

MARITIME REPORTER

AND
ENGINEERING NEWS



'Golden Girl'

**Moss Point Delivers
EMD-Powered Golden Girl
To Golden Gulf Marine**

(SEE PAGE 28)

NOVEMBER 15, 1981

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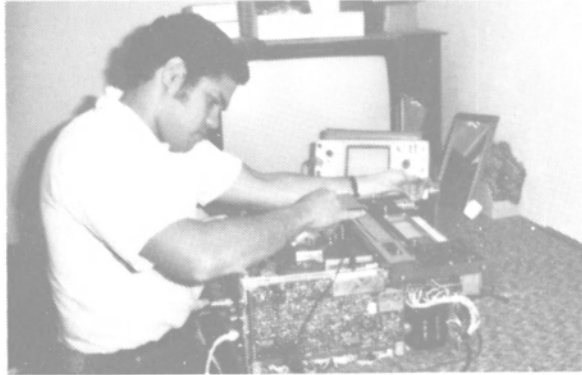
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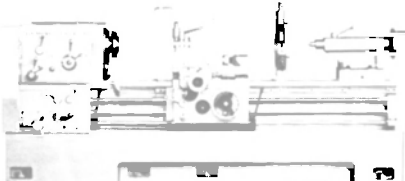
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MarAd Approves Title XI Application For Guarantee Of Offshore Drilling Rig

The Maritime Administration has approved in principle an application by Keyes Offshore, Ltd. V, Houston, Texas, for a Title XI guarantee to aid in financing a drilling rig.

The 180-foot by 175-foot vessel is being built by Litton Systems' Ingalls Shipbuilding Division, Pascagoula, Miss. The rig was designed for use in both exploratory and workover drilling situations, and is expected to operate in the Gulf of Mexico. The approved guarantee is for \$26,490,000, or slightly less than 75 percent of the rig's \$35,320,554 estimated actual cost.

Engineering Firm To Develop Port Plan For St. Petersburg

Post, Buckley, Schuh & Jernigan, Inc., consulting engineers and planners of St. Petersburg, Fla., have been selected by city officials to develop a cruise port plan for the Port of St. Petersburg.

Post, Buckley will survey existing facilities and identify what future facilities will be required for the development of a cruise port. The city hopes to have a cruise ship operating out of the port by 1982 as part of the downtown waterfront development plan.

Following the initial planning, PBS&J will analyze marketing opportunities for the Yucatan Peninsula, specifically Cancun and Cozumel, stressing the convenience of the St. Petersburg location.

\$71-Million Navy Nuclear Contract Modification Awarded To G.E.

General Electric Company, Knolls Atomic Power Laboratory, Schenectady, N.Y., has been awarded a \$71,815,000 modification to a previously awarded cost plus fixed fee contract for naval nuclear propulsion components. This modification increases the value of the basic contract by \$71,815,000; the new total value of the entire contract is \$711,659,846. Work will be performed at various locations. The Naval Sea Systems Command is the contracting activity. (N00024-73-C-5234)

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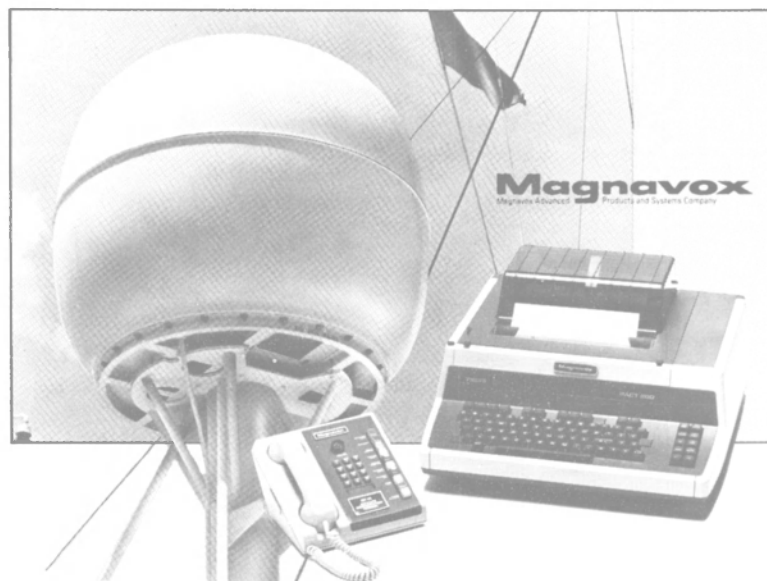
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Adm. Harold E. Shear Sworn-In As Maritime Administrator



Secretary of Transportation Drew Lewis (right) administers oath of office to Adm. Harold E. Shear, USN (ret.), as Maritime Administrator at Department of Transportation ceremony. Mrs. Shear holds the Bible.

Adm. Harold E. Shear was sworn-in recently as Administrator of the Maritime Administration by Secretary of Transportation Drew Lewis.

The former Commander of Allied Forces in Southern Europe is the first to head the agency since it was transferred to the Department of Transportation from the Commerce Department last August.

Secretary Lewis, commenting on the appointment of the four-star admiral, said: "Admiral Shear is well-qualified to take on the tough task of reinvigorating our nation's maritime resources. In this undertaking, he will have my full support and will work closely with the Congress and all segments of the maritime industry.

"In addition, the recent transfer of MarAd to DOT will ensure that federal maritime policies and initiatives will be more effectively coordinated and administered than in the recent past."

A much decorated combat veteran, Admiral Shear specialized in submarines for 25 years and among his commands was the nuclear-powered, ballistic missile submarine USS Patrick Henry. During the Vietnam War, he commanded the Navy's first fast combat-support ship, USS Sacramento.

Admiral Shear retired from the Navy in 1980 and came to the post at the Maritime Administration from Norton, Lilly & Co., a New York firm which serves as general agent for shipping companies, where he was vice president.

A December 1941 graduate of the U.S. Naval Academy in a wartime accelerated class, Admiral Shear served in both destroyers and submarines during World War II. During his 39-year naval career, he held numerous important commands, including director of the Navy's submarine warfare and antisubmarine programs; chief of the U.S. Naval Mission to Brazil, and vice chief of Naval Operations.

At the time of his retirement in June 1980, he was Commander in Chief of Allied Forces in Southern Europe, which placed him in charge of armed forces of all NATO nations on the southern flank of Europe from Gibraltar to the eastern boundary of Turkey and Russia.

A graduate of the Armed Forces Staff College, the Navy Nuclear Power Training Program and the National War College, Admiral Shear grew up on Shelter Island, N.Y. He is married to the former Elizabeth Perry of Falmouth, Maine. They have two children, Kathleen and Kenneth.

In a brief address following the ceremony, Admiral Shear promised to "push very hard

to get this industry back on its feet." He told a crowd of about 150 industry representatives that he anticipates "significant progress in the months ahead."

Paceco Moves Headquarters To New Gulfport, Miss., Plant



Paceco, Inc., a subsidiary of Fruehauf Corporation, has moved to new world headquarters building, depicted in this artist's rendering, located on the Harrison County Industrial Seaway in Gulfport, Miss.

Paceco, Inc., a subsidiary of Fruehauf Corporation, recently completed its headquarters move from Alameda, Calif., to Gulfport, Miss. Paceco, a major designer and manufacturer of container handling cranes, has invested over \$26 million in expanding and improving its existing 100-acre Gulfport facility. The underroof fabrication area has been doubled and now covers 450,000 square feet (more than 10 acres) including a new 58,800-square-foot air-conditioned machine shop.

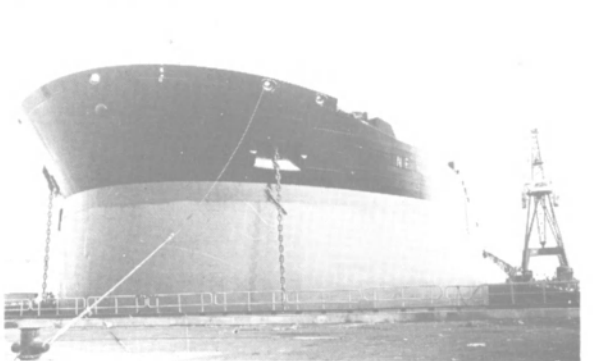
The fabrication area is connected by rail to Paceco's new 38,650-square-foot environmentally controlled metal preparation and coating facility and is within walking distance of Paceco's new three-story headquarters building. The plant, located on the Harrison County Industrial Seaway, is one of the largest and most modern plants of its kind.

Activities at the plant include heavy steel fabrication of container handling, bulk handling, and heavy lift cranes for onshore and offshore application, as well as contract manufacturing and fabrication for the offshore industry including complex subassemblies requiring sophisticated machining capabilities. Currently, there are 720 Paceco-designed cranes in operation in more than 120 ports worldwide.

Paceco licensees are located in Japan, Korea, Canada, Italy, Africa, England, France, Australia, Brazil, and Spain.

Paceco's new address is: Paceco Incorporated, West Seaway Access Road, P.O. Box 3400, Gulfport, Miss. 39503-1400.

\$2.5-Million Repair Contract Awarded To ASRY



The Arab Shipbuilding and Repair Yard Co. (ASRY) of Bahrain has received its biggest ever repair contract. SOPONATA, the Portuguese government-owned tanker company, Sociedade Portuguesa de Navios Tanques, has awarded ASRY a contract for repairs to the ULCC Neiva (shown above), 323,114 dwt: expected to exceed \$2.5 million.

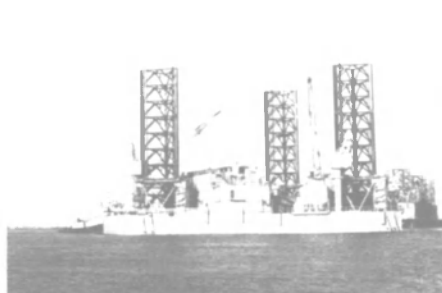
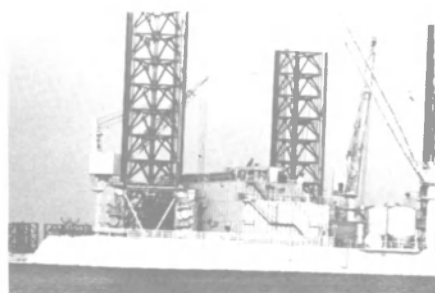
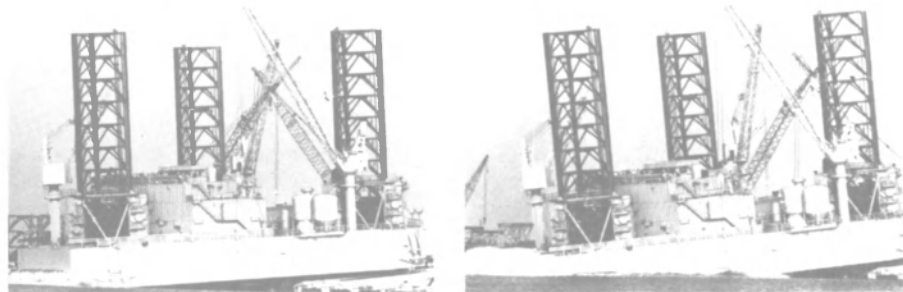
President Reagan And Sponsor Authenticate Keel Of 'Yorktown' At Ingalls



As part of his participation in the bicentennial celebration of the Battle of Yorktown, Va., that ended the Revolutionary War, President **Reagan** authorized the start of hull construction on a new U.S. Navy cruiser to be named Yorktown (CG 48). In the upper photo, the President and Secretary of the Navy **John F. Lehman** look on as **Mrs. Mary Mathews**, sponsor of the Aegis guided missile cruiser, initials a

plaque that will become a permanent part of the ship. The President also initialed the plaque, which authenticates the keel-laying of the second ship in the Ticonderoga Class. Prior to the ceremony at Yorktown, employees of Ingalls Shipbuilding Division of Litton Industries in Pascagoula, Miss., the builder of the ship, positioned the first hull section or "keel" onto its blocks, signifying the beginning of construction.

Marathon Launches Jackup Penrod 86 At Brownsville Yard



These four frames capture the launch sequence of the Penrod 86, a class 82-SD-C self-elevating offshore jackup drilling platform built by Marathon Manufacturing Company, Houston, Texas.

The shallow-draft cantilever drilling unit was launched recently at Marathon's Gulf Marine Division yard in Brownsville, Texas. The rig is rated for water depths up to 250 feet. When the

remaining sections of its three triangular legs are added, they will be 360 feet tall. The derrick and other drilling components have yet to be installed. The rig's cantilever design lets the derrick move out beyond the stern so that the rig can work next to permanent offshore platforms without putting the weight of the drilling package on these platforms.

Halter Delivers New Offshore Express Supply Boat



Built by Halter, the 166-foot Cameron Express (shown above) is operated by Offshore Express, Inc. of Houma, La., for Mesa Petroleum of Freeport, Texas.

The first of three 166-foot liquid mud supply boats for the company, the Cameron Express is one of seven new vessels added or being added to the Houma-based Offshore Express fleet in a recently announced \$16-million expansion program. The others are the Cameron 166-foot supply boats Breton and Chandeleur Express; the 102-foot crewboat Lightning Express, already in service; two 115-foot utility boats, and a 180-foot supply vessel. The latter is scheduled for delivery in December. The others were delivered in the fall.

Built by Halter Marine at its Calumet yard for Shearson Equipment Investors of New York, a limited partnership, the Cameron Express is one of the largest in Offshore Express's 16-vessel fleet, which range from 80- and 102-

foot crewboats and 110-foot utilities, to the 187-foot supply boat Trojan Express.

The Cameron Express provides below-deck storage of 1,900 barrels of liquid mud for delivery to the drilling platform. It also is equipped with four 750 Pneu-tanks for storage of dry mud. It is powered by 16-149 Detroit Diesels delivering 2,000 hp, has deck cargo space for 500 tons, and a cruising speed of 12 knots. The deck size of the Cameron Express is 118 by 29.

"This is a significant new addition to our growing fleet," commented **Robert C. Schmidt**, vice president and general manager of Offshore Express. He said the company has long had a policy of acquiring vessels tailored to the specific needs of its customers and "the Cameron Express exemplifies that policy. She is designed for extreme stability in rough seas, for speed and maneuverability as well as for maximum storage facilities," he said.

New Compact Oil Water Separator From Sigma —Literature Available

Sigma Treatment Systems, Inc., Chester Springs, Pa., is offering literature on a new addition to its line of marine pollution control equipment. The SH2 Oily Water Separator is U.S. Coast Guard certified and meets IMCO standards. Designed with simplicity and minimum maintenance in mind, the single-tank units are fully automatic devices with only one pump. No disposable cartridges or other consumables are used. Permanent coalescer beds are automatically backwashed every time separated oil is discharged. Failsafe operation is ensured by the addition of an optional monitor which activates an automatic recirculate valve and an alarm system when oily content of the effluent exceeds 15 ppm. Additional features of the monitor in-

clude outputs for continuous monitoring and remote alarms. The SH2 OWS is available in standard capacities from 2-50 gpm through Sigma's worldwide distribution network.

For more information and free literature on Sigma Treatment Systems' new SH2 Oily Water Separator,

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\$18-Million Navy Overhaul Contract Awarded To Coastal Drydock

Coastal Drydock, Brooklyn, N.Y. has been awarded a \$18,825,000 formerly-advertised firm-fixed price contract for the regularly scheduled overhaul of USS Nitro (AE-23). Work will be performed in Brooklyn. The Naval Sea Systems Command is the contracting activity. (N62794-70-C 0010)

MarAd Publishes Update Of Vessel Inventory

The Maritime Administration has published an update of its semiannual "Vessel Inventory Report." The publication lists U.S.-flag merchant vessels alphabetically by name and shipowner as of June 30, 1981. Copies are available from the Maritime Administration Public Affairs Office, Room 7215, Nassif Building, 400-7th Street, S.W., Washington, D.C. 20590.

Award \$47-Million Nuclear Navy Contract Modification To Westinghouse Electric

Westinghouse Electric Corporation, Plant Apparatus Division, Wilkins Township, Pa., has been awarded a \$47,020,000 modification to a previously awarded cost plus fixed fee contract for naval nuclear propulsion components. Work will be performed at various locations. The Naval Sea Systems Command is the contracting activity. (N00024-C-5010)

Seward, Alaska To Build Large Shipping Facility

The City of Seward, Alaska, broke ground recently for the state's largest marine-oriented industrial development.

"The Fourth of July Industrial Park, located across the head of Resurrection Bay from this picturesque community of 3,000 will be the site of a \$60-million dock, shipyard, ship fitting, and marina area," said city manager **Johnny Johnson**.

The development of the 100-acre industrial complex will involve both private and public investment. "Private sources," he explained, "have already committed more than \$8 million to this area."

VECO Inc. of Anchorage has leased a major portion of the industrial park from the city of Seward and as a result of the October 6 municipal election, it will be the operator of the ship repair facility when it is completed. VECO's license to operate the shiplift and transfer pit required at least three-fifths approval by the voters. "Endorsement of the license agreement," said Mr. **Johnson**, "was overwhelming."

The City of Seward, through industrial development grants from the State of Alaska and bond monies, expects to invest more than \$54 million during the next 10 years, said Mr. **Johnson**.

The city's participation will cover initial construction costs of the industrial park's public facilities, including the harbor and dredging, redirecting the glacier-fed Fourth of July Creek to elim-

inate potential flood hazards, completion of an access road to the site, installation of water, power, and sewer systems, shiplift construction, and drydock facilities.

The city also will provide the funds for construction of a 1,300-foot-long general cargo dock, a shiplift capable of handling ships up to 300 feet long, seven public dry berths for ships of up to 250 feet in length, bonded warehous-

ing, small boat storage, and miscellaneous harbor facilities.

Construction of the 1,300-foot-long dock is seen as a key development of the Port of Seward as a coal transfer station for the export of Alaskan coal to the Orient.

