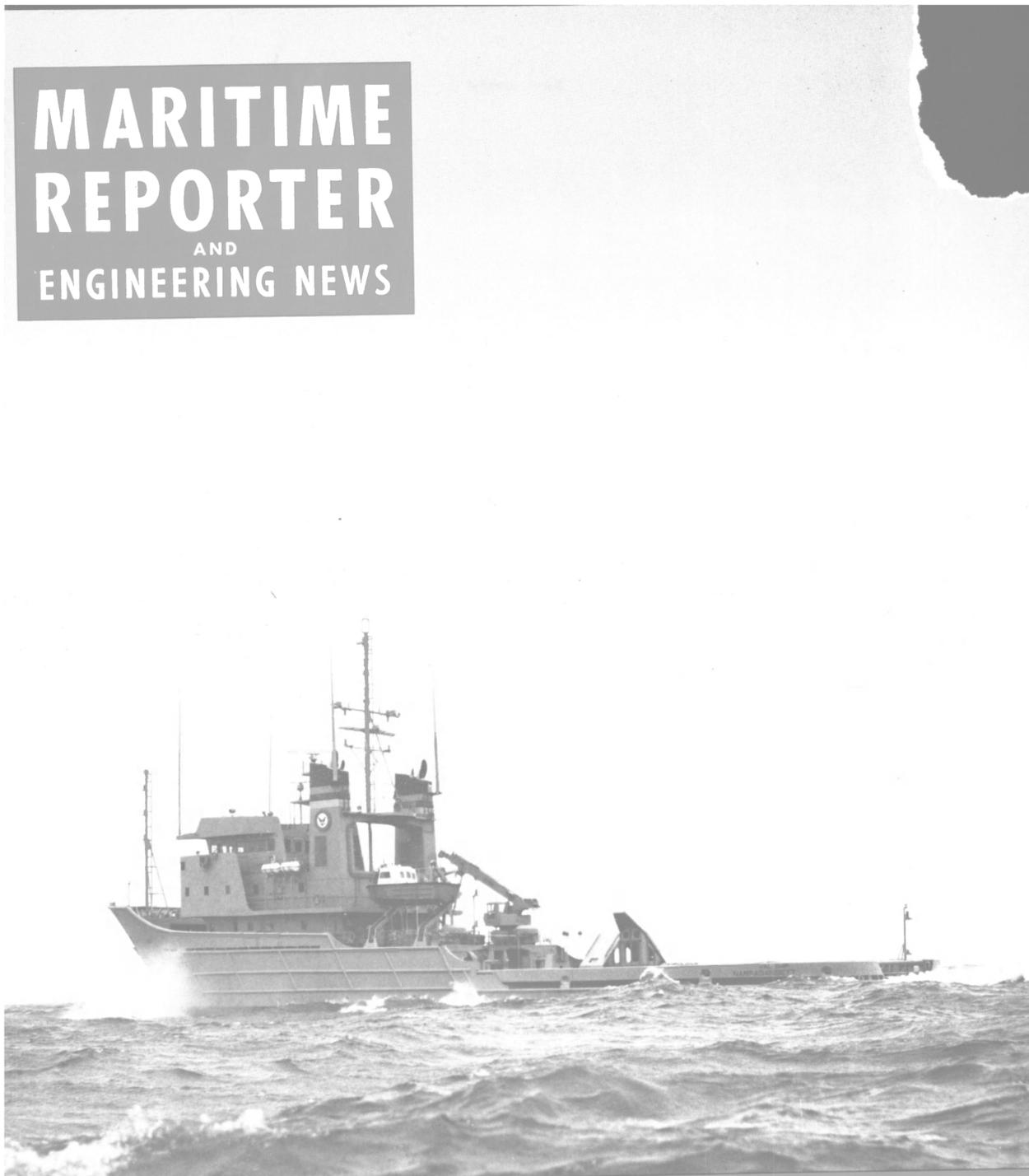


**MARITIME
REPORTER**
AND
ENGINEERING NEWS



USNS Narragansett (T-ATF 167)

**Marinette Marine Completes
Two GM Powered
T-ATF Tugs For Navy**
(SEE PAGE 12)

JANUARY 1, 1980

When you pass The Ambrose Light, you're not far from Gulf.



Back in 1908, U.S. Lightship No. 87 first dropped her mushroom anchor at 40° 27.5' N, 73° 49.9' W.

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**Title XI Requested
For 2 Lakes Carriers
Costing \$60 Million**

Two subsidiaries of American Steamship Co., 3250 Marine Midland Center, Buffalo, N.Y., have each applied for a Title XI guarantee to aid in financing the construction of a self-unloading Great Lakes bulk carrier. Both vessels are under construction at Bay Shipbuilding Corp., Sturgeon Bay, Wis.

Cooper Steamship Co. has contracted for a 32,100-dwt bulker, which is scheduled for delivery in March. The actual cost of the vessel is approximate \$28.8 million.

Goodyear Steamship Co. is having a 23,825-dwt bulk carrier built. The vessel, which is expected to be delivered in October, has an actual cost of approximately \$31.5 million.

Propulsion for each of the vessels will be provided by a 7,200-hp diesel engine.

If approved, the Title XI guarantees would cover 87½ percent of the actual cost of the vessels.

**Report Shipbuilding
Welding Time Can
Be Reduced 75 Percent**

The Bideford Shipyard in Devon, England builds a variety of containerships. Welding time was significantly reduced using standard BUG-O equipment, including a 9600 Line WEAVER (manufactured by Weld Tooling Corporation, Pittsburgh, Pa.), along with a 500 amp MIG power source, 1.2mm-diameter solid MIG wire with 80-percent argon and 20-percent shielding gas. One welder, using the BUG-O automatic, welded all of the longer welds on the ship.

This permitted the remainder of the welders using semi-automatic equipment to do the hatches, plating and fittings, thus drastically reducing the job time. An added and valuable asset was the consistent quality of weld appearance and mechanical properties. The total time saving for welding was reported to be 75 percent. For complete information and literature, contact Herbert E. Cable, Weld Tooling Corporation, 3001 West Carson Street, Pittsburgh, Pa. 15204.



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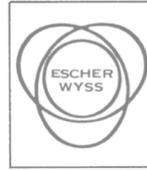
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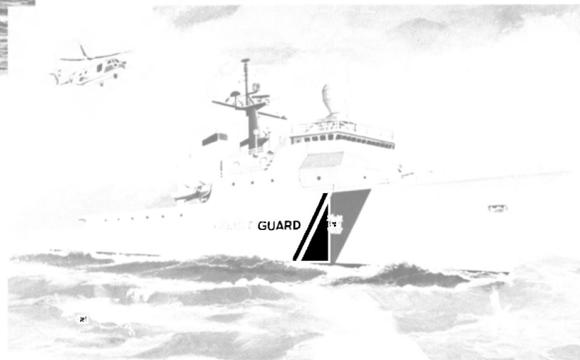


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Moore McCormack Names Three To Key Positions

Robert E. O'Brien, president and chief executive officer of Moore McCormack Lines, Incorporated, New York, N.Y., recently announced three key appointments of that water transportation subsidiary of Moore McCormack Resources, Inc.

Henry W. Born was appointed

inward traffic manager, A. Charles Hidalgo, manager of rates and conferences, and James E. Durick, assistant traffic manager, effective December 1, 1979.

Mr. Born joined Moore McCormack in 1938, after attending New York University. Following a tour of the company's South American east coast port facilities, he returned to the New York office, and was appointed

assistant traffic manager. Mr. Born will exercise responsibility for all inward traffic matters of the company's services from the east coast of South America, South and East Africa, and the Malagasy Republic to the U.S. Atlantic Coast ports.

Mr. Hidalgo, a veteran of nearly 40 years in the maritime industry, joined Moore McCormack in 1940. He has held positions of increasing responsibility in the Bill of Lading and Traffic Departments, except for two periods of active duty with the U.S. Armed Forces.

Prior to his appointment in 1969 as assistant traffic manager of the Robin Line Service from South and East Africa, he served as assistant traffic manager in the company's American Scantic Line Service.

Mr. Hidalgo in his new assignment will continue to be responsible for all matters concerning rates, and represent the company in its conference memberships.

Mr. Durick as assistant traffic manager will help direct the traffic activities of the company's

liner services from the east coast of South America and from South and East Africa and the islands in the Indian Ocean.

Mr. Durick brings to his new position a diversified shipping background in marketing-sales, rates and conferences. Prior to joining Moore McCormack Lines, he had been affiliated since 1973 in various traffic posts with the South African Marine Corporation. He most recently served as inward sales manager. Mr. Durick attended the State University of New York.

Contract To Todd For \$3-Million Navy Overhaul

Todd Shipyards Corporation, Brooklyn, N.Y., is being awarded a \$3,092,842 fixed price contract for drydocking, upgrading electronic equipment and overhaul of the USNS Gen. Hoyt S. Vandenberg, a government-owned missile range instrumentation ship. The Navy's Military Sealift Command, Atlantic, Bayonne, N.J., is the contracting activity. (N62381-80-B-0002)

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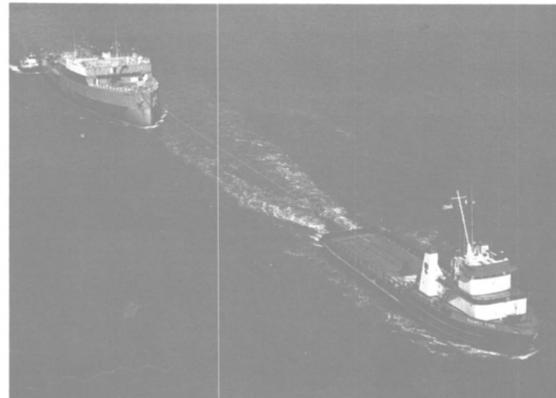
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Tidewater Marine Tows Mobile Supply Vessel Eleven Thousand Miles



Amoco's mobile supply base, Wareship II, en route to the Indian Ocean. Tidewater Marine's Ramey Tide is towing the vessel to the Seychelles Islands.

Tidewater Marine's Ramey Tide, a 190-foot, 4,300-horsepower towing supply vessel, has started an 11,000-mile tow from the Houston Ship Channel to the Seychelles Islands in the Indian Ocean.

The Ramey Tide is towing the Wareship II, a former U.S. Navy LSD converted by Amoco Drilling Services Inc., for remote area operations as a mobile supply base. The tow will transit the distance at an average speed of from 7 to 8 knots over a 72-day period, and upon arrival the vessel will support a new drilling program by Amoco Seychelles Petroleum Company in the Indian Ocean. The Wareship II contains all of

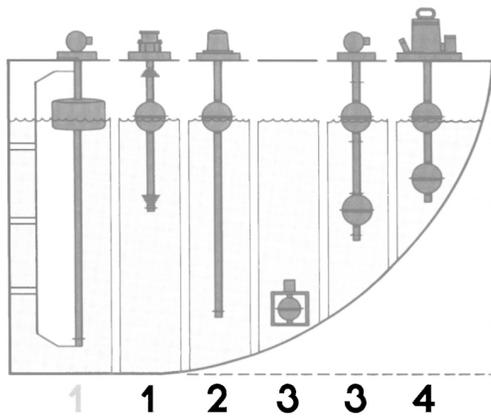
the materials, tools and supplies required to support a one- or two-well exploratory drilling program.

The Ramey Tide is one of 16 new vessels completed for Tidewater Inc. last year as part of the company's fleet modernization and expansion program. It was built by Avondale Shipyards, Inc. at its New Orleans, La., facility.

The vessel is powered by two EMD 12-645 E7A diesel engines and has a 40-foot beam, 14-foot draft, and 125,000-gallon fuel capacity.

This year, Tidewater will take delivery of 15 additional vessels costing \$31 million.

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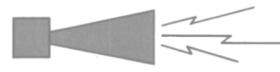


4.

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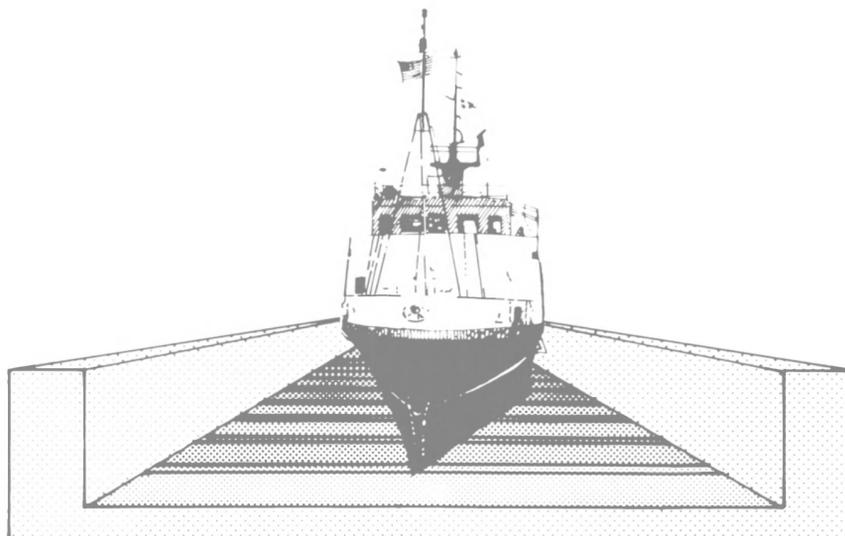
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**Bay Shipbuilding Lays
Keel For Turecamo Barge**



Attending the ceremony, from left to right, were: Allen A. Powell, assistant manager, Contract Services, Bay Shipbuilding Corp.; A.J. Zuehlke, president, Bay Shipbuilding Corp.; Harry Taylor, senior surveyor, American Bureau of Shipping, Sturgeon Bay, Wis.; and Comdr. Larry Murdock, United States Coast Guard. OCMI, Sturgeon Bay.

The official keel-laying ceremony of Hull 725 was held recently at Bay Shipbuilding Corp., Sturgeon Bay, Wis. Hull 725, a 396-foot tank barge is being built for Turecamo Coastal & Harbor Towing Corp. of Staten Island, N.Y. Attending this ceremony were Comdr. Larry Murdock, United States Coast Guard, OCMI; Harry Taylor, American Bureau of Shipping; and representing Bay Shipbuilding, A.J. Zuehlke, president, and Allen A. Powell, assistant manager-Contract Services.

The 396-foot tank barge will have a beam of 72 feet and an amidship side depth of 25 feet 10 inches. The barge can be either towed or pushed by tug. Operating in the New York City area, the barge will be suitable for carrying grade B petroleum products and lower, including heavy fuel oil.

Ten cargo tanks with two abreast and five in length will have a volumetric capacity of 103,500 barrels. Three main cargo deep-well pumps will be on deck. Each pump will be powered by a GM Detroit V16 Diesel engine developing 480 horsepower. These three pumps will each have a capacity of approximately 4,200 gpm or 6,000 barrels hour.

This is Bay Shipbuilding's first contract with Turecamo Coastal & Harbor Towing Corp. Delivery of the 396-foot tank barge will take place in the summer of 1980.

**Blount To Build 75-Foot
1890's Style Steam Launch**

The Great Congress St. & Atlantic Steamship Company, Ltd., Boston, Mass., has signed a contract with Blount Marine Corporation of Warren, R.I., for construction of a 75-foot steam launch of traditional turn-of-the-century lines.

Designed by Halsey Heereshoff of Bristol, R.I., it will return Boston once again to the era of marine steam. Tourists visiting Boston's historic waterfront will be able to steam the harbor and the Charles River in the style of the 1890s. Service is planned from the Museum of Transportation Wharf to the Constitution in Charlestown, to the Quincy Market area in Boston, and back to Museum Wharf again.

January 1, 1980

The vessel is to be a classic single-deck steam launch with a 17-foot beam and a 4-foot draft. The steel hull will carry a vintage mahogany superstructure incorporating a pilothouse and glassed-in engine room, making the engine and boiler visible to passengers.

The vessel will be certified by the U.S. Coast Guard and will accommodate 125 passengers on old-fashioned rim seating under a canopy. Careful attention to detail above the waterline will produce a faithful recreation of the type of passenger launch that plied Boston Harbor 100 years ago.

The engine will be a three-cylinder Davis, made in London, Ontario, Canada, in 1906. It will produce about 80 hp at 250 rpm under 180 psi. All auxiliaries will be steam-driven

as well from a modern marine boiler designed specifically for the boat.

The engine is a rare "three-cylinder compound" with the high-pressure cylinder alternately feeding two low-pressure cylinders. It formerly powered the 55-foot tug Ajax, owned and operated by John Clement, one of New England's senior marine steamers. Prof. Jens Holm of the Webb Institute is the steam consultant for the project.

Blount Marine is one of the foremost designers and builders of passenger vessels in the United States. They recently christened the New Shoreham, an 80-passenger cruise ship of 150 feet.

Delivery of the steamboat and commencement of service in Boston Harbor is planned for May of 1980.



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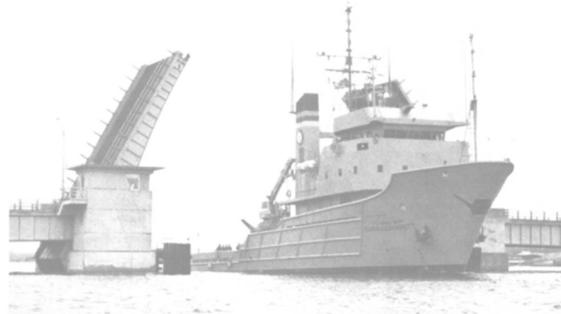
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USNS Narragansett (T-ATF 167), second of seven T-ATF fleet ocean tugs being built by Marinette Marine, was recently delivered to the U.S. Navy.

Marinette Marine Christens Second And Third Of Seven New Tugs For U.S. Navy

The second and third in a series of seven T-ATF Fleet Ocean Tugs built by Marinette Marine Corporation, Marinette, Wis., for the U.S. Navy were recently christened. The USNS Narragansett (T-ATF 167) recently completed sea trials and has been delivered. The USNS Catawba (T-ATF 168) is completing sea trials and will be delivered in the spring of 1980.

The T-ATF Fleet Tug is a new class of vessel intended to replace the aging World War II ATF's last constructed in 1946. The T-ATF has an overall length of 226 feet, a maximum beam of 42 feet, and full load displacement of 2,260 tons.

The vessel is powered by two EMD 20-cylinder medium-speed diesels driving through clutches and nonreversing reduction gears. Power is transmitted through line shafts and propeller shafts to controllable, reversible-pitch propellers running in Kort nozzles. Total installed horsepower of 7,200-bhp is designed to produce a minimum bollard pull of 120,000 pounds and a free-running speed of 15 knots at 80 percent power.

The T-ATF is designed to operate with a full-time crew of 20 men. Accommodations for the permanent crew are above the main deck and are, in general, comparable to commercial standards for the type of vessel. Besides quarters for the normal crew, troop-type berthing accommodations are provided below the main deck for an additional crew of 20 transients, if the mission requires it.

To support its primary tasks, the T-ATF is fitted with all of the permanent equipment that is required. This includes a single drum wire towing winch and synthetic rope traction machine. A stern roller is provided at the transom for over-the-stern operations such as anchor handling and recovery, and diving support. A portable towing bow is installed to provide an uninterrupted sweep of the towline over the bulwarks. Hydraulically operated Norman Pins are provided to prevent the towline from moving too close to amidship.

An electrohydraulic-powered deck crane is located on the fo'c'sle deck starboard side for use in

handling portable equipment and recovering salvage gear. The crane requires only one man for operations. The ability to rotate the boom without vang and the self-stowing capability of the retracting boom represent a significant improvement over the king post and boom arrangement of the older ATF.

A 24-foot diesel-driven workboat is provided to assist in various operations. The boat is launched and recovered using standard Wellan-type davits.

In addition to the vessel's mooring anchors, a 9,000-pound Stato anchor is installed in the forward bulwark opening. This anchor is used for debeaching and salvage operations. The ship's crane is used to recover the anchor and place it on the main deck. The anchor is stowed using shoreside facilities.

An area of the main deck is marked for receiving cargo from a helicopter. Helicopter operations do not require special equipment and do not interfere with the primary mission of the vessel.

The T-ATF's primary mission is to salvage and take in tow ships of the Fleet that are battle damaged or nonoperational. The

combination of the conventional wire tow and traction machine for synthetic hawsers offers the greatest possible simplicity and the highest degree of reliability. The T-ATFs are equipped to respond quickly to a call from a ship in danger without having to first return to port.

The vessel is also capable of performing offshore firefighting and dewatering of distressed ships. Two 1,500-gpm foam monitors are located on the wheelhouse top and the firefighting platform between the stacks. Each fire pump supplies a monitor and a hose manifold on the main deck. Dewatering of stranded vessels is accomplished with portable eductors connected to the firefighting hose manifolds.

In addition to these capabilities, the T-ATFs will be used for a variety of other missions. The ships have space and weight reservations for portable salvage equipment, including pumps, generators, beach gear and a hydraulic puller. The open deck area permits untethered diving with the use of portable equipment. The tugs can also be used for transporting and deploying a payload of oil-spill cleanup equipment.

Davie Launches Second Jackup Drilling Rig For Global Marine Drilling Company

Davie Shipbuilding Limited recently launched the second in a series of marine jackup drilling rigs. Mrs. Lillian Schindler broke the traditional bottle of champagne and thereby launched and christened the Glomar Jackup II.

Mrs. Schindler is the wife of Marvin Schindler, manager of engineering and construction for Global Marine.

The evening launch, at Davie's Lauzon, Quebec, Canada, yard, marks the near completion of the second rig built by Davie for the Houston, Texas-based Global Marine Drilling Company.

Davie has been constructing drill rigs since June of 1978, when it obtained its first contract from Global. Since then, the yard has received two repeat orders from Global and a contract with Salen Offshore of Houston (see MARITIME REPORTER Engineering News, August 1, 1979).

The Glomar Jackup II was scheduled to leave Davie in early December 1979, when it was to be mounted upon a barge and

towed to the Gulf of Mexico. The Salen rig is scheduled for delivery in May of 1980, followed by the delivery of the third Global rig in August of '80.

Davie Shipbuilding regards this series of rigs as a base upon which to build their long-term expertise to respond to needs of the offshore industry. Future possible markets include the construction of larger platforms and the supply of jackup rigs specifically adapted for use in the shallow-water leases off Canada's east coast.

Each of the rigs under construction at Davie is built to the designs of the Marathon LeTourneau class 82-SD-C through a license agreement between Davie and Marathon. The rigs are each valued at approximately \$25 million Canadian.

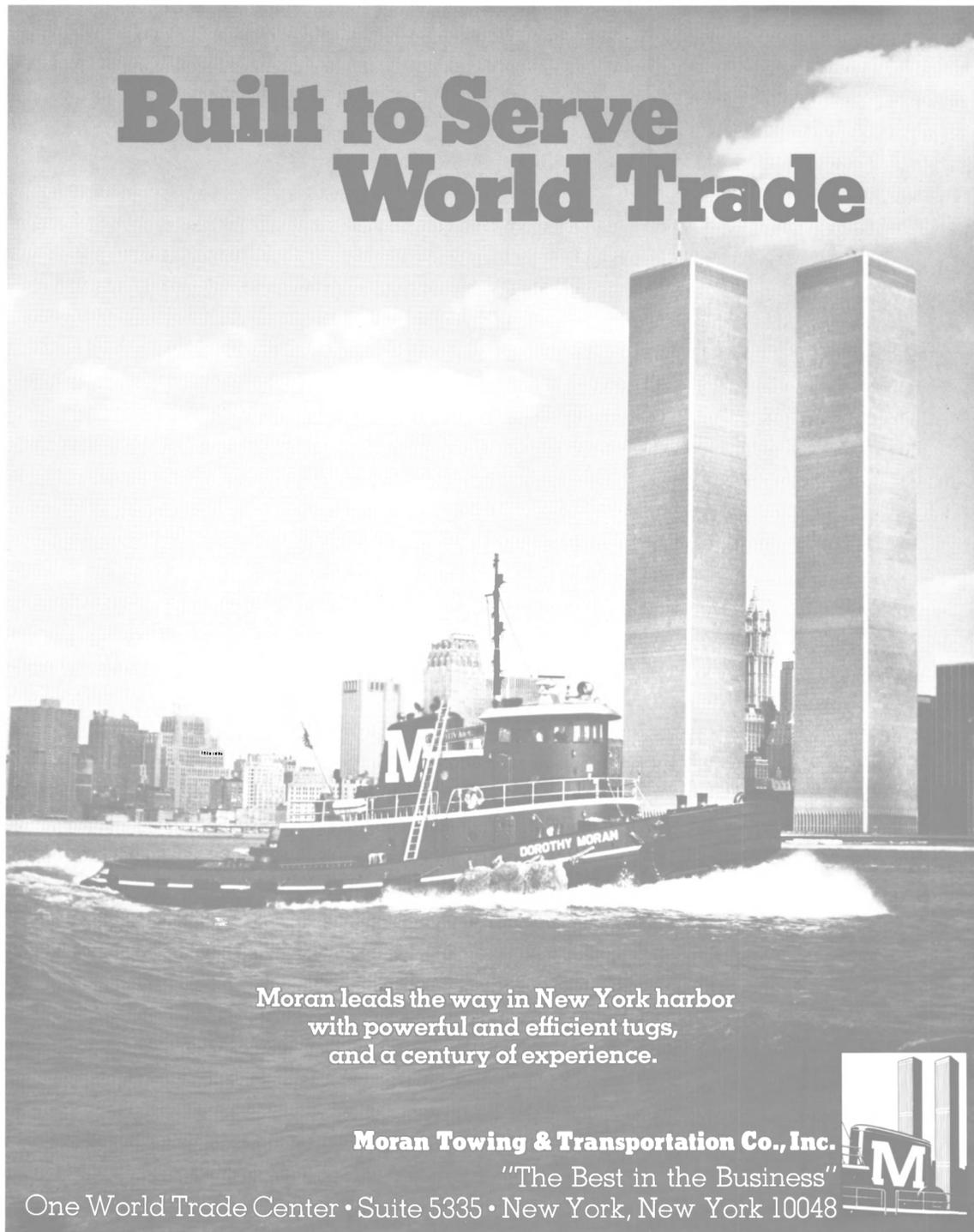
The 82-SD-C rigs are designed to drill in water depths of up to 250 feet, with a drilling penetration of 25,000 feet. The 207-foot-long platform has crew accommodations for up to 90 persons.

| T-ATF Equipment Suppliers | | | |
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Papers Call For First Pan-American Conference Of Ocean Engineering

The First Pan-American Conference of Ocean Engineering, which will be held in Mexico City, October 20-23, 1980, sponsored by the Pan-American Federation of Engineers Associations (UPADI), the Mexican Committee on Ocean Resources Engineering (COM-

IRO), and others, has decided to extend the deadline for submittal of abstracts and papers, as follows: submittal of abstracts, May 4, 1980; communication of approval of abstracts, May 31, 1980; submittal of papers, July 31, 1980.

The general theme will be "Participation of Engineers in National Decisions," and papers on the following general topics are requested: the future of ener-

getics, necessary alternatives for development, importance for developing countries, appropriate technological exchange, and interrelation between Pan-American associations. Two-page abstracts should be submitted to Comité Organizador del Congreso Panamericano de Ingeniería Oceanica, Apartado Postal 60-549, Mexico 18, D.F., Mexico. Cable: ORG-SUBMEX, Telex: 01771437 CO-ERME.

MarAd Awards Contract For Sailing Ship Study

The Maritime Administration has commissioned a study to determine whether wind-powered ships could compete effectively with conventionally powered merchant ships, Assistant Secretary of Commerce Samuel B. Nemirow announced recently.

MarAd, an agency of the U.S. Department of Commerce, awarded a \$138,840 contract for the 12-month study to a team headed by former shipyard executive Lloyd Bergeson, president of Wind Ship Development Corporation, Norwell, Mass. The group is to expand upon a preliminary study completed by the University of Michigan in 1975.

"The Michigan study concluded that a commercial sailing vessel was not then an economically feasible alternative for the American merchant marine, but said the figures were close," Mr. Nemirow said. "With the continued escalation in the price of fuel, we believe it is time for another look."

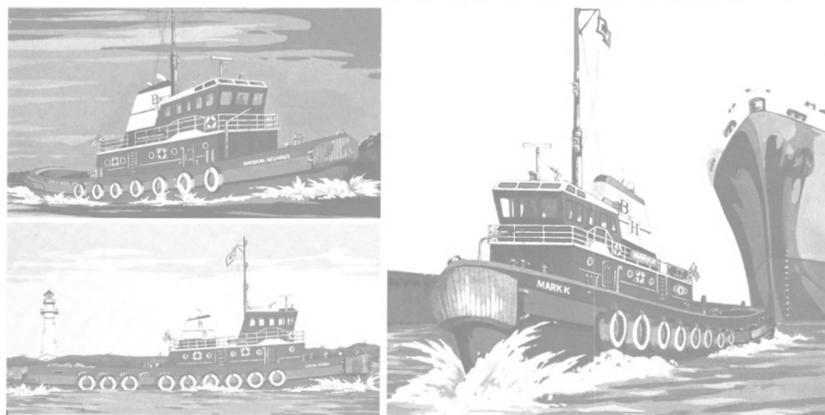
He noted there are foreign-policy as well as economic reasons for reducing the nation's dependence upon foreign oil. "Because it is pollution free and constantly renewed, wind power is an ideal candidate," he added.

The Bergeson group will analyze ship characteristics, trade routes, and commodities to determine market opportunities best suited for sailing ships of various sizes. It also will examine the overall economic potential of sailing ships in world trade.

Modern wind-powered cargo ships most likely would employ hybrid propulsion systems with auxiliary engines for use in calm seas, and to improve maneuvering capabilities in harbors and other restricted waterways. Aerodynamically designed sails made from synthetic materials, coatings to protect the ship's hull and reduce friction, and modern communications equipment which provides continuous updates on weather patterns are among other possible departures from the sailing technology of the 19th century.

The Bergeson group was selected after evaluation of a total of six proposals submitted to MarAd in response to an August 13, 1979, request for study ideas.

Other members of the contract team are Frank MacLear, president of the naval architectural firm of MacLear and Harris, New York, N.Y.; Henry S. Marcus, associate professor of ocean engineering at the Massachusetts Institute of Technology; Dr. James H. Mays, an ocean engineering scientist of Providence, R.I.; A.P. Bates, consultant, Hingham, Mass.; Dr. Petrus A.M. Spierings, consultant, Boston, Mass.; and P.C. Anderson, president of Sail Freight, International, North Kingstown, R.I.



Three new tugs join the Bay-Houston family.

Three new additions to the Bay-Houston fleet will be the Barbara H. Neuhaus, Laura Haden and Mark K. All attest to the dedication of Bay-Houston to provide the best

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EROSION/CORROSION Accelerated by DE-ZINCAFICATION nearly destroyed this Condenser Tube-Sheet, on a cargo vessel. Ceramic Metal quickly rebuilt it, and also rebuilt the End Plates, Division Bars and Water Boxes.

**Todd Will Deliver 2
400' Barges To Montauk
Oil Transportation Corp.**

The Galveston Division of Todd Shipyards Corporation is expected to deliver the first of two petroleum product barges, under construction for Montauk Oil Transportation Corp., early in 1980. The 400-foot by 78-foot by 31-foot barge, to be named Cibro Norfolk, has a capacity of 135,000 barrels.

The barge will be equipped with a two-pipeline system for carriage of multiple-grade petroleum products. Three deep-well pumps will discharge the cargo at a rate of 15,000 barrels per hour. The ABS-classed A-1 manned Cibro Norfolk will have accommodations for a crew of four. It will have a loaded speed of 7 knots with a 6,000-hp tug and 10 knots light.

Montauk Oil Transportation Corp., a division of Cibro Petroleum, is constantly adding to its fleet of barges for their inland and offshore work. Todd Galveston is expected to deliver the second barge, the Cibro Savannah, in September of 1980. Three other barges, Cibro Philadelphia, Cibro Albany, and Cibro New York, were recently constructed at Todd's Houston Division and are currently in service.

**Donald A. Adley Named
Senior VP Of Marketing
At Farrell Lines**

George F. Lowman, chairman of the board and chief executive officer, Farrell Lines Incorporated, has announced the appointment of Donald A. Adley as senior vice president, Marketing. Mr. Adley, a graduate of Dartmouth College, comes to Farrell Lines with broad and diversified experience in the marketing management field involving road, air and ocean transportation. He was formerly president of the Adley Corporation, a motor common carrier, general manager-Cargo, Trans World Airlines, and Group vice president-Marketing and Sales, Barber Steamship Lines Inc., the position he held at the time he joined Farrell Lines.

**Raytheon Service Co.
Brochure Describes
Auto-Alarm RCVR/KYR**

Raytheon Service Company recently published a brochure describing their new Auto-Alarm Receiver/Keyer. The Raytheon Auto-Alarm, Model RAY-1AAR/K is a solid-state rackmountable unit designed to monitor the 500-kHz international radiotelegraph distress frequency band and actuate a continuous audible alarm upon detection of a distress signal.

The RAY-1AAR/K contains several unique design features, including automatic gain control (AGC) system for optimum receiver sensitivity, precise recognition of valid distress signals, and type approval in conformance with FCC 1981 timing regulations, Part 83.554.

The signal keyer automatically "keys" radiotelegraph transmitters with the International Radiotelegraph Alarm signal. The 12-volt d-c power source required

to operate the Signal Keyer is normally supplied by the radio-room emergency battery supply. The Auto-Alarm is presently installed in Solas Communication Consoles onboard a number of ships.

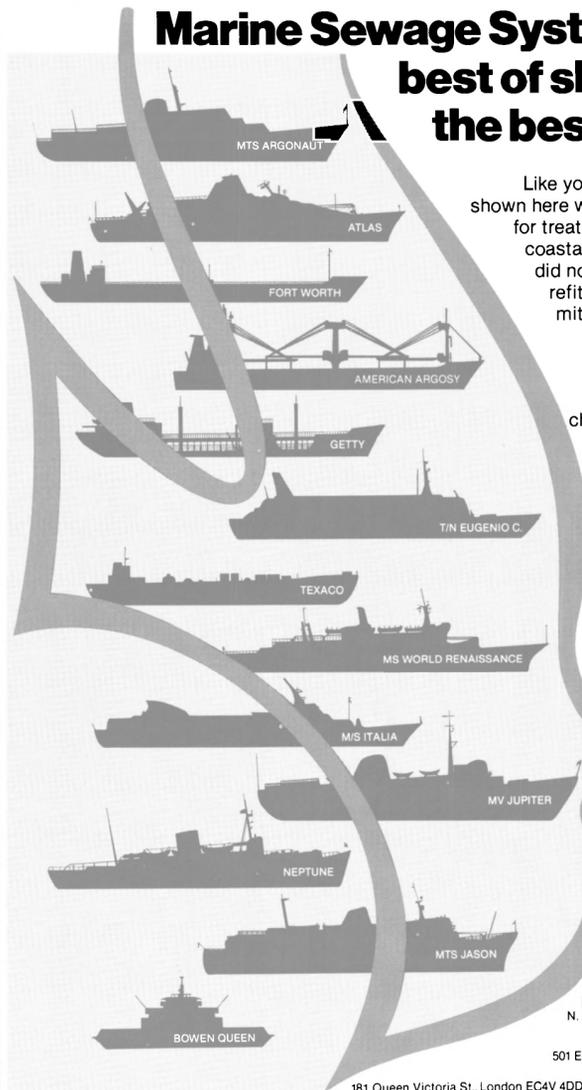
For complete details and a free copy of the four-page brochure on the Auto-Alarm Receiver/Keyer, write Charles Chartier, MR-1, Raytheon Service Company, 2 Wayside Road, Burlington, Mass. 01803.

**\$15-Million Overhaul
Contract Received By
Bethlehem San Francisco**

Bethlehem Steel Corporation, San Francisco, Calif., has been awarded a \$15,149,537 firm fixed price contract for regular overhaul of the USS Kansas City (AOR-3). The Naval Sea Systems Command is the contracting activity. (N62798-70-C-0010)

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**National Marine Shipyard
Division To Open New
Gulf Coast Facilities**

The Shipyard Division, National Marine Service Incorporated, will open a new division location, E.E. Ahlemeyer, president of the division has announced.

The new facility will be in the New Orleans, La., area on the Harvey Canal. Located at 540 Destrehan Avenue in Harvey, the Gulf Coast branch will specialize in parts and service for General Motors EMD diesel engines.

The new unit will also provide 24-hour repair service, complete diesel engine overhaul and repairs, block welding, line boring and a large EMD parts inventory.

The Harvey location was selected to facilitate service to the marine, industrial and offshore industries in the Gulf Coast and South Atlantic states.

National Marine pioneered rapid overhaul of diesel engines, and routinely provides overhaul of higher horsepower diesels in as little as 48 hours.

The company maintains a "go-anywhere" policy to provide quick on-site repair of downed diesel engines, and regularly sends its repair crews to points throughout the world.

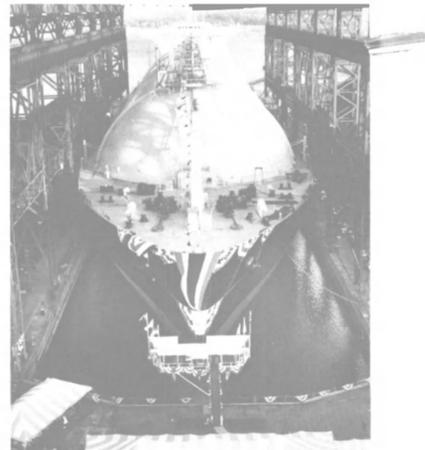
The Shipyard Division's central facility is located at Hartford, Ill., just above the confluence of the Mississippi and Missouri Rivers, and provides extensive drydocking, repair and cleaning services to marine and

industrial customers, in addition to its diesel service.

National Marine Service, a subsidiary of NICOR Inc., is headquartered at 1750 Brentwood Boulevard in St. Louis, Mo.

**LNG Virgo Named
At General Dynamics**

The Group managing director of Burmah Oil Company Ltd. of England declared recently that tapping reserves of natural gas readily available in many countries "is one of the simplest ways of developing new sources of energy."



The 936-foot LNG Virgo was christened during naming ceremonies at General Dynamics' Quincy (Mass.) Shipbuilding Division. The Virgo will join seven sisterships delivering liquefied natural gas to Japan.

Speaking at the naming ceremony for the giant liquefied natural gas tanker LNG Virgo, Stanley J. Wilson said he found it "incredible that we should stand around bewildered at the disappearance of old sources of energy while doing almost nothing to open up new resources that are readily available."

Mr. Wilson, whose wife Molly christened the eighth LNG tanker to be built at General Dynamics' Quincy (Mass.) Shipbuilding Division, said the world could open up the new resources "by recreating the necessary will, determination and urgency. . . ."

Mr. Wilson told the thousands of shipyard workers and distinguished guests at the ceremony that the tankers built in the yard "can provide the transport" for the new sources of energy. "Ships built in this yard are no longer prototypes. They are the norm."

The 936-foot LNG Virgo is scheduled to join seven sisterships which have been delivering liquefied natural gas from Indonesia to Japan for more than two years. By the end of 1979, the ships will have made about 177 round trips to Japan, delivering 469 billion cubic feet of natural gas—enough to heat the homes in the greater Boston area for 12 years.

Also participating in the naming ceremony were David S. Lewis, General Dynamics chairman and chief executive officer, P. Takis Veliotis, corporate vice president and general manager of its Electric Boat Division, and Joseph H. Lennox, Quincy Division general manager.

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 COMPANY _____ PHONE _____
 CITY _____ STATE _____ ZIP _____
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ALABAMA
 Bayou La Batre
 Deep Sea Marine Products
 Location: West Bank, 500 Tam
 Avenue
 Phone: (205) 824-4127
 Radio: Ch 16, VHF
 Mobile
 Midstream Fuel Service, Inc.
 Location: Mobile River, Mile 1.5
 Address: Fairhope, 35532
 Phone: (205) 433-4972
 Radio: Ch 16, VHF

ARKANSAS
 Helena
 Helena Fuel & Harbor Service, Inc.
 Location: Mississippi Service, Inc.
 Mississippi River, Mile 661
 Riverfront & Bridge Road
 Phone: (501) 338-8321
 Radio: Ch 16

CALIFORNIA
 Oakland
 Bay Area Petroleum, Inc.
 Location: 421 23rd Ave.
 Phone: (415) 534-4517
 San Diego
 Alameda & Brito, DBA Tuna Clipper
 Marine
 Location: San Diego Harbor
 Foot of Crosby Street
 Phone: (714) 232-1838
 San Pedro
 San Pedro Marine, Inc.
 Location: Berth 74
 Phone: (213) 832-1339

FLORIDA
 Jacksonville
 See Savannah Oil & Chemical
 Savannah, Ga.
 Port Everglades
 Belcher Oil Company
 Location: Port Everglades
 2401 Eisenhower Boulevard
 Address: Fort Lauderdale
 Phone: (305) 525-4261
 Tampa
 Belcher Oil Company
 Location: Tampa Bay
 Phone: (813) 247-4572, 247-4573
 West Palm Beach
 Belcher Oil Company
 Location: Port of Palm Beach
 1733 Hill Avenue
 Phone: (305) 848-1495

GEORGIA
 Brunswick
 See Savannah Oil & Chemical
 Savannah, Ga.
 Savannah
 Belcher Oil Company
 Location: Savannah River, Mile 17
 Pier 50, Georgia Ports Authority
 Phone: (912) 364-8621
 Savannah
 Savannah Oil & Chemical
 Location: Savannah River
 647 W. River Street
 Phone: (912) 234-5402

ILLINOIS
 Hartford
 City Bros. Marine Service of
 America, Inc.
 Location: Upper Mississippi River,
 Mile 157
 Foot of Hawthorne Street
 Phone: (618) 254-0626 (Illinois)
 (314) 741-2570 (Missouri)
 Radio: Ch 16, KLC 791
 Wood River
 Hartford Fueling Service
 Location: Upper Mississippi River,
 Mile 156
 Phone: (618) 254-4333
 (314) 741-3667
 Radio: Ch 16 VHF KLG 280

KENTUCKY
 Louisville
 Wooten River Service
 Location: Ohio River, Mile 603
 2527 River Road
 Phone: (502) 896-0317
 Paducah
 Molloy Marine Service, Inc.
 Location: Ohio River, Mile 934
 100 Husband
 Phone: (502) 443-6456
 Paducah
 Walker Midstream Fuel and
 Service Co.
 Location: Ohio River, Mile 934
 532 South Second St.
 Phone: (502) 442-2738
 Radio: freq. 156

LOUISIANA
 Amelia
 Berwick Bay Oil Co., Inc.
 Location: Bayou Bonif
 Intracoastal Waterway
 1/2 mile North 85 mile board
 See Berwick listing under Morgan
 City, La.
 Baton Rouge
 Capital Marine Supply, Inc.
 Location: Lower Mississippi, Mile 230
 Foot of North Street
 Phone: (504) 343-8379
 Radio: Channels 16, 7a, 10, 66a VHF
 KFT 322

Baton Rouge
 Channel Fueling Service, Inc.
 Location: Lower Mississippi, Mile 232
 R. er Road
 Phone: (504) 383-4691, 383-4814
 Radio: freq. 156.8
 Belle Chasse
 Plaquemines Oil Sales Corp.
 See Plaquemines Oil, Venice, La.
 Berwick
 Berwick Bay Oil Co., Inc.
 Location: Atchafalaya River - 1/4 mile
 north of Hwy 90 bridge
 See Berwick Oil Listing under
 Morgan City, La.
 Cameron
 Berwick Bay Oil Co., Inc.
 Location: Calcasieu River
 See Berwick Bay Oil listing,
 Morgan City, La.
 Cameron
 Cameron Marine Service, Inc.
 Location: Calcasieu River
 Phone: (318) 775-5206
 Dulac
 Berwick Bay Oil Co., Inc.
 Location: Houma Navigation Channel
 17 miles South of Houma
 See Berwick Bay Oil listing,
 Morgan City, La.
 Gretna
 John W. Stone Oil Distributor, Inc.
 Location: Lower Mississippi, Mile 96.5
 87 First Street, Gretna
 Harvey 77059
 Phone: (504) 366-3401
 Radio: KGW 352
 Houma
 Houma Oil Company, Inc.
 Location: Intracoastal Canal
 Phone: (504) 872-0464
 Intracoastal Canal
 Berwick Bay Oil Co., Inc.
 Location: Vermillion River - 1/4 mile
 north of Intracoastal Canal Mile 155
 See Berwick Bay Oil listing,
 Morgan City, La.
 Lake Charles
 Channel Fueling Service, Inc.
 See Channel Fueling Service,
 Sulphur, La.
 Morgan City
 Berwick Bay Oil Company, Inc.
 Location: Young's Road
 Phone: (504) 384-1610
 Radio: Ch 16 WIFX8979
 New Orleans
 Gulf Outlet Fuel & Marine
 Supplies, Inc.
 Location: Gulf Intracoastal Waterway
 Mile 5 East
 3400 Jourdan Road
 Phone: (504) 241-8680
 Radio: Ch 16 WIFX8979
 Port Allen
 7i-State Marine Service Co.
 Location: Lower Mississippi, Mile
 227.5
 River Road
 Phone: (504) 749-3171
 Radio: 156.8
 Sulphur
 Channel Fueling Service, Inc.
 Location: Gulf Intracoastal Waterway
 West Intersection of Calcasieu
 River
 Phone: (318) 583-7215, 583-7384
 Radio: 156.8
 Venice
 Plaquemines Oil Sales Corp.
 Location: Mississippi River
 Address: 52 Grove St.
 Louisiana Hwy 23, Venice
 Address: Belle Chasse
 Phone: (504) 334-5555 (Belle
 Chasse)
 Phone: (504) 534-7403 (Venice)

MISSISSIPPI
 Blount
 Ship Services Corporation
 Location: Gulfport State Port and
 Biloxi Back Bay, Beacon 7
 Phone: (601) 374-1000
 Greenville
 Waterways Marine of Greenville, Inc.
 Location: Lower Mississippi, Mile 537
 Warfield Point Road
 Phone: (601) 335-2526
 Radio: KWS 617

MISSOURI
 St. Louis
 St. Louis Fuel & Supply Co., Inc.
 Location: Upper Mississippi, Mile 179
 Address: Foot of Gratiot Street
 Phone: (314) 421-3960
 Radio: Ch 16, W83-RD00 722 Fort
 Guage

NORTH CAROLINA
 Elizabethtown
 Campbell Oil Company, Inc.
 Location: 1010 West Broad Street
 Phone: (919) 862-4107

OREGON
 all ports
 see Libbylad Petroleum listing under
 Tacoma, Washington

PENNSYLVANIA
 Philadelphia
 River Associates, Inc.
 Location: Delaware River
 Pier 9 North
 Phone: (215) 463-8100

SOUTH CAROLINA
 Charleston
 Charleston Oil Co.
 Location: Ashley and Cooper Rivers,
 1553 King St. Extension
 Phone: (803) 577-5600
 Charleston
 See Savannah Oil & Chemical,
 Savannah, Ga.
 Georgetown
 See Savannah Oil & Chemical,
 Savannah, Ga.
 Port Royal
 See Savannah Oil & Chemical,
 Savannah, Ga.

TENNESSEE
 Memphis
 Memphis Boat Refueling Service, Inc.
 Location: Lower Mississippi, Mile 735
 Foot of Illinois Street
 Phone: (901) 775-3131
 Radio: Ch 16

TEXAS
 Galveston
 Grasso Marine Service, Inc.
 Location: Galveston Ship Channel
 Pelican Island
 Phone: (713) 744-2888 (dock)
 (713) 763-4343 (office)
 Lake Jackson
 Channel Fueling Service, Inc.
 Location: Gulf Intracoastal Waterway
 West, Mile 393
 1400 Mile Avenue
 Phone: (713) 233-5321, 233-5322
 Radio: 156.8
 Port Arthur
 Channel Fueling Service, Inc.
 Location: Gulf Intracoastal Waterway
 West, Mile 282
 5700 Proctor Street
 Phone: (713) 962-5557
 Radio: 156.8
 Rockport
 Berwick Bay Oil Co., Inc.
 Location: Rockport Navigation Harbor,
 Intracoastal Canal, Mile 526
 See Berwick Bay Oil Listing, Morgan
 City, La.

VIRGINIA
 Norfolk
 Marine Oil Service, Inc.
 Location: Elizabeth River
 Address: 71 Rider Street
 Phone: (804) 622-0934, 622-3109

WASHINGTON
 Seattle
 Ballard Oil Co.
 Location: Lake Washington Ship
 Canal
 Phone: (206) 783-0241
 Tacoma
 Libbylad Petroleum, Inc.
 Location: Washington and Oregon - all
 ports
 Phone: (206) 572-4402
 Radio: KLB radio station
 Marysville, Wa.
 Phone: (206) 783-0241

WASHINGTON
 all other ports see Libbylad Petroleum
 above.

WEST VIRGINIA
 Ft. Pleasant
 City Ice & Fuel Co.
 Location: Ohio River, Mile 265.3
 Address: 224 First Street
 Phone: (304) 675-2010

Hillman Delivering 14 New Chemical Barges To PPG



First of 14 new chemical barges for PPG slides down the ways recently at the Hillman Barge and Construction Company yard in Brownsville, Pa.