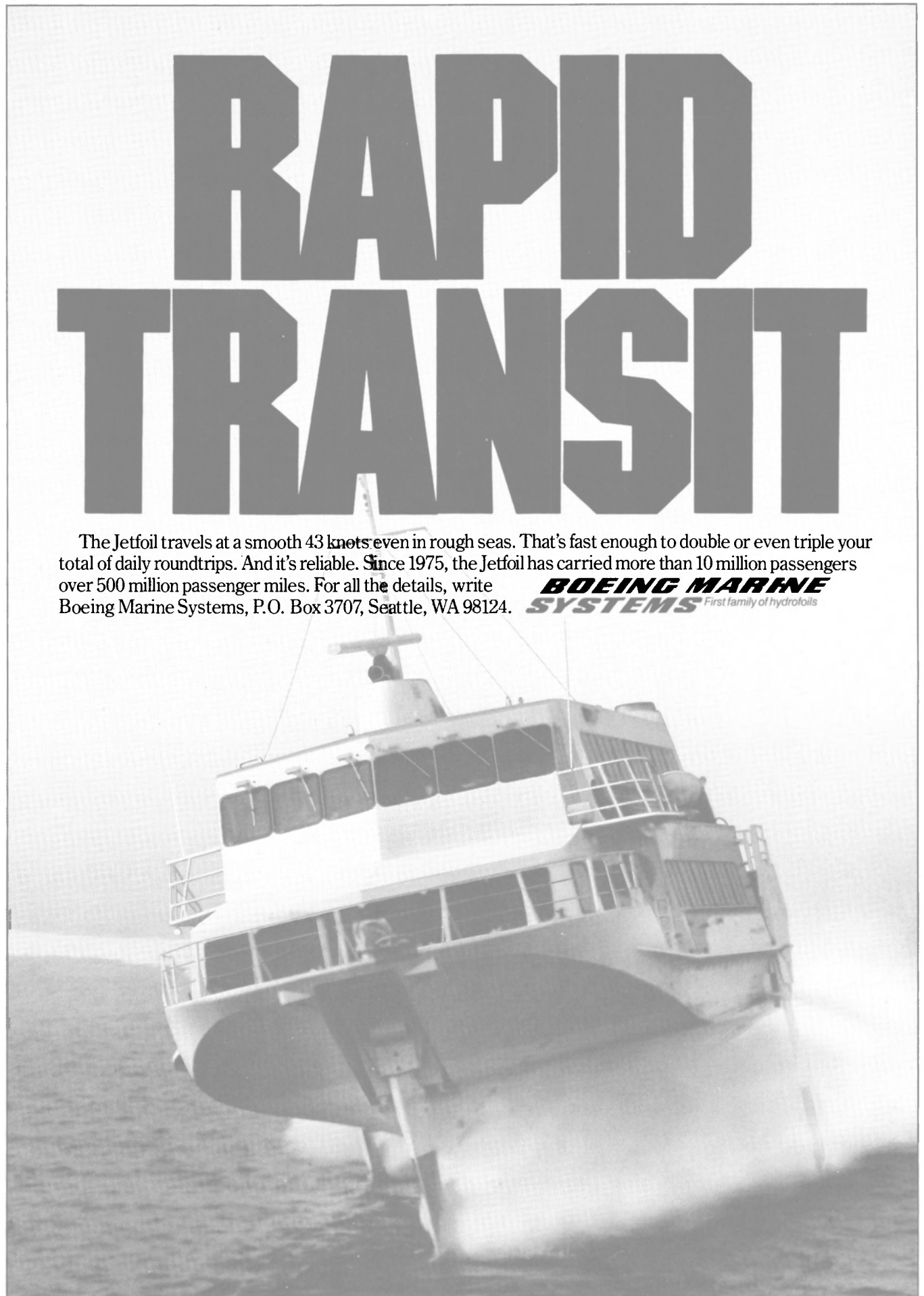
Two ships of up to 100,000-dwt capacity and drafts of up to 45 feet will be able to use the dock at the same time. In comparison,

the shallower Port of Anchorage, now the state's busiest, usually handle ships of 35,000-dwt capacity.

Seward is also Alaska's northernmost deepwater ice-free port served by rail. It is also the terminus of the Seward Highway, the only overland transportation route other than the Alaska Railroad, between the Kenai Peninsula, Anchorage, and the interior.

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The Cummins powered Mike Schmaeng.

Inland Marine Delivers Towboat M/V Mike Schmaeng To Pott Industries

The Inland Waterways Division of Pott Industries, Inc., St. Louis, recently christened its newest towboat, the M/V Mike Schmaeng, an 1,800-hp towboat, built by Inland Marine Constructors, Inc. of Evansville, Ind. The christening ceremonies were at Evansville.

The new towboat is named after **G. Michael Schmaeng**, port engineer of Federal Barge Lines, an operating company of the Inland Waterways Division of Pott

Industries. The towboat will be operated by Heartland Transportation Company, a subsidiary of United Barge Company, another operating company of the Inland Waterways Division.

Opening address and welcome was given by **Roy Ryan**, president of Inland Marine Constructors, Inc.; tribute was bestowed upon the vessel by **Jack Lynch**, president of the Inland Waterways Division of Pott Industries. Benediction was offered by Reverend

David Kissel, pastor of St. John The Baptist Church at Newburg, Ind. Reverend Kissel presented the ship's bible to Capt. **John Choate**. Immediately thereafter, **Mrs. Margaret June Schmaeng**, sponsor and wife of the towboat's namesake, broke the traditional bottle of champagne.

The M/V Mike Schmaeng hull measures 85 feet by 30 feet by 10 feet, with an operating draft (maximum) of 8 feet 3 inches. The all-welded steel hull is heavily framed, longitudinally and transversally. The bottom plate is 1/2-inch with bilge knuckles and stern bottom plating 5/8-inch, side plating is 3/4-inch, bow corner plating is 3/4-inch, and headlog plating is 3/4-inch. A bent plate of 1/2-inch plating is provided along both sides and the stern transom.

There are four fuel oil bunkers with a total capacity of 30,016 gallons, two potable water storage tanks having a total capacity of 6,556 gallons, one 360-gallon lube oil storage tank, one 590-gallon bilge holding tank, one 590 gallon dirty oil holding tank, and three ballast tanks, having a total capacity of approximately 10,000 gallons, all built into the hull.

Propulsion power is furnished by two Cummins KTA-2300M diesel engines, each developing 940 hp at 1,800 rpm through a Twin Disc Model MG540 reverse reduction gear with a 7 to 1 ratio. The engines are cooled with clear water circulated through Fernstrum Grid Coolers. The engine and gear package was supplied by Cummins Missouri.

The engines are started from the engine room only and are

controlled by means of Wabco Logic Master pneumatic control system, as provided in the pilothouse. The Mike Schmaeng swings two four-blade Columbian Bronze stainless-steel propellers, with 78-inch diameter and a 64-inch pitch.

The twin Delco 60-kw generators, driven by GM 4-71s, and the Con-Select control panel, were supplied by Western Diesel Company, St. Louis.

The boat carries a Pan American Systems Corporation 24-point monitoring system. The PASC 450 Series modular system maintains a watch on main jacket water levels and temperature, lube oil level and pressure, reduction gear lube oil levels, and generator water and lube oil levels, as well as bilge water level, fire alarms, and other functions.

The steering system is mechanical-over-hydraulic with full followup controls. The boat has two steering and four flanking rudders. The system is operated by one of two hydraulic steering pumps. On deck, in addition to dual 40-ton Patterson winches, the Mike Schmaeng is equipped with Steven-Adams "Car Puller" Model 12V capstan winches, fore and aft.

Atop the pilothouse are two Carlisle and Finch 19-inch carbon arc searchlights, as well as a Kahlenburg Model T-2 Triplex Airhorn. Pilothouse electronics include two Raytheon 55 VHF radios, a Dukane loud hailer and intercom system, an Intech Model 2500 single-sideband, and two Sperry radars, Model 74 and Model 3012. The towboat is also equipped with an Anschuetz swing indicator and an EPSCO CVS-888 depth recorder. Pilothouse eye level is 34 feet.

The pilothouse contains a console for housing the engine and steering controls, a double cushioned settee with hidden water closet under and a combination water cooler/refrigerator. An electronics room is provided immediately beneath the pilothouse and houses the searchlight rectifiers and power supplies for the various electronics equipment.

The Mike Schmaeng sleeps nine persons, with two double bunkrooms, laundry, full head and a galley, located on the first deck, and two double bunkrooms, a single bunkroom and a full head on the second deck. All living quarters, galley and bathrooms have central air-conditioning. The pilothouse is air-conditioned by two window-type units.

The Mike Schmaeng is equipped with a bilge/ballast pump, fire pump, fuel oil transfer pump, two Quincy Model 325 air compressors, a potable water pressure set, and hot water tank. A Fast 9M sewage treatment plant treats the waste matter.



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Roy Sea Appointed Marketing Manager At Tracor Marine



Roy Sea

Tracor Marine of Fort Lauderdale, Fla., has appointed Roy Sea as marketing manager for the company's Ocean Technology Division. Prior to joining Tracor Marine in 1980, Mr. Sea was employed by the Director of Ocean Engineering of the Naval Sea Systems Command in Washington, D.C., in various engineering and management capacities over an 11-year period.

Based in Fort Lauderdale, Mr. Sea reports to Ocean Technology Division director Edward Clausner, and is responsible for the marketing of the company's ocean engineering/marine services and equipment. Tracor Marine is a wholly owned subsidiary of Tracor, Inc. of Austin, Texas, and operates field offices in Norfolk, Va., and St. Croix, U.S. Virgin Islands.

Wheelabrator-Frye Awarded \$3-Million For Hull Cleaning System

Wheelabrator-Frye Incorporated, Mishawaka, Ind., has been awarded a \$3,473,500 firm-fixed price contract to furnish one closed cycle submarine hull cleaning system as a result of negotiation under N00600-81-R-0226, following competition in which seven bids were solicited and three were received. The Naval Regional Contracting Office is the contracting activity. (N00600-82-C-0259)

Top Executive Changes Announced By Marco

Marco Seattle has named Bob McMahon to the position of vice president and general manager of its shipyard division. The announcement was made recently by Marco president Peter G. Schmidt, who noted that the move was part of a program to bring greater autonomy to the shipyard division in relation to the company's other divisions.

Mr. McMahon is a nine-year veteran with the Seattle shipbuilder, fishing systems, and industrial products manufacturer, where he was most recently ship-

yard production manager. Mr. McMahon spent six years in the U.S. Navy's nuclear submarine fleet prior to joining Marco in 1972.

Mr. Schmidt also announced that Robert F. Allen, Marco's executive vice president, has been assigned to San Diego as the executive vice president and general manager of Campbell Industries. Acquired by Marco in 1979, Camp-

bell is one of the world's leading builders of tuna superseiners. The company operates a 35-acre shipyard with approximately 800 employees.

Mr. Allen has held many positions in his 23 years with Marco, most recently as vice president in charge of the company's shipyard and pollution control division.

Along with Mr. Allen's relocation, Mr. Schmidt announced that

Marco vice president D. William Lerch has been named manager of the pollution control division, the world's leading builder of oil-skimming vessels. Mr. Lerch has held a variety of positions over a 22-year span in engineering and pollution control with Marco. These have included the posts of chief engineer and general manager of a company-operated shipyard in Chile.

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\$30-Million Order Signed By Hongkong United Dockyards Ltd.

Hongkong United Dockyards Ltd. has signed its largest order to date: a \$30-million contract for a ship conversion. The conversion, from a heavy ore bulk carrier to an offshore oil drilling ship, follows a similar conversion by HUD in 1975, and its total worth when completed will be \$80 million.

"The deal reflects the increasing involvement by Hongkong in the offshore oil exploration business," commented J.D. Hall,



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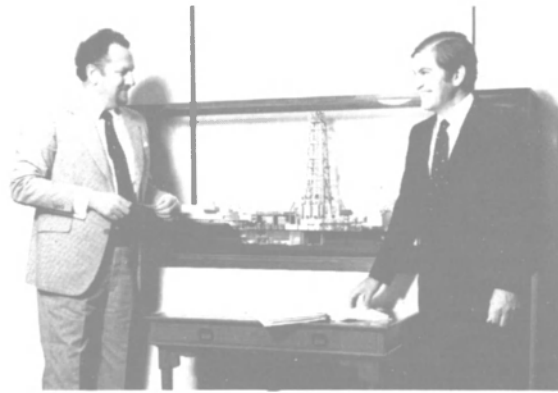
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Including the \$30-million contract award for HUD are J. David Hall (left), HUD managing director, and John Bagnall, director of the Energy Searcher's owners, Pacific Supplier Inc.

HUD managing director, at the recent contract signing.

"The worldwide demand for offshore oil drilling rigs and a consequent shortage in supply of platforms has boosted further the current boom in specially constructed drilling ships," he added.

The converted drillship is to be known as the Energy Searcher and it will be delivered to its owners, Pacific Supplier Inc., by July 31, 1982.

The conversion will involve major steelwork modifications, new accommodations to the latest Australian government requirements, the fitting of a helicopter deck to take Sikorsky S61N helicopters, and the installation of a sophisticated eight-point mooring system.

The Energy Searcher will be capable of drilling to 20,000 feet in 1,500 feet of water. It will include an extensive array of machin-

ery and equipment to serve its 240-foot-high derrick tower which is positioned over the moon pool.

Drilling equipment, coming from the U.S.A., Europe and Japan, will be installed and tested by HUD before the vessel is handed over.

Energy Searcher will be managed by Atwood Oceanics on behalf of the owners, which include Offshore Oil N.L., an Australian oil and gas exploration and production company. The vessel will operate in Australian offshore waters and will fly the Australian flag.

The ship is already berthed at HUD's Tsing Yi Island base.

Robert M. Catharine, president of Jackson Marine Corporation, New York, N.Y., is Hongkong United Dockyards' agent in the U.S.

Westinghouse Credit, Seafirst Leasing Provide Equity In Four-Towboat, 81-Barge Transaction



The Virginia E. Towey is one of four towboats and 81 river barges involved in a \$28-million leveraged lease arranged for Dravo Corporation by Westinghouse Credit Corporation and Seafirst Leasing Corporation. Dravo will operate the equipment to transport dry bulk commodities such as coal, grain, ores, and various manufactured products.

Westinghouse Credit Corporation and Seafirst Leasing Corporation, through a partnership arrangement, have provided the equity in the \$28-million leveraged lease of four towboats and 81 river barges arranged for Dravo Corporation.

WCC and Seafirst, respectively, provided 90 percent and 10 percent of the equity investment. The Travelers Insurance Companies and Connecticut General Life Insurance Company provided the debt in the transaction.

The towboats and barges represent a major part of the operating assets of Nilo Barge Line, acquired by Dravo in June from the Olin Corporation. Through a subsidiary, Dravo Mechling Corporation, Dravo ranks as one of the largest carriers on the Mississippi-Ohio River system. The firm is using the equipment to transport dry bulk commodities such as coal, grain, ores, and various manufactured products.

Towboats included in the arrangement are the 5,000-hp City of St. Louis, the 5,850-hp Virginia E. Towey, the 7,000-hp James F. Towey, and the 7,000-hp Theresa Seley.

Westinghouse Credit Corporation, a wholly owned subsidiary of Westinghouse Electric Corporation, is a \$2-billion finance company headquartered in Pittsburgh, Pa.

For full information on Westinghouse marine financing opportunities,

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**SACM Publishes Brochure
On Marine Diesel Engines
—Copies Available**

A 12-page full color brochure detailing the range of the company's marine diesel engines has been published by SACM of Mulhouse, France. The company is represented in the U.S. by F.W.

Donnelly Company of Houston, Texas.

SACM manufactures a range of diesel engines from 400hp through 8,000hp which are well regarded for their high performance, lightweight engine range, and for their medium speed engine range capable of burning heavy fuels.

The introduction of SACM en-

gines to the U.S. was made recently with the sale by the Donnelly company of eight SACM 175 V12 RVR engines to Command Marine for use in a series of four surface effect ships being built by Halter Marine.

The brochure contains photographs and specifications of the full range of engines; a brief history highlighting the technical

accomplishments of the 155-year-old company; a description of engine applications; and the services provided by SACM and its subsidiaries for diesel engines used for main propulsion, pumping units, and generating sets.

For more information and a free copy of the brochure,

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Approve Application For \$22 Million Title XI For Towboat, 68 Barges

The Maritime Administration has approved in principle an application by Wisconsin Barge Lines, Inc., Sunset Hills, Mo., for a Title XI guarantee to aid in financing the construction of one towboat and 68 barges.

American Bridge, Ambridge, Pa., delivered 15 rake barges earlier this year and Dravo Corp., Pittsburgh, Pa., delivered 25 box barges. St. Louis Ship, St. Louis, Mo., is scheduled to deliver 28 barges and the towboat by early 1982. Included are 53 box barges and 15 rake barges.

The towboat will have a length overall of 168 feet, a molded beam of 40 feet, and main machinery is rated at 1,900 hp.

Of the actual estimated cost of \$26,003,737, the Title XI guarantee covers \$22,119,000 (75 percent of the estimated actual cost of the towboat and 87½ percent of the estimated cost of the barges).

Literature Available From Marland On Inverto® Oil/Water Separator

Bob Daniels, vice president, Marland Environmental Systems, Walworth, Wis., has announced that a new product bulletin on the firm's improved design of the Inverto®, oil/water separator is available.

The Inverto bulletin describes the principles of operation and illustrates the flow pattern of the oil water through the basic unit, which is available in six basic capacities—1.0-1.5, 2.0-2.5, and 4.0-5.0 tons/hour.

Complete specifications, including dimensions, weight and electrical requirements are included.

The Inverto is the result of years of research and development into the simplest, efficient and most cost effective method of separating oil from water for both bilge and ballast, with no replaceable filters and no use of consumables.

For a free copy of the new Marland Inverto product bulletin,

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◀ Write 501 on Reader Service Card

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Kockums To Build Four Ro/Ro's For Saudi Arabia In \$240-Million Order

Four ro/ro ships of 38,500 dwt each — the largest in the world to date — will be built by Sweden's Kockums shipyard, Malmo, for the National Shipping Company of Saudi Arabia under a \$240,000,000 order.

The vessels, which will be used

for shipping vehicles and trailers between the U.S. and Saudi Arabia, can take 2,000 containers. They will be powered by Gotaverken-built engines. Delivery of the first unit will take place in the first quarter of 1983.

Kockums, a major builder of supertankers during the early 1970s, was acquired by the state-owned Swedyards group in 1978. The shipyard also specializes in building liquefied-gas tankers.

Publish New Brochure On End Entry Ball Valves From Zidell Explorations

A fact-filled six-page brochure detailing the design features of the company's line of class 150 and class 300 end entry ball valves, reduced bore, was published recently by the Valve Division of Zidell Explorations, Inc., Portland, Ore.

In addition to a photograph of a typical valve, the brochure contains a table of dimensions for both the class 150 and class 300 valves. In addition there are charts of break-away torque and flow characteristics, and a graph illustrating pressure temperature ratings.