PPG Industries has begun the launching of 14 new Hillman chemical barges, custom designed to carry caustic soda shipments from PPG's expanded plant in Lake Charles, La. The first barge was launched recently, and all the remaining vessels are scheduled for delivery before the end of this year.

Hillman Barge & Construction Company of Brownsville, Pa., designed and built the barges to specifications prepared by the PPG marine engineers. Hillman worked closely with PPG, making modifications to meet the company's product needs and design specifications.

The double-skin barges are of single tank design with wash bulkheads for stability during towing. Each of the 195-foot by 35-foot by 12-foot barges will hold 1,500 tons of 50-percent caustic soda solution. Other features include double continuous full penetration welding, external heating channels for all-weather operation, and stern flooding provisions for unloading and trimming.

Approved and inspected by the American Bureau of Shipping and the United States Coast Guard, the Type II hull barges are classed for river, bay and sound service. Upon completion by Hillman in Brownsville, each barge will be lined and insulated with PPG Columbia #7 lining at Busch & Latta Marine Coating, St. Louis, Mo.

Hillman Barge & Construction Company, a major inland shipyard, manufactures custom-designed barges, each modified and constructed to customer specifications. Robert Kenny, president of Hillman Barge, said: "Hillman is oriented toward custom barges, each individually designed and constructed to handle either specialty materials or different applications and situations. This flexibility of design and construction permits modifications to meet the customer's specific operating requirements."

"Hillman barges have a reputation for sturdiness," Mr. Kenny added. "For instance, strategic areas are beefed-up with additional steel reinforcement to provide longer life and less maintenance when the barges are used in larger tows with larger horsepower boats. The value of equipment after 10 years is as important as the initial purchase price to today's sophisticated operators. Therefore, the added values of rugged construction today are well worth the investment." Mr. Kenny said: "Our philosophy is offer value. This value can be seen in the number of rake and stern trusses, corner construction, the size and number of steel members, as well as the detail, fitting, and welding of each component in a Hillman barge."

According to Mr. Kenny, Hillman has set a ceiling at 500 employees. "This has resulted in a stable workforce," Mr. Kenny said, "with an average of 9 years of marine service. Supplementing this experience, is our constant program of education, testing and upgrading for all personnel. This is essential to the construction of custom application barges, particularly the more sophisticated tank barges Hillman is called upon to construct."

Besides chemical barges, Hillman also produces standard and jumbo coal barges, grain, cement, sand, and gravel barges, floats, and other specialty-type marine equipment. The purchasers and operators of the most recent Hillman barge fleet, PPG Industries, is one of the largest producers of chlorine and caustic soda. Its expanded Lake Charles plant, which the barges were designed in conjunction with, is scheduled to come on-stream in mid-1980, adding a capacity of 300,000 tons of caustic soda annually.

Shell Oil Company
 Manager Commercial Communications
 One Shell Plaza
 Houston, TX. 77002

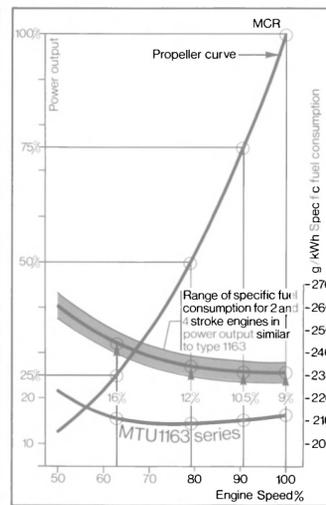
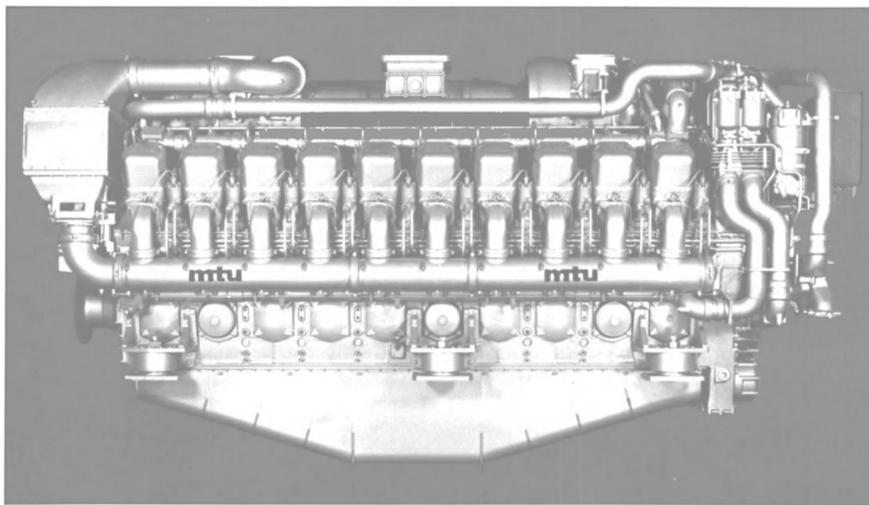
Send me the Shell Shallow Draft Marine Products Guide (SOC: 95-79)
 Send me the Shell Marine Equipment Lubricants chart (SOC: 122-79)
 Send me the Shell Marine Jobber Directory (SOC: 127-79)
 Send me the Caprinus R Technical Bulletin (SOC: 17-77)
 Send me the Caprinus R brochure (SOC: 32-77)

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 Title _____
 Company/Vessel _____
 Address _____
 City _____ State _____ Zip _____

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sumes less fuel than any comparable engine—as much as 10% less. Over an engine's lifetime, the savings are tremendous. These savings, together with MTU's complete power package availability, ease of engine maintenance, complete service/parts back-up and service, and service parts exchange program, has solved a number of marine propulsion problems. Decades of testing and technology have resulted in this progress and because of our experience and expertise, we can satisfy your marine propulsion needs.



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**Anker Marine Paints
Moves To Larger Quarters**

Leif Anker Ammentorp, president of Anker Marine Paints, announced that his offices have moved to larger quarters, on the sixth floor, 33 Rector Street, New York, N.Y. 10006, effective immediately.

Established in 1964, Anker Marine Paints is the U.S. representative for W. & J. Leigh & Co., one of the largest British paint companies.

**MarAd Study Available
On Development Of A
Standard Cargo Ship**

The development of a standardized general cargo ship to help meet the future requirements of the U.S. merchant marine would yield substantial benefits to ship operators, shipbuilders and the Government, according to a study released recently by the Maritime Administration.

Series production of such a ship could significantly lower construction costs and cut production time, helping make the American merchant marine more competitive in the world shipping market. This, in turn, could reduce the level of subsidies paid by the Government to help offset the advantages enjoyed by low-cost foreign competitors.

The study, "Next Generation Cargo Liner: Phase I," was prepared under contract by J.J. Henry Co., Inc., and Temple, Barker and Sloane, Inc. The cost of the cooperative effort was shared by the Maritime Administration and seven U.S.-flag operators — Farrell Lines, American Export Lines (now a division of Farrell), Lykes Bros. Steamship Company, Matson Navigation Company, Moore McCormack Lines, Puerto Rico Maritime Shipping Authority, and United States Lines.

The first step of the study involved forecasting general cargo movements and service requirements on selected worldwide trade routes served by the participating operators. The forecasts, which extended through the year 2000, produced profiles on each carrier's cargo mix (percentages of breakbulk, containerized, and roll-on/roll-off cargoes), and service requirements (itinerary, service frequency, and port and canal constraints).

Based on these individual profiles, a conceptual ship design was developed for each operator. These designs were tailored to each company's specific cargo and service requirements.

The final step was the development of a composite design based on the most important characteristics of the seven individual designs. The resulting composite ship, with available options, has the following specifications: length between perpen-

diculars, 620 feet to 800 feet; beam, 105 feet 6 inches; depth, 69 feet 6 inches; draft 29 feet 6 inches to 32 feet 6 inches; deadweight tonnage, 19,500 to 29,600; service speed, 18 to 23 knots; and shaft horsepower, 14,500 to 42,500.

While the study assumed the use of a steam powerplant, it was recognized that diesel propulsion offers fuel-saving advantages, and would meet the lower speed and horsepower requirements of some

shipowners. The report suggested that powerplant trade-off studies be conducted at a later date.

The composite design also can be modified to facilitate different cargo mixes, depending on the container, roll-on/roll-off or breakbulk requirements of the shipowner.

The report recommends continued development of a standardized vessel and concentrated research on optimizing such a ship. This would involve such ef-

orts as model testing and applying technological advancements to the production of the ship and its cargo-handling systems.

The report is available from the National Technical Information Service, 5285 Port Royal Road, Springfield, Va. 22161. The prices and order numbers are: Executive Summary (PB-297588/AS) @ \$4, Final Report (PB-297590/AS) @ \$9.50, and Final Report/Appendices (PB-297589/AS) @ \$8.

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RCA Technical Services



Equipped with an SCR Diesel Electric propulsion system, the geophysical research vessel Western Strait has a cruising speed of about 13 knots. The 185-foot vessel was built by Mangone Shipbuilding for Western Geophysical Company.

Mangone Delivers Research Vessel, Western Strait, To Western Geophysical

The Western Strait, a highly sophisticated 185-foot geophysical research vessel with an SCR Diesel Electric propulsion system, has been delivered to Western Geophysical Company by Mangone Shipbuilding Company, a subsidiary of Stewart and Stevenson Services, Inc.

Constructed at the Mangone yard in Houston, Texas, the ship's first assignment is in South American waters. Don L. Godeau, vice president and general manager of Mangone Shipbuilding, said the Western Strait joins a Western Geophysical fleet of some 30 vessels which are engaged in offshore research throughout the world.

Built specifically for research and exploration, the Western Strait is 185 feet in length, has

a 38-foot beam, a 16-foot depth and a 13-foot 8-inch draft. The ship has a range of 11,500 miles and a working capacity of 38 days. Cruising speed is approximately 13 knots. Quarters are fully air-conditioned, with accommodations for 39 geophysical personnel and crew members.

The SCR Diesel Electric propulsion system supplies electric power with two 16V 149T1 Detroit Diesel engines each driving a 1,100-kw Kato a-c generator, providing power through SCR equipment to two Westinghouse 1,000-hp d-c motors with a Cotta marine gear on each shaft.

Auxiliary generators aboard the Western Strait include one 250-kw set powered by a 12V71 Detroit Diesel and one 150-kw

unit powered by an 8V71 Detroit Diesel.

A 48-inch Murray and Tregurtha Harbor Master BT-375 bowthruster is driven by a 1,000-hp Westinghouse d-c electric motor.

The SCR propulsion system controls developed by International Switchboard Company are operated from a pilothouse control panel.

The ship's electronics include a Decca autopilot, Sperry gyrocompass, Raytheon DE-731 recording Fathometer, Leigh Class A E.P.-I.R.B., two Decca 65121 radar units, intercom system, and VHF and SSB radios. She is also equipped with Azimuth stabilizers and a COMSAT 3941 satellite communications system with telephone and telex.

Geophysical research equipment aboard the Western Strait includes an LRS-888 Seis Recording System with 100 channels; a complete satellite navigation system consisting of Hewlett-Packard Mini-computer, Doppler, Loran C, and satellite receiver; and nine TV monitors. Other equipment includes a LaCoste and Romberg Gravity meter, Geometrics magnetometer, Krupp fathometer, LRS-100 synchronizers, 20 air guns, six 5,000-psi electric-drive compressors, eight remote control "birds" for stabilizing cable at a certain depth, and a 48 group cable.

The vessel is also equipped with flume stabilization system, Halon firefighting system, Pitman #757 five-ton crane, a welding machine and a motor-generator set for clean power to the geophysical equipment.

Chevron Orders Two 35,000-DWT Product Tankers From Mitsubishi

Two new, diesel-powered, 35,000-deadweight-ton product tankers have been ordered by Chevron Transport Corporation, San Francisco, Calif., a subsidiary of Standard Oil Company of California, for service in the company's international trades. The vessels, which will be built by Mitsubishi Heavy Industries in its yard at Kobe, Japan, are scheduled for delivery in September and December 1981.

These product carriers will meet the safety and environmental requirements of the U.S. Port and Tanker Safety Act of 1978, as well as those of various conventions which have been adopted by the Inter-Governmental Maritime Consultative Organizations (IMCO), the maritime agency of the United Nations. They will be equipped with protectively located segregated ballast tanks and inert gas systems.

The addition of this new tonnage to the company's fleet will serve to replace older product tankers in this size range which the company has scrapped over the last five years.

A.L. Kucera Elected President Of AWO

Anthony L. Kucera has been elected president of The American Waterways Operators, Inc., Arlington, Va., succeeding James B. Potter Jr., according to William A. Creelman, AWO chairman of the board. AWO represents the nation's barge and towing industry.

Mr. Creelman said, "We thank Mr. Potter for his service to The American Waterways Operators and wish him well in the future. We welcome Mr. Kucera and are confident that his experience in water resources and his expertise in water transportation will be invaluable to AWO."

Mr. Potter resigned to "pursue other business interests," Mr. Creelman noted.

Mr. Kucera has been with AWO since 1974. In 1976, he was named executive assistant to the president, and in 1977 assumed the position of executive vice president.

Prior to joining AWO, Mr. Kucera was senior vice president of the Water Resources Congress in Washington, D.C. He served as vice president and regional manager for Water Resources Associated in St. Louis, Mo., and prior to that he was regional manager for the Mississippi Valley Association in Omaha, Neb.

A native of Flandreau, S.D., Mr. Kucera received a bachelor's degree with honors in economics from Huron College in Huron, S.D. He continued his postgraduate studies in economics at the University of Maryland.

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Bethlehem Reorganizes Shipbuilding Department

David H. Klinges, vice president in charge of shipbuilding, Bethlehem Steel Corporation, Bethlehem, Pa., recently announced a reorganization of the department, effective December 1, 1979.

Continuing to head the shipbuilding executive offices are Mr. Klinges and John C. Estes, assistant vice president.

Under the reorganization, Herbert I. Freinberg becomes general manager of operations and facilities, Francis J. Long becomes general manager of human resources, and Thomas F. Robinson becomes general manager of technical services.

In the operations and facilities organization, Mr. Freinberg will be assisted by Rockwell Holman, manager of production; Sidney S. Cohen, superintendent of estimating and pricing; Allan F. Stacy Jr., superintendent of planning; Timothy E. Cummings, construction engineer; John G. Rogers, planning engineer, and Tore O. Hartmann-Hansen, facilities engineer.

Assisting Mr. Long in the human resources group will be George L. Bowen, manager of labor relations, safety and workers' compensation, and equal employment; Mary S. Murphy, administrative manager of salary and office administration; Wendell O. Robertson, superintendent of management development; Allan Gunderson, superintendent of personnel services, and Ruth E. Thompson, administrative assistant for public affairs.

Mr. Robinson will head the organization within the shipbuilding department that has been known as central technical division.

Mr. Klinges said that the sales group will continue in its present format. Roland V. Danielson is manager of new ship construction, Louis W. Gomlick is manager of ship repair sales, William H. Bevan is assistant manager of ship repair sales, Robert W. Miller is manager of industrial products sales, Richard H. Jones is assistant manager of industrial products sales, Bradford J. Sibley is sales engineer, John J. Hefernan is manager of contract administration, and James W. Bramblet Jr. is assistant manager of contract administration.

David T. Cianelli will continue as legislative liaison in the Washington, D.C., office.

Fourth British Columbia Towboat Conference Set For March 21-22, 1980

The Fourth British Columbia Towboat Industry Conference will be held at the Empress Hotel, Victoria, British Columbia, March 21-22, 1980. The theme of the conference this year will be "The

Tug and its Environment." The meeting will be sponsored by the Council of Marine Carriers and B.C. Towboat Owners Association.

The B.C. Towboat Industry Conference is open to all members of the Council of Marine Carriers, the B.C. Towboat Owners Association, and any other persons interested in the development of the towboat industry.

The main program will consist of three technical sessions and a

visit to the Institute of Ocean Sciences, Patricia Bay. The conference fee includes all aspects of the main program, ladies program, cost of lunches, hospitality suite, cocktail party, banquet, and dance. The cost of accommodations and any other meals is not included. The fee will be \$125.

Subjects will include: Transportation in the Forest Industry—An Update; Fraser River Estuary Study; West Coast Mariners

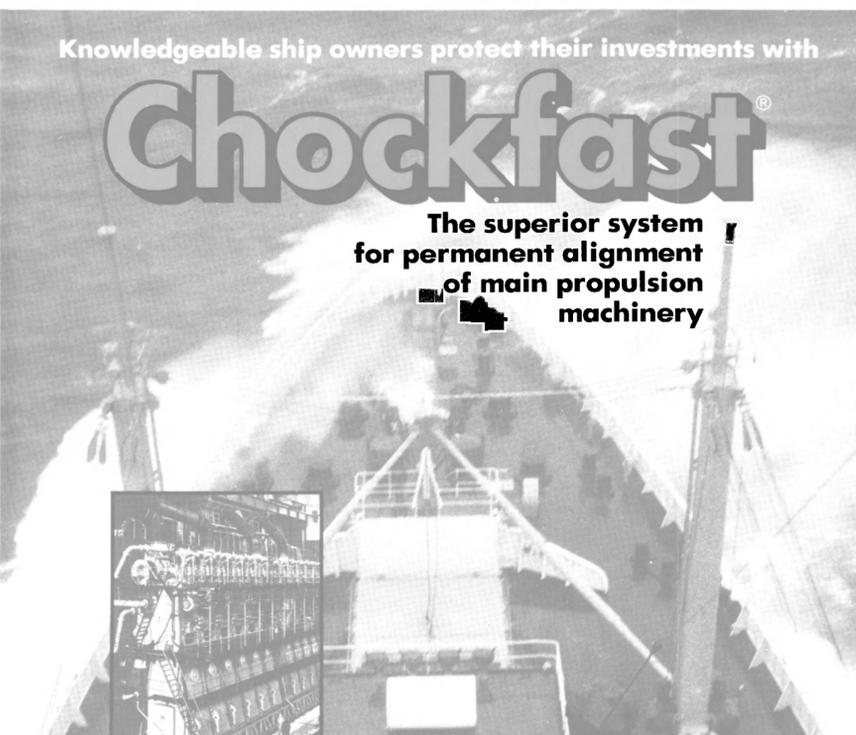
Assistance Program; Marine Sanitation Devices—A Panel Discussion on Existing and Proposed Regulations; Regulation, The Environment and the Shipyard; Ship Handling Tug Design; The Other End of the Towline; and Fuel Conservation.

Direct all inquiries to Peter Woodward, Council of Marine Carriers, #200-1575 West George Street, Vancouver, B.C. V6G 2V3. Telephone (604) 687-9677.

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**Pertamina 1020 Delivered
By Hitachi Zosen**



The 17,723-dwt product carrier Pertamina 1020 was delivered recently to her owner, Scorpa Pranedya Navigation, Inc. of Liberia. The ship was constructed at the Hiroshima Works (Innoshima) of Hitachi Zosen.

The Pertamina 1020 (shown above) is the first of two product carriers of the same

type to be constructed at the Hiroshima Works for use in the transportation of refined petroleum products between Indonesian ports and harbors.

The tank arrangement conforms to conventional requirements applicable to separate ballast oil tankers for the prevention of ocean pollution. In addition, the interior walls of the cargo oil tanks and all inside fittings are coated with epoxy resin paint to prevent the inclusion of interior rust and paint in the product during transportation.

The Pertamina specifications are: length overall, 158 meters (about 518 feet); length between perpendiculars, 150 meters (about 492 feet); breadth, 25.80 meters (85 feet); depth, 10.80 meters (35 feet); designed full load draft, 7 meters (about 23 feet); gross tonnage, 10,882 (30,827 cubic meters); deadweight tonnage, 17,723 long tons; main engine, Hitachi B&W 7L45GFC type diesel

(1 set); maximum continuous output, 6,160 hp; and speed (sea trial maximum), 14.22 knots.

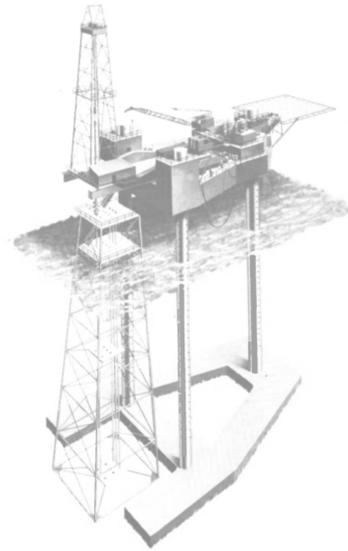
**William Meldrum Jr. Named
General Manager Of Lorain Yard
By American Ship Building**

William Meldrum Jr. has been named general manager of the Lorain shipyard of AmShip Division of The American Ship Building Company, Cleveland, Ohio.

Mr. Meldrum, who retired as general manager in 1977 from Fraser Shipyards, Inc., Superior, Wis., had previously been General Ship and Engineering Work's hull foreman. Earlier, he had been supervisor of ship repair at Bethlehem Shipbuilding Company. He had previously served with AmShip in various capacities. Early in his career, he was employed by General Ship as boiler-maker, hull fitter and foreman of building boilers, patrol craft escorts and ferryboats.

Mr. Meldrum is a native of New Castle, England, and attended school in Lowell, Mass.

**Broughton Will Build
A \$23-Million Jackup
At Bethlehem Beaumont**



Artist's conception of new "Broughton II"

Carlos Broughton, president of Broughton Offshore Drilling, Inc., Houston, Texas, announced the signing of a contract with Bethlehem Steel Corporation for the construction of a heavy-duty cantilever jackup rig capable of drilling 30,000-foot wells in water depths ranging from 100 feet to as shallow as 10 feet.

The \$23,000,000 unit is the Bethlehem JU-100MC design, and is a duplicate to the "Broughton I" rig also under construction at Beaumont, Texas, with a contract delivery date of January 1980.

This second unit, to be named "Broughton II," is scheduled for delivery in February 1981 at Beaumont, and is available for contract.



**"...SPEEDS A VOYAGE...
SAVES FUEL...EASES
A CAPTAIN'S NERVES,"**

... C. F. Jallorina, Master of the M/S MAYON was describing his ship's newly installed Magnavox Satellite Navigator MX 1142. "Now I'm always certain of my ship's position despite fog or bad weather and the safety enhancement is a prime concern," Captain Jallorina added.

"Fuel savings by way of navigation efficiencies pay for this automatic Sat-Nav in a short time," said Paul Hibbert, Service Manager of COLLINS MARINE CORPORATION, San Francisco.

He commented that the officers of the MAYON understood the automatic navigation features of Magnavox MX 1142 within an hour. They had become experts in its manual computations and maintenance within the day it was installed, he remarked.

Mr. Hibbert noted that the new owner-operators of the MAYON, Maritime Company of the Philippines, Manila, have had six other of their world-wide fleet of vessels outfitted by COLLINS with new navigation equipment in recent months. The same Magnavox Sat-Navs were installed in the line's carriers: ANTIPOLLO, PUERTA PRINCESSA, PALAWAN and PHILIPPINE RIZAL.

The photos show Captain Jallorina (at top) describing the operating advantages of the MX 1142. Center photo depicts Paul Hibbert instructing the MAYON's Chief Mate, Cesar S. Oro and Second Mate, Publicito C. Bernas, in course computations.

Tom Collins, president of COLLINS MARINE CORPORATION (not shown) said that the Magnavox equipment, including antenna can usually be installed in a day by his technicians at Collins locations in San Francisco, San Pedro and Seattle.

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**Goldrus Marine Seeks
Title XI For 4 Drill Barges**

Goldrus Marine Drilling Company, 900 First City National Bank Building, Houston, Texas 77002, has applied for a Title XI guarantee to aid in financing the construction of four drill barges. Red Fox Industries, New Iberia, La., is the proposed builder.

The inland bay and shallow coastal waters drilling barges are intended to be operated on the United States Gulf Coast.

The actual cost of the four vessels is \$44,000,000. If approved, the Title XI guarantee would cover 75 percent of that amount.

**\$10.3-Million Contract
To Electric Boat For
Sub Support Work**

The General Dynamics Corporation, Electric Boat Division, Groton, Conn., is being awarded a \$10,303,000 negotiated cost plus fixed fee contract to provide naval architectural, engineering, and cost estimating support to the SSN-668-Class submarine program. The Naval Sea Systems Command is the contracting activity. (N00024-80-C-2021)

**USS Harry W. Hill Commissioned
At Ingalls Shipbuilding**

The 24th ship of the series of 31 Spruance-class destroyers designed and being built by Litton Industries' Ingalls Shipbuilding Division was commissioned into active U.S. Navy service in Pascagoula, Miss., recently.

The 7,800-ton, 563-foot-long Harry W. Hill (DD-986), under command of Comdr. J.J. Hogan of Manchester, N.H., joined 11 other ships of the class now operating with the Pacific Fleet based in San Diego, Calif. Twelve more jet-engine-powered Spruance-

class destroyers are operating with the Atlantic Fleet.

Adm. Jerauld Wright (ret.), former Commander in Chief, Atlantic and U.S. Atlantic Fleet, and Supreme Allied Commander, Atlantic, was principal speaker at the commissioning ceremony. The ship is named in honor of the late Adm. Harry W. Hill, a World War II Naval force commander who led the amphibious assaults on the Japanese-held Pacific bastions of Tarawa and Iwo Jima.

The 25th ship of the class, the O'Bannon (DD-987), was delivered in late November. Five other destroyers have been launched at Ingalls and will be delivered to the Navy at a rate of one a month into next spring.

The Spruance-class destroyers, largest U.S. ships of the type ever built, are designed primarily for antisubmarine warfare.

Fast, highly maneuverable and extremely quiet, they are the first major U.S. combat ships to be powered by gas turbine engines. Four marine jet engines produce more than 80,000 shaft horsepower to drive each ship at speeds in excess of 30 knots.

In addition to antisubmarine warfare, the Spruance-class destroyers are capable of such missions as shore bombardment, support of amphibious assaults, surveillance and tracking of hostile surface ships, and blockade duty. Basic armament includes deck guns, torpedoes and antisubmarine rockets. Each ship can also carry two ASW helicopters. Other weapon systems, such as Harpoon surface-to-surface missiles and Sea Sparrow surface-to-air missiles, are being installed aboard each destroyer following a six-month shakedown period.



Powered by four gas turbine engines, the U.S. Navy's newest multi-mission destroyer USS Harry W. Hill (DD-986) cuts a zigzag path across the Gulf of Mexico, during recent sea trials.

January 1, 1980

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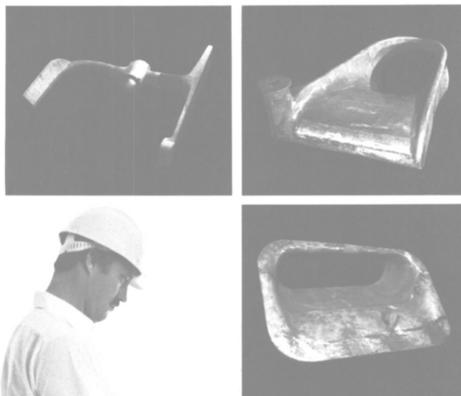


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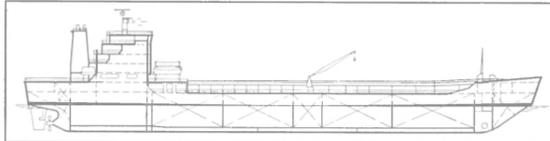


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Shell Orders 11,500-DWT Tanker From Valmet



Profile of the 11,500-dwt tanker ordered from Valmet Shipbuilding by Oy Shell Ab.

Valmet Shipbuilding, Helsinki, Finland, has received an order for an 11,500-dwt tanker. The new vessel, scheduled for delivery late in 1981, has been ordered by Oy Shell Ab, the Finnish subsidiary of Royal Dutch/Shell.

This is the second order for Finland placed by the Shell Group. In June, Shell Expro ordered a multiservice vessel worth 350 million marks for operation in the North Sea.

The new contract was signed on behalf of Shell by managing director **Ahti Lohivesi** and by director **Kaj Lindstrom**, and for the shipyard by managing director **Jaakko Ihamuotila** and Shipbuilding Group's vice president **Rauno Ilves**.

The vessel will be built at Valmet's Helsinki shipyard in Vuosaari, where Oy Shell Ab's main office is located. Construction work will begin this year, and delivery is scheduled for the end of 1981.

The new ship will have a length overall of 141 meters (about 463 feet), breadth of 21.2 meters (70 feet), a depth of 10.7 meters (35

feet), and a draft of 7.8 meters (26 feet).

Total loading capacity of tanks will be 14,000 cubic meters. The machinery consists of two medium-speed engines giving a total output of 7,500 bhp connected via reduction gear to a controllable-pitch propeller. The speed of the new vessel will be 14 knots.

The ship will sail under the Finnish flag, will be managed by Oy Henry Nielsen Ab, and will have a Finnish crew.

Construction will be according to class +100 A-1 of Lloyd's Register of Shipping and will also meet the requirements of the Finnish Ice Class 1 A.

This contract will result in Valmet's first direct delivery to Shell. However, other vessels built by Valmet Oy were time-chartered, during construction, to Shell.

Two hundred forty-five vessels of more than 10,000 dwt are currently operated by Shell, making it the largest individual fleet in the world. The Shell fleet carries 12 million tons of oil daily. This equals the annual total consumption of oil in Finland.



RECORD RIG TRANSPORTATION—The Dutch semisubmersible heavy-lift vessel Super Servant 1 (see Maritime Reporter August 15, 1979 issue) recently delivered the mat-supported rig JFP 1, with six leg sections, to Kavalla, Greece. The completely self-propelled Super Servant, owned by Wijmuller B.V., Holland, was loaded with the 5,720-ton rig at Tsu, Japan. Total time for this loading operation was four hours, including resurfacing. The legs of the rig towered 75 meters (about 246 feet) above the waterline, and the sides of the rig overhung the sides of the ship by 9 meters (about 30 feet) when the Super Servant 1 left Japan for Greece. During the Japan-Suez leg of the trip, an average daily run of approximately 315 miles was achieved, resulting in a transit time of only 26 days. After the passage of the Suez Canal, it took the Super Servant 1 another two days before she arrived at Piraeus, Greece, where the six leg sections were unloaded. The JFP 1 was actually offloaded at a position near Kavalla, 24 hours sailing from Piraeus.

Ingram Subsidiary Asks Title XI For 2 Tankers Costing \$119.8 Million

American Tankships, Inc., a subsidiary of Ingram Corp., 4100 One Shell Square, New Orleans, La. 70139, has applied for a Title XI guarantee to aid in financing the construction of two product tankers. A shipbuilder for the project has not been determined as yet.

The 37,500-dwt vessels will be powered by slow-speed diesel engines, and capable of operating at 15 knots. They are intended to be used in the domestic trade between U.S. Gulf and East Coast ports.

The actual cost of the two vessels is approximately \$119.8 million. If approved, the Title XI guarantee would cover 87½ percent of that amount.

S.G. Dever Named VP Of Colmac Coil Mfg.

S.G. (Gus) Dever has been named vice president of Colmac Coil Manufacturing by Roger McMillan, president of Colmac Industries, Inc.



S.G. Dever

Colmac Coil Manufacturing is a wholly owned subsidiary of Colmac Industries and is a major manufacturer of heating and refrigeration coils.

Mr. Dever comes to Colmac Coil from American Strevell Company of Portland, Ore., where he was a designing mechanical engineer. He has over 30 years' experience in refrigeration and coils, and has owned two contracting firms doing refrigeration installations.

As the new head of Colmac Coil, Mr. Dever will not only manage the Colville plant, but will also be in charge of outside sales. His first major assignment will be moving part of the coil plant into a new 19,440-square-foot addition to the present facility in Colville, Wash.

Exxon ULCCs Receive Stanwick Maintenance And Inventory Services

The Stanwick merchant ship maintenance system will be installed on four of the largest ships in the world, according to Robert Apple, president of The Stanwick Company Division of The Stanwick Corporation, Washington, D.C.

Exxon International Company

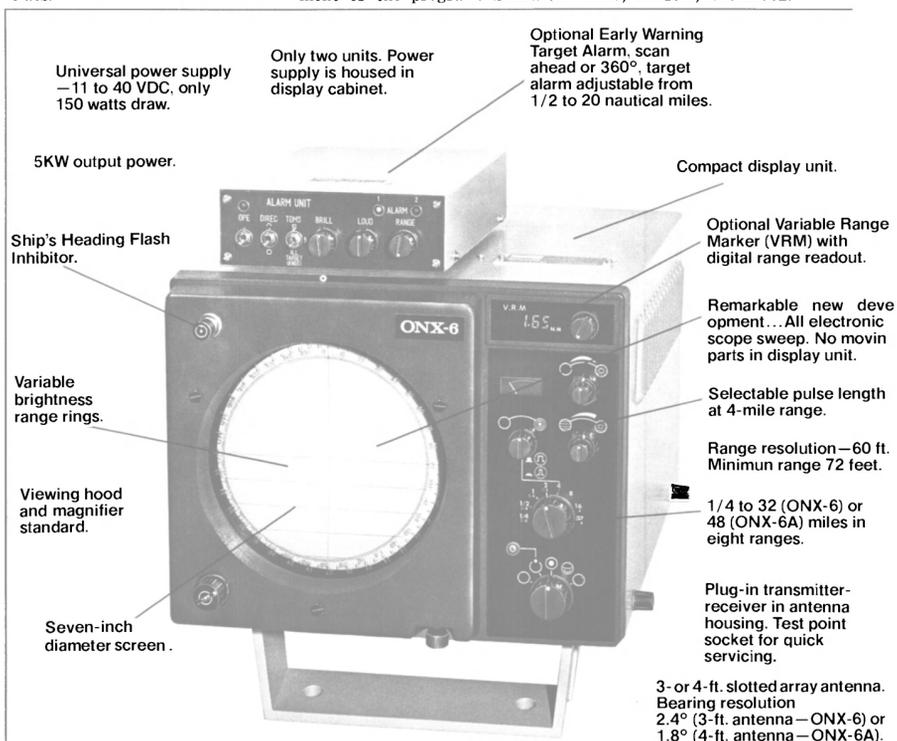
has awarded the contract to develop and install the maintenance system and to inventory the on-board spares in the four ultra large crude carriers (ULCCs) of the Esso Atlantic/Tokyo class. Two of these tankers are approximately 500,000 dwt and two are 400,000 dwt. Exxon has decided to proceed with this class after a year of evaluation of the Stanwick maintenance system on four 37,000-dwt tankers of the Everett class.

According to Bud Kelly, The Stanwick Company project manager, maintenance engineering analysts from Stanwick's Maritime Systems Department, working in coordination with Exxon's maintenance and repair staff, will establish a comprehensive program of scheduled maintenance tasks for all maintainable shipboard equipment, and produce the management system for scheduling and auditing the accomplishment of the program. Stanwick

will also inventory all shipboard repair parts to provide input data for a computerized inventory control program.

Stanwick's maintenance and inventory control systems are installed in more than 50 other commercial ships and drill rigs around the world.

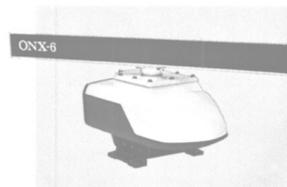
For further information, contact Jerry Clark, Marketing Manager, The Stanwick Company, 3661 East Virginia Beach Boulevard, Norfolk, Va. 23502.



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2 G.E. 600 KW GEARED TURBO GENERATORS
450/3/60/1200 — 0.8 PF — 961 amps — type ATI — 0.8 PF. TURBINE: PSN-FN-20 6-stage — 525 lbs/825°F — superheat 355°/371°F — GEAR: 10033/1200 — RPM 10033 — total — 6390 lbs. steam/hr. steam flow.

3 G.E. 400 KW TURBO GENERATORS
450/3/60/1200 — 0.8 PF — 641 amps — TURBINE: 6-stage — 10059 RPM — 525 lbs/825°F — type GE 618N. Steam rate 5100 lbs/hr. — OAL 10' 10 1/2" — OAW 4' 10 1/4" — OAH 5' 5 1/4" — wt. 14,855 lbs.

4 400 KW WESTINGHOUSE TURBO GENERATOR SETS FOR BETH SPARROWS POINT HULLS 4467 TO 5400; QUINCY HULLS 1600 SERIES
400 KW (500 KVA) — 0.8 PF — 1200 RPM — 450/3/60. TURBINE: 585 lbs — 840° TT — 28 1/2" vacuum — 9018 RPM — serial 10A4462-3 & 10A4462-4. GEAR: 9018/1200 RPM. A.C. GENERATOR: 500 KVA — 400 KW — 450 volts — 641 amps — 0.8 PF — 3-phase 60-cycle — 1200 RPM — CR 40° — excitation amps 41 — excitation voltage 120. Instruction book 5442. Switchgear available.

5 UNUSED WESTINGHOUSE 60 KW 120 VDC M-20-EH
120 VDC — 1800 RPM. TURBINE: M-20-EH — 20 lbs dry & saturated — 25" vacuum. 7283 RPM. GEAR: 7283/1800. GENERATOR: 60 KW — 120 VDC — 500 amps — SK — stab. shunt wound.

6 UNUSED 500 KW DELAVAL-WESTINGHOUSE GEARED TURBO GENERATOR
GENERATOR: Westinghouse 500 KW — 120/240 volts DC — 2080 amps — 1200 RPM — stab. shunt. TURBINE: DeLaval — 730 HP — 440 PSI working pressure condensing. Temperature 740° — 9977 RPM. HELICAL GEAR: 9977/1200 RPM. Serial # of turbine 245204 — weight 22,000 lbs.

TURBINES & ROTORS

7 BETH-SPARROWS POINT, QUINCY HULLS
1 HP Turbine or rotor — Bethlehem
1 400 KW Stator only — Westinghouse
1 HP turbine casing only — Bethlehem
1 Complete Westinghouse 400 KW turbo generator set
1 Forced draft motor fan
1 Anchor windlass — 2 11/16"
Steering gear motors — 15 HP
Forced draft fan Impeller

8 WESTINGHOUSE C-25 CARGO PUMP TURBINE ROTOR
VICTORY-AP2 MAIN PROPULSION
Westinghouse AP2 19-stage HP rotor for 6000 HP Victory — serial #4A-2079 — equal to new. Unused surplus AP2 — Victory Ship complete HP & LP turbines
Allis-Chalmers HP & LP
Westinghouse LP AP2 with throttle valve
G.E. HP & LP with throttle valve

9 VICTORY-AP3 MAIN PROPULSION NEW 8500 HP G.E. TURBINES
Large Victory or C-3
HP #72271 LP #72272
10 Boxes spare parts, tools & fittings. With maneuvering valves.

10 8500 HP G.E. — C-3 OR VICTORY
H.P. — 8-stage — 6159 RPM — serial 62043
L.P. — 8-stage — 3509 RPM — serial 62042
G.E.I. 16263

11 VICTORY SHIP AUXILIARY TURBO GENERATOR SET ROTORS
300 KW 5965 RPM JOSHUA HENDY
Turbine — 3H-69 Gear — 52269
Turbine — 3H-52 Gear — 52252
Turbine — 3H-62 Gear — 52262
ALSO WESTINGHOUSE 2A & 5A SERIES

- FOR T-2 VESSELS -

12 TURBINE: DORV-325M — 525 KW — 5645 RPM — 435 PSIG — 28" exhaust. REDUCTION GEAR: S-162 — form D — 5641/1200. A.C. GENERATOR: 500 KVA — 400 KW — 440/3/60 — 1200 RPM — 0.8 PF. D.C. EXCITATION GENERATORS: 75/55 KW — form AL — 110 volts DC. With new type amplydines.

13 538 KW WESTINGHOUSE T-2 AUXILIARY GENERATOR COMPLETE
TURBINE: 538 KW @ 5010 RPM — 438 PSIG — 750° TT — 28 1/2" vacuum. GEAR: 5010/1200 RPM. A.C. GENERATOR: 400 KW — 450/3/60/1200 — 0.8 PF. DC EXCITER: 32.5 KW — 120 volts (variable voltage) — shunt — 4-pole — DC excitation 5 KW. ALWAYS WELL MAINTAINED BY MAJOR OIL CO.

14 T-2 UNUSED G.E. MAIN PROPULSION STEAM TURBINE WITH ROTOR
10-Stage — 435# — 720° TT — turbine complete with rotor — serial #109166 — 4925/5400 KW — 3600/3720 RPM — 28.5" vacuum.

15 WESTINGHOUSE MAIN PROPULSION STEAM TURBINE WITH ROTOR EX-CHEVRON VESSEL "MACGAREGILL"
Shrouded—like new condition. Will sell rotor separately. WESTINGHOUSE MAIN PROPULSION TURBINE Ex"Pecos" — unshrouded — serial 2A-7733-2 type A

16 UNUSED G.E. MAIN PROPULSION STATOR
Type ATB-2—serial #6978272. 2300/2370 volts — 60/62 cycles — 3-phase — 3600/3720 RPM — armature amps 1237/1315 — 4925/5400 KW — 1.0 PF. Westinghouse stator — from Ex "Pecos"

17 WESTINGHOUSE 538 KW AUX. GENERATOR EXCITER ARMATURE
We have both types:
110 KW — 32 KW — 5.5 KW
110 KW — 28 KW — 5.5 KW

18 538 KW WESTINGHOUSE AUXILIARY TURBINE ROTORS

19 WESTINGHOUSE T-2 TANKER MAIN GENERATOR COOLERS & MAIN MOTOR COOLERS
Reconditioned — with A.B.S. Units all ready to ship. Also G.E. Main Generator Coolers

20 G.E. 525 KW AUX. GENERATOR EXCITER ARMATURE
75-55 KW

21 NEW STYLE AMPLYDINE
5LY148A2 — type A.M. — frame 605

22 AUXILIARY GENERATOR ROTORS
G.E. aux. generator rotors — DORV-325M — for 525 KW turbo generator sets

23 T-2 MAIN CARGO PUMPS
Ingersoll-Rand 6GT — 2-stage — bronze — 2000 GPM — 280" head

24 LATEST DESIGN 5-SPEED FORCED DRAFT FAN MOTORS
G.E. Model 5M505FE-1 — frame 5055—type M—440/3/60 — serial S.E.6731807. Controller available. (Complete with fan impeller)

25 T-2 SHIPS SERVICE AIR COMPRESSORS
Worthington — 5 1/2 x 3 1/2 x 3 1/2 — VA2 — 20 C.F.M. — 100 lbs. — 5 H.P. Motors — 440/3/60 — 1750 RPM.

WESTINGHOUSE DRY TYPE T-2 CARGO PUMP TRANSFORMERS

26 200 KVA — single phase — 60 cycle 2300/450 volts — weight 3720 lbs. each. 4 available.

27 G.E. PYRONOL OIL COOLED TRANSFORMERS
200 KVA — single phase — 60 cycles — 2300/450 volts — 3 available.

28 MISCELLANEOUS DRY-TYPE TRANSFORMERS
Lighting Transformers—15 KW— 450/120 volts
Galley Power Transformers—15 KW—450/220 volts

29 INGERSOLL-RAND 14,000 GPM MAIN CIRCULATOR
14,000 GPM @ 25' head — model 24UCM — bronze — with 125 HP 440/3/60 580 RPM motor. 26" suction — 24" discharge. Can furnish with Westinghouse type CS frame B-876C or GE type KF vertical motors.

PUMPS

30 BRONZE T-2 TANKER STRIPPING PUMPS
14x14x12 — 700 GPM at 100 lbs. Same pump available in steel for fuel oil transfer, etc.

31 WESTINGHOUSE 200 H.P. CARGO PUMP MOTORS
440/3/60 1750 RPM — 40°

32 MISSION TANKER T2SEA2 CIRCULATING PUMP MOTOR
150 HP — 440/3/60/590 RPM. Frame 6335 — type KF — 204 amps

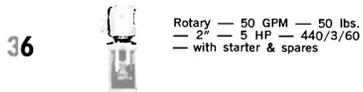
33 T-2 MAIN ROTOR
LARGE G.E. MAIN PROPULSION SCHEENCTADY TURBINE ROTOR
Turbine serial 77418 — reconditioned with certificate. Just out of Beth shop 1970

34 T-2 MISCELLANEOUS, PUMPS ETC.
10 HP Labour Self-Priming Bilge Pumps • Rudder 13 1/2" Rudder Stocks • Main Injection 3-Way Valve
Main Condensate Pumps • Fuel Oil Service Pumps
Magnablast Breaker • 1 Set New Bull Gear & Pinion for G.E. 525 K.W. Diesel Gen Model S-162 • 32", 24", 15" Rubber Expansion Joints • Mission Tanker Steering Gear Pumps

35 TURBINE FIRE PUMPS — BRONZE
Worthington turbine — 440# — 448" — 3500 RPM — 75 HP — 15" back pressure — 750 GPM @ 125 lbs — 6" suction — 4" discharge.



NEW BLACKMER FUEL OIL TRANSFER PUMP



36 Rotary — 50 GPM — 50 lbs. — 2" — 5 HP — 440/3/60 — with starter & spares

UNUSED BRONZE FEED-WATER BOOSTER PUMPS



37 220/237 GPM @ 144' head — 2 stage — 1750 RPM with 30 HP 440/3/60 motor control & spares. Built for USN

LUBE OIL SERVICE PUMP



38 Quimby-Rotex — size 6D — 500 GPM @ 70 lbs — 6"x6" flange — 720 RPM. MOTOR: Allis-Chalmers — 40 HP — 230 VDC — type EBV-147S — stab. shunt — 148 amps. Complete with starter and rheostat — designed originally for C-1MAV-1 vessels.

WORTHINGTON 16"x14"x18" VERTICAL DUPLEX STRIPPING PUMP



39 1400 GPM @ 110 PSI; suction lift 11.5 ft. Steam back pressure 15 lbs. Suction 14" — discharge 10" — steam 2 1/2" — exhaust 4". Overall width 6' 8" — overall height 9' 1 1/2" — depth 3' 9 1/2" — approx. wt. 10,000 lbs.

NEW WORTHINGTON VERTICAL SUBMERSIBLE BILGE PUMP



40 For emergency use on passenger ships, etc. PUMP: JAS — 264 GPM — 171' head — two 6" inlets — one 5" outlet. MOTOR: 40 HP — 230 VDC — 149 amps.

MOTOR-DRIVEN GARDNER-DENVER RECIPROCATING BILGE PUMP



41 50 GPM — 150 PSI — Model ALAXE — serial #106335. 3 3/4" bore — 4" stroke — 2 1/2" suction — 2" discharge. 51" long — 21" wide — 21" high — weight 750 lbs. MOTOR: Diehl — 2.5 HP — 440/3/60 — 1750 RPM — 3.53 amps.

GOULD FIRE AND BILGE PUMP



42 Ex-LST — horizontal centrifugal — bronze — 4" suction — 3" discharge — 250 GPM @ 100 PSI — 2200 RPM. MOTOR: 30 HP — 230 VDC with magnetic starter.

AURORA HEAVY DUTY BRONZE FIRE SERVICE PUMP



43 Single stage — 2 1/2" suction — 2" discharge. 3000 RPM — 250 GPM. 100 lb. head. Impeller diameter 9 1/2". MOTOR: Air cooled heavy duty 25 HP Reliance T type ON-2S-2 1/2 230 VDC — 110 amps — stab. shunt.

DIESEL GENERATOR SETS

410 KW ENTERPRISE DIESEL GENERATOR SET

44 Enterprise DSG-6 6-cylinder diesel engine driving Westinghouse generator. 250 volts DC — 1640 amps — 650 RPM — shunt wound.



AUTOMATIC TENSIONING 12X14 STEAM WINCH

American Engineering. Drum diameter 24". Will stow 1500 ft of 1 1/2" in 8 layers. Capacity 1st layer: 20,000 lbs./100 FPM — 16,000 lbs./50 FPM. Drum width 2' 6 3/4". Steam inlet 3" — exhaust 4". 8' 4 1/2" wide over cylinders. Base 6' x 6' 3 1/2".



16" BRASS PORTLIGHTS

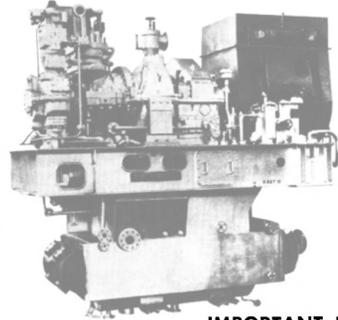
15" and 16" brass portlights. 16" portlights are 3-dog type.

MISCELLANEOUS

IF YOU'RE GOING TO JUMBO-IZE YOU CAN ECONOMIZE WITH THESE

ALLIS-CHALMERS — DELAVAL 1000 KW GEARED MARINE TURBO-GENERATORS

If you are contemplating the new construction of TANKERS, ORE CARRIERS, CONTAINER VESSELS, ETC.



YOU CAN SAVE THOUSANDS OF DOLLARS

with these modern, practically new units — built to highest Navy standards. Send for our free descriptive brochure. You'll be glad you did... and money ahead!