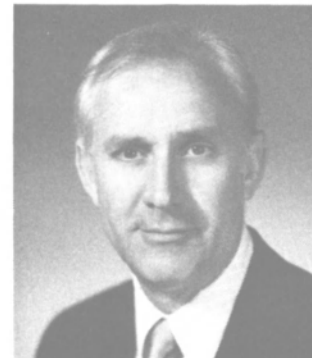
Product data for both carbon and stainless-steel valves are in the brochure, along with diagrams of the valves identified by part call-outs referenced in a table of material specifications. The brochure is a handy reference guide.

For a free copy of the brochure, Write 70 on Reader Service Card

Award \$6-Million Turbine Contract Modification To Solar Turbines

Solar Turbines Incorporated, San Diego, Calif., has been awarded a \$6,379,779 modified cost plus award fee contract for development of a gas turbine waste heat recovery system for use as a high-efficiency cruise propulsion plant on nonnuclear combatants. Work will be performed in San Diego. The Naval Sea Systems Command is the contracting activity. (N000-24-81-C-5340)

Appoint David Daniels National Sales Manager At M&T Chemicals

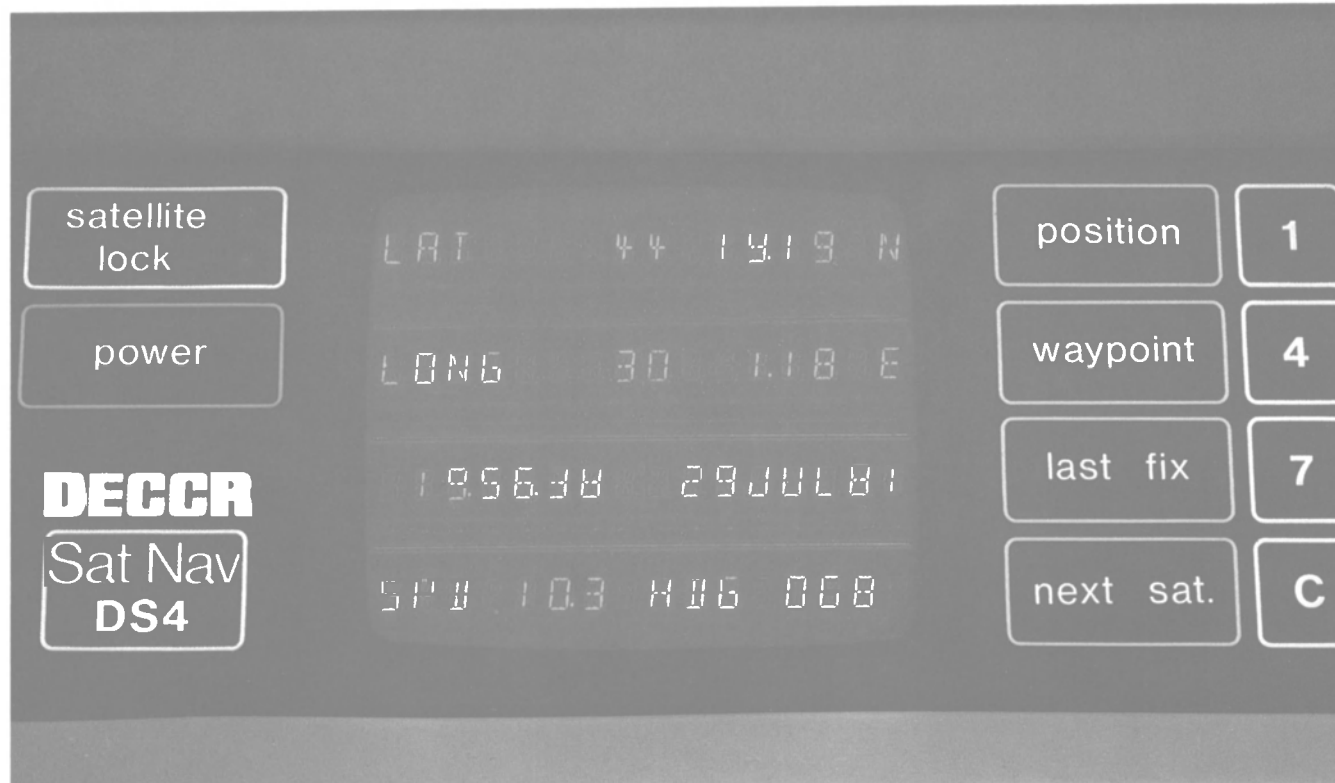


David A. Daniels

David A. Daniels has been appointed national sales manager for chemicals by M&T Chemicals Inc., Woodbridge, N.J. He will be responsible for all sales activities for the Plastic Additives, Industrial Chemicals and the Bio & Fine Chemicals Divisions.

Mr. Daniels joined M&T in 1970 as a research chemist in process development. He has served the company in several research posts and in 1976 was appointed sales engineer for the Chemical Division. In 1978 he was named account manager for the Eastern sales district. In 1980 he was appointed central district sales manager.

M&T Chemicals Inc., with general offices in Rahway, N.J., is a leading manufacturer of specialty chemicals based on tin, antimony, phosphorous, sulfur, and zirconium; electroplating chemicals and processes; and formulated plastic products.



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MR 15/11



Fairbanks Morse-powered M/V Charles Haun.

HUDSHIP Delivers The M/V Charles Haun To Parker Towing Company

Hudson Shipbuilders, Inc. (HUDSHIP) recently delivered the M/V Charles Haun to Parker Towing Company, Inc. of Tuscaloosa, Ala.

The Charles Haun is an 85-foot by 34-foot by 10-foot 6-inch twin screw towboat. The vessel is powered by twin Fairbanks Morse 38D8 $\frac{1}{8}$ six-cylinder diesel engines driving through MGI LST reverse/reduction gears. Auxiliary power is provided by Detroit Diesel 6-71N, 1,200-rpm generator sets rated at 75 kw each.

The boat can carry 34,000 gallons of fuel, 800 gallons of lube oil and 5,100 gallons of potable water, making it ideally suited for the rough conditions of harbor work and the economical operation of the long tow. Maneuverability for the Charles Haun is provided through two 84-inch stainless-steel four-blade propellers, two steering rudders and four flanking rudders. The steering system was furnished by Skipper Hydraulics, Inc.

Deck machinery consists of two Beebe electric barge winches models 35RRC and 35LRC equipped

with 130 feet of $\frac{7}{8}$ -inch, 6 by 37 galvanized wire rope, and two Skipper Hydraulics electric capstans. The living accommodations are designed for maximum crew comfort. Staterooms are arranged to provide three two-man and two one-man facilities.

Parker Towing operates towboats and open hopper barges in the Warrior-Tombigbee, Coosa and the Alabama River areas and through the Gulf Intracoastal Waterway System. Capt. **Tim Parker Sr.**, president, and **Tim Parker Jr.**, vice president, accepted delivery of the Charles Haun, which is named after their operations manager. The Charles Haun was designed by Townsend Marine Consultants of Georgetown, Conn., and will be operating on the Black Warrior and Tombigbee Rivers in Alabama.

In their wide range of vessels offered, HUDSHIP produces a standard design 85-foot towboat similar to the Charles Haun, as well as 112-foot and 120-foot utility vessels and 165-foot, 185-foot, and 203-foot offshore supply ves-

sels, and four drillships and drill barges.

At the same date in 1980, according to the institute's director, Dr. **Hans Ludwig Beth**, there were 129 units on orderbooks — 109 jackups, 16 submersibles and semisubmersibles, and four drillships and barges.

Dr. **Beth** said this sector was in the doldrums at the beginning of 1978 when there were only 33 units on order worldwide. With the pressure on to find new sources of oil and natural gas, there has been a continuous, dramatic growth in the number of orders.

The U.S. leads the field with

Study Notes Upsurge In Offshore Rig Orders —U.S. Yards In Lead

Worldwide orders for offshore mobile and fixed rigs for exploration and drilling for oil and natural gas have increased considerably during the 12 months ending in July 1981, according to a study just released by the Bremen Institute for Shipping Economics.

At the beginning of July there were 224 units on order in 21 countries — 163 jackup rigs, 57 submersibles and semisubmers-

Chemical Waste Incinerator Ships Discussed At SNAME Chesapeake Section

A paper entitled "Chemical Waste Incinerator Ships — The Interagency Program to Develop a Capability in the United States" was presented at a recent Chesapeake Section of SNAME meeting held at the Washington Navy Yard Officer's Club. The paper's authors were **Daniel Leubecker** and **Lissa Martinez** of the Maritime Administration; **Gerald Chapman** and **Donald Oberacker** of the Environmental Protection Agency; **Rosalie Matthews** of the National Bureau of Standards, and **Fritz Wybenga** of the Coast Guard.

John Nachtsheim, president of the Society, delivered an introductory statement for the panel of authors, stressing the need for such vessels. Mr. **Nachtsheim** had been a contributing member of the interagency work group.

The authors noted that the U.S. currently confronts a serious and massive hazardous materials disposal problem. It is estimated that tens of millions of tons of

hazardous waste are generated annually across the nation. Furthermore, there are thousands of disposal sites throughout the country being improperly maintained and may pose significant health problems.

The authors detailed the organization, responsibilities, and areas of concern of an interagency ad hoc work group that studied at-sea incineration. The principal agencies were the Environmental Protection Agency, MarAd, the U.S. Coast Guard, and the National Bureau of Standards. The alternatives available to the Federal Government, as defined by the ad hoc group, for encouraging the design, construction, and operation of a U.S.-flag incinerator vessel were also described by the authors.

The paper illustrated the work of each agency, as well as described vessel design considerations and the projected need for, and type of waterfront facilities. Vessel prototypes were also discussed.



Participants in the presentation of a paper on "Chemical Waste Incinerator Ships" were, left to right: **Gerald O. Chapman**, Environmental Protection Agency, author; **Daniel W. Leubecker**, Maritime Administration, author; **Ms. Lissa A. Martinez**, Maritime Administration, author; **Frits Wybenga**, Coast Guard, author; **Donald A. Oberacker**, Environmental Protection Agency, author; **Frank J. Slyker**, Bethlehem Steel Corporation, Sparrows Point, chairman, Chesapeake Section, SNAME, and **Capt. J. Richard Gauthey**, Naval Sea Systems Command, vice chairman. (Not pictured: **Ms. Rosalie T. Matthews**, National Bureau of Standards, author.)

contracts for 79 offshore units, followed by Japan with 33, Singapore with 29, France with 12, South Korea with nine and Canada with eight.

Horne Brothers Awarded \$5-Million Navy Contract

Horne Brothers Incorporated, Newport News, Va., has been awarded a \$5,519,962 formerly advertised firm-fixed price contract for the regularly scheduled overhaul of USS Fairfax County (LST 1193). Work will be performed in Newport News. (N62-678-73-C-0031)

\$110-Million Navy Contract Modification Awarded To General Electric

General Electric Company, Machinery Apparatus Operation, Schenectady, N.Y., has been awarded a \$110,170,000 modification to a previously awarded cost plus fixed fee contract for naval nuclear propulsion components. Work will be performed at various locations. The Naval Sea Systems Command is the contracting activity. (N00024-74-C-5009)

Award \$21-Million Navy Contract Modification To General Dynamics

General Dynamics Corporation, Electric Boat Division, Groton, Conn., has been awarded a \$21,000,000 modification to a previously awarded cost plus fixed fee contract for naval architectural, engineering, construction evaluation and cost estimating support for the SSN 688 nuclear attack submarine program. Work will be performed in Groton. The Naval Sea Systems Command is the contracting activity. (N00024-80-C-2021)

Consolidated Barge Names Dillon To Manager Post



Todd A. Dillon

Consolidated Grain and Barge Company, St. Louis, Mo., recently announced the promotion of **Todd A. Dillon** to the position of manager of merchandising. Mr. Dillon joined Consolidated in 1980 as a barge freight merchandiser, the post he held prior to his recent promotion.

Port Of Portland Appoints European Representative

The Port of Portland Commission, at its regular monthly meeting, approved an agreement that will give Portland representation in Europe — marking the first presence of the Port on that continent since the overseas representative program was initiated in 1972.

European countries account for about 8 percent of the cargo handled by Portland. With 80 percent of Portland's cargoes originating or destined for Pacific rim countries, the Port's priorities have been in those markets.

With an effective representative program now well in force throughout the Far East and the Austral-Asia markets, the Port Commission is turning its attention to Europe, including the United Kingdom and Mediterranean markets.

The Port's new European representative will be N.R.K. Agencies Ltd. which is headquartered in London.

\$16-Million Navy Contract To Comsat General

Comsat General Corporation, Washington, D.C., has been awarded a \$16,470,000 modified firm-fixed price contract for one year of wideband Satellite Communications Services over the Atlantic, Pacific, and Indian Oceans. Work is being performed in Seattle. The Naval Electronic Systems Command is the contracting activity. (N00039-73-C-0045)



The Boeing jetfoil Bima Samudera I will be tested in a variety of assignments by the Indonesian government.

Indonesia To Use Jetfoil In Naval, Commercial Roles

A Boeing jetfoil to be evaluated in a variety of naval and commercial roles by the government of Indonesia was launched recently by Boeing Marine Systems in Renton, Wash.

Bima Samudera I, the first jetfoil for the Republic of Indonesia, will be evaluated in coastal defense and customs enforcement

roles as well as offshore oil operations, ocean resource control, and commercial passenger transportation. The high-speed hydrofoil will arrive in Indonesia in January 1982 to begin operation there in March. It will be operated by the Agency for the Development and Application of Technology, which is headed by the Minister of Research and Technology.

Adm. **Waloejo Soegito**, director of PT PAL, the Indonesian National Shipyard, represented the government at the ceremony. Value of the sale is approximately \$13.7 million.

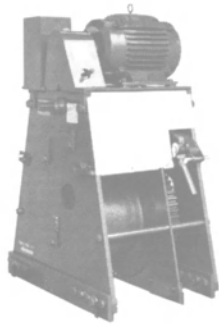
Although this jetfoil will be delivered in a commercial passenger configuration, the quick change capability of the vessel will enable Indonesian operators to easily change interior arrangements for use in other roles. Jetfoil seating can be conveniently removed and replaced by communication and navigation equipment necessary to perform a variety of patrol functions. The Bima Samudera I also has the additional fuel capacity of the patrol jetfoil.

The United Kingdom has already purchased a patrol configuration of the jetfoil which is now in fisheries protection service in the North Sea. The Royal Navy jetfoil, HMS Speedy, is equipped with diesel engines and extra fuel capacity to permit conventional hullborne operations of longer duration. Turbine propulsion enables dash speeds of over 50 knots when necessary.

Jetfoils are in commercial passenger service in Hong Kong,

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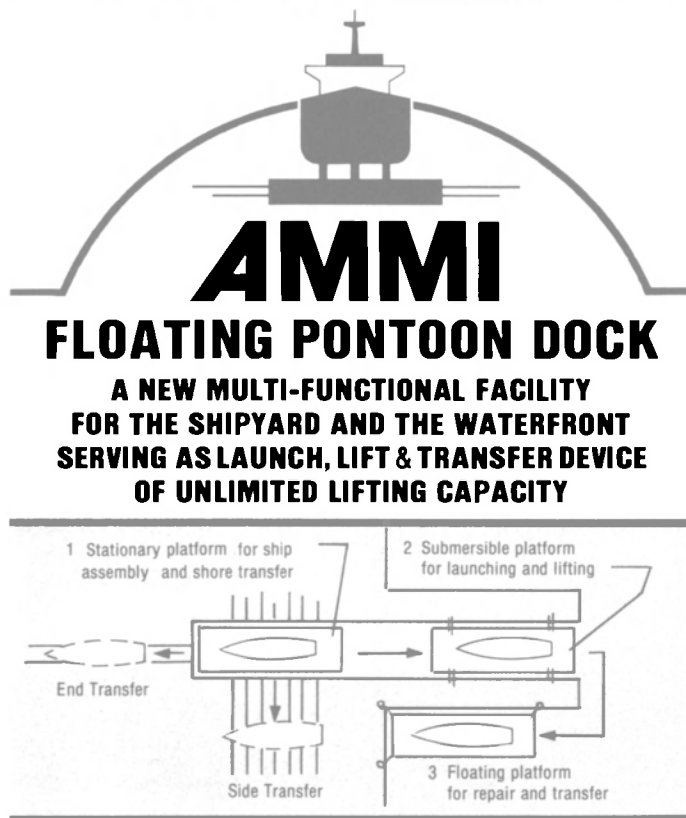
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Japan, the Irish Sea, English Channel, and the Canary Islands. Boeing Marine Systems has also delivered the first of five larger patrol hydrofoil missileships (PHMs) to the U.S. Navy. The PHMs are equipped with Harpoon missiles and a rapid-fire 76-mm cannon which, in combination with the speed, agility, and rough water performance of the ship, provide exceptional effectiveness in strike, patrol and surveillance missions. Designed for all-weather operations, PHM's fully submerged foil system permits the ship to operate in heavy seas with stability normally available only in much larger ships.

**Northern Radio Announces
New HF/SSB Transceiver—
Literature Available**

Northern Radio announces the recent introduction of the Model N-860 Scanning, synthesized HF/SSB transceiver.

The new Model N-860, FCC type accepted, is said to be the first Scanning HF/SSB transceiver to be made available to the U.S. market. It features 200 field programmable and selectable simplex/duplex channels, of which any number may be selected for scanning.

This is in addition to Northern's other standard features: 130,000 synthesized frequencies from 1.6 to 18 MHz—all of which (simplex or semi-duplex) are easily selectable by means of front panel thumbwheel switches; microprocessor controlled; all ITU-designated frequencies to 18 MHz stored in permanent memory for simple recall; 150 watts PEP; speech processor that transmits a whisper at full rated power; automatic syllabic squelch; and much, much more.

For further information and free literature on Model N-860,
Write 74 on Reader Service Card

**Mobile Workover Unit
Houtech II Christened At
Beth Steel's Beaumont Yard**

Houtech Energy Inc. of Houston, and Bethlehem Steel Corporation's Beaumont shipyard recently commissioned a 73-foot water depth mobile offshore workover unit.

The rig was christened Houtech II by its sponsor, Mrs. Richard M. Kleberg III, wife of the managing director of SFD Investments. It is the second mobile workover rig to be built by the Beaumont yard for Houtech.