IMPORTANT INFORMATION

DELAVAL TURBINE: 1442 HP — 10019 RPM — Class GJ-N — 9-stage — 10,000 RPM — 1050 PSI — 950°TT — condensing steam rate 10.30 lbs. Typical serial number 652468. DELAVAL DOUBLE HELICAL GEAR: 10000/1200 RPM — Allis-Chalmers — 1000 KW — 450 volts — 3-phase — 60 cycle — 1200 RPM — 0.8 PF — static excitation — totally enclosed air-to-water cooling — temperature rise: Stator 130°C — Rotor 110°C — class H insulation — typical serial number 160615 — type M.A.K.G. Complete with 525 sq.ft. condenser — 190 lbs/hr air ejector — oil coolers — strainer — piping & valves — generator switchgear — static excitation control — voltage regulator. Total weight of unit 40,300 lbs. OAL 12' 9" — OAW 6'. Turbo-generator height 5' 8" — total height of turbo-generator & condenser 12' 8". UNITS IN EQUAL-TO-NEW CONDITION. Originally designed for DLG Guided Missile Frigate Program. Installed only about 2 years, then removed and carefully re-boxed by U.S.N. at Bath Iron Works 1964-65. Navy installed larger units due to increased load requirements.

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publishes the most important information
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No. 2 Magazine July 1979



ARCTIC WIND
MARITIME REPORTER August 1979
No. 2 Magazine September 1979



SUPER SERVANT 1
MARITIME REPORTER August 1979
No. 2 Magazine September 1979



NORTHERN CALIFORNIA SECTION/SNAME
MARITIME REPORTER April 1979
No. 2 Magazine June 1979



CO-OP GRAIN II
MARITIME REPORTER September 1979
No. 2 Magazine October 1979



ACADIAN MARINER
MARITIME REPORTER February 1979
No. 2 Magazine April 1979



BUSTER B.
MARITIME REPORTER August 1979
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U.S.T. ATLANTIC
MARITIME REPORTER April 1979
No. 2 Magazine May 1979

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**That's why it's the Best Read marine magazine...
why your advertising works harder... to produce
more sales for you ... only in Maritime Reporter.**

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Only Maritime Reporter gives your advertising these powerful sales-building advantages.

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MARITIME REPORTER is requested in writing, by thousands more marine men who specify and buy than any other marine magazine in the world

REQUESTED BY THOUSANDS MORE U.S. BUYERS -

Throughout the entire United States ... MARITIME REPORTER is requested by thousands more shoreside buyers than any other marine magazine

REQUESTED BY THOUSANDS MORE FOREIGN BUYERS -

Than the second magazine, ME/Log.

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In 1979, MARITIME REPORTER carried more pages of advertising (7 x 10) than No. 2, ME/Log.

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Regular display advertisers in MARITIME REPORTER receive a free listing - company name and address - in the buyers directory section in all 24 issues for one entire year whether an ad appears in every issue or not. No other marine magazine gives you this continuous sales-building exposure.

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FMC Signs New Barge Contract With Puget Sound Freight Lines

The Marine and Rail Equipment Division of FMC Corporation, Portland, Ore., received a contract recently from Puget Sound Freight Lines, Inc., Seattle, Wash., for construction of an oceangoing deckhouse barge. The 253-foot barge has a 4,400-ton capacity to carry newsprint

and other paper products from Puget Sound and the Columbia River to Hawaii. Construction will begin at the FMC yard in Portland in early 1980, with delivery scheduled for July 1, 1980.

FMC will build the barge to ocean service rules of the American Bureau of Shipping; it will also be certificated by the U.S. Coast Guard.

William R. Galbraith, FMC's vice president of sales and Robert G. Joseclyn, senior vice president

of Puget Sound Freight Lines, signed the contract at FMC's Portland office. "This project and the 3,000-cubic-yard dump barge to be completed in January, shortly after completion of a series of four giant roll-on/roll-off barges, demonstrates the diversity of projects within the capabilities of our yard," noted Mr. Galbraith at the contract signing ceremony.

The Marine and Rail Equipment Division of FMC is a man-

ufacturer of two types of transportation equipment in Portland—marine equipment, and railroad freight cars. FMC Corporation, headquartered in Chicago, Ill., is a major international producer of machinery and chemicals for industry and agriculture.

\$9.9-Million Awarded To NASSCO For Work On 2 Tankers For Navy

The National Steel and Shipbuilding Company, San Diego, Calif., has been awarded a \$9,987,399 fixed price contract for reactivation and modernization work on the USNS Albatra and Chattahoochee, two small gasoline tankers, to again be Navy operated. The Navy's Military Sealift Command, Pacific, Oakland, Calif., is the contracting activity. (N00033-70-C-0074)

7th Ocean Energy Conference Set For June In Washington, D.C.

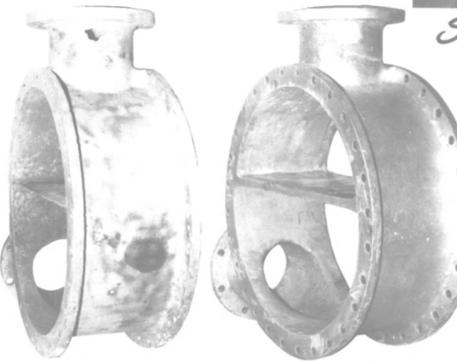
The 7th Ocean Energy Conference, sponsored by the Ocean Systems Branch, U.S. Department of Energy, will be held June 2 through 5, 1980, at the Shoreham Americana Hotel in Washington, D.C. The theme will be "Ocean Energy—A Time for Action." The conference will address the many facets of ocean energy technology, including the extraction of energy from ocean thermal gradients (OTEC), waves, currents, and salinity gradients. The goal of the conference is to summarize the current national and international status of ocean energy technology development and arrive at a definitive position on how to proceed from small-scale experiments to commercialization as quickly as possible, yet with acceptable risk to the government and private industry.

The technical program will include approximately 70 papers and a workshop to summarize the conference, as well as a half-day executive seminar to overview the entire ocean energy picture. An expanded exhibits program of products and services of interest to the ocean energy community will also be presented.

Gibbs & Cox, Inc. is organizing the conference on behalf of the Department of Energy. The ocean energy systems program is part of the department's solar energy technology development effort. Those interested in presenting a technical paper or sponsoring an exhibit should contact either Robert Scott or William Rogalski at Gibbs & Cox, Inc., 2341 Jefferson Davis Highway, Suite 1020, Century Building, Arlington, Va. 22202, phone (703) 979-1240. Abstracts of papers should not exceed 400 words, and must be submitted by February 1, 1980.

**THOUSANDS OF REPAIR JOBS
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Strong-Back Materials



First proven under the most difficult conditions by the Navy, the Cordobond Strong-Back Method offers a fast and easy method of repair both aboard ship and ashore. Applied quickly by ship or maintenance personnel, Cordobond Strong-Back products are used extensively for repairing and lining:

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| Water Boxes | Ventilators |
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| Ducts | Pumps |
| Pipes | Sea Valves and Chests |
| Condenser Covers | Tanks, Bulkheads and Decks |
| Cooler Heads | Shell Plating Etc. |
| Tail Shafts | Frozen Pipes, etc. |

The Cordobond Strong-Back Components, when used according to directions, will repair anything from a pin hole to a complete break with a patch of great strength that clings tenaciously and lastingly.

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STANDARD KIT For Ocean Going Vessels **JUNIOR KIT** For Harbor Craft **SEND FOR LIST OF CONTENTS AND LITERATURE**

CORDOBOND REPAIR KITS CONTAIN ALL THE COMPONENTS AND ACCESSORIES FOR MAKING EMERGENCY REPAIRS AT SEA

Packed in sturdy Navy type refillable metal containers. Over 6000 ocean going vessels carry our standard repair kits. Cordobond is not affected by water, oil, gasoline, etc. It does not corrode. It eliminates costly gas freeing. Cordobond is self curing, no applied heat necessary.

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Gibbs & Cox Names Stark Assistant VP

James J. Convy, chairman of the board, Gibbs & Cox, Inc., New York, N.Y., one of the nation's leading independent naval architectural firms, recently announced the appointment of Capt. Robert E. Stark as assistant vice president. Captain Stark joined Gibbs & Cox, Inc. in 1972, after completing 26 years of naval service as an engineering specialist.

Since joining Gibbs & Cox, Inc., Captain Stark has been associated with the design of the Navy's patrol frigate USS Oliver Hazard Perry (FFG 7). For the past six years he has been project manager for all aspects of this program, including design of the lead ship, as well as Gibbs & Cox's role as Class Design Agent.

Captain Stark is a graduate of the U.S. Naval Academy, and obtained an M.S. degree in naval construction and engineering from M.I.T. in 1948. He is a member of Council of The Society of Naval Architects and Marine Engineers, a member of The American Society of Naval Engineers, The Society of Sigma Xi, Tau Beta Pi, and is a licensed professional engineer in the State of New York.

Kings Point Names G.A. Uberti Of NASSCO Marine Man Of Year

The U.S. Merchant Marine Academy Alumni Association has named George A. Uberti of San Diego, Calif., as its 1979 Marine Man of the Year.

Mr. Uberti, a 1948 Academy graduate, currently serves as chief marine engineer at the National Steel and Shipbuilding Company in San Diego. He has been involved in tanker design for NASSCO, and recently was selected as program manager for the construction of a U.S. Navy cable repair ship.

A specialist in nuclear engineering, Mr. Uberti was involved in the development of the nuclear merchant ship Savannah, in the creation of a Navy Nuclear Power Department, and in the design of the U.S. Army's nuclear barge MH-1A.

Mr. Uberti sailed for a number of years after graduating from Kings Point, and began his shoreside career as a test engineer for the U.S. Naval Boiler and Turbine Laboratory. He later attended the Massachusetts Institute of Technology on a scholarship from The Society of Naval Architects and Marine Engineers.

De Laval Offers Literature On Centrifuges For Shipboard Use

Centrifuges are becoming increasingly important on shipboard due to the need for clean fuel oil

and other oils at sea. As a result, centrifuges themselves are becoming more sophisticated to meet these needs.

De Laval Separator Company, Poughkeepsie, N.Y., reports a growing trend in the use of more flexible and reliable centrifuges controlled with solid-state programmable controls (PCs). Frank Bauer, De Laval manager, Controls Engineering, points out that PCs are easy to maintain. "The principal benefit of PCs," how-

ever, "is flexibility. Secondly, the PC provides tighter control of centrifuge in certain key operations," according to Mr. Bauer. De Laval uses Texas Instruments programmable control systems in many of their centrifuge lines.

For more information and free literature on De Laval's centrifuges with programmable controls for shipboard use, write David E. Closs, MR-1, The De Laval Separator Co., Poughkeepsie, N.Y. 12602.

Electric Boat Awarded \$4-Million Navy Order For Trident Work

The General Dynamics Electric Boat Division, Groton, Conn., was awarded a \$4,092,600 modification to a previously awarded contract for the Trident Ship Control Station and SCS installation and checkout spares. The Naval Sea Systems Command is the contracting activity. (N00024-74-C-0252)

CLASS FAVORITES

In every class there are always those who stand out. That is us in the marine industry.

Mississippi Marine boats have earned laurels from operators and pilots for their dependable performance and ease of operation. We have over 100 vessels plying the inland waterways and the Gulf in the hands of satisfied owners.

Towboats, barges, and off-shore vessels from Mississippi Marine are

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Let us show you our class favorites. We'll build you the most boat for your money. Call us.

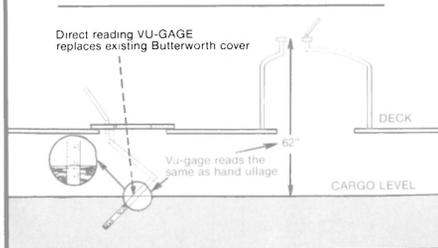


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\$4.5-Million Navy Order To Sperry For SSBN Work

Sperry Corporation, Systems Management Division, Great Neck, N.Y., was awarded a \$4,537,000 firm fixed price contract for FY 80 technical hull management assistance and field engineering services for overhaul of SSBNs, associated technical data and reports. The Naval Sea Systems Command is the contracting activity. (N00024-80-C-4024)

Four Agents Named By National Marine Service

National Marine Services Incorporated, St. Louis, Mo., has announced the appointment of four manufacturers agents for its line of oil water separators which control water pollution and recover reusable oils.

Tate Engineering, Inc., with offices in West Conshohocken, Pa., and Baltimore, Md., has been appointed for the area of eastern

Pennsylvania, eastern Maryland, Virginia, Delaware, and northwestern New Jersey.

Telco, Inc., based in Cleveland, Ohio, will service northern Ohio.

George P. Dempler Company, Bridgeville, Pa., will cover western Pennsylvania, West Virginia and southeastern Ohio.

M & H Equipment Company of Minneapolis will cover Minnesota, northwestern Wisconsin, North and South Dakota, and the west-

ern part of the upper peninsula of Michigan.

The National Marine systems are known as OilMaster™ for industrial applications, and Bilge-Master® for marine use. The announcement was made by C.L. Thompson, general manager of National Marine's Products Division at 827 Hanley Industrial Court, St. Louis, Mo. 63144.

Electro-Nav To Market SATURN Satcom In U.S.

Electro-Nav president Robert E. Negron announced recently that his company has been granted exclusive rights to market the Elektrisk Bureau (EB) SATURN satcom in the U.S.

SATURN furnishes fast contact, round-the-world range, clear reception, and economical operation. It handles telephone communications, telex, facsimile, and high-speed data, to and from anywhere on earth.

Strong antenna and terminal construction permits operation that is substantially unaffected by hurricane force winds and heavy rains, at a temperature range of -40° to +65°C, even when a ship is rolling as much as 25 degrees in each direction. The terminal and power supply are designed to fit into a standard radioroom console, reducing radioroom clutter.

Standard two-wire connections permit location of telephone jacks anywhere aboard ship, and full flexibility for locating telex, data and facsimile equipment. SATURN may also be wired to a ship's switchboard, allowing calls to be transferred within the ship.

SATURN is manufactured by EB of Norway, which has recently been awarded the contract to design, construct and install Europe's first earth station.

For a brochure describing SATURN terminal and antenna operation, add-on equipment, and technical data, write Robert E. Negron, Electro-Nav, 1201 Corbin Street, Elizabeth Marine Terminal, Elizabeth, N.J. 07201.

ABS Appoints Hilger Principal Surveyor For Western Rivers

The American Bureau of Shipping has appointed Donald J. Hilger to the post of principal surveyor for Western Rivers. He is stationed in Nashville, Tenn. Announcement of the appointment was made by William N. Johnston, ABS chairman and president.

Mr. Hilger joined ABS in 1966 as a surveyor in the Cleveland, Ohio, office. He also served in Yokohama, Japan, and in Manila, Philippines, where he was appointed senior surveyor in 1972 and principal surveyor in 1976. Mr. Hilger was named principal surveyor, Nashville, in 1977.

He succeeds William Hemminger Jr., who retired as principal surveyor for Western Rivers.

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The necessity for ship repairs and maintenance is a fact of life among ship-owners and operators. The longer a ship is laid up for drydocking and repairs, the less productivity for her owners.

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quality in workmanship or materials.

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Texaco Continues Its Support Of Student Programs At Kings Point

Texaco Inc. continued its support of student programs at the U.S. Merchant Marine Academy, Kings Point, N.Y., with a recent contribution to Kings Point's Midshipman Morale Fund.



Capt. T.W. Merrell (left), Texaco's marine operations superintendent, presents his company's contribution for midshipman activities at the U.S. Merchant Marine Academy to Acting Superintendent Howard F. Casey.

Capt. T.W. Merrell, superintendent of marine operations at Texaco and a 1947 Academy graduate, presented his company's donation to the Acting Superintendent of the Federal Academy, Howard F. Casey.

Texaco's contribution helps sponsor programs for which Federal funds are not appropriated, such as athletic and cultural events.

Shipping Orders Worth £42 Million For U.K. Yard

European and Asian customers have ordered seven cargo ships worth £42 million from U.K. shipbuilders Austin and Pickersgill during December 1979.

The latest orders are from Greek operators for two 14,000-ton SD14 cargo carriers to be completed by the second half of 1980 at Austin and Pickersgill's covered shipyard at Sunderland, northeast England.

The SD14, of which more than 100 have been built at Sunderland and another 100 under license in various parts of the world, is considered to be one of the most successful series-built merchant vessels in British history.

The National Shipping Corporation of Pakistan placed a £20-million order with Austin and Pickersgill for three 18,000-ton SD18 cargoliners, the first sales of this new design. A few days later, a Hong Kong concern ordered a R26 bulk carrier of 26,000 tons, and a Federal German operator placed a contract for an SD14 (LPS).

GE's Ground Systems Department Renamed

Effective immediately, General Electric's Ground Systems Department will operate with a new name: Simulation and Control Systems Department.

Formed originally to provide ground systems support for the Apollo Space Program, the Daytona Beach, Fla., facility has successfully re-directed its product emphasis in recent years. By exploiting space technology expertise in the design of digital and display systems, the department has become a major supplier of shipboard automation systems, and is a leader in the design and production of Computer Generated Image systems for visual simulation. The new title has been

chosen to more accurately identify these activities.

Commenting on the name change, the department general manager, Dr. James C. Castle, noted: "Changing our department name reinforces rather than changes what we do and what we plan to do. The new name is more appropriate for us, and it does underline the success which we have had in pursuing important new business opportunities for the General Electric Company."

\$4.3-Million Order To Gould For Submarine Simulator Development

Gould, Inc., Ocean Systems Division, Cleveland, Ohio, has been awarded a \$4,350,000 cost plus fixed fee contract to provide for design and development of an improved Submarine Simulator and Test Set Assembly. Work will be performed in Cleveland, and San Diego, Calif. The Regional Contracting Office, Long Beach, Calif., is the contracting activity. (N00-123-80-C-0226)

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Stanwick And Vickers Form Joint Company

The Stanwick Corporation, Washington, D.C., has announced the forming of a joint company with Vickers Canada Inc. The new company, Vickers-Stanwick Systems Inc., is a Canadian entity being 51 percent owned by Vickers and 49 percent owned by Stanwick.

Operating out of its new head-

quarters in Ottawa, Vickers-Stanwick Systems Inc. will provide management, engineering and technical services to government and commercial maritime activities in Canada.

The Stanwick Corporation is a management engineering systems firm which provides integrated logistics support to governmental and commercial maritime sectors in the United States and other foreign countries. Major areas of

services include Maintenance Management Systems, Shipyard Development and Operations, Technical Documentation and Training, Ship Repair Services and Professional Recruitment.

Vickers Canada Inc. is one of the largest ship repair and ship design companies in Canada providing services to governmental and commercial maritime sectors. Vickers Canada is engaged in manufacture of defense and heavy

industrial equipment, including nuclear powerplant components, heat transfer equipment and rapid transit cars.

Martino Named Assistant General Manager At Todd Galveston Yard

Benjamin C. Martino has been appointed assistant general manager of Todd Shipyards Corporation's Galveston (Texas) Division, it was announced recently by Robert D. Hesley, general manager of that division.



Benjamin C. Martino

Mr. Martino has over 30 years' experience in shipbuilding and ship repair. Prior to joining Todd, he was general manager of McAllister's Tug and Barge Dry Docks, Inc., Jersey City, N.J. He also previously held supervisory and management positions with Perth Amboy Dry Dock Co.; Livingston Shipbuilding Co.; Seastrain Shipbuilding Corp.; John J. McMullen Associates, Inc.; Ingalls Shipbuilding Corporation; Lockheed Shipbuilding Corporation, and New York Shipbuilding Corp.

In his new position with Todd's Galveston Division, Mr. Martino will be responsible for Administration and Operations.

Anderson Named To Key National Post By AAPA

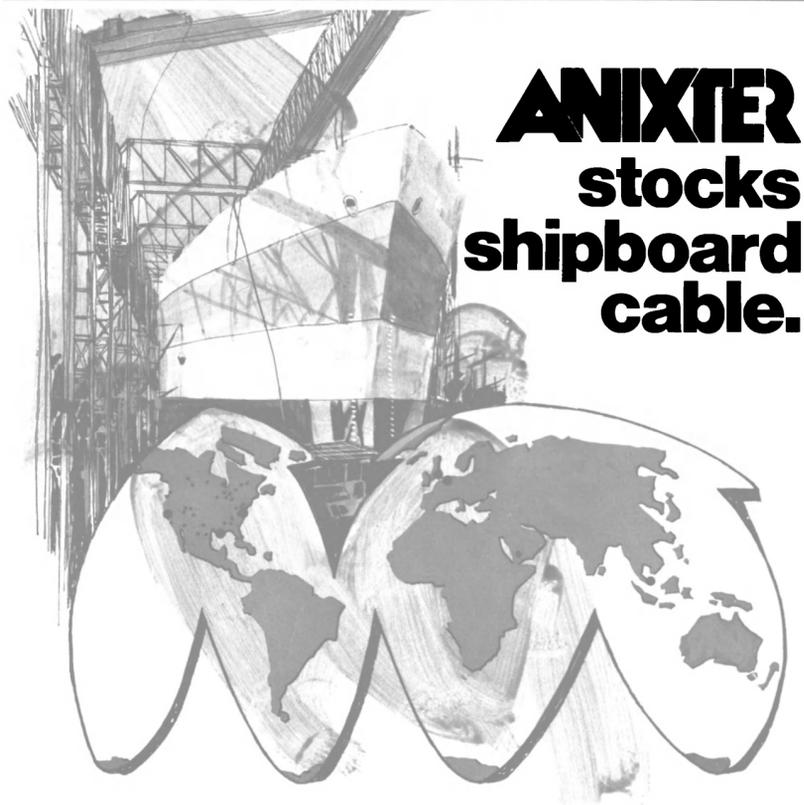


Lloyd Anderson

Lloyd Anderson, executive director of the Port of Portland (Ore.), has been named chairman of the U.S. National Transportation Policy Committee of the American Association of Port Authorities (AAPA).

Mr. Anderson will head the 12-member policy group made up of representatives of seaports throughout the country. The committee's role is to assist U.S. ports with basic issues effected by national legislation, and in dealings with appropriate governmental agencies and regulatory bodies.

The AAPA membership includes 79 U.S. ports, 34 in Latin America, and 16 Canadian ports.



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**Olson Named President
Of Willamette Tug & Barge**

E. Whitney Olson has been named president of Willamette Tug & Barge Co., a major Portland, Ore.-based ship assist, general towing and barging, and oil-barging firm which operates in the Ports of Portland, and Vancouver, Wash.

He also serves as Group vice president-Marine Services for Riedel International, Inc., Willamette's parent company. The Marine Services Group maintains operations in the San Francisco Bay area—Western Tug & Barge Co., California Launch Services, and Western-Pacific Construction Materials Co.; and in the Seattle area — Western Pacific Towing. The company also operates tugs and barges along the Pacific Coast, and in Honolulu, Hawaii, and New Orleans, La.

Announcement of the appointment was made by Arthur A. Riedel, president of Riedel International.

Mr. Olson has spent his entire working life involved in a variety of marine activities, beginning as a deckhand while he attended high school in northern California. He has served Willamette Tug & Barge since 1972 in progressive management positions.

Mr. Olson is very active in area waterfront organizations. He is chairman of the Columbia River Towboat Association, vice president of the Port of Columbia River Propeller Club, and secretary of the Portland Shipping Club. He is also a director of the Merchant's Exchange, and a member of the Society of Port Engineers and the Longview Transportation Club.

**New MARCO Brochure
Describes Hydraulic
Pump Drive Units**

A new 16-page brochure describing the full line of MARCO Hydraulic Pump Drive equipment is available from the manufacturer, the Industrial Products Division of Marine Construction & Design Co. (MARCO), Seattle, Wash.

The brochure features complete specification and selection data for standard and marine equipment applications, as well as information on drive and mounting options for special requirements.

The MARCO Hydraulic Pump Drive (HPD) interconnects between a power supply and a fluid hydraulic pump for the transmitting of hydraulic power to an assortment of hydraulic functions (i.e., winches, line hauling devices, swing and track drives, etc.). The MARCO HPD can efficiently transmit power to as many as eight hydraulic pumps mounted at a single location.

The HPD can accept any SAE flange pump, and provides either

increasing or decreasing gear ratios between the prime mover and the hydraulic pumps.

In addition to the many pump drive options available, the brochure describes the MARCO power take-off drive adaptor model E1400 and the special HPD designs that MARCO has developed.

Specifications documented include gear ratios, input/output RPM and HP, dimensions and weights. Information on input options for shaft, direct drive plate or clutch drive adaptations with

appropriate mounting criteria is also provided.

The comprehensive brochure serves as a complete, one-source reference and selection guide for MARCO HPD equipment. A free copy of the brochure may be obtained from Robert Cook, MARCO Industrial Products Division, 2300 West Commodore Way, Seattle, Wash. 98199. The company is also a leading manufacturer of large commercial fishing vessels, hydraulic fishing equipment, and oil-field products, including oil-spill skimmers.