Houtech II is a mat-supported jackup designed primarily for offshore workover operations. It features a self-contained propulsion system plus a cantilevered substructure. The latter offers the

capability of being able to position the rotary table over existing offshore production platforms. On location, the rig has a total variable load capacity of 400,000 pounds, which includes a maximum hook or rotary plus set-back loading of 295,000 pounds. The rig has a maximum cantilever reach of 25 feet with a substructure load capacity of 245,000 pounds at the rig centerline.

The commissioning of this multimillion-dollar rig concludes nearly nine months of construction and outfitting in the Beaumont yard. The rig is scheduled to operate in the Gulf of Mexico for AMOCO Production Company.

Houtech II was designed and built to the Rules of the American Bureau of Shipping for the construction of mobile offshore drilling units. The rig consists of

a platform measuring 115 feet by 74 feet supported by three 4.5-foot-diameter columns fixed to a steel barge-like mat that is 110 feet by 84 feet.

While in 73-foot water depths, the rig can withstand 70-knot winds and 26-foot seas. During hurricane season and while located in waters of up to 50 feet, the Houtech II can withstand 100-knot winds and 30-foot seas.

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The jackup offshore mobile drilling unit J Storm XVII was the seventh rig completed this year by the Beaumont Yard of Bethlehem Steel.

Christen Jackup J. Storm XVII At Bethlehem Steel's Beaumont Yard

Southern Drilling Company, a wholly owned subsidiary of Marine Drilling Company, and Bethlehem Steel Corporation's Beaumont, Texas, shipyard recently commissioned a 200-foot water depth mobile offshore drilling rig.

The rig was christened J Storm XVII by its sponsor, Mrs. Gino Giusti, wife of Dr. Gino Giusti, president of Texasgulf, Inc., Stamford, Conn. The multimillion-dollar rig has been under construction for nearly 10 months, and upon delivery will begin drilling operations in the Gulf of Mexico for Texasgulf.

Sherman C. Perry, general

manager of the Beaumont shipyard, said the rig was the seventh to be completed this year by the yard. The yard is currently working on a backlog of 10 similar rigs scheduled to be delivered over the next year and a half.

The J Storm XVII is a mat-supported jackup designed for deep-well drilling operations. On location, the rig will have a total variable drilling load capacity of 4.5 million pounds and handle hook or rotary plus setback loads of up to one million pounds.

The rig consists of a platform measuring 132 feet by 157 feet,



From left: Dr. Gino Giusti, Mrs. James C. Storm, James C. Storm, Sherman Perry, and Mrs. Gino Giusti, sponsor.

supported by three 11-foot-diameter columns fixed to a mat that is 185 feet by 220 feet. Outfitted with deep-well drilling equipment, the rig can operate in water depths of up to 200 feet. The J Storm XVII contains onboard, air-conditioned living accommodations for 46 persons, including sleeping quarters, galley, laundry,

recreation facilities, and a three-bed hospital room.

The J Storm XVII was designed and built to comply with the current safety standards of the United States Coast Guard plus the American Bureau of Shipping rules for the construction of mobile offshore drilling units.

Mississippi Marine Delivers M/V Redneck—Second Of Three Towboats For Captain Hollinger



The towboat M/V Redneck is powered by two GM 16V-71 engines.

D. John Nichols, president of Mississippi Marine Towboat Corporation, Greenville, Miss., announced recently the delivery of the M/V Redneck to Capt. W.A. (Peanut) Hollinger of Greenville. The 56-foot by 22-foot by 7-foot 6-inch, 1,000-hp towboat is the second of three ordered by Captain Hollinger, and is the sister vessel to the M/V Cole.

The vessel is built to meet the rugged demands of fleeting service. The hull is constructed of 3/8-inch and 1/2-inch plate with heavy 1-inch plate head log and transom. Corner wrappers of 1-inch plate and a 3/8-inch formed rub rail located port and starboard provide additional hull protection.

The vessel is powered by two GM 16V-71 main propulsion engines coupled to a pair of Twin Disc MG-518 (4.5:1) reduction gears. The gears turn two 5 1/2-inch-diameter shafts. The wheels are specially designed 50-inch by 46-inch, four-blade, stainless-steel with extra heavy edge thickness and increased blade area ratio. The main engine cooling is provided by Fernstrum grid coolers and the engines are controlled by Morse MD-24 cable controls.

The vessel is equipped with two steering rudders and four flanking rudders. The mechanical over hydraulic system is main engine driven. While the vessel is equipped with a pair of 12-kw,

model A2D 12000 Dieselec, air-cooled generator sets, a separate 12-volt system also is provided, enabling the vessel to operate without the generators. Navigation lights and other necessary lighting are dual 12-volt dc and 120-volt ac. The two power winches are Skipper Hydraulic, 25-ton, powered by the main-engine-driven hydraulic pumps and reservoir package, which also allows for operation of the vessel without the use of the generator sets.

Air conditioning is provided in the vessel's pilothouse and in the main deck galley room. A compact galley unit is provided on the main deck with gravity-fed water systems from the deck above. The M/V Redneck's raised pilothouse provides a 25-foot 6-inch eye level and 360-degree visibility. A catwalk and stairs provide access to both empty barges as well as the vessel's main deck.

The M/V Redneck is another example of Mississippi Marine's ability and willingness to build vessels specifically tailored to meet the needs of a customer's particular operation. Captain Hollinger wanted a simple, no frills type vessel, designed to suit his operation. Mississippi Marine is also building two 1,800 to 2,400-shp pushboats, one 1,000-hp work boat, and a 143-foot offshore geophysical vessel, for various companies.

Barge Operations Manager Appointed By Consolidated



Donald G. Leeker Jr.

Consolidated Grain and Barge Company, St. Louis, Mo., announced recently the promotion of Donald G. Leeker Jr. to the post of manager of barge operations. Mr. Leeker joined Consolidated in 1978 as a barge dispatcher. He was named chief dispatcher in 1980, and in May of this year was made assistant manager of barge operations, the post he held prior to his new promotion.

Nedlloyd Orders Two Containerships

Nedlloyd Lines, a wholly owned subsidiary of the Royal Nedlloyd Group, has ordered two container vessels at approximately 1,800 TEUs from the Korean shipyard of the Hyundai Corporation. The vessels, to be delivered during the second half of 1983, will sail under the Dutch flag and will see service in the Europe Middle East Service.

Ed Trlica Elected President Of Jered

The board of directors of Jered Inc., the Houston based unmanned vehicle service company, has announced the election of Ed Trlica to the office of president.

Board chairman Jerry Jones stated: "We have been extremely pleased with the industry reaction to Jered that has resulted in our obtaining over 50 percent of the unmanned vehicle work awarded in the Gulf during the past 12 months. Mr. Trlica has been a key factor in this growth and in his new capacity as president he will concentrate on the continued orderly growth of Jered, including our expansion into overseas markets."

\$11.8-Million Navy Contract Awarded General Ship For Overhaul Of USS Vulcan

General Ship Corporation of Boston, Mass., has been awarded a U.S. Navy contract in the amount of \$11.8 million for the regular overhaul of USS Vulcan (AR-5).

Under the new contract, Vulcan will arrive in the yard in January 1982 for an 11-1/2 month over-

haul. General Ship is now completing the overhaul of USS Mullinnix (DD-944), and will start the overhaul of USS Garcia (FF-1040) this month under another contract awarded recently.

General Ship Corporation is a privately owned small business which operates two yards in Boston Harbor, one in East Boston and one in South Boston where the Vulcan will be overhauled.

Publish Specifications For Detroit Diesel's Line Of 16-Cylinder Engines

The Detroit Diesel Allison Division of General Motors Corporation, Detroit, Mich., has published a data sheet containing the specifications of its line of 16-cylinder marine engines.

The literature includes a photo-

graph of each typical engine in the series which are rated at 700 hp, 1,060 hp, and 1,325 hp, respectively, by model. Also included are performance charts based on the use of different injectors, profile drawings detailing the principal dimensions, and a list of standard equipment.

For a free copy of the 16-cylinder specifications sheets,

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tions in recognition of a general MVI shortage - you do not have to accept an HVI oil.

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Westinghouse Awarded \$24.8-Million Component Contract Modification

Westinghouse Electric Corporation, Plant Apparatus Division, Wilkins Township, Pa., has been awarded a \$24,804,000 modification to a previously awarded cost plus fixed fee contract for naval nuclear propulsion components. Work will be performed at various locations. The Naval Sea Systems Command is the contracting activity. (N00024-72-C-5513)

Ohio River Officials Meet With Representatives Of Finnish Coal Interests

Executives of The Ohio River Company, Cincinnati, Ohio, the nation's largest barge mover of coal, met recently with 23 Finnish businessmen at ORCO's headquarters to discuss the shipment of U.S. coal to Finland.



John D. Geary (left), president of the Cincinnati-based Midland Affiliated Co., discusses America's inland waterways system with Kauko Relander, executive director of FinnCoal, a new company established by Finland's industrial coal users to supply Finnish industry with imported coal.

The group, which includes representatives of Finnish electric utility companies and other industries, was brought to Cincinnati by Gates Engineering of Beckley, W. Va. Gates is a consulting firm retained by the Finns to coordinate efforts in securing a U.S. coal trade agreement. Growth in future U.S. coal production will partially hinge on the industry's success in marketing coal to foreign countries such as Finland.

Earle Faig, Ohio River Company vice president-sales, presented a proposal that includes barging either Appalachian or southern Illinois coal to the Gulf of Mexico via the inland waterway system. Transporting the coal from the fields to ports serving the Atlantic shipping lanes is a key element in the U.S.-Finland discussions, and Mr. Faig explained that ORCO's proposal provides one of the most cost-effective and dependable methods of transporting coal.

Founded in 1925, The Ohio River Company is one of eight marine-related subsidiaries of the Midland Affiliated Company and is the largest barging company in the U.S. ORCO operates more than 1,500 barges and 74 boats along the inland waterway system.

Butterworth To Exhibit At Marintec China '81

Marintec China '81 will take place in Shanghai, People's Republic of China, from December 10 through December 16. Butterworth Systems has announced it will be present with several major pieces of equipment on display, including the SFC 5 BW Oil/Water Separator, which pro-

vides "clean" water with less than one part per million of oil, and the P-60, MP, K and SK tank cleaning machines.

Not on display, but represented graphically, will be the SCAMP® Underwater Hull Cleaning machine, and the Marine LIQUA-BLASTER® High Pressure water jetting equipment. Literature will be available in Mandarin Chinese.

Butterworth Systems equip-

ment will be displayed at the British Joint Venture booth.

For more information, contact Butterworth Systems (UK) Ltd., 123 Beddington Lane, Croydon, CR9 4NX, England. Telephone 01-684-4049; telex 946524. Or Butterworth Systems Inc., 224 Park Avenue, Box 352, Florham Park, N.J. 07932. Telephone (201) 765-1546; telex 136434.

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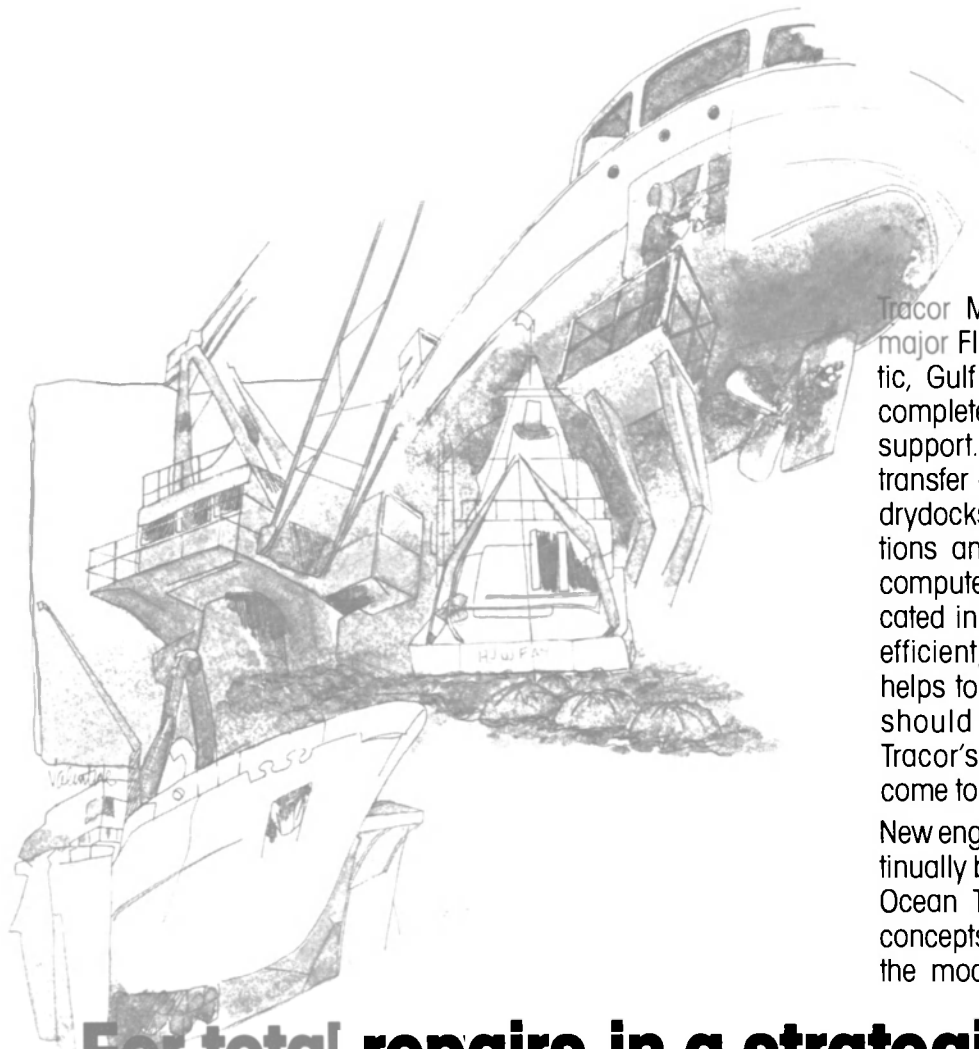
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NASSCO Delivers 'S/S Coast Range'— Second Of Three Carlsbad Class For Union

The S/S Coast Range (shown above), a 37,500-dwt product carrier built by National Steel and Shipbuilding Company (NASSCO), San Diego, Calif., for Union Oil Company of California, was delivered to Union Oil recently in ceremonies at the San Diego shipyard. The ship was received by **Glenn O. Burk**, president of West Coast Shipping Company, which will operate the Coast Range.

The keel for the 658-foot vessel was laid June 2, 1980. The vessel was launched January 10, 1981.

The S/S Coast Range, a Carlsbad Class carrier with a capacity of 300,000 barrels, is capable of transporting 10 different products simultaneously. A cylindrical appendage-type bulbous bow improves vessel speed. A steam turbine engine provides maximum fuel efficiency and conservation. The ship will carry products from Union Oil's refineries in Los Angeles and San Francisco to Alaska, Hawaii and the U.S. West Coast.

Form New Repair Company To Service Mexican Gulf —Information Available

Supertankers that may require marine repairs and engineering services while at the Louisiana Offshore Oil Port can utilize a new service group formed recently by Marine Agents of Galliano, Inc.

A free-on-request pamphlet describes the facilities and services of MAGI-Marine Agents of Galliano, Inc., which includes a major manufacturing and engineering organization, a shipyard, an

The S/S Coast Range is the second of three sister ships to be delivered to Union Oil this year. NASSCO delivered the S/S Blue Ridge on June 27, 1981 (see MR of September 15, 1981, pg. 8), and the S/S Sierra Madre is scheduled to be delivered in December.

The vessels incorporate the most modern equipment available and will meet the latest safety and environmental protection standards, including double bottoms, a clean segregated ballast system, an inert gas system, a sewage treatment plant, collision avoidance radar, and a backup steering system.

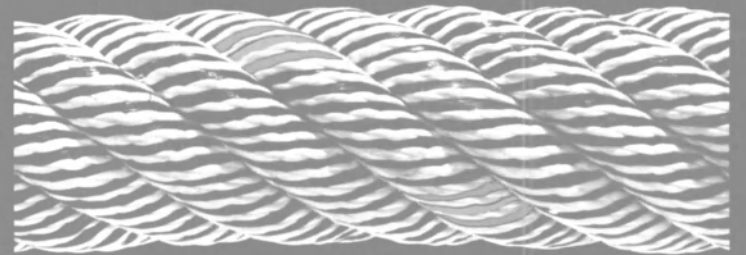
NASSCO currently has under contract six product carriers, two Navy destroyer tenders and a Navy cable repair ship. The company's backlog of new construction and repair work was approximately \$559 million at the end of August. NASSCO has been engaged in marine construction for more than 35 years, and is wholly owned by Morrison-Knudsen Company, Inc., Boise, Idaho.

armature works, and electronics specialist.

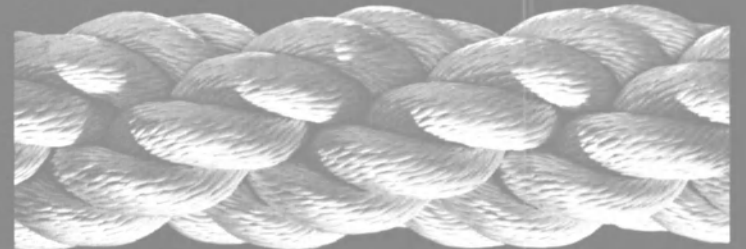
The very large crude carriers calling at LOOP are moored nearly 20 miles offshore in the Gulf of Mexico to pump their cargoes into submerged pipelines. The MAGI pamphlet describes its capabilities to handle any repairs that can be done afloat. For a copy of the pamphlet "Marine Repairs and Engineering Services in the Gulf of Mexico" and a new illustrated brochure, "Meet MAGI", which describes the offshore port's operation and details the services of Marine Agents of Galliano, Inc.,

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4 OUT OF 4 from AMERICAN



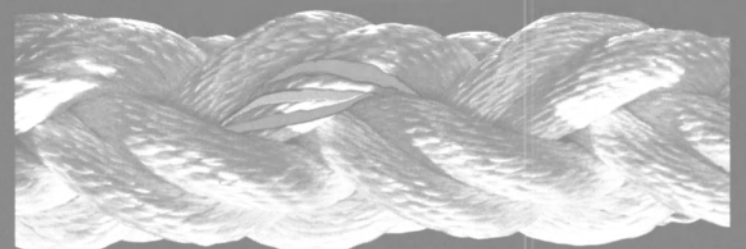
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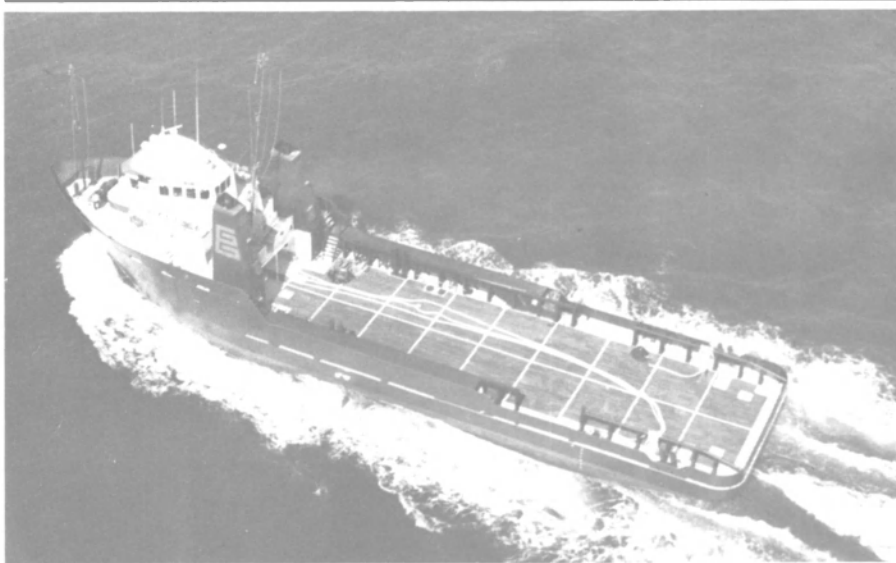
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ON THE COVER



The 180-foot Golden Girl, powered by twin 12-cylinder EMD engines, is one of two 180-foot supply vessels recently delivered by Moss Point Marine.

Moss Point Marine Delivers Two Supply Vessels To Golden Gulf

Moss Point Marine, Inc. of Moss Point, Miss., announced the delivery recently of two 180-foot-class multipurpose supply vessels to be operated by Golden Gulf Marine Operators, Inc. of New Orleans.

The M/V Golden Girl (See MR/EN, October 1, 1981, page 64) and her sister M/V Golden Moon are the second and third such vessels of a 12-boat package by Moss Point Marine for Golden Gulf Marine. Both vessels will operate in the Gulf of Mexico.

The vessels each have molded beams of 40 feet and molded depths of 14 feet. Their onboard capacities (each) include 57,000 gallons of fuel, 11,200 gallons of potable water, 1,540 barrels liquid mud storage and 3,600-cubic-foot dry mud volume. The vessels, registered at under 300 tons, can carry 550 tons of deck load capacity.

MarAd Approves Title XI Refinancing Guarantee For 20 River Barges

The Maritime Administration has approved in principle an application from Shearson River Barge Associates I, New York, N.Y., for a Title XI guarantee to aid in refinancing twenty 195-foot river barges.

The barges, five built by Cargo Carriers, Inc., and 15 by Nashville (Tenn.) Bridge Co., were delivered in 1979. The applicant indicated the barges' main employment will be in the carriage of grain, but that they may also be used for other dry-bulk cargoes, such as coal. The approved guarantee is for \$4,141,000, or up to 87½ percent of the depreciated actual cost of the barges.

The Golden Girl and Golden Moon are powered by twin 12-cylinder EMD 645E-2 diesels rebuilt by National Marine, coupled to Falk marine gears on a 3:1 ratio. Shipboard electrical power is provided by a set of two 125-kw GM 6V71 turbocharged generators.

In the pilothouses, a complete electronics package includes two Sailor VHF's, one all band receiver, a Drake SSB radio, a Necode, two Furuno radars, a Texas Instruments 9900 Loran C, an Epsco recording fathometer and one loud hailer.

The first vessel for Golden Gulf Marine, the Golden Gulf, was delivered by Moss Point Marine in mid-summer (See MR/EN, September 1, 1981, page 52), with the final boat in the 12-vessel package scheduled for delivery in February 1983.

Racal-Decca Publishes Brochure On Satellite Navigator DS-4 Model

A four-page color brochure detailing the features and specifications of the company's satellite navigator DS-4 has been published by Racal-Decca, Ltd., Surrey, England.

In addition to technical parameters and dimensional drawings of the receiver, antenna, and antenna bracket, the brochure has photographs of the display board of the instrument with call-outs identifying each part, facilitating identification.

For a free copy of the DS-4 brochure from Racal-Decca,

Write 75 on Reader Service Card



Two GM Detroit Diesel 6-71M engines power the oil recovery vessel Marlimpia. The oil recovery system was designed by Centrifugal Systems, Inc., of Houston, Texas, for use on Lake Maracaibo, Venezuela.

Monark Boat Delivers Oil Recovery Vessel For Use On Lake Maracaibo

A new oil recovery vessel was recently delivered to the owners, The Lake Committee, Lake Maracaibo, La Salina, Venezuela. Designed by Centrifugal Systems, Inc. of Houston, Texas, and built by Monark Boat Company, Monticello, Ark., the Marlimpia is a catamaran type, self-propelled, 28-ton aluminum vessel.

The oil-recovery system, exclusively designed and built by Centrifugal Systems, Inc., consists of four 12-inch-diameter Petro Mops with the puller-wringer and return pulley assemblies; the Weir recovery system; dispersant agent with monitors; and 500 linear feet of 18-inch oil containment boom.

The Petro Mop system used on the Marlimpia is able to recover a maximum of 600 barrels of spilled oil per hour and the Weir System, 250 barrels per hour. The vessel is 48 feet length overall, with 17 feet ¾ inches width overall. The tunnel between the hulls is more than 6 feet.

Propelled by two Detroit Diesel 6-71M's, the Marlimpia easily cruised at 20 knots down the Mississippi River on her maiden voyage to New Orleans for shipment. Daniel F. Young, Inc. arranged the lift and deck shipment to Venezuela.

The GM 3-71 72-kw generator set provides electric power to the auxiliary machinery and reclaimed oil tanks' heating system. The heating system allows the

viscosity of the reclaimed oil to be lowered before being offloaded.

The auxiliary machinery includes electrohydraulic systems for powering the puller-wringer, Weir, Petro Mop return system, and a telescopic hydraulic Hap-610 crane of 4,000 pounds at 10-foot-reach capacity located mid-ship. The crane was installed for deploying and retrieving the oil containment boom. However, a hydraulic crane aboard a stable work platform, such as this vessel, has many other uses in an emergency situation in the offshore energy industry.

The Marlimpia has the equipment to fight fires on offshore platforms and other vessels. Its two Elkhart 2½-inch fire monitors include fire-foam eductors with a maximum reach of 140 feet. The fire monitors also serve as dispersant applicators, applying Exxon Chemical Company's Corexit 9527 oil dispersant as permitted on Lake Maracaibo.

The dispersant is blended with sea water by a variable proportional injector pump before being applied to the oil slick. Dispersant application rates can be varied from near zero to as much as 15 U.S. gallons per acre. The system automatically sets the correct amount of sea water for the selected dispersant application rate and vessel speed.

Further, the vessel is equipped with a dedicated system to apply Ergon's Oil Herder, an oil col-

lecting agent, from the port and/or starboard bow.

A 100-barrel-capacity heated reclaimed oil stowage tank is integrated in each pontoon of the catamaran hull.

The vessel is equipped with all the necessary navigational equipment, consisting of two radios—one Raytheon RAY 58A VHF-FM, one Raytheon RAY 1209C-SSB over-the-horizon communicator, 100-w; and a depth sounder-recorder, Raytheon model DE-719B, with a Raytheon 724A model transducer.

This vessel is the second to be fitted with the Petro Mop system. The first was the Limpimar, also owned by The Lake Committee. Both vessels operate on the zero-relative velocity (ZRV) principle, i.e. the mops are stationary, or move very slowly, with respect to the water's surface. The operating speed of the vessel can be as much as four knots and maintain the ZRV. The positioning of the mops on the water's surface is controlled by a hydraulically powered return system.

With this unique hydraulic return system, the mops can be properly positioned to reclaim oil from relatively rough seas, flotsam and debris, and ice floes. Field experience indicates up to 98 percent efficiency in recovering floating oil under less than ideal conditions. The oil has varied in gravity from API 16° to API 42° in actual operations. Ambient temperatures have been tropical in all operations.

At the present, more vessels using similar systems as in the Limpimar and Marlimpia are being designed by Centrifugal Systems, Inc. for delivery in 1982. Centrifugal Systems, Inc. is a Houston company oriented in oil spill machinery for picking up or dispersing oil spills.

Approve Title XI Guarantee For Two Towboats Costing Over \$3 Million

The Maritime Administration has approved in principle an application by Parker Towing Co., Inc., Tuscaloosa, Ala., for a Title XI guarantee to aid in financing the construction of two towboats, the M/V Charles Haun and another, designated Towboat No. 2.

Each vessel will have a length overall of 85 feet, a molded beam of 34 feet, and will be rated at 2,000 hp. Hudson Shipbuilders, Inc., Pascagoula, Miss., and Mississippi Marine Towboat Corp., Greenville, Miss., are the builders of the vessels. The M/V Charles Haun was delivered in September; Towboat No. 2 is scheduled for delivery this month.

Both vessels are expected to be employed on the Black Warrior-Tombigbee River system and Gulf Intracoastal Waterway. The Title XI guarantee covers \$2,272,000 or about 75 percent of the estimated actual cost of \$3,034,589.

Imperial Oil Planning Semisub Drilling Rig With 6,000-Foot Capability

Plans for a semisubmersible offshore drilling unit capable of drilling in waters up to 6,000 feet deep are being finalized by Imperial Oil Ltd., a subsidiary of Esso Resources, Canada, Ltd.

The rig will be used for a multi-

well drilling program off the coasts of Newfoundland and Labrador. According to a company spokesman, the objective is to insure as much Canadian input as possible on the design, construction, ownership, and operation of the rig.

At this stage of development, Imperial is looking at the possibility of having an international consortium involved in the rig's

construction, and is evaluating design proposals. It is anticipated that all the details involving the rig will be completed by early 1982.

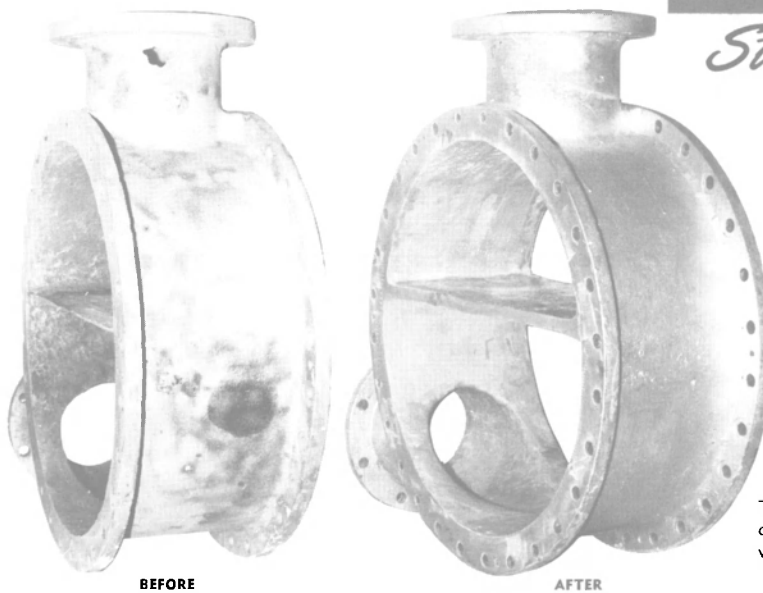
The semisubmersible will be similar to the dynamically positioned Sedco 709, but incorporating larger deck space. The target date for completion of the rig is mid-1983.

THOUSANDS OF REPAIR JOBS HAVE BEEN COMPLETED QUICKLY AND ECONOMICALLY

with

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| Water Boxes | Ventilators |
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STANDARD KIT For Ocean Going Vessels JUNIOR KIT For Harbor Craft

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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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Ocean Ship Supply
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Weedon Engineering Co.
- GEORGIA—Savannah
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- MAINE—Portland
Chase Leavitt & Co., Inc.
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Tate Engineering, Inc.
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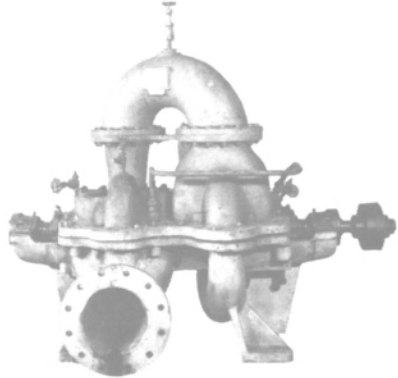
- FRANCE—Dunkirk
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Coger S.A.S.
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Norus-Morch A/S
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James Brown & Hamer, Ltd.
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Capetown
Globe Engineering Works, Ltd.
- SPAIN—Cadiz
Consumar
—Bilbao
Indame, S.A.
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Kiat Hiran Engineering Ltd. Partnership
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Virgin Islands Marketing Corporation
- WEST GERMANY—Hamburg
Van Lessen & Punt GmbH
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R. Landry & Company, Ltd.

T-2 TANKER EQUIPMENT

AVAILABILITY

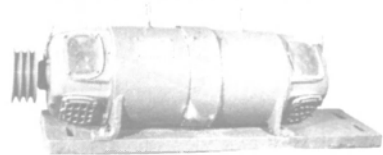
From Immediately To 5 Days

INGERSOLL-RAND 6-GT CARGO PUMP



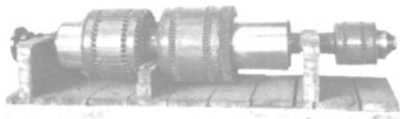
2000 GPM — 100 PSIG — Westinghouse or G.E. pump motors — 200 HP — 440/3/60

G.E. NEW STYLE AMPLIDYNE



5LY148A — Type AM — Frame 605. Rebuilt with ABS. Immediate delivery.

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110 KW — 32.5 KW — 5.5 KW — for Westinghouse 538 KW auxiliary generator. In stock for immediate delivery. Reconditioned — with ABS.

G.E. 75/55 KW ARMATURE

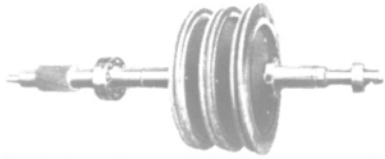


FOR 525 KW TURBO GENERATOR SETS
In stock for immediate delivery. Reconditioned — with ABS.

538 KW WESTINGHOUSE TURBINE SPINDLE

For immediate delivery. Reconditioned with ABS.

G.E. 525 KW TYPE DORV 325 M AUXILIARY TURBINE ROTOR



In stock — for immediate delivery. A.B.S.

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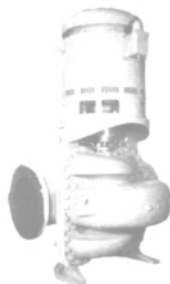
From Ex-Gulf Oil Spare Parts Stock

- 1 Box 2nd Stage Diaphragms — Curtis
- 1 Box 2nd Stage Diaphragms — Rateau

1 WESTINGHOUSE MAIN GENERATOR FORWARD PEDESTAL BEARING SEAL

From Ex-Gulf Oil Spare Parts Stock

INGERSOLL-RAND 24VCM BRONZE MAIN CIRCULATING PUMP



Reconditioned by USMP 1975 — with ABS — Immediate delivery. New Micarta and bronze inserts — new stainless steel shaft, rings, upper & lower bearings, bushings, casing and cover. Dynamically balanced. From Ex-Gulf Oil. Immediate delivery.

WESTINGHOUSE 7240 HP MAIN PROPULSION TURBINE

Unshrouded — 17th to 18th rows replaced by Westinghouse. With ABS. Immediate delivery.

WESTINGHOUSE 50 HP FORCED DRAFT FAN MOTORS

Ready for shipping in 5 days

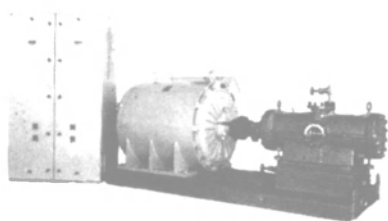
NEW INGERSOLL-RAND 3G FIRE & BUTTERWORTH PUMP

Pump only. Ready for delivery.

NEW G.E. MAIN TURBINE ROTOR

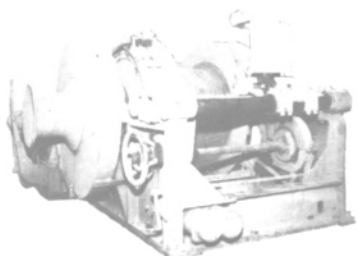
700 G.P.M. @ 150 P.S.I.
NEW — UNUSED — EX-U.S.N.

MOTOR DRIVEN ROTARY HORIZONTAL PUMPS WITH 4-SPEED 440/3/60 MOTOR



Inlet 8" — outlet 6". Powered by 4-Speed 440/3/60 motor. Motor is 100/75/50/37.5 HP — 1200/900/600/450 R.P.M. Motor has Cutler-Hammer control. Weight 10,000. Inquire for complete details.

100,000 LB. ALMON JOHNSON Constant Tension Mooring Winches

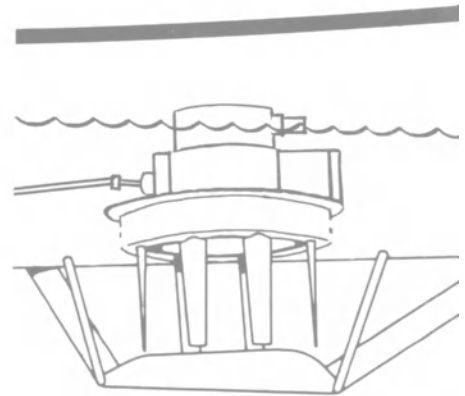


In very good condition. Series 232 mooring & anchoring winches. Automatic self-tensioning. Wide range from 100,000 lb. line pull @ 10 FPM to 26,000 lbs. @ 400 FPM. Gypsy line pull @ 12,000 lbs. @ 25 FPM. Drum declutchable through spiral jaw clutch for free spooling. Driven by 50 HP 230 VDC motors — Westinghouse CK — 575 RPM — 1/2 hour — 75°C rise — stab shunt — 181 amps. Max. RPM 1900 — Cutler-Hammer brake — 18" — type NM. Complete with magnetic control panel, resistor banks & remote control pedestal and mounted master switch.