**Navy Awards Todd L.A.
\$10.9-Million Contract
For LST Overhaul Work**

Todd Pacific Shipyards Corporation, Los Angeles Division, San Pedro, Calif., has been awarded a \$10,975,623 negotiated firm fixed price contract for the regularly scheduled overhaul of the USS Schenectady (LST-1185). The Supervisor of Shipbuilding, Conversion and Repair, USN, Long Beach Naval Shipyard, Long Beach, Calif., is the contracting activity. (N65870-79-R-0003)

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Gladding-Hearn Delivers Pilot Boat Huron Belle

The second boat in a new class of pilot launches has been delivered to the Lakes Pilots of Port Huron, Mich. by Gladding-Hearn Shipbuilding Corporation of Somerset, Mass.

The Pilot Association's Captains Greene and MacDermid made the 1,000-mile delivery trip from Somerset to Port Huron, traveling down the Atlantic Coast to the Hudson River, up the river to the New York State Barge Canal, and finally into the Great Lakes.

The 50-foot single-screw Huron Belle (shown above) has a high deadrise or "deep-V" planing hull designed by C. Raymond Hunt Associates of Boston, Mass. The boat combines a top speed of 20 knots, with the strength of steel construction for demanding pilot work.

For Gladding-Hearn Shipbuilding, the Huron Belle is the 28th pilot boat the yard has developed in its 25 years of operation. Three more boats, coupling the Hunt hulls with the yard's expertise in pilot boat design, are now under construction — two 55-foot aluminum boats for the Charleston, S.C. Pilots, and a steel 50-footer for the Tampa Bay Pilots.

The lead boat in the class, the twin-screw Delaware, was launched last spring, and has averaged 100 running hours a week in all weather for the Pilots Association of the Bay and River Delaware. The Delaware was the first joint venture between Hunt Associates and Gladding-Hearn. It was to develop a faster boat to meet the new requirements of the Delaware Pilots when they moved ashore for their 165-foot station vessel, the station vessel pilot boat Philadelphia. Now with a shore-based operation and a run of 6 to 10 miles, the pilots felt a faster boat was needed, but it had to be just as seaworthy as their older, slower displacement launches. At the pilots' urging,

Gladding-Hearn and Hunt combined their talents to produce this entirely new class of reliable, comfortable, and fast pilot boats.

The Huron Belle, like the Delaware, takes advantage of the Hunt high deadrise hull to get comfortable, dry upwind performance in rough water, and for steady running in a following sea.

With its higher speeds, the boat can keep pace with the modern, faster merchant ships, substantially reducing commuting time to and from station.

"With our old boat, it took us 40 minutes to make the 8-mile run between our station and our normal boarding areas. The Huron Belle makes it in 20 minutes," said Captain Greene.

The Huron Belle has a 16-foot beam and a 4.5-foot draft. The steel hull and decks are topped with an unpainted aluminum deckhouse, positioned well aft for comfort at sea and good visibility during boarding maneuvers.

Powered by a turbocharged 12V-71 Detroit Diesel, the boat has 300-gallons fuel capacity and a top speed of 20 knots.

Seating for four passengers is provided on raised platforms in the deckhouse to increase visibility. An adjustable helmsman's seat is located on centerline, aft of a vertically mounted stainless "destroyer" wheel. A bunk is located aft of the passenger seats.

The Huron Belle, like other pilot vessels developed by Gladding-Hearn, has several special features for its rigorous daily use. Fixed Lexan cabin top deadlights and floodlights give complete visibility for day and night operations. Forward windows in the deckhouse are equipped with defrosters and wipers. A hot water heating system, run off the engine, warms the deckhouse when the boat is underway. Electrical 110 V convectors provide heat for the deckhouse and engine room at dockside. Engine water is also

circulated through a system under the decks to keep them ice-free during the winter.

To minimize damage from ships alongside in rough weather, the deckhouse is located well inboard. Fendering of heavy "D" section rubber runs along the sheer. Aluminum and stainless-steel handrails are also inboard, leaving wide side decks. A section of rail across the transom is removable for the occasional stern docking or for emergencies, when a stretcher bearing injured can be transferred to the Huron Belle.

Principal particulars of the Huron Belle are: LOA, 50 feet, LWL, 45 feet, beam, 16 feet, draft 5 feet, with a displacement of 46,000 pounds; power, single Detroit

Diesel 12V71 TI; horsepower/rpm, 550/2,100; reduction, 2:1/Twin Disc 514; top speed, 20 knots; service speed, 19 knots; fuel capacity, 300 gallons; construction, welded steel hull and decks, aluminum deckhouse; propeller, 34-inch-diameter x 30-inch pitch four-blade NIBRAL Tetradyne; propeller shaft, ARMCO stainless steel, 3-inch diameter; controls, Morse single lever with 43c cables; radar, Decca 060; radio, Modar VHF; depth sounder, Data-marine digital; bilge pumps, 1¼-inch Jabsco and Edson; anchor, 40 pounds, Danforth; searchlight, Perko; navigation lights, Perko; and fendering, 4-inch and 6-inch "D" section rubber by Johnson Rubber.

ABS Approves Use Of Protective Ceramic Metal —Literature Available

The American Bureau of Shipping recently approved the use of Belzona® Molecular Ceramic Metal for protecting exposed tailshaft sections, providing shipowners with an alternative to either stainless-steel clad welding or fiberglass wrapping.

Ceramic Metal®, which was developed for rebuilding and protecting metal subject to very aggressive erosion-corrosion attack, can be applied cold, thereby eliminating metallurgical stresses in the parent metal. A thixotropic compound, Ceramic Metal reacts to create a hard, abrasion-resistant, synthetic metal which, according to the manufacturer, is so tough it is almost impossible to machine. Other features include outstanding resistance to chemical attack, thermal shock, impact, and stress. The most

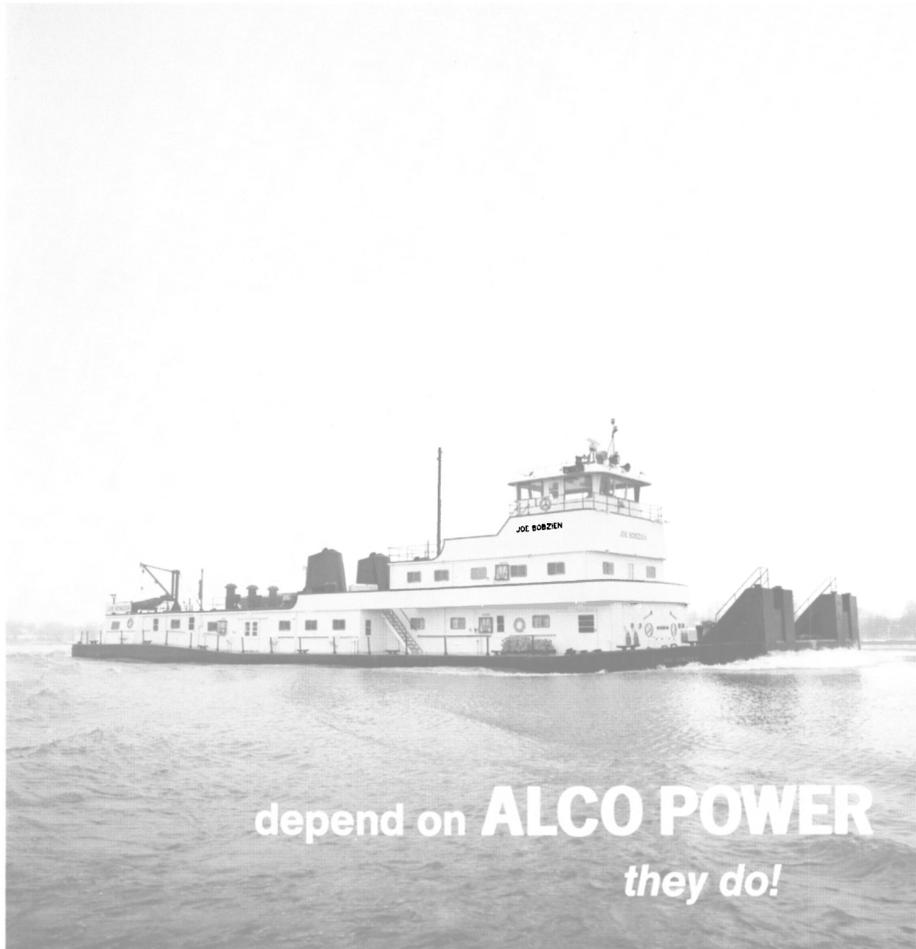
common applications include repairs to condenser tube sheets, division bars, endplates and water boxes; also, repair of Kort nozzles, bowthrusters, cavitated propellers, sea scoops — even emergency repairs to turbo-blower casings.

Belzona Molecular produces a complete line of Molecular Metals which includes: E-Metal®, for fast, emergency repairs to fuel tanks, pipes, radiators, oil pans, etc.; Super Metal® for rebuilding machinery and equipment, such as the repair of cracked engine and compressor blocks, oversized bearing and pintel housings, keyways and scored hydraulic rams. Super Metal is fully machinable, making it ideal for rebuilding worn shafts.

For further information, plus a complete free package of descriptive and technical literature, write to A.M. Janczak, Executive Vice President, Belzona® Molecular Inc., 224 Seventh Street, Garden City, N.Y. 11530.



GOTAVERKEN ARENDAL DELIVERS REEFER VESSEL—Gotaverken Arendal AB has delivered a refrigerated cargo vessel of 14,800 dwt, M/S Winter Sun, to Salen Shipping Companies, Stockholm, Sweden. The vessel, yard number 916, is the third in the series of four refrigerated cargo vessels being built at Gotaverken Arendal for Salen Shipping Companies. The vessels in this series are very versatile and flexible; primarily, they will carry perishable goods such as fruit, vegetables, frozen meat and fish, but they can also carry containers and cars.



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SNAME New England Hears Paper, 'Liability Avoidance In Ship Design And Construction'

The New England Section of The Society of Naval Architects and Marine Engineers met in Newton, Mass., on December 5, 1979. The speaker was Dr. **Kenneth W. Fisher**, who presented a paper on "Liability Avoidance in Ship Design and Construction." Dr. Fisher is the author of several papers on shipbuilding costs and management practices, and he is editor of several books which span the gap between technical and legal matters in the marine industry. Dr. Fisher is the founder of a national firm of maritime management counselors emphasizing the technological aspects of that field.

Dr. Fisher's presentation was centered on the fact that liability often occurs and recurs in ship design and construction. The speaker examined the basis of some of the more common forms of potential liability which face marine designers and shipbuilders. The presentation was illustrated with several interesting examples taken from the author's past experience. Dr. Fisher offered at the end of his talk some suggestions which may be helpful in avoiding, or at least minimizing potential liabilities. Following the presentation, there was a period of questions in which several members participated.

New OMNITHRUSTER For Small Commercial Boats —Literature Available

OMNITHRUSTER, Gardena, Calif., announced a new series, PV 300, maneuvering system at the Seattle 1979 Fish Expo. This series was designed to meet the need of owners of smaller commercial boats (mainly fishermen) for a strong, dependable maneuvering system to hold boats with the bow in the wind, to direct the bow away from the net in a purse seine direction, and for getting around to traps.

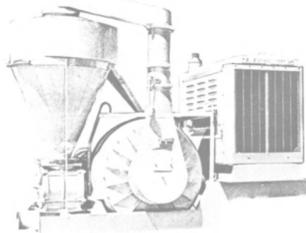
Stanley A. Dashew, president, states: "The owners of many fishing boats in the 45-foot and 105-foot range, with a 50 to 75-horsepower requirement, have come to us and asked for an OMNITHRUSTER system that would fit their needs and their budget. We developed new production techniques to make the same rugged OMNITHRUSTER available in small sizes at much lower costs than we previously thought possible."

Like all OMNITHRUSTER systems, series PV 300 meets the basic requirements of maneuvering underway and in strong currents, thrusting with bow out of water . . . and, the impeller runs in one direction.

The OMNITHRUSTER series PV 300 utilizes standard OMNITHRUSTER principles of operation; discharges above the water or under the water; neutral, port or starboard without reversing the prime mover; and has a protected intake on the bottom or side. It requires only a simple installation, using standard shipyard construction procedures to minimize installation labor and to reduce downtime on retrofits. There are no protrusions and no change in hull shape. The unit is powered by hydraulic or diesel drive.

For additional information and complete free literature, contact Violet J. Winslow, Director of Public Relations, OMNITHRUSTER Inc., 16837 South Normandie Avenue, Gardena, Calif. 90247.

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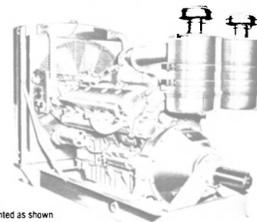
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| Compressor | Multi-Stage Centrifugal | | |

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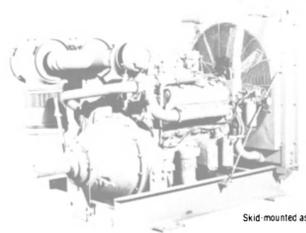


Skid-mounted as shown

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| Engine Type | 2 cycle V8 Diesel | EQUIPMENT | Heavy-Duty P.T.O. Starting Equipment and Governor |
| Number of Cylinders | 8 | F.O.B. | Our warehouse New Jersey |
| Bore and Stroke | 4 1/4" x 5" | | |
| Total Displacement | 568 cu./in. | | |
| Max. Brake H.P. Basic Engine | 336 @ 2300 RPM | | |
| Net Weight, Dry | 5400 lbs. | | |

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NEW! GMC 8V92T1 Diesel Engine



Skid-mounted as shown

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| Engine Type | 2 cycle V8 Diesel | Net Weight, Dry | 6200 lbs. |
| Number of Cylinders | 8 | EQUIPMENT | Heavy-Duty Twin Disc P.T.O. |
| Bore and Stroke | 4 84" x 5" | F.O.B. | Our warehouse Portland, Oregon |
| Total Displacement | 736 cu./in. | | |
| Max. Brake H.P. Basic Engine | 550 @ 2300 RPM (Turbo-charged) | | |

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For additional information, brochures or inspection, contact: Hugh Sturdivant, Sales, Manager.

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EARLY DELIVERY — John F. Sullivan Jr., left, president and chief executive officer of Bath Iron Works, recently delivered the U.S. Navy guided missile frigate McInerney (FFG8) under contract cost and 11 weeks ahead of the original contract schedule. Comdr. John S. Berg, right, prospective commanding officer, happily acknowledged the milestone to Capt. Charles L. Mull, Navy Supervisor of Shipbuilding at Bath. First "production" model of the new class, McInerney was formally commissioned into the fleet December 15. Fourteen of the frigates are currently under contract at the Bath, Maine, shipyard, which is a Congoleum company.

B.I.E. Instruments Offers Short Form Catalog

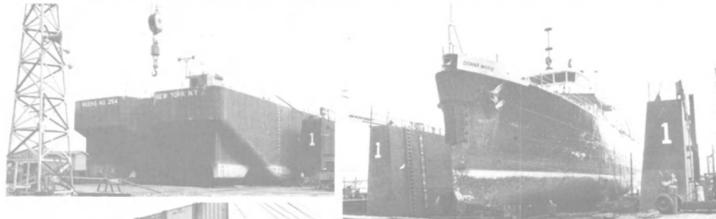
B.I.E. Instruments, Inc., Houston, Texas, recently published a fully illustrated, six-page surface coating measurement and testing instrument brochure which includes applications, descriptions, photographs and specifications on all products.

Product classifications featured in the catalog are coating thickness gages, porosity detection instruments, substrate quality instruments, adhesion testing instruments, and general inspection aids and equipment. These instruments are especially useful for checking the quality of surface preparation, absence of porosity and pinholes, the bond between coating and substrate and wet and dry film thickness.

For a free copy of the catalog, write Andrew Sansum, B.I.E. Instruments, Inc., 2100 West Loop South, Houston, Texas 77027.



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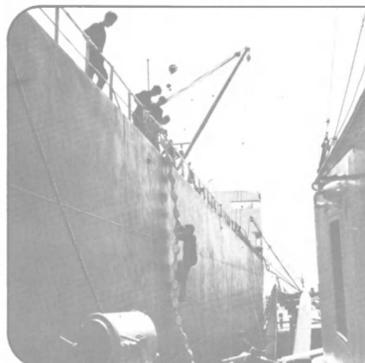
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**Burton Launches Third
Of Seven Tuna Seiners**

The DeoLinda, a 224-foot, 1,200-ton tuna seiner, was launched into the waters of the Sabine Neches Channel at Burton Shipyard, Inc., recently after being christened by its namesake, Mrs. Deolinda Medeiros, wife of the DeoLinda's skipper, Raymond Medeiros, and her daughter-in-law, Mrs. Christina Medeiros. Mrs. Medeiros was also assisted in the christening by her daughters and maids of honor, Miss Karen Medeiros and Miss Linda Dee Medeiros.

The vessel is the third of a seven-ship contract awarded to Burton Shipyard, Inc., Port Arthur, Texas, by Van Camp Sea Food Company, a division of Ralston Purina Com-

pany. The DeoLinda is jointly owned by Van Camp Sea Food Company and Capt. Raymond Medeiros. The ship is expected to operate primarily with the Pacific fleet, fishing for skipjack and yellowfin.

The vessel will have a cruising speed of 16 knots and is designed for operation with a crew of 21. The DeoLinda measures 42 feet wide, with a draft of 18 feet 6 inches. Displacing 2,600 long tons, the steel-hulled craft is capable of carrying a 1,200-short-ton payload of frozen tuna. The design and detailed engineering drawings were provided by Rados International Corporation, San Pedro, Calif. In basic concept, the DeoLinda follows the proven characteristics of previous Rados designs, and includes the latest innovations and convenience features that



The 224-foot DeoLinda is launched at Burton Shipyard.

have been developed for the tuna fishing operators.

"Yacht like" in outward appearance, similar luxury is exemplified in the interior treatment for the convenience and comfort of the crew. Such features as stereophonic music, closed circuit recorded television, and luxurious lounge areas make off-duty hours more pleasurable.

The new tuna seiner is propelled by a General Motors EMD, turbocharged, marine diesel engine, rated at 3,600 shp at 900 rpm. The 20-cylinder engine drives a 132-inch-diameter, five-blade stainless-steel propeller through a Falk reduction and reversing gear. Auxiliary power for the vessel is provided by three Caterpillar D-353 TA diesels with 300-kw Kato brushless generators. The ship's bowthruster is a Bird-Johnson model 10/35/FP with direct Caterpillar drive.

A passive stabilizer has been incorporated into the hull structure, and was engineered by John J. McMullen Associates.

Fishing gear and hydraulic equipment are by Marco and include a Model WS444 purse seine winch and the Puretic power block model B56-61990-185. A Whaley Model B-102-H hydraulic ring stripper is also provided. The purse davit is a Rados International design.

Navigational aid and communications equipment, provided and installed by Marine Electric of San Diego, Calif., consists of a Magnavox 1102 Satnav receiver, Furuno FRJ-100 and KRA-1064 radars, FE 812 depth sounder, FDK-245 ADF and scanning sonar. Other NAV/COM gear includes Sperry MK 37 gyrocompasses, gyropilot, Furuno weather facsimile recorder model FAX 143 and a broad assortment of radio communications equipment.

Facilities are provided for the operation of a helicopter with the pad located on the wheelhouse top, with stainless steel fuel tanks located in the work deck area. Private berthing accommodations are included for the helicopter pilot and his mechanic. Five outboard chase boats are stored on both the boat deck and the upper deck. The diesel-powered purse skiff is provided by Mauricio and Sons of San Diego, Calif.

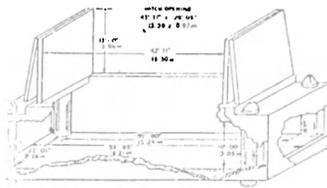
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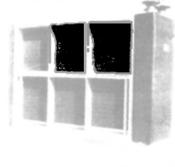
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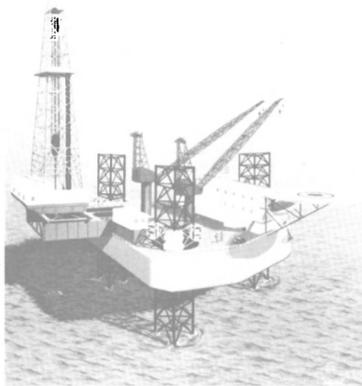
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Burton is located in Port Arthur, and is a wholly owned subsidiary of Pioneer Texas Corporation of Dallas, Texas.

**Western Oceanic Inc.
To Build 300-Ft. Water
Depth Jackup**



An artist's impression of the new Western Oceanic Inc. jackup.

Western Oceanic Inc. and Far East-Levingston Shipbuilding Ltd. announced they have signed a contract for the construction of a mobile self-elevating drilling unit for operation in up to 300-foot water depths. The unit will be built in Singapore for delivery in March 1981. The unit is currently available for drilling contract.

The jackup is to be constructed to specifications drawn up by Western Oceanic to meet their operational requirements, incorporating living quarters for 84 men, a heavy cantilever feature for development drilling as well as exploratory drilling tasks, ability



Pictured during contract negotiations are, left to right: **Joe Callahan**, vice president of Engineering and Construction, Western Oceanic Inc.; **Peter Lovie** of Lovie & Co., U.S.A., representative for Far East-Levingston Shipbuilding Ltd., and **Jim Sisk**, manager-Major Projects, Western Oceanic Inc.

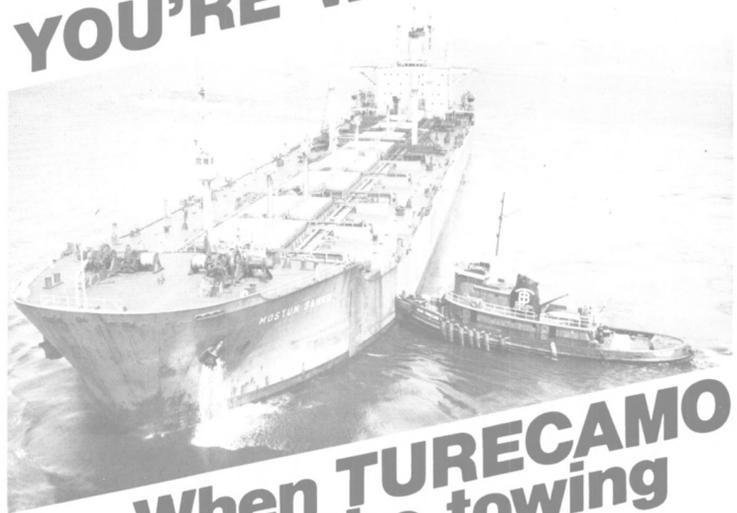
to withstand relatively severe environmental conditions, as well as the ability to work in water depths down to 13 or 14 feet. The basic design of this jackup is the Friede & Goldman L-780 series, and will meet the latest requirements of the American Bureau of Shipping and the United States Coast Guard. The basic dimensions of the hull are 185 feet by 175 feet by 25 feet, with legs 416 feet 7 inches long overall. An electrically driven rack and pinion system will be used, of standard Armco National Supply design, operating at an elevating speed of 1.5 ft./min.

This latest addition to the Western Oceanic fleet will be the 14th mobile offshore

drilling unit to be built for Western Oceanic, joining a current fleet of four semisubmersibles and seven jackups of various types and sizes. Western Oceanic Inc. is headquartered in Houston, Texas, and is a wholly owned subsidiary of the Western Company of North America located in Fort Worth, Texas.

Far-East-Levingston Shipbuilding Ltd. is an entirely Singapore-owned builder of offshore equipment, who have in the past built an unusually wide range of different types of jackups for U.S.A. and other drilling contractors. Other recent projects have involved jumbo and standard drilling tenders, drillships, dynamically positioned vessels, semi-submersibles, and pipelay barges.

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**SNAME L.A. Section Hears Paper
On Air Cushion Drilling Systems**



Shown at the SNAME Los Angeles Metropolitan Section meeting are, left to right: Charles E. Heil, ARCO Transportation Co., Section chairman; Harold D. Ramsden and G. Dayton Knorr, both of Global Marine Development, Inc., authors and speakers; George L. Steihl, West Coast Shipping Co., secretary-treasurer; and Edward V. Stewart, ARCO Transportation Co., vice chairman.

A former chairman appeared before the Los Angeles Metropolitan Section of The Society of Naval Architects and Marine Engineers and presented a paper on "Air Cushion Drilling Systems." Harold D. Ramsden, manager business development, Global Marine Development, Inc., was the guest speaker. He was accompanied by G. Dayton Knorr, Global's Air Cushion Project manager. The two prepared the paper for presentation to the Section.

According to the guest speakers, it all started in 1968, when

Global Marine acquired the first lease for offshore exploration in the Canadian Arctic. This began a program to develop an Air Cushion Drilling System (ACDS). The task eventually involved a long series of tests simulating 50-below-zero working conditions. All operational functions of the system had to be designed with these criteria in mind.