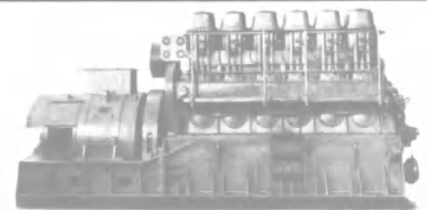
TWO 1,000 VOITH--S

CYCLOIDAL COUPLING OMNI-DIRECTIONAL

Can Be Located Side-By-Side
For Fast and Precise Movement
On Axis Turns Make Them Ideal

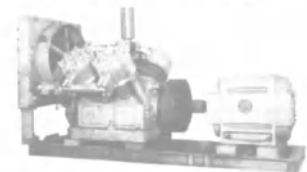


Serial Nos. NR-1783 and NR-1784. Unit size 24, blade length—2400mm blade orbit diameter. PRI heavy duty motor 800/1000 HP—440/3/60—1770 Mfg. by Electric Machinery Co. Complete with 'HYDRAULIC COUPLING ARRANGEMENT. UNIT E MOTORS FOR BRIDGE CONTROL.



BALDWIN 250 KW DIESEL GENERATOR SET
ENGINE: Model VO — 450 HP at 400 RPM — 6 cylinder — 12 3/4" X 15 1/2" — 4-cycle — heat exchanger cooled — air starting. GENERATOR: 250 KW — Westinghouse — 120/240 volts DC.

MARINE SHIPBOARD AIR COMPRESSOR V-TYPE — TS-22820



160 CFM @ 125 lbs — 2-stage 870 RPM — 8 X 8 1/4 X 8 1/4 — air cooled — with intercooler. Direct-connected air compressor #2261021. MOTOR: 50 HP 440/3/60 — mfg by U.S. Motor. AIR COMPRESSOR: Mfg by Air Pumps Ltd. Excellent condition — formerly used on AT&T Vessel "Long Lines" and removed only because they needed a larger unit. Complete with inter- and after cooler. Very good condition.



THE BOSTON

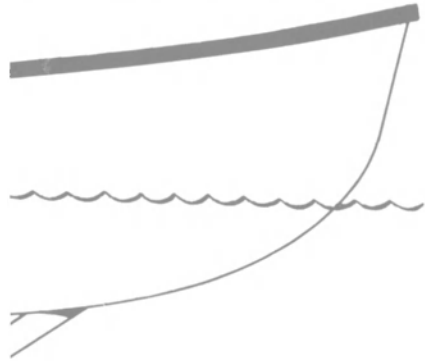
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100 H.P. SCHNEIDER

EXTRA-ROTATING AXIAL PROPELLERS

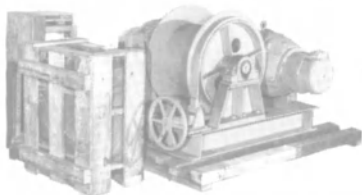
Starboard, Fore and Aft,
Mounted Sideways and 360°
for Tugs, Ferries, Cranes, Etc.



150. 6 Stainless steel blades each unit—1500mm
CENTRAL DRIVE with Voith AD40 reduction gears and
3600 RPM—squirrel cage—884 amps—frame 23153.
Control Panel Controls & motor controls. Size 8—Control
DRIVE DIRECTLY WITH DIESEL ENGINE AND
ELECTRIC MOTOR. COMPLETE WITH HYDRAULIC SERVO

GENERAL PURPOSE WINCH 3500 LBS AT 200 FPM.

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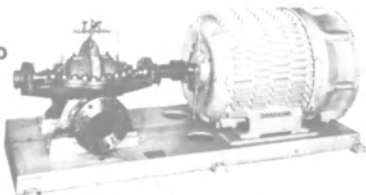


EX
U.S.N.

A.C. Motor drive—25/12.5 HP—GE 440/3/60—40°C AB
—1750 RPM—type KR—full load amps 32. Motor drives
winch through Falk reduction gear. Has compressor
hand brake.

NEW 5" ALL BRONZE BALDWIN-LIMA 1000 GPM 150 PSI TOTAL HEAD CENTRIFUGAL FIRE PUMP

NEW
UNUSED

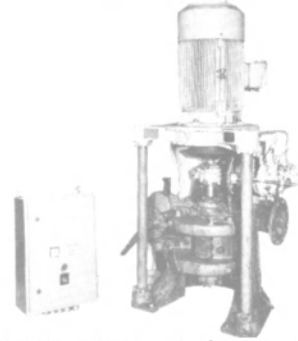


EX
U.S.N.

Single stage double suction type with 6" side suction
& 5" side discharge. 3600 RPM—test pressure 250 PSIG.
MOTOR: Reliance 125 HP 440/3/60—totally enclosed—
fan cooled—Frame D-5003-S—50°C.

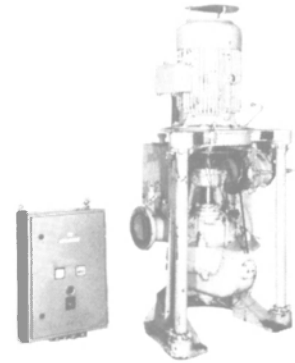
PUMPS

SELF-PRIMING FIRE & GENERAL SERVICE PUMP Complete With Vacuum Pump



Type 150 V.C.B.-A.N.V. — Built 1976. 6" x 6" — 397
GPM @ 230' head — 100 PSI — 1750 RPM — 792
GPM @ 115' head — 50 PSI — 1750 RPM or M³/hr —
90/180 @ 70M/35M head. MOTOR: 33 KW—440 volts
3-phase 60Hz — 1800 RPM. Teikoku Machinery Works,
Osaka, Japan. Condition very good. Lloyds or ABS.

SELF-PRIMING EMERGENCY FIRE PUMP



4" x 4" — 220 GPM @ 231' head (100 PSI) 1750 RPM
(50M³/hr. @ 70M total head). Complete with vacuum
pump. MOTOR: 25KW — 1800 RPM — 440/3/60Hz.
Type 125-2VCS-A-NV. Teikoku Machinery Works, Osaka,
Japan.

SEND FOR PLANS. BOTH OF THESE PUMPS REMOVED FROM
VERY NEW HANSA VESSEL "RABENFELS"

FIRE PUMPS

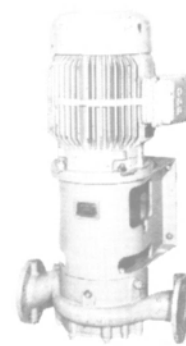
MADE BY K.S.B. GERMANY — (RADIAL FLOW)

265 GPM



4" x 4" — 265 GPM — 220' head (60
M³ @ 70m) — 3520 RPM. MOTOR:
24KW — 440/3/60Hz.

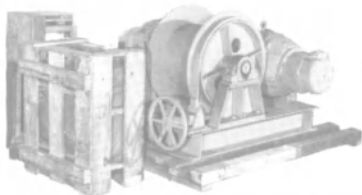
396 GPM



396 GPM @ 230' head (90M³ @
70m) — 3550 RPM. MOTOR: 26KW
— 440/3/60Hz.

GENERAL PURPOSE WINCH 3500 LBS AT 200 FPM.

NEW
UNUSED

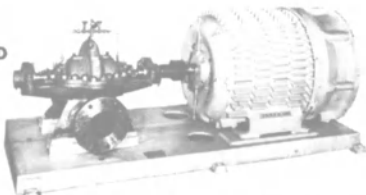


EX
U.S.N.

A.C. Motor drive—25/12.5 HP—GE 440/3/60—40°C AB
—1750 RPM—type KR—full load amps 32. Motor drives
winch through Falk reduction gear. Has compressor
hand brake.

NEW 5" ALL BRONZE BALDWIN-LIMA 1000 GPM 150 PSI TOTAL HEAD CENTRIFUGAL FIRE PUMP

NEW
UNUSED



EX
U.S.N.

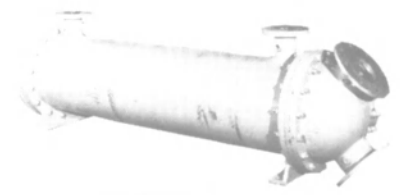
Single stage double suction type with 6" side suction
& 5" side discharge. 3600 RPM—test pressure 250 PSIG.
MOTOR: Reliance 125 HP 440/3/60—totally enclosed—
fan cooled—Frame D-5003-S—50°C.

1500 GPM GARDNER-DENVER BALLAST & CIRCULATING PUMPS



8" Suction — 6" discharge. MOTOR:
30HP — 440/3/60/1750 RPM. Ex
U.S.N. LSM vessels.

ROSS COOLERS



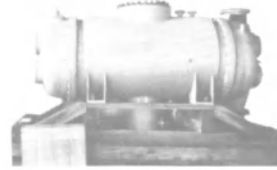
MODEL 1460

Ross Cooler Model 1460 — Type BCP — 160 sq. ft. —
contains 196 5/8" tubes #18BWG Cupro Nickel tubes
— copper shell — Cupro Nickel heads & tube sheets.
Tubes 5' 0-1/8" long — single pass. 3" Lube oil inlet &
outlet — 5" seawater inlet & outlet. Formerly working
with LST GM 1000/1200 HP engine.

MODEL 848

48" Tube length — 5/8" tubes — Cupro Nickel — 49 mils
thick — 60 tubes — 39.2 sq. ft. — for LST reduction
gears. 8" Diameter copper shell — 1 1/2" Seawater inlet
and outlet — single pass. 1 1/2" Oil inlet & outlet —
125# ASA. Overall length 5' 0-1/4" — distance between
centers of oil inlet & outlet 3' 4 3/8".

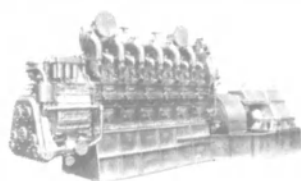
UNUSED ALCO MARINE CONDENSER



700 Sq. ft. — 2-pass — 5/8" CuNi tubes 0.049 (18BWG)
— 108" effective length — 476 tubes — shell & head
hydro test 30 PSI. Empty weight 6350 lbs. — 11,000
lbs. filled with water — operating 7550 lbs. — 2-Pass
9 3/8" inlet & outlet — length of condenser 156" — about
78" from exhaust flange to bottom of hot well.

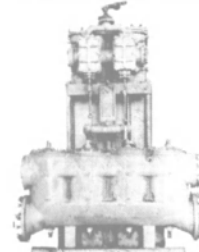
MATCHED PAIR

1200 HP — GM MODEL 12-278A
@ 744 RPM—WITH FALK REDUCTION GEAR



Vee type 8 3/4 X 10 1/2 — 2.5:1 Falk reverse & reduction
gear. Port and starboard engines — mounted on pre-
fab sub-base as shown.

WORTHINGTON 16" X 14" X 18" VERTICAL DUPLEX STRIPPING PUMP



1400 GPM @ 110 PSI — suction
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exhaust. Overall width 6'8" —
overall height 9'1 1/2" — depth
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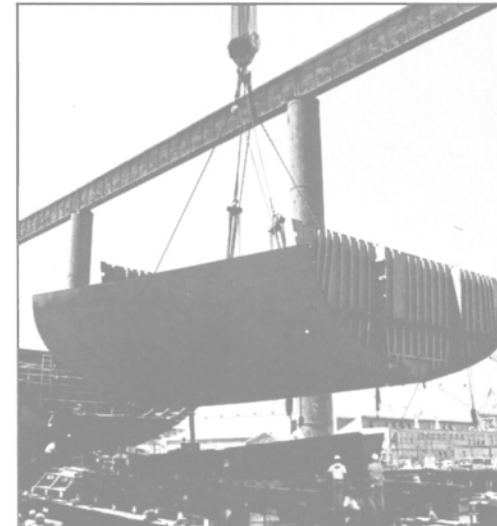
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LARGEST U.S. CIRCULATION TO BUYERS - thousands more than any other marine magazine.

LARGEST INLAND/OFFSHORE (shallow draft) circulation to buyers.

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BEST READ because it is current...weeks ahead of slower monthlies.

200,000 MONTHLY READERSHIP...unequalled pass-along readers...5 readers per single copy.

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**MARITIME
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AND
ENGINEERING NEWS

Canadian Survey Shows 400 New Vessels Needed During Next Ten Years

A survey conducted by the Canadian Shipbuilding and Ship Repairing Association points to a need for over 400 new vessels and floating equipment at a total cost (in 1981 dollars) of over \$33 billion over the next 10 years.

Expenditures, says the association, have already begun to build up with \$700 million in orders placed abroad in the last nine months. The survey was based on replies from major shipowners, petroleum companies, and government agencies.

According to the survey, the cost of ships and floating equipment required for the exploration and recovery of petroleum in the

Arctic will exceed \$13 billion. The outlay for those off the East Coast will surpass \$13 billion.

The cost of vessels for the Great Lakes, the St. Lawrence Seaway, coastal trade, and commercial fishing will total about \$5 billion.

Claims have been made, notes the association, that the Canadian shipbuilding industry cannot build large complex vessels such as those needed in the Arctic. **Henry Walsh**, the group's president, refutes the claim, stating that only the large Arctic LNG carriers and the very large icebreaking tankers are beyond the capacity of Canadian yards.

"With the likely early expansion of one or more existing yards together with the construction of one or perhaps two world-scale shipyards, not only will the building of all types of vessels be possible but the total

capacity should be such as to enable the Canadian industry to meet most of the projected vessel and floating equipment needs during this decade and in the decades to come," asserts the association.

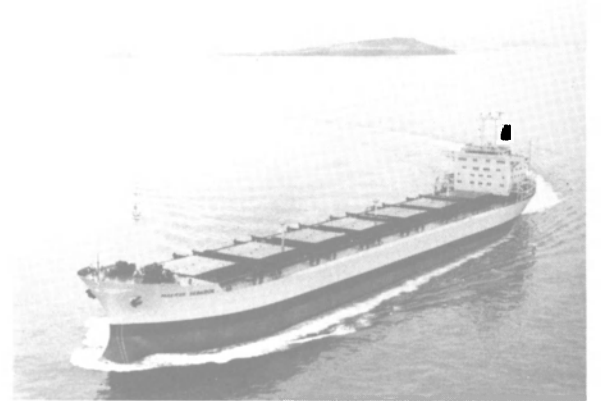
However, it adds, the orders should be paced with the buildup of Canadian shipbuilding capacity.

The association urged the Federal Government to adopt a "sound" policy so that future industrial, technological and employment benefits accrue to Canada.

If the Arctic LNG carriers, icebreaking tankers, and other specialized Arctic and offshore equipment are designed and built in domestic yards, then Canada will continue to be a leader in Arctic marine technology, the association stressed.

Bulk Carrier Maersk Sebarok Delivered By Hitachi

The 64,822-dwt bulk carrier Maersk Sebarok, built at the Ariake Shipyard of Hitachi Zosen, Japan, was delivered recently to her owner the Maersk Company (Singapore) Pte., Ltd.



The Maersk Sebarok is the 47th Panamax-type bulk carrier built by Hitachi Zosen, Japan.

The 215-meter-long vessel is the last of a three-ship order for the owner and is the 47th Panamax-type bulk carrier built by Hitachi. The ship is equipped with several energy-saving features, including a Hitachi Zosen nozzle at the stern to increase propulsion efficiency, a constant pressure turbo-charged main engine — a Hitachi B&W 7L67GFCA diesel — and life-long antifouling paint. The ship was built to Lloyd's Register classification.

Santander Shipyard To Increase Drydock Capacity To 25,000-Dwt

Astilleros de Santander, S.A. has announced the implementation of a major expansion project which will increase the capacity of its Number 1 drydock from 6,500 dwt to 25,000 dwt.

The drydock is being lengthened from 405 to 535 feet, and widened from 52 to 78 feet. In addition, crane capacity at the enlarged facility is being raised from 10 to 30 tons. A subsidiary of Astilleros Espanoles, S.A., the Santander Yard is represented exclusively in the United States by Wesley D. Wheeler Associates, Ltd., New York, N.Y.

Located on Spain's northern coast, Astilleros de Santander provides a convenient repair and maintenance location for vessels trading to North Europe and the Mediterranean. In addition to the expanding Number 1 drydock, the yard has a second dock capable of accommodating vessels up to

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M. Rosenblatt Promotes Three To Company Officers

Lester Rosenblatt, president and chairman of the board of M. Rosenblatt & Son, Inc., one of the nation's leading independent naval architectural and marine engineering firms, recently an-

years' experience in project management for the design of shipboard electrical/electronics systems. As manager of the branch, he is responsible for providing design services to the Navy and the commercial shipbuilding industry in the Chesapeake area. He

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Built by Zigler Shipyards, Jennings, La., and delivered earlier this year, the 165-foot vessels are designed primarily for commercial use in support of offshore oil and natural gas exploration and production. The approved

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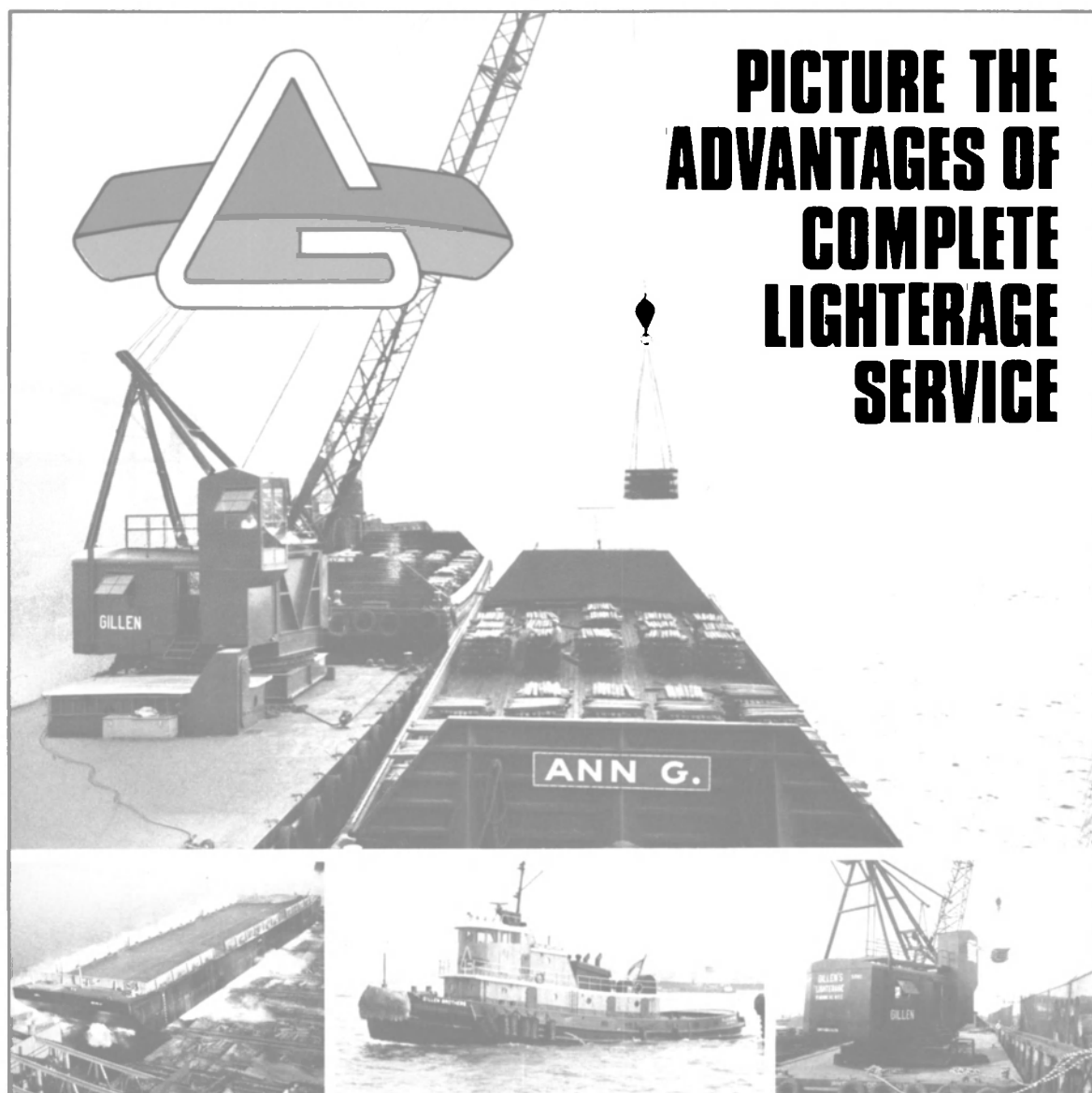
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Astilleros de Santander offers a wide range of ship construction and repair services, including lengthening and conversions.