The air cushion system, as explained by Messrs. Ramsden and Knorr, consists of a basic rectangular steel platform surrounded on its periphery by a flexible

air skirt. The flexible skirt segments contain an air bubble as the structure rises above the surface. The air cushion is generated by four d-c motor-driven centrifugal fans, maintaining an overall average pressure of 1½ pounds per square inch. This is sufficient to raise a typical drilling platform of several thousand tons to a normal operating height of 8 feet for moving.

The environmental considerations involved working over land-fast ice in the Arctic regions, offshore in water depths of 1,800 feet, and over land, permafrost, or marsh areas, without upsetting the ecological balance on these remote sites. It was to be a year-round activity with drilling cap-

ability down to 16,000 feet over ice or 25,000 feet over marshlands. The system concept was successfully extended to pipelaying, transporters for both cargo and personnel, and living accommodations. All were designed to be moved from site-to-site through wilderness and undeveloped areas.

An unexpected and highly successful application of the concept was realized with the design and utilization of an icebreaker employing the same principles. It was tested on Thunder Bay, Ontario, Canada. The performance evaluations resulted in assigning efficiency ratings far in excess of expectations. The craft built was named Iceater-1.

**Norwegian Firm To Buy
Jetfoils For Offshore
Use From Boeing Marine**

Braathens S.A.F.E., a Scandinavian domestic airline headquartered in Oslo, Norway, has reached agreement with Boeing Marine Systems of Seattle, Wash., toward the purchase of two Boeing Jetfoil hydrofoils for use in offshore oil crew and supply transfer.

Bjoern G. Braathen, Braathens' president, made the announcement recently from Seattle where he and a group of Norwegian Government, union, and company representatives were visiting the hydrofoil facility.

The purchase, which through the Department of Commerce has Norwegian Government approval, is a three-phase agreement culminating in delivery of the two Jetfoils in 1982. A joint Braath-

ens-Boeing study will determine the best configuration of the Jetfoil model 929-115 for safe and comfortable transportation of crews to offshore platforms in the North Sea. The Jetfoils will also be employed in the transfer of high-priority cargo to the rigs.

Following the definition of the configuration, Boeing will provide a specific proposal, and upon approval will begin construction of the Jetfoils in time for 1982 delivery.

Braathens is presently working with Coast Center Base and West Engineering and Research Company of Norway to establish a transport company to offer a complete offshore transport service based on the Jetfoil. Braathens plans to form a separate company to purchase and operate the Jetfoils, while Coast Center Base will operate the terminal facilities.

The Jetfoils will operate in conjunction with a new system to transfer crews to and from oil rigs, one of which is now under development by Kongsberg Engineering A.S. of Norway.

Boeing has already delivered a special performance Jetfoil derivative to the British Royal Navy, which will begin operation in April for protection of oil and gas installations in the North Sea. Commercial operations began in 1975, and currently there are 11 Jetfoils in operation with announced orders for six more for 1980-81 delivery.

**Atwood To Sell Rig
Big John To French Firm**

The Maritime Administration has given Atwood Oceanics, Inc., Houston, Texas, permission to sell the drilling rig Big John to a French corporation, Foramer, S.A., with transfer of registry and flag.

The 3,338-dwt drilling platform barge was constructed by Bethlehem Steel's San Francisco shipyard in 1964.

The Maritime Administration's approval for foreign transfer is required by Sections 9 and 41 of the Shipping Act of 1916, as amended.

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China Orders 4 Towboats, 30 Barges From Dravo

Dravo Corporation, Pittsburgh, Pa., has signed a contract with Chang Jiang Shipping Administration of the People's Republic of China for the construction of four 6,000-hp river towboats and 30 barges. Terms of the contract were not disclosed.

The equipment will be used on China's Chang Jiang (Yangtze River). Construction will take place at Dravo's Neville Island shipyard, on the Ohio River near Pittsburgh.

High Pressure Filter Selection Guide From Paul-Munroe Hydraulics

Paul-Munroe Hydraulics, Inc., Orange, Calif., PMH Products Division, recently announced the availability of an easy-to-use six-page selection guide for 1/2-micron and 10-micron high flow pressure filters.

Matching a filter and element to your hydraulic system has been simplified with the addition of color-coded application charts. Engineering specifications and physical dimension of all options have also been included in this brochure.

Standard options include disposable and stainless steel replaceable elements, reverse flow filters, electrical element cleanliness indicators, visual and electrical by-pass indicators.

A copy of the Guide may be obtained by writing to Arlene Corkhill, Paul-Munroe Hydraulics, Inc., PMH Products Division, 1701 West Sequoia Avenue, Orange, Calif. 92668.

Zidell Named Manager Of Drapp's Swan Island Marine Repair Division

Carl Propp has been named manager of the Swan Island (Portland) marine repair division of Zidell Explorations, Inc., Portland, Ore., according to Stanley Rosenfeld, vice president.



Carl Propp

In his new post, Mr. Propp will be responsible for drydocking and repair production at both Zidell's South Portland drydocks and Swan Island repair facility.

Prior to joining Zidell Explorations, Mr. Propp spent 11 years

as shipyard manager for the Port of Portland, and is credited with having made a substantial contribution to design of the port's 84,000-ton Swan Island drydock. That expertise was immediately called on when the 213-foot Coast Guard cutter Yaona was dry-docked at Zidell's South Portland yard.

Mr. Propp is past vice chairman of The Society of Naval Architects and Marine Engineers (SNAME). He has contributed

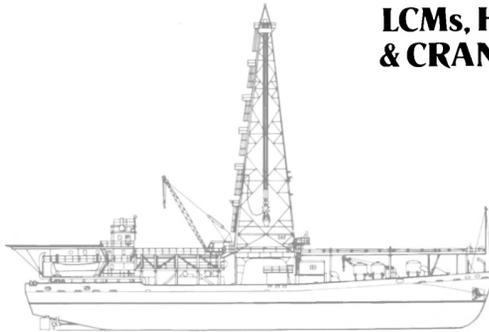
articles to marine publications and prepared technical papers on oil spills and reception facilities for the Inter-Governmental Maritime Consultative Organization (IMCO) symposium sponsored by the United Nations in Acapulco, Mexico.

Among his inventions on which Mr. Propp holds patents are a waste oil and water reception facility, and an oil and debris skimming vessel, which has won national recognition.

Zidell Explorations, Inc. is an expanding, diversified organization active in marine repair, voyage repair dockside, barge and drydock construction, marine equipment sales and valve manufacture.

Headquartered in Portland, Zidell Explorations operates offices in Tacoma, Wash., Long Beach, Calif., Houston, Texas, Atlanta, Ga., Baton Rouge, La., and Elmhurst, Ill., and East Brunswick, N.J.

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Drilling Equip: National 1625D Drawworks; Parkersburg hydro. brake; 15,000' Powered Sandline; National C375 Rotary Table, GE752 drive, Varco bushing, National 12P160 Mud Pumps, 550T Travelling Block w/WGC 400T Heave Compensator, National P650 Swivel API 500T Derrick (146'x56'x34'). (2) Flopetrol 120' Burner Booms, Haliburton Twin HT 400 Diesel Cement Units, GMI auto. piperacker, Drill pipe, collars, subs, tongs & elevators. Complete mud systems. Hyd. power tong.

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Drilling Equip: National 1625E Drawworks; Parkersburg Hydro. Brake; 15,000 Powered Sandline; National C375 Rotary Table, GE752 drive, Varco bushing; 2 National G1000C Mud Pumps; 550T Travelling Block w/Vetco 400T Heave Compensator; National 1324 Swivel; 136'x56'x34' Derrick; (2) 120' Flopetrol Burner Booms; Haliburton Twin HT400 Cement Units; GMI Auto. Piperacker; Drill pipe, collars, subs, tongs, & elevators. Complete mud systems.

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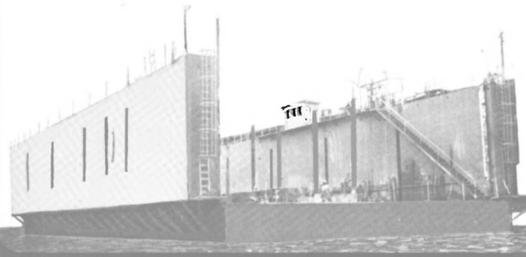
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Breadth between wing walls — 56'
Capacity — 1,000 tons

Three longitudinal bulkheads; four transverse bulkheads; ten watertight ballast tanks. Ten 8" centrifugal pumps (20 HP motors). Ten electric flood valves; ten manual flood valves. Ten cross-over valves. Total weight — 375 tons. Two ventilation blowers for voids. 4' void full length of each wing wall. Four positioning barge blocks, electrically operated from control house. Heavy tow pads. Two positioning winches at forward end of port and starboard wing walls. Currently in operation and in use. 4' keel blocks full length included.

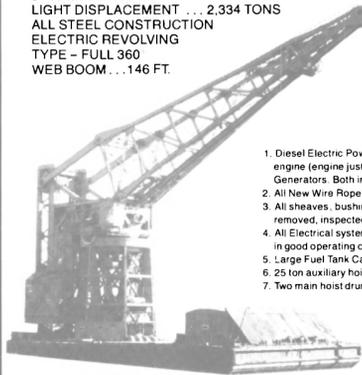


200 TON/DIESEL ELECTRIC Floating Crane

FOR SALE - RENT - CHARTER

LENGTH OVERALL 140 FT.
BEAM 84 FT.
DRAFT 7 FT.
LIGHT DISPLACEMENT 2,334 TONS
ALL STEEL CONSTRUCTION
ELECTRIC REVOLVING
TYPE - FULL 360
WEB BOOM . . . 146 FT.

MAIN HOIST:
200-Ton - By 2 only, 8 part blocks. Each block carries 2,050 ft. of 1 1/2" 6 x 37 1/2 P.S. wire rope (New)
AUX. HOIST:
25-Ton - By 1 only 4 part block. Block carries 1,110 ft. of 1 1/2" 6 x 37 1/2 P.S. wire rope (New).



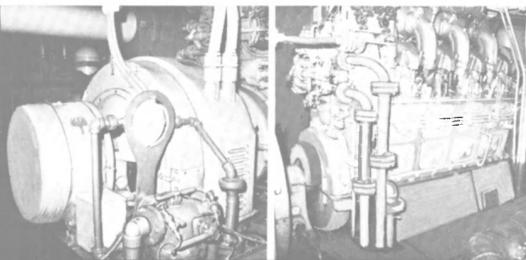
1. Diesel Electric Powered with G.M. 8-278A diesel engine (engine just majored) and 300 KW, 230 volt Generators. Both in A-1 first class condition.
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3. All sheaves, bushings and sheave pins have been removed, inspected and replaced in Good Condition.
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6. 25 ton auxiliary hoist has full 140 ft. of boom travel.
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5-350 KW units in parallel with a 1750 KW capacity. To be used as power package for dredge, drilling rig, repair facility, etc. or as 5 individual units.

General Motors Model 8-278A, typical serial 45004, air start — 600 RPM, driving a G.E. alternating current Generator Type AT1, Model 12G732, 350 KW continuous, or 438 KW for 2 hrs., 440V-3-60, complete with all attached auxiliaries. Other available components include generator control panels, oil coolers, air compressors, air tanks. 5 units available.



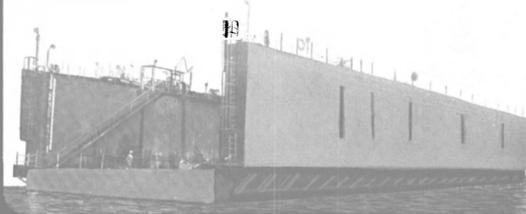
Floating Drydock

Under Construction

Length over-all — 200'
Breadth — 84'
Total depth — 30'6"
Breadth between wing walls — 74'
Capacity — 2,400 tons

Three longitudinal bulkheads, four transverse bulkheads; fifteen watertight ballast tanks. Six 8" centrifugal pumps (40 HP motors). Fifteen air operated flood valves. Total weight — 900 tons. Two ventilation blowers — one for starboard pump room and one for port pump room. 4' keel blocks full length included.

Artist's Conception



For additional information and quotations please contact: Stan Rosenfeld or Andy Canulette Marine and Industrial Sales Division of:



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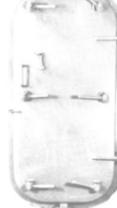


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26"x48" 26"x66"
26"x60" 30"x60"

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**NEW 7" RADIUS
PANAMA CHOCKS**

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14" X 10" CLEAR OPENING

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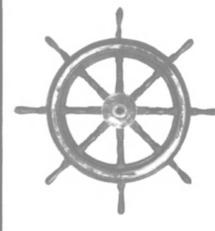


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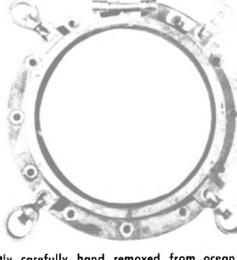


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CLEAR OPENING
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all paint removed**



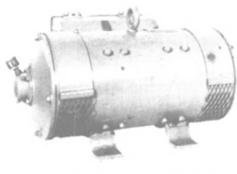
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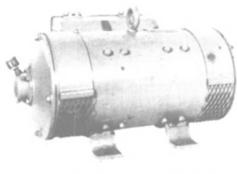
700 GPM @ 150 PSI. Inlet 8" — outlet 6". Powered by 4-speed 440/3/60 motor. 100/75/50/37.5 HP — 1200/900/600/450 RPM — with Cutler-Hammer control. Weight 10,000 lbs.

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MOORING SYSTEMS

Somson Ocean Systems, Inc., 99 High Street, Boston, Mass. 02110

NAVAL ARCHITECTS, MARINE ENGINEERS, SURVEYORS

Advanced Marine Enterprises, Inc., Suite 500, 2341 Jefferson Davis Highway, Arlington, Va. 22202
Agemar, Avenida 38 No. 71-51, Edif. Acuario (Planta Baja) Apartado 1465, Maracaibo, Venezuela
American Standards Testing Bureau, Inc., 40 Water Street, New York, N.Y. 10004
Amirikon Engineering Co., Chevy Chase Center Bldg., Suite 505, 35 Wisconsin Circle, Chevy Chase, Md. 20015
J.L. Bludworth, 8207 Glenloch, Houston, Texas 77061
Del Brest Inc., 326 Picayune Place (Suite 201), New Orleans, LA 70130

CCS Marine Associates Ltd., 2784 Crescentview Drive, N. Vancouver, B.C. Canada V7R2V1
C.D. Marine Co., Reger East, Suite 222, 9951 Atlantic Blvd., Jacksonville, Florida 32211
CIS & Associates, 11320 S.W. 108 Court, Miami, Fla. 33176
CADCOM, 107 Ridgely Ave., Annapolis, MD 21401
R.A. Cady Marine Survey Practice, 2301 Leroy Stevens Road, Mobile, Ala. 36609
Childs Engineering Corp., Box 333, Medfield, Mass. 02052
John P. Colletti & Associates, P.O. Box 13378, Pittsburgh, PA 15243
Crown Dry Dock Engrs., Inc., 21 Pottery Lane, Dealham, Mass. 02026
Crane Consultants Inc., 15301 1st Ave., So. Seattle, Washington 98148
Francis B. Crocco, Inc., Box 1411, San Juan, Puerto Rico
C.R. Cushing & Co., Inc., One World Trade Center, New York, N.Y. 10048
Norman N. DeJong & Associates, Inc., 1734 Emerson St., Jacksonville, Fla. 32207
Design Associates, Inc., 3308 Tulane Ave., New Orleans, La. 70119
Designers & Planners Inc., One State Street Plaza, New York, N.Y. 10004
Parker C. Emerson & Associates, 17935 Cardinal Drive, Lake Oswego, Oregon 97034
Christopher J. Foster, Inc., 16 Sinksink Drive East, Port Washington, N.Y. 11050
Friede and Goldman, Ltd., 225 Baronne St., New Orleans, La. 70112
Gibbs & Cox, Inc., 40 Sector Street, New York, N.Y. 10006
John W. Gilbert Associates, Inc., 58 Commercial Wharf, Boston, Mass. 02110
L.R. Glotter & Associates, Inc., 610 Colman Bldg., 811 First Ave., Seattle, Wash. 98104
Phillips Gresser & Associates (PTE) Ltd., 122 Eng Neo Ave., Singapore 11
Morris Guralnick Associates, Inc., 620 Folsom Street, Suite 300, San Francisco, CA 94107
J.J. Henry Co., Inc., Two World Trade Center-Suite 9528, New York, N.Y. 10048
Hydronautics, Incorporated, 7210 Pindell School Road, Howard County, Laurel, Maryland 20810
Janzen Engineering Co., 6655-H Amberton Drive, Baltimore, Md. 21227
James S. Kroger & Co., Inc., 3333 Rice St., Miami, Fla. 33133
Little Research and Engrg. Corp., 95 Russell St., Littleton, Mass. 01460
Alan C. McClure Associates, Inc., 2600 South Gessner, Houston, TX 77065
John J. McMullen Associates, Inc., 1 World Trade Center, New York, N.Y. 10048
Mazur & Harris, Inc., 28 West 44 Street, New York, N.Y. 10036
Marine Consultants & Designers, Inc., 308 Investment Insurance Bldg., Corner E. 6th St. & Rockwell Ave., Cleveland, Ohio 44114
Marine Design Inc., 401 Broad Hollow Road, Rte. 110, Melville, N.Y. 11746
Maritime Service Company, 1337 Rosecrans St., Suite B, San Diego, CA 92106
Material Handling Engineering Corp., 29330 N.E. 16th Place, Carnation, WA 98014
Rudolph F. Matzer & Associates, Inc., 13891 Atlantic Blvd., Jacksonville, Fla. 32225
Mechanical Resources Inc., 191 Cambridge Avenue, Jersey City, N.J. 07307
George E. Meese, 194 Acton Rd., Annapolis, Md. 21403
Hoyt Merritt & Son, Inc., 15 Lakeshore Rd., St. Catharines, Ontario, Canada L2N 2S7
Maritime, Inc., 33 Bradford Street, Concord, MA 01742
Nelson & Associates, Inc., 2001 N.W. 7th Street, Miami, Florida 33125
Nickum & Spaulding Associates, Inc., 811 First Ave., Seattle, Wash. 98104
Norgard and Clark, 114 Sansome St., San Francisco, CA 94104
Ocean-Oil International Engineering Corporation, 3019 Mercedes Blvd., New Orleans, La. 70114
Perlaton Engineering Co., Inc., 8970 S.W. 87th Ct., Miami, Florida 33156
S.L. Petchul, Inc., 1380 SW 37th Ave., Fort Lauderdale, Fla. 33317
Hoyt Merritt & Son, Inc., 350 Broadway, New York, N.Y. 10013
and 657 Mission St., San Francisco, Calif.
Sargent & Herkes, Inc., 611 Gravier St., New Orleans, La. 70130
Schmahl and Schmahl, Inc., 1209 S.E. Third Ave., Fort Lauderdale, Florida 33316
Secor Systems Engineering Associates, Corp., P.O. Box 2030, 19 Cherry Hill Industrial Park, Parlin Blvd., Cherry Hill, NJ 08003
Seaworthy Engine Systems, 75 Main Street, Essex, Conn. 06426
George G. Sharp, Inc., 100 Church St., New York, N.Y. 10007
T. W. Spaetgens, 156 West 8th Ave., Vancouver, Canada V5Y 1N2
The Starvick Company Maritime Systems Department, 3661 E. Virginia Beach Blvd., Norfolk, VA 23502
R.A. Stearn, Inc., 253 N. 1st Ave., Sturgeon Bay, WI 54235
Arne G. Svendsen, 58 Bonnielield Drive, Tiverton, R.I. 02878
Richard R. Taubler Inc., 8 Columbia St., Milford, Del. 19963
H.M. Tiedemann & Co., Inc., 295 Greenwich Ave., Greenwich, Conn. 06830
Thames Engineering Consultants Inc., P.O. Box 589, New London, Ct. 06320
Timco, 951 Government St., Suite 2161, Mobile, Alabama 36604
Corning Townsend III, 18 Church St., Georgetown, CT 06829
Undersa Systems, 112 W. Main St., Bay Shore, N.Y. 11706
Wesley D. Wheeler Associates, Ltd., 104 East 40 St., Suite 207, New York, N.Y. 10016
Thomas B. Wilson, 920 North Avalon Blvd., Wilmington, CA 90744

NAVIGATION & COMMUNICATIONS EQUIPMENT

American Hydromath Co., Buckwheat Bridge Rd., Germantown, N.Y. 12526
Frank Beier Radio Company, P.O. Box 10307, Jefferson, La. 70181
Calvert Electronics, Inc., 220 East 23rd Street, New York, N.Y. 10010
Collins Marine Corp., Pier 32, San Francisco, CA 94105
Communication Associates, Inc., 200 McKay Road, Huntington Station, N.Y. 11746

Camsat General Corp., 950 L'Enfant Plaza, S.W., Washington, D.C. 20024
Electro-Nav, Inc., 1201 Corbin St., Elizabeth Marine Terminal, Elizabeth, N.J. 07201
EPSCO, Inc., 411 Providence Highway, Westwood, Mass. 02090
Furuno U.S.A., 271 Harbor Way, S. San Francisco, CA 94080
Galbraith Pilot Marine Division, 166 National Road, Edison, NJ 08817
Henschel Corp., 14 Cedar St., Amesbury, Mass. 01913
Hose McCann Telephone Co., Inc., 524 W. 23rd St., N.Y. 10011
ITT Decca Marine Inc., P.O. Box G, Palm Coast, Fla. 32037
ITT Mackay Marine, 2912 Wake Forest Road, Raleigh, N.C. 27611
Intermarine Electronics, Inc., Flowerfield Bldg., #7, St. James, N.Y. 11780
Itron Corp., 5 Alfred Circle, Bedford, MA 01730
Krupp Atlas-Elektronik, A Div. of Krupp Intl. Inc., P.O. Box 68218, Houston, Texas 77058
Magnavox Navigation Systems, 2829 Mariposa St., Torrance, Cal. 90503
Maritel Inc., 2510 Riva Road, Annapolis, Md. 21401
NavCom, Inc., 2 Hicks Street, North Lindenhurst, N.Y. 11757
Navidyne Corp., 11824 Fishing Point Drive, Newport News, VA 23606
Navigation Communications Systems, Inc., 20100 Plummer Street, Chatsworth, CA 91311
North American Philips Communication Corp., 91 Mckee Road, Mahwah, N.J. 07430
RCA Service Co., Building 204-2, Camden, N.J. 08101
Radar Devices, Inc., 14272 Wicks Boulevard, San Leandro, CA 94577
Raytheon Marine Co., 676 Island Pond Road, Manchester, N.H. 03103
Raytheon Co., Submarine Signal Div., P.O. Box 360, Portsmouth, R.I. 02871
Rockwell International, Collins Telecommunications Products Division, Cedar Rapids, IA 52409
Rockwell International, Flow Control Division, 400 N. Lexington Ave., Pittsburgh, PA 15208
Simrad Inc., 1 Labriola Court, Armonk, N.Y. 10504
SI-TEX, P.O. Box 6700, Clearwater, FL 33518
Sperry Marine Systems Div., Charlottesville, Va. 22901, Division of Sperry Rand Corp.
Tracor, Inc., Industrial Products Div., 6500 Tracor Lane, Austin, Texas 78721
OILS—Marine—Additives
Ferrous Corporation, P.O. Box 1764, Bellevue, WA 98009
Gulf Oil Company—U.S. (Domestic Oils), 909 Fannin Street, Houston, TX 77001
Gulf Oil Trading Co., 1290 Ave. of Americas, New York, N.Y. 10019
Shell Oil Co., 1 Shell Plaza, Houston, Texas 77002
A. Margolis & Sons Corp., One World Trade Center, Suite 8751, New York, N.Y. 10048
Mobil Oil Corporation, 150 East 42nd St., New York, N.Y. 10017
Texaco, Inc. (International Marine), 135 East 42nd St., N.Y., N.Y. 10017
OIL/WATER SEPARATORS
Butterworth Systems Inc., 224 Park Ave., Florham Park, N.J. 07932
The Delaval Separator Co., 350 Dutchess Turnpike, Poughkeepsie, N.Y. 12492
National Marine Service, Inc., 1750 Brentwood Blvd., St. Louis, MO 63144
PAINTS—Marine—Protective
"CONSOL" manufactured by Hanline Bros., Inc., 1400 Warner St., Baltimore, MD 21230
Devco & Reynolds Co., Inc., P.O. Box 7600, Louisville, Ky. 40207
Farboil Company, 8200 Fischer Road, Baltimore, MD 21222
International Paint Co., 17 Battery Place North, Suite 1150, New York, N.Y. 10004
Mobil Chemical Co., Maintenance & Marine Coatings Dept., P.O. Box 250, Edison, N.J. 08817
Woolsey Marine Industries, Inc., 100 Saw Mill Rd., Danbury, CT 06810
PETROLEUM SUPPLIES
Shell Oil Co., 1 Shell Plaza, Houston, Texas 77002
PILOT LADDERS—Wood Products
A.L. Don Co., 38 Grant Avenue, Carteret, N.J. 07008
PIPE—HOSE—Cargo Transfer, Clamps, Couplings
Camlock Flange Sales Corp., 449 Sheridan Blvd., Inwood, L.I., N.Y. 11696
Hydro-Craft, Inc., 4223 Edgeland, Royal Oak, Mich. 48073
Kubota, Ltd., 22 Funade-cho 2-chome, Naniwa-Ku, Osaka, Japan
Penco Division/Hudson Engineering Co., 1114 Clinton St., Hoboken, N.J. 07030
PLASTICS—Marine Applications
Hulse Marine Plastics, Inc., 390 Hamilton Ave., Bklyn, N.Y. 11231
PROPELLERS—NEW AND RECONDITIONED—SYSTEMS
Avondale Shipyards, Inc., P.O. Box 52080, New Orleans, La. 70150
Bird Johnson Company, 110 Norfolk St., Walpole, Mass. 02081
Coolidge Propellers, 1601 Fairview Ave., East Seattle, Wash. 98102
Michigan Wheel/Gulf Coast, P.O. Box 1528, Pascagoula, MS 39567
Vaith Schneider of America—U.S. Agent: Eli Shorput, 347 Evelyn St., Paramis, N.J. 07652
Tacoma Boatbuilding Co./Escher Wyss, 1840 Marine View Dr., Tacoma, WA 98422
PROPULSION—Marine
Combustion Engineering, Inc., Windsor, Connecticut 06095
Maritime Industries, Ltd., 6307 Laurel St., Burnaby, B.C. Canada V2B 3K3
Port Electric Turbine Div., 155-157 Perry St., New York, N.Y. 10014
Schottel of America, Inc., 8375 N.W. 56 Street, Miami, Fla. 33166
Transamerica Delaval, Inc., Turbine & Compressor Div., P.O. Box 8788, Trenton, N.J. 08650
PUMPS—Repairs—Drives
Penco Division/Hudson Engineering Co., 1114 Clinton St., Hoboken, N.J. 07030
Transamerica Delaval, Inc., IMO Pump Div., P.O. Box 321, Trenton, NJ 08602
Warren Pumps, Inc., Bridges Ave., Warren, Mass. 01083
Warrington Pump Inc., P.O. Box 1250, Mountaintside, N.J. 07092
RATCHETS
CW American, Division Columbus McKinnon Corp., P.O. Box 74, McKees Rocks, Pa. 15136
REELS—Coiling Systems
Reel-O-Marine Systems, Inc., 418 Hellman St., Wrightsville, Pa. 17368
REFRIGERATION—Refrigerant Valves
Bailey Refrigeration Co., Inc., 74 Sullivan St., Brooklyn, N.Y. 11231
Port Refrigeration Div., 157 Parry Street, New York, N.Y. 10014
ROPE—Manila—Nylon—Hawesers—Fibers
American Mfg. Co., Inc., Willow Avenue, Honesdale, Pa. 18431
Jackson Rope Co., Reading, Pa. 19603
Samson Ocean Systems, Inc., 99 High Street, Boston, Mass. 02110
Tubbs Cordage Co., Orange, CA 92666
RUDDER ANGLE INDICATORS
Electric Tachometer Corp., 68th & Upland St., Philadelphia, Pa. 19142
Henschel Corp., 14 Cedar St., Amesbury, Mass. 01913
Hose McCann Telephone Co., Inc., 524 W. 23rd St., N.Y. 10011
Sperry Marine Systems Div., Charlottesville, Va. 22901, Division of Sperry Rand Corp.