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TUGS • BARGES • FLOATING CRANES**

At today's prices, a vessel fueled by coal can cost nearly \$3 million less per year to operate than one powered by diesel. And that's based on fuel prices alone. When you consider the higher maintenance cost of a diesel, and its need for expensive lubricating oil, the difference becomes even more staggering.

Small wonder that coal is making a comeback in ocean shipping. Foster Wheeler, the world's leading supplier of marine boilers, has been awarded a contract for two coal-fired marine steam generators. The first such units to be ordered for a United States ocean-going vessel in nearly fifty years.

The boilers will power a 665-foot vessel with each supplying 48,000 pounds of superheated steam per hour at a temperature of 900F and operating at a pressure of 870 psi. Only proven state-of-the-art technology is used and the fuel is readily available coal.

The boilers and the totally enclosed coal and ash handling systems are custom engineered to meet specific operating requirements. And with these fully automated units there's no need for additional manpower. What's more, these coal-fired units feature the same conservative Foster Wheeler design and exacting con-

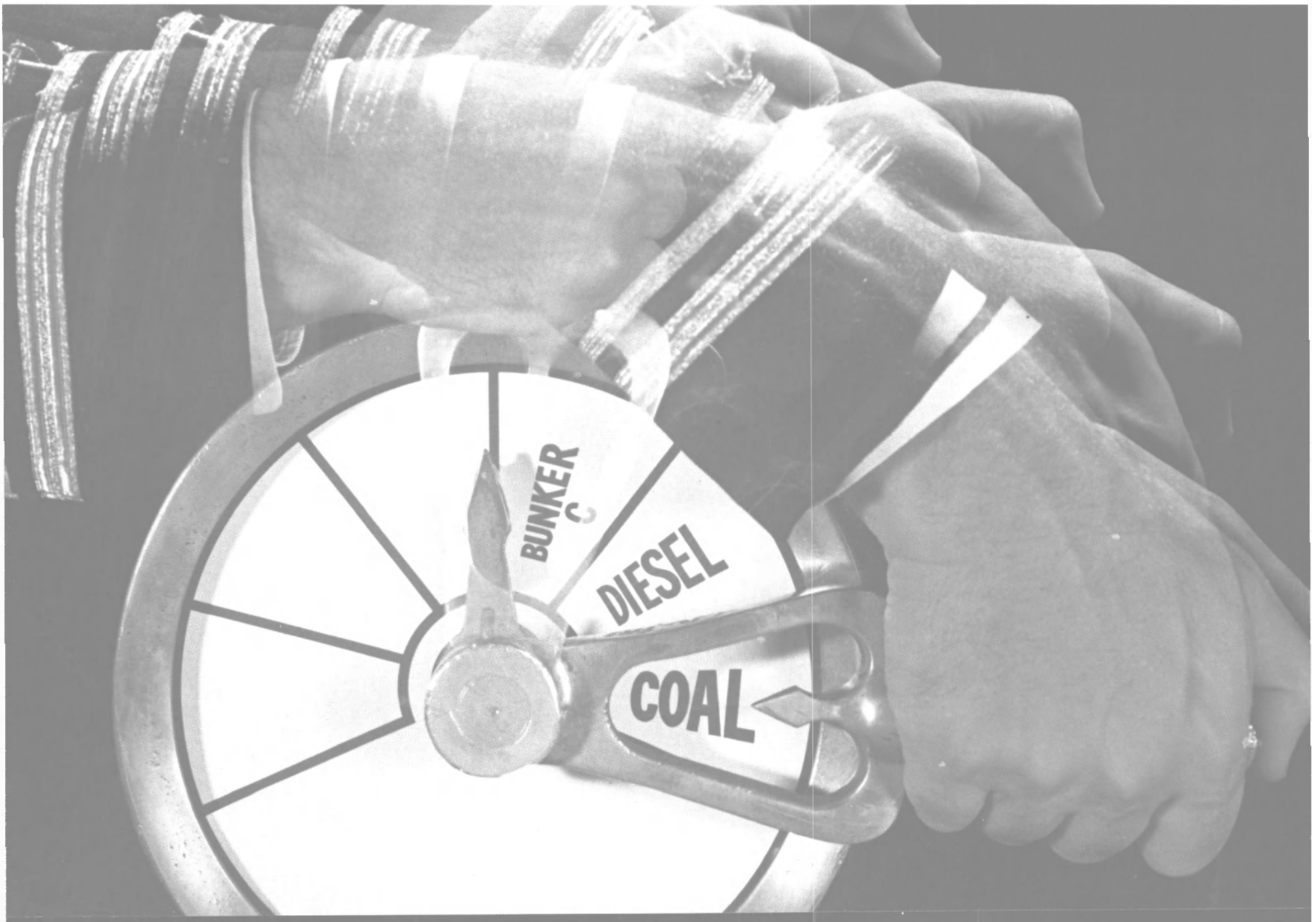
struction that have delivered top performance and high reliability for decades.

Of course, we're not newcomers to marine coal power. Our last coal-fired boilers which were launched on the Great Lakes in the 1950s are still in operation today. And now, once again we're offering significant coal-based fuel savings at sea.

After all, when you can save a million here, a million there, it all adds up. Foster Wheeler Boiler Corporation, Livingston, New Jersey 07039.

FOSTER  WHEELER

Full steam ahead.



M. Rosenblatt Promotes Three To Company Officers

Lester Rosenblatt, president and chairman of the board of M. Rosenblatt & Son, Inc., one of the nation's leading independent naval architectural and marine engineering firms, recently announced the promotions of **Zackary Awer** and **Stephen Halpern** to vice president, and **Stephen Dunlap** to assistant vice president.



Zackary Awer

Mr. Awer, a graduate mechanical engineer, has been the head of the mechanical department in New York since 1957. With his extensive experience in shipboard hull machinery and cargo and weapons handling systems, he has been directly involved in both conceptual and detail design for naval and commercial vessels.



Stephen Halpern

Mr. Halpern, a graduate civil engineer, is the chief engineer, western division, of M. Rosenblatt & Son, Inc. During his 26 years' experience with the company, he has been involved in many conceptual and preliminary designs, and feasibility and parametric studies for marine vehicles of all types. He has served as program manager for many modernization, overhaul, and repair design projects for a wide variety of naval and commercial ships. Mr. Halpern is also a licensed P.E. in New York State.



Stephen Dunlap

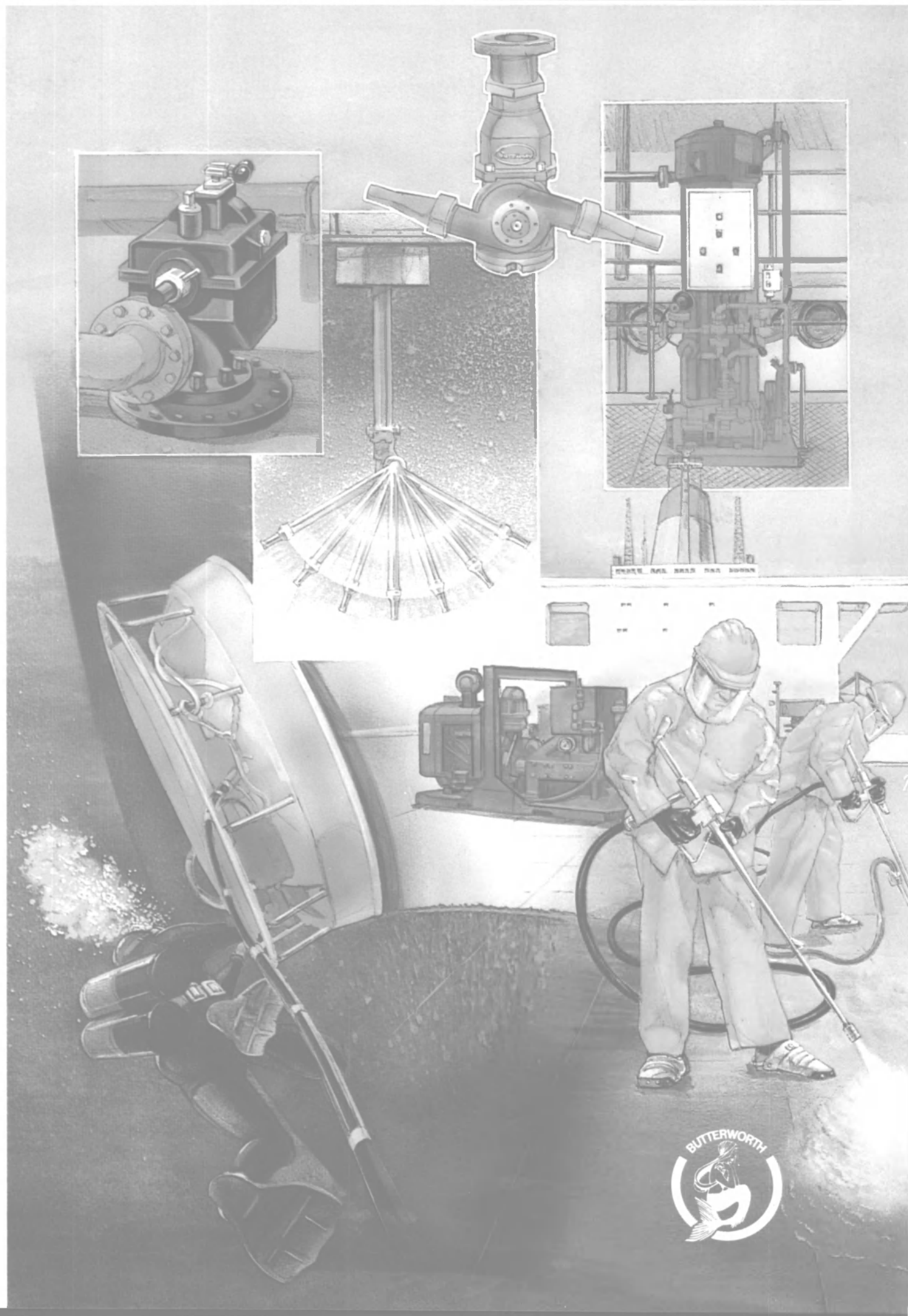
Mr. Dunlap has been the branch manager of the Charleston office since 1975. He has had over 18

years' experience in project management for the design of shipboard electrical/electronics systems. As manager of the branch, he is responsible for providing design services to the Navy and the commercial shipbuilding industry in the Charleston area. He is a graduate electrical engineer and a licensed P.E. in the state of South Carolina.

Approve Title XI Guarantee For 3 Tug/Supply Vessels

The Maritime Administration recently approved in principle an application from Linden, Inc., New Orleans, La., for a Title XI guarantee to aid in financing the construction of three 2,500-hp tug/supply vessels.

Built by Zigler Shipyards, Jennings, La., and delivered earlier this year, the 165-foot vessels are designed primarily for commercial use in support of offshore oil and natural gas exploration and production. The approved guarantee is for \$7,929,000, or up to 87½ percent of the vessels' depreciated actual cost.



Brochure Available On Sperry's Steering Systems

Sperry Marine Systems, Great Neck, N.Y., has published a 12-page booklet in color, describing and illustrating the full range of the company's electrohydraulic steering systems and components.

The Sperry Marine organization, with a worldwide network of sales and service locations at major shipping and shipbuilding

centers, provides complete installations for vessels of all types. The brochure has photographs and technical information on all components of large, medium, and small steering systems. The brochure also describes the instructional services the company provides either aboard ship or at its own facilities.

For a free copy of the Sperry Marine Steering Systems booklet, Write 72 on Reader Service Card

Capt. Chao Awarded Medal Of Honor By St. John's University

Capt. James S.C. Chao, president and managing director of Foremost Maritime Corporation, New York, N.Y., a company he helped to found in 1964, recently received the Medal of Honor from St. John's University, Queens, N.Y. The medal was presented



James S. C. Chao

by the Very Rev. Joseph T. Cahill, C.M., at the institution's 112th commencement exercises held in the fall.

The Medal of Honor, the most prestigious and highest award granted by the university, was given to Captain Chao in recognition of his continuous professional and academic contributions to the shipping industry. Captain Chao serves on the St. John's advisory committee for its business administration programs and is active in its Asian Studies Center. He received his master's degree in business administration and his doctorate in commercial science from St. John's.

Captain Chao is a director and chairman of the audit committee of the United Orient Bank in New York. He has served as president of Foremost Maritime Corp. for 12 years. The company represents a group of shipowners with more than 45 oceangoing vessels. Besides long-term contracts in chartering and newbuildings, Foremost is involved in ship financing.

Captain Chao is only the 19th alumnus of St. John's to receive the Medal of Honor.

New Hands-Free Two-Way Radio From Standard —Literature Available

Talkman, a new, miniature, lightweight, voice-activated, hands-free, two-way radio with sophisticated solid-state circuitry, has been developed by Standard Communications it was announced by director of marketing Mark Thomas.

Ideal for use in shipyards, marine terminals and when transferring cargo, it measures only 2½ inches wide, 4½ inches high, ¾-inch deep, and weighs less than one pound. It is available in any one of five channels and will transmit up to ¼ mile. It is powered by an easily obtainable nine-volt battery. The headset features a stowable whip antenna and an adjustable boom-mounted miniature voice-activated microphone. Units are sold individually with a suggested list price of \$125.

For a free brochure on Talkman,

Write 66 on Reader Service Card

For tank washing, oil/water separation, underwater hull cleaning and high pressure water jetting...

Butterworth Systems makes all the difference in the world.

Since Arthur B. Butterworth was issued the first patents for tank cleaning machines over 50 years ago, we have concentrated on a few select, specialized systems for the marine industry. In doing this, we have earned a worldwide reputation for top performance, exceptional reliability, and creative application of modern technology.

Today we offer the world's finest oil/water separators, underwater hull cleaning services, high pressure water jetting equipment, and, of course, tank cleaning machines of every kind.

Since we started, we've seen many companies come and go, but Butterworth Systems continues to provide you with equipment and services that save millions of dollars on fuel costs and ship operations.

Tank cleaning machines for crude oil (COW) or water washing.

Butterworth Systems offers the widest selection of tank cleaning

machines available. (Not surprising, since we started the whole thing!) In all, six different BUTTERWORTH® tank cleaning machines, each with its own unique cleaning capabilities and advantages, so we can provide tailor-made systems for your own tank washing needs.

SCAMP® underwater hull cleaning machines.

In the past ten years, the periodic maintenance of over 4,500 ships by SCAMP Underwater Hull Cleaning Machines has saved owners and operators almost ½-billion dollars. One telephone call can arrange a SCAMP hull cleaning for your vessel almost anywhere in the world and save you millions of dollars in operating costs by reducing fuel expenditures and improving vessel performance. It is also a preferred way to renew the effectiveness of modern reactivation coatings.

Oil/Water separators.

Compact BUTTERWORTH® SFC BW separators provide a simple and clean way to meet U.S. Coast GUARD AND Marpol '78 requirements for bilge-water separation. They feature a permanent filter bed composed of specially treated oleophilic material which needs an annual poured-in topping of only about 10% new material. Never a dirty filter cartridge to touch. No filter disposal problems. Less labor intensive. Fully automatic models available.

LIQUA-BLASTER® high pressure water jetting equipment.

Diesel or electric powered, a 2,000 psi (138 Bars) to 15,000 psi (1035 Bars) jet of salt or fresh water is revolutionizing routine on-board maintenance... especially rust and scale removal from surfaces to be painted. Delivered by a fail-safe, hand-held gun, this water jet easily cleans condenser and boiler tubes, oil spray from machinery,

galley grease filters, clogged ports and more. In non-explosive environments, where sparks present no hazard, a crew member can add a small amount of sand via the ABRAS-I-JECTOR® accessory and quickly and easily take a surface to the white-metal SA2.5 standard. It's no wonder that long after other names have been forgotten, the Butterworth Systems name will still be synonymous with reliable ship systems. For more information contact your nearest Butterworth Systems office.



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Front view of the MAK-powered UPSCO tug resting in the floating drydock as it was towed to the mid-water launch site.