SCAFFOLDING EQUIPMENT—Work Platforms
Patent Scaffolding Co., 2125 Center Ave., Fort Lee, N.J. 07024
Spider Staging Sales Co., P.O. Box 182, Renton, Washington 98055
Trus-Jost Corp., P.O. Box 60, Boise, Idaho 83707
SEWAGE—Pollution Control
American United Marine Corp., 575 Madison Ave., New York, N.Y. 10022
Argo Marine Pollution Systems Division, 140 Franklin St., New York, N.Y. 10013
Demco, Inc., P.O. Box 94700, Oklahoma City, OK 73109
Envirovac, Division of Dometic Inc., 107 Lawton Avenue, Beloit, WI 53511
Marine Moisture Control Co., Inc., 449 Sheridan Blvd., Inwood, L.I., N.Y. 11696
Marland Environmental Systems, Inc., N. Main Street, Walworth, WI 53184
Microphor, Inc., P.O. Box 490, Willits, CA 95490
Red Fox Industries, P.O. Drawer 640, New Iberia, LA 70560
Research Products/Blankenship, 2639 Andjion, Dallas, Texas 75220
St. Louis Ship FAST Sewage Systems, 611 East Marceau St., St. Louis, Mo. 63111
Sigma Treatment Systems, 2 Davis Ave., Frazer, PA 19355
SHACKLES
West Footscroy Engineering Works Pty. Ltd., P.O. Box 144, West Footscroy, Victoria, 3012 Australia
SHAFTS, SHAFT SEALS, REVOLUTION INDICATOR EQUIPMENT
Aronco Steel Advanced Materials Div., 703 Curtis St., Middletown, OH 45043
Electric Tachometer Corp., 68th & Upland St., Philadelphia, Pa. 19142
Henschel Corp., 14 Cedar St., Amesbury, Mass. 01913
Penco Division/Hudson Engineering Co., 1114 Clinton St., Hoboken, N.J. 07030
SHIPREPAIRING—Salvage
American Ship Dismantlers, Inc., Division of Schnitler Industries, 3300 N.W. Yeon Avenue, Portland, Ore. 97210
The Boston Metals Co., 313 E. Baltimore St., Baltimore, Md. 21202
Fischelster Towing Co., 642 City Island Ave., Bronx, NY 10464
National Metal & Steel Corp., 691 New Dock St., Terminal Island, Cal. 90731
Ridell Explorations, Inc., 3121 S.W. Moody St., Portland, Ore. 97201
SHIPBUILDING STEEL
Armo Steel Corp., 703 Curtis St., Middletown, Ohio 45042
Bethlehem Steel Corp., One State Street Plaza, N.Y. 10004
SHIPBUILDING—Repairs, Maintenance, Drydocking
Asmar Shipyards Co., Astilleros y Maestranas de la Armada, Prat 856, Piso 14, Casilla 150 V, Valparaiso, Chile, S.A.
Astilleros Espanoles, S.A., 17, Padilla, Madrid 6, Spain
Avondale Shipyards, Inc., P.O. Box 52080, New Orleans, La. 70150
Bergerson Industries Inc., P.O. Box 38, St. Bernard, La. 70085
Bethlehem Steel Corp., One State Street Plaza, N.Y. 10004
Blomh + Voss AG, D-2000 Hamburg 1, P.O.B. 10 07 20
Blomh + Voss Co., 55 Morris Ave., Springfield, N.J. 07081
Blount Marine Corp., P.O. Box 368, Warren, RI 02885
Boeing Marine Systems, P.O. Box 3707, Mail Stop 14-11, Seattle, WA 98124
Ira J. Buckley & Sons, Inc., 764 Court Street, Brooklyn, N.Y. 11231
Camden Ship Repair Co., Inc., Paint & Erie Streets, Camden, N.J. 08102
Caraglioti Shipyards Pty. Ltd., Old Punt Road, Tomago, N.S.W., Australia 2322
Centamar, One World Trade Center, Suite 3557, New York, N.Y. 10048
China Shipbuilding Corp., c/o Allegro Transportation Supply Co., 393 Seventh Avenue, Room 224, New York, N.Y. 10001
Coastal Dry Dock & Repair Co., Building 131, Brooklyn Navy Yard, Brooklyn, N.Y. 11205
Corrad Industries, P.O. Box 790, Morgan City, La. 70380
Curacao Drydock Co., Inc., P.O. Box 153, Willemstad, Curacao, Netherlands Antilles
Curacao Drydock, 26 Broadway, Suite 741, New York, N.Y. 10004
Dorbyl Ltd., Military Road, 1 Industrial Sites, West Bank, 5201 East London Republic of South Africa
Dravo Steelship Corp., 4-4, Box 167, Pine Bluff, Ark. 71602
FAC Co., Marine & Rec. Equipment Div., 4700 N.W. Front Ave., Portland, Oregon 97208
Galveston Shipbuilding Co., P.O. Drawer 2660, Galveston, Texas 77553
General Dynamics, Quincy Division, Quincy, Mass. 02169
Hallfax Industries, Ltd., P.O. Box 1477, Halifax, Nova Scotia, Canada B3K 3H7
Halter Marine, Inc., P.O. Box 29266, New Orleans, La. 70189
Haven de Graaf, Marine & Rec. Equipment Div., 4700 N.W. Front Ave., Portland, Oregon 97208
Hillman Barge & Construction Co., P.O. Box 510, Brownsville, Pa. 15417
Hitachi Shipbuilding & Engrg. Co., Ltd., 47 Edobori 1-Chome, Nishi-Ku, Osaka, Japan
Hongkong United Dockyards Ltd., Kowloon Docks, Hong Kong
Hudson Shipyards, Inc., P.O. Box Q, Pascagoula, MS 39567
Ingalls Shipbuilding, P.O. Box 149, Pascagoula, MS 39567
Jackson New York, 29 45 Richmond Terrace, Staten Island, NY 10303
Jeffboat, Inc., Jeffersonville, Ind. 47130
Kessel Shipyard Ltd., P.O. Box 2169, 325, Telok Blangah Road, Singapore 4
Kockums Shipyard, S-201, 10 Malmo 1, Sweden
Lockheed Shipbuilding and Construction Co., 2929 16th Avenue, S.W., Seattle, Wash. 98134
Margone Shipbuilding Co., 819 South 80th Street, P.O. Box 5446, Houston, TX 77012
Marathon Manufacturing Company
Marathon LeTourneau Offshore Company, 1700 Marathon Building, 600 Jefferson, Houston, Texas 77002
Marathon LeTourneau Gulf Marine Division, P.O. Box 3189, Brownsville, Texas 78520
Marinette Marine, Ely Street, Marinette, WI 54143
Morton Shipyard Co., Inc., P.O. Box 645, Cohoes, New York 12047
J. Roy Mc Dermott & Co., Inc., P.O. Box 60035, New Orleans, LA 70160
Misener Industries, Inc., 5353 Tyson Avenue, P.O. Box 13625, Tampa, Fla. 33681
Mississippi Marine Towboat Corp., P.O. Box 539, Harbor Front Industrial Park, Greenville, MS 38701
Mitsui Shipbuilding & Engrg. Co. Ltd., 6-4, Tsukiji 5-chome, Chuo-ku, Tokyo, Japan
Manark Boat Co., P.O. Box 210, Mantlella, Ark. 71655
Murray & Stewart (Marine) (PTY) Ltd., Ocean Road-Table Bay Harbour, P.O. Box 1909, Cape Town 8000, South Africa
Nashville Bridge Co., Box 239, Nashville, Tenn. 37202
National Steel & Shipbuilding Corp., San Diego, Calif. 92112
Newport Shipbuilding & Repair, P.O. Box 5426, Houston, TX 77012
Newport News Shipbuilding & Dry Dock Co., 4101 Washington Ave., Newport News, Va. 23607
Norfolk Shipbuilding & Drydock Corp., P.O. Box 2100, Norfolk, Va. 23501
Northwest Marine Iron Works, P.O. Box 3109, Portland, Oregon 97208
O.A.R.N. (Officine Allestimento-Riparazioni Navil), P.O. Box 1395, Genoa, Italy 16100
Pareco, Div. Fruehauf Corp., 2350 Blanding Ave., Alameda, Calif. 94501
Pearlton Engineering Co., P.O. Box 8, Kendall Branch, Miami, Fla. 33156

Perth Amboy Dry Dock Co., Perth Amboy, N.J. 08862
Port Allen Marine Service, Inc., P.O. Box 108, Port Allen, LA 70767
Port of Portland, P.O. Box 3229, Portland, OR 97208
St. Louis Shipbuilding—Federal Barge, Inc., 611 East Marceau, St. Louis, Mo. 63111
Savannah Machine & Shipyard Co., P.O. Box 787, Savannah, Ga. 31402
Setenave-Estaleiros Navais De Setubal, P.O. Box 135, Setubal, Portugal
Sudaimport, 5 Kalyaevskaya, Moscow K-6, USSR
Sumitomo Heavy Industries, Ltd., 2-1 Ohtemachi, 2-Chome, Chiyoda-Ku, Tokyo, Japan
Sun Shipbuilding, Foot of Morton Ave., Chester, Pa. 19013
Swiftships Inc., P.O. Box 1908, Morgan City, LA 70380
Tacoma Boatbuilding Co., Inc., 1840 Marine View Drive, Tacoma, WA 98422
Todd Shipyards Corp., 1 State St. Plaza, New York, N.Y. 10004
Total Transportation Systems Inc., 813 Forest Dr., Newport News, VA 23606
Total Transportation Systems (International) A/S, Bjornegarden, P.O. Box 28, N-5201 Oslo, Norway
Tracor Marine, P.O. Box 13107, Port Everglades, Fla. 33316
Tug Barge Systems, Inc., subsidiary of Ingram Corp., 4100 One Shell Square, New Orleans, La. 70139
Union Dry Dock & Repair Co., Foot of Pershing Road, Weehawken, N.J. 07087
Valmet OY, Helsinki Shipyard, Laivanrakentajantie 2, P.O. Box 910 SF 00101 Helsinki 10, Finland
Vancouver Shipyards Co., Ltd., 50 Pemberton Ave., North Vancouver, B.C. Canada
Wall Shipyard, P.O. Box 419, Harvey, La. 70058
Wiley Mfg., a unit of AMCA International Corp., Suite 200/Stockton Bldg., University Office Plaza, Newark, Del. 19702
Zigler Shipyards, P.O. Box 2607, Morgan City, La. 70380
SHIP STABILIZERS
Pacific Marine Products, Inc., P.O. Box 11, Kenmore, Wa. 98028
Sperry Marine Systems Div., Charlottesville, Va. 22901, Division of Sperry Rand Corp.
SMOKE INDICATORS
Robert H. Wager Co., Inc., Passaic Avenue, Chatham, N.J. 07928
STUFFING BOXES
Johnson Rubber Co. (Marine Div.), 16025 Johnson St., Middlefield, Ohio 44062
SURVEYORS AND CONSULTANTS
Hull & Cargo Surveyors, Inc., 99 John St., New York, NY 10038
TANK CLEANING
Butterworth Systems Inc., 224 Park Ave., P.O. Box 352, Florham Park, N.J. 07932
Penco Division/Hudson Engineering Co., 1114 Clinton St., Hoboken, N.J. 07030
Salvino, Inc., 77 River St., Hoboken, N.J. 07030
TANK LEVELING INDICATORS
Transamerica Delaval, Inc., Gem Sensors Div., Spring Lane, Farmington, CT 06032
Va-Gage System, 150 E. 42nd St. (Room 910), New York, NY 10017
TERMINALS—Oil-Transfer
Deland Corp., 29 Broadway, New York, N.Y. 10006
Transportation Concepts & Techniques, Inc., 551 Fifth Avenue, New York, N.Y. 10017
TOWING—Barges, Vessel Chartering, Lighterage, Salvage, etc.
Bay-Houston Towing Co., 805 World Trade Bldg., Houston, Texas 77002
Chotin Transportation, Inc., 580 Walnut St., Cincinnati, Ohio 45202
Curtis Towing Co., Mercantile Bldg., Baltimore, Md. 21202
Delmar Systems, Inc., 160 Industrial Parkway, Lafayette, La. 70501
Henry Gillen's Sons Lighterage, 21 West Main St., Oyster Bay, N.Y. 11777
Gulfport Marine Corp., 225 Baronne St., Suite 600, New Orleans, LA 70112
James Hughes, Inc., 17 Battery Pl., New York, N.Y. 10004
International Transport Contractors (USA) Inc., 908 Town and Country Blvd., Houston, TX 77024
McAllister Bros., Inc., 17 Battery Pl., New York, N.Y. 10004
McDonough Marine Service, P.O. Box 26206, New Orleans, La.
Moran Towing & Transportation Co., Inc., One World Trade Center, Suite 5335, New York, N.Y. 10048
Suderman & Young Co., Inc., 918 World Trade Bldg., Houston, Texas 77002
Turecamo Coastal & Harbor Towing Corp., One Edgewater St., Cliff, Staten Island, N.Y. 10305
UNDERWATER SERVICES—Contracting
SeaTec International Ltd., Blackburn Industrial Center, Gloucester, MA 01930
VALVES AND FITTINGS
American United Marine Corp., 575 Madison Ave., New York, NY 10022
Conromatics Div., Litton Industrial Products, Inc., 222 Roberts St., East Hartford, CT 06108
Demco, Inc., P.O. Box 94700, Oklahoma City, Okla. 73109
Marine Moisture Control Co., 449 Sheridan Blvd., Inwood, N.Y. 11696
Mechanical Marine Co., 900 Fairmount Ave., Elizabeth, N.J. 07027
Stacey Valve Co., 29 Meserole Ave., Brooklyn, N.Y. 11222
Voss, Inc., Building J, 7029 Huntley Road, Columbus, Ohio 43229
Robert H. Wager Co., Inc., Passaic Avenue, Chatham, N.J. 07928
Waukesha Bearings Corp., P.O. Box 798, Waukesha, WI 53186
VIDEO EQUIPMENT
Video Library Systems, 185 Oszer Avenue, Hauppauge, NY 11787
WATER PURIFIERS
Everpure Inc., 600 North Blackhawk Drive, Westmond, Ill. 60559
WEATHER FORECASTS
FRT, 698 Virginia Road, Concord, Mass. 01742
Oceanographic Services, P.O. Box 6783, Santa Barbara, CA 93111
WELDING SYSTEMS
MK Products, Inc., 16882 Armstrong Ave., Irvine, CA 92705
WINCHES
Clyde Iron, a unit of AMCA International Corp., Suite 200/Stockton Bldg., University Office Plaza, Newark, Del. 19702
Geomatic Co. Ltd., 7400 132nd Street, Surrey, B.C., Canada
Morley Machinery Co., 79 South Horton St., Seattle, Washington 98134
Victoria Machine Works, P.O. Box 1939, Victoria, TX 77901
WINDOWS
Kearfott Marine Products, A Singer Co., 550 South Fulton Avenue, Mt. Vernon, N.Y. 10550
WIRE AND CABLE
Anixter Bros., Inc., 4711 Golf Road, One Concourse Plaza, Skokie, Illinois 60076
Seacoast Electric Supply Corp., 225 Passaic St., Passaic, NJ 07055
Seacoast Electric Supply Corp., 1505 Olive St., Houston, TX 77007
WIRE ROPE—Slings
Armo Steel Corp., 703 Curtis St., Middletown, Ohio 45042
Bethlehem Steel Corp., One State Street Plaza, N.Y. 10004
ZINC
Smith & McCracken, 153 Franklin St., New York, N.Y. 10013



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| (25) | 1-1/4" End | 90 ea. |
| (11) | 1-3/8" End | 90 ea. |
| (23) | 1-1/2" End | 125 ea. |
| (14) | 1-3/4" End | 130 ea. |
| (12) | 1-7/8" End | 145 ea. |
| (5) | 2" End | 145 ea. |
| (34) | 2-1/2" End | 150 ea. |
| (9) | 2-3/4" End | 300 ea. |
| (34) | 3" End | 340 ea. |
| (75) | 1-1/8" screw pin, chain type | 85 ea. |
| (11) | 2-3/8" screw pin, chain type | 350 ea. |
| (15) | 3" screw pin, chain type | 350 ea. |

WELDED STUD LINK CHAIN

| | | |
|----------|----------------|----------------|
| 93 shots | 7/8" Gr. 2 (F) | \$ 400 per sh. |
| 21 shots | 1-1/2" Gr. 3 | 1100 per sh. |

DANFORTH ANCHORS

| | | |
|-----|----------------|-------|
| (1) | 750 lb. (used) | \$225 |
|-----|----------------|-------|

LWT ANCHORS

| | | |
|-----|-----------------|----------|
| (1) | 750 lb. | \$ 700 |
| (2) | 4000 lb. | 2000 ea. |
| (1) | 4000 lb. (used) | 1300 |
| (1) | 5000 lb. | 2500 |

STOCKLESS ANCHORS

| | | |
|------|--------------------|-----------|
| (82) | 200 lb. (used) | \$ 60 ea. |
| (3) | 275 lb. (used) | 65 ea. |
| (1) | 250 lb. Baldt type | 215 ea. |
| (8) | 350 lb. Baldt Type | 250 ea. |
| (3) | 800 lb. Baldt Type | 800 ea. |
| (3) | 2600 lb. (used) | 780 ea. |

| | | |
|-----|----------------------|------------|
| (2) | 4000 lb. (used) | \$1200 ea. |
| (2) | 11000 lb. Baldt type | 5000 ea. |
| (1) | 12000 lb. (F) | 7000 ea. |
| (3) | 15000 lb. (F) | 9450 ea. |
| (2) | 18000 lb. (F) | 9000 ea. |
| (1) | 20000 lb. (F) | 10000 ea. |

BALDT CONNECTING LINKS

| | | |
|------|-----------------------|-----------|
| (12) | 3/4" CCL — HS-Bronze | \$ 65 ea. |
| (7) | 1" CCL — non-magnetic | 100 ea. |
| (33) | 1-5/8" CCL (used) | 60 ea. |
| (3) | 1-3/4" CCL | 65 ea. |
| (41) | 2-7/8" CCL | 180 ea. |
| (15) | 3-1/8" CCL — ORQ Type | 400 ea. |
| (41) | 3-1/4" CCL | 350 ea. |
| (30) | 3-3/8" CCL | 400 ea. |

KENTER CONNECTING LINKS

| | | |
|------|-------------|-----------|
| (3) | 3" CCL | \$280 ea. |
| (11) | 3-1/16" CCL | 280 ea. |

SWIVELS

| | | |
|-----|--------------------------------------|------------|
| (1) | 1-1/4" Baldt swivel | \$ 550 ea. |
| (1) | 3-3/8" (F) | 1300 ea. |
| (1) | 3-3/8" Jaw & jaw swivel (F) shackles | 1300 ea. |

CHAIN STOPPERS

| | | |
|-----|---|-------------|
| (1) | 3/4" Ulster type | \$ 125 ea. |
| (5) | 3-7/16" Ulster type | 2500 ea. |
| (1) | 1-1/4" Pelican Hook Ass'y | \$ 250 ea. |
| (4) | 3-1/2" Pelican Hook Ass'y | 2000 ea. |
| (1) | 3-3/4" Pelican Hook Ass'y | 2500 ea. |
| (4) | 2-7/16" - 2-3/4" Devils Claw Chain Stoppers | \$ 1100 ea. |

TERMS & CONDITIONS:

All quantities subject to prior sale. All orders must be accompanied by payment. Baldt will notify you within 24 hours of receipt of order on verification of quantity and shipping date.

Note: All product is new unless otherwise indicated. (F) indicates foreign manufactured to Baldt's specifications. Baldt tested and certified.

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Contact: Ed Kelley
215/447-5220



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UNION COMMERCIAL STEAMSHIP COMPANY

17 PEARLSON STREET - P.O. BOX 118 - PIRAEUS 4 - GREECE
TELEX 21261 - CABLES UNICOMSHIP - TELEPHONE 4723015

20 March 1979

Mr. R. H. Dietrich
Bethlehem Steel Corporation - Shipbuilding
Bethlehem, Pa. 18106
U. S. A.

Dear Bob:

m. v. "UNION PRIDE"

This will acknowledge receipt of your letter of February 26th, 1979 enclosing invoices for work performed on the above named vessel November/December of last year at Hoboken.

I would like to take this opportunity to express the satisfaction of Owners for the quality of work carried out at Hoboken. The end result was totally satisfactory, and this is a particularly happy note for me as I met with a good deal of opposition to awarding the engine job to Beth. While all concerned had no doubts that the rudder job could easily be handled by Beth, there were a great number of reservations about awarding a major diesel engine repair to Bethlehem Steel.

The satisfactory end result made Beth look good in Owners eyes, who will certainly have no hesitation in doing future diesel engine repairs at Hoboken.

I look forward to doing business with Beth in the future. With kindest personal regards, I remain,

Yours sincerely,

UNION COMMERCIAL STEAMSHIP COMPANY


MARK SCUFALOS, Pres.

MS/ts

A D H. M. SCUFALOS 8014827 - S BACHAS 80181912 - S J KALAFATIDES 8221497 - N J BEVINTHIS 8623271

Thank you, Mr. Scufalos.

BethShip



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