UPSCO Launches Hull Number 001 —A 120-Foot Tug For An ITB

The Upper Peninsula Shipbuilding Co. (UPSCO) in Ontonagon, Mich., recently launched its first vessel to be built under contract. Hull No. 001—a 1,053-ton tug for an integrated tug-barge (ITB) system—is being built, along with four barges, for the State of Michigan. It was the first commercial launching at the 16-month-old yard.

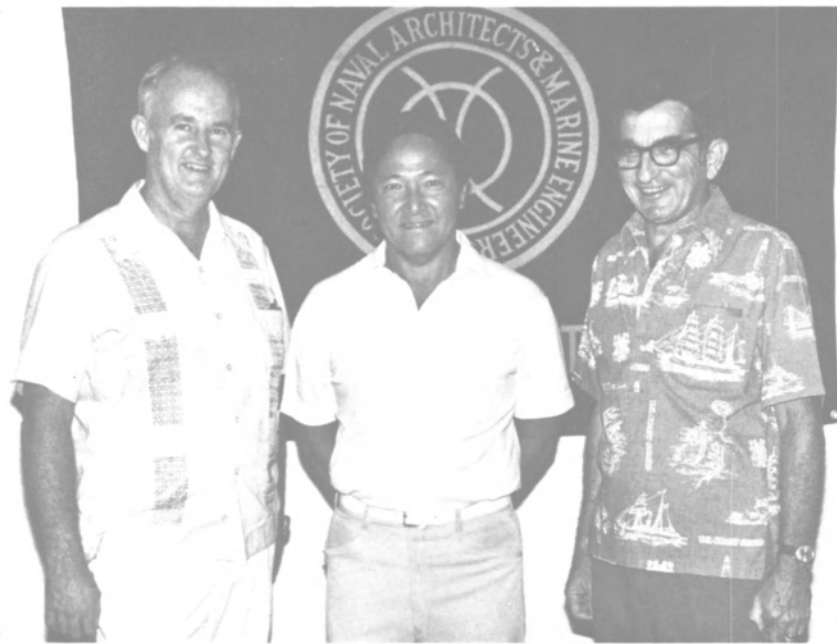
UPSCO used its 2,167-LT floating drydock for the launch. The drydock, which is equipped with removable wing walls for side transfers, was designed and built by the yard—its first newbuilding.

The 120-foot-long tug, designed by the naval architectural firm of Breit & Garcia, New Orleans, La., is undergoing outfitting and completion of its superstructure while moored at UPSCO's dock. Four rail ferry barges for the ITB system are also being built by the yard, with the first barge

scheduled for completion six months ahead of schedule.

The tug has an automated engine room and is powered by two MAK 6M551, 4,000-hp turbo-charged diesel engines which drive Liaaen controllable-pitch propellers. The tug will propel one of the four 436-foot-long rail ferry barges in turn across Lake Michigan, while the remaining three barges are loaded and unloaded in port. The tug and barges, ice-strengthened to permit year-round operation on the Great Lakes, will utilize a connecting system and hydraulic pads manufactured under license from Bretagne ACB.

The State of Michigan selected the ITB system to increase utilization of this cross-lake service and to eliminate a state rail subsidy which exceeds five million dollars annually. The state felt the versatility of the ITB would attract a variety of cargoes as would the unique shuttle schedule.



Participants in the Hawaii Section meeting were (left to right): Capt. Thomas Marnane, Commander of the Pearl Harbor Naval Shipyard, Rudy Choy, president of Aikane Corporation, who delivered a paper on hydrofoil catamarans, and Dr. Frederick Munchmeyer, who was honored as immediate past chairman.

SNAME-Hawaii Discusses High-Speed Catamaran Hydrofoils

The Hawaii Section of The Society of Naval Architects and Marine Engineers held its first meeting of the 1981-82 season recently at the Cannon Club, on the Lanai, Fort Ruger, under the chairmanship of Dr. Manley St. Denis.

A paper entitled "High-Speed Catamaran Hydrofoils" was delivered by Rudy Choy, president of Aikane Corporation, one of Hawaii's largest commercial sail-

ing operations. A member of the SNAME since 1964, he has been involved with catamaran construction and design since 1947. One of his major designs is the voyaging canoe Hokulea.

Mr. Choy discussed the concept, design, and model testing of a proposed catamaran hydrofoil that was tested at the General Dynamics Convair tank in San Diego, Calif. It achieved a scale speed of 70 knots on the final day of testing, which was the desired goal. This design shows promise and warrants additional research and development.

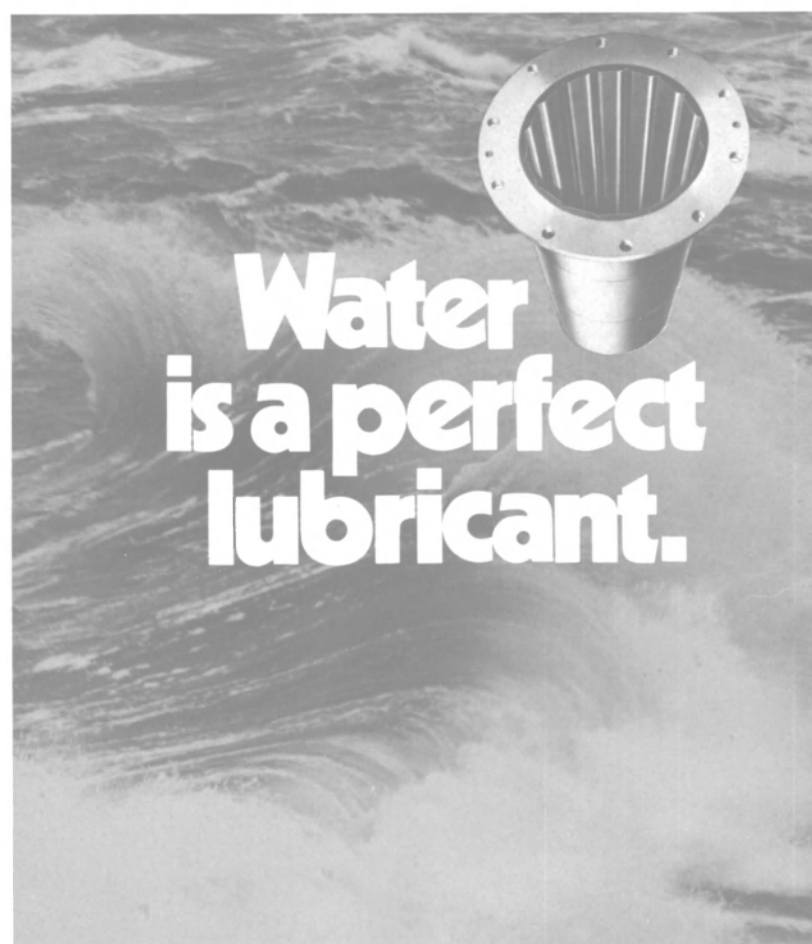
Other officers elected for the year include: vice chairman, Capt. Thomas Marnane; secretary-treasurer, John Biddulph; members, Executive Committee, Capt. Alfred Gallant, James Hollenberg, Brian Trenhaile, and Dr. Frederick Munchmeyer.

Southwest Marine Expands San Diego Offices

Southwest Marine, Inc. has recently expanded its San Diego administrative offices. This is the beginning phase of plans to renovate and add to the entire yard.

"Our plans are to not only expand with yards all along the West Coast, but to have the finest, most up-to-date yards in the country," stated Arthur Engel, president of Southwest Marine. The new addition includes computer and accounting facilities on the first floor. Management offices are located on the second floor, with a huge conference and meeting room on the third floor.

Besides San Diego, Southwest Marine has ship repair yards in San Pedro and San Francisco.



Oil-free Cutless® rubber bearings stop water pollution, conserve oil.

In these days of fuel scarcity, leaky oil lubricated bearings waste energy and pollute our waterways. With Cutless water lubricated rubber bearings designed by Lucian Q. Moffitt, Inc., there's no oil seal to fail. No lube oil to leak out and pollute the waterways. Any water will lubricate the Cutless bearing... fresh water, salt or sand-filled.

Exclusive "Water Wedge" channels molded into a tough BFGoodrich rubber liner keeps plenty of lubricating water flowing through the Cutless bearing.

Cutless bearings are available worldwide from yards and marine stores in a full range of shaft diameters and load capacities. Write us for engineering data.

**LUCIAN
MOFFITT, INC.**

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P. O. Box 1415, AKRON, OHIO 44309

that time some shipowners found it advantageous to use intermediate fuels (IFO) on their auxiliary engines.

Since then the number of engines equipped for IFO operation has increased every year, and at the present time about 80 percent of Bergen's annual engine production is sold for IFO operation. There are today approximately 320 Bergen Diesel engines, totaling 2,700 cylinder units, commissioned for IFO operation.

The majority of the 210 generating engines and a fairly large number of the propulsion engines which are in operation worldwide have to accept the wide variety of fuel qualities available.

Experience has shown that, provided Bergen's recommendations for fuel treatment, engine temperatures and load levels are met, overhaul times and wear figures generally did not alter significantly compared to marine diesel fuel operation.

Representatives of B&W Diesel, Inc. presented a paper on "The Low-Speed Diesel and the Future Energy Scenario." The authors spoke of the current B&W Diesel engine program which is based on the all-fabricated design which was introduced with their K-GF engines in 1973. Because of the oil crisis in 1973 and the subsequent demand for increased propulsion efficiency, B&W decided to develop a slower running version of this series.

Due to the uniflow scavenging system of the B&W engine, the slower turning of the propeller could be obtained for the same output by increasing the stroke of the engine.

With the introduction of constant-pressure turbocharging in 1978 and the improved turbocharging efficiency, the exhaust-valve timing was modified such that, at the same maximum cylinder pressure and at the same mean indicated pressure, a more favorable cylinder process was obtained. An increase in thermal efficiency and a lower thermal load was obtained.

This led B&W to the next logical step, which was that of further utilizing the built-in power reserve by increasing the mean effective pressure by 12 percent and the speed by three percent. At the same time, the maximum cylinder pressure was increased by about five percent.

B&W two-stroke engines have in principle been designed to burn all commercial grades of heavy fuel, limited by only a few guiding parameters, mainly related to the handling of the fuel oils.

B&W has systematically investigated for the past three years the effect of such so-called future fuels on a test engine, a two-stroke crosshead uniflow-scavenged engine and in fact, found indication that such fuels will not cause appreciable difficulties.

Hugo Fiedler, Krupp MaK Maschinenbau GmbH, spoke on the

"Prospects of Medium Speed Four-Stroke Diesel Engines in View of Future Fuel Problems."

This paper reports on investigations by Krupp MaK in the low-quality fuel field. Prospects for lowering of fuel consumption and possibilities of maintaining low maintenance costs in spite of increasing difficulties are discussed.

The general feeling has been that high engine speed might re-

sult in difficulties in burning heavier and less combustible fuel components on account of less time for combustion. Consequently, Krupp MaK looked for various fuels representing future parameters as close as possible and investigated the influences on combustion and thermodynamics, deposits on the combustion chamber and neighboring area as well as on the general engine perform-



Hugo Fiedler
Krupp MaK Diesel

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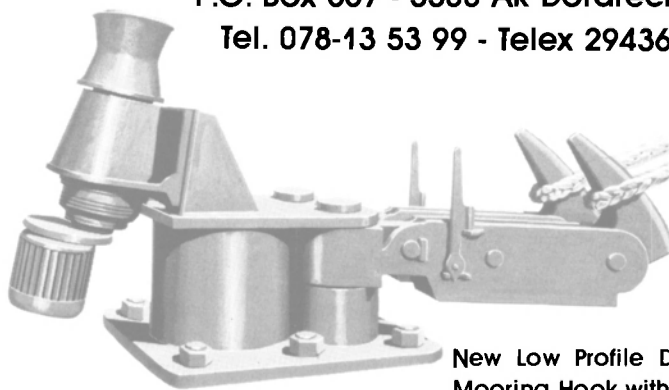


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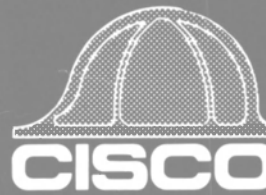
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ance and lubricating oil contamination.

The tests proved that even engines running at speeds as high as 1,000 rpm provide enough time for complete combustion. This means that a diesel engine will be able to run on any kind of liquid fuel if designed according to requirements.

Extensive lubricating-oil contamination tests have shown that there is of course an increase of lube-oil contamination when changing from gas oil to lighter intermediate fuels but even bunker fuel of 700 cST viscosity has not given any additional contamination in the upper load range.

If designed and developed according to requirements and equipped with modern fuel processing, medium-speed four-stroke engines are capable of coping with all liquid fuels to be on the market for shipping in the future.



Louis Røvs Hansen
B & W Alpha Diesel

A paper on "Alpha Propulsion Systems Intermediate Fuel Oil Recommendations" was presented by representatives of B&W Alpha Diesel Engines. This paper pointed out that during the past few years the number of B&W Alpha Diesel medium-speed en-

gines operating on intermediate fuels have increased considerably. An earlier paper of B&W Alpha predicted that fuel qualities would deteriorate, resulting in increased demands on diesel engines and on the fuel handling systems, and that fuel prices would continue to rise, making intermediate fuel more attractive. Both of these predictions have come true.

These developments have affected the design of diesel engines, and the safe operation on intermediate fuels is today a main design feature of B&W Alpha Diesel engines.

Also, since that earlier paper, quite a few changes have taken place. The specification of the recommended fuels has been altered, the main idea being not to specify viscosity as this parameter only defines the necessary preheating and has nothing to do with quality. On the other hand, commercially available fuels are identified by their viscosity.

The main problem today with regard to intermediate fuel operation is no longer to make the engine burn the fuel, but to clean the oil before it is injected so as to avoid excessive wear of the engine.

J.F. Chapuy of S.E.M.T. Pielstick spoke on "Heavy Fuels and PA.6 Ship Propulsion Engines." As early as 1953, S.E.M.T., using the alkaline reserves of detergent oils, showed that in spite of having no positive separation between the combustion chamber and the crankcase, medium-speed engines could burn heavy fuel. Thus, the use of lubricating oils with a high total base number has made heavy fuel almost tra-



Jean Francois Chapuy
S.E.M.T. Pielstick

ditional for Pielstick PC type engines since 1960.

However, high-speed engines running at 1,000 to 1,500 rpm generally remained out of the heavy-fuel-burning area, mainly because of fears of difficulties with the injection system and combustion process, and the consequences on engine operation. The PA.6 model, with its rating of 400 bhp per cylinder, was investigated from the beginning to burn high-viscosity residual fuel.

From the start, good results were obtained with a four-cylinder PA.6 test engine running at 1,000 rpm which had aggregated over 10,000 hours by November 1979 on several fuels of 3,500 sec. Redwood No. 1, viscosity of 380 cST at 50°C.

At the present time, over 300 engines of the PA.6 type have been ordered with more than half of them already in service. Sixty-six engines are running in continuous service on heavy fuel (out of 44 as main propulsion units) and have accumulated roughly one million operating hours.

G.A. Lustgarten, Sulzer Brothers Limited, described "Recent Developments on the Sulzer AS25-

Engine." He stated that heavy-fuel operation is economical for a high-speed four-cycle engine like the Sulzer AS25 engine only if certain requirements concerning maintenance and fuel quality as well as its treatment are taken into consideration.



Ernst Yung
Sulzer Diesel

The author also stated that heavy fuel oils with low impurity level (roughly equivalent to intermediate fuel IF 30) allow operation close to the economic optimum, taking into account fuel and maintenance costs, plant availability, etc. Poorer fuel grades can be used economically only under very favorable operating conditions. In general, higher total maintenance costs have to be accepted when burning poor quality heavy fuels.

Further, the fuel treatment and lube-oil filtration are exceptionally important to heavy-fuel operation. Correct layout of the installation is just as decisive as the engine design.

If the specified requirements are met, heavy-fuel operation is an economically attractive solution.



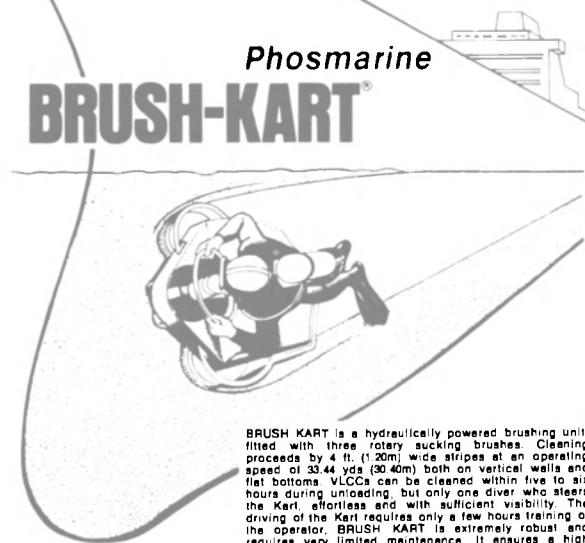
Peter Spock
ACBL

R.P. Spock and J.E. Nivin of American Commercial Barge Line Company, gave an overview of "The ACBL Blended Fuel Program."

In early 1980, the rapidly increasing price of fuel was approaching 50 percent of the operating costs for the ACBL fleet of over 60 vessels. At this point, management decided that it should look seriously at various methods to reduce fuel consumption. As a result of preliminary discussions concerning blended fuels, it was decided to call a meeting to thoroughly discuss the subject with an oil company, engine supplier and shipyard representatives. This meeting was held in June 1980 and included Shell Oil Company, Alco Engine, ACBL and Jeffboat representatives.

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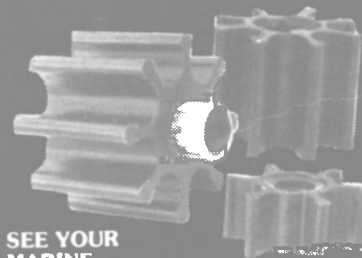


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Jeffboat was to develop a fuel-handling system which could be adapted to the standard 145-foot boat with a minimum of change and make the system flexible enough so that the main fuel tanks could hold 2-D later if the blended fuel was unavailable or the price difference made it uneconomical to use blended fuel.

The final scheme selected basically was: when the vessel is operating on blended fuel, the fuel is drawn from the unheated main bunker and preheated in a sump external to the main tank. From there, the fuel goes directly to the fuel heating package or "HOPS" unit as ACBL refers to it. In the HOPS unit, the fuel is strained and then pumped into the loop by a positive displacement pump. From there it passes through a heat exchanger which utilizes engine jacket water as a heating medium. Following further filtration, the fuel goes through a regulating valve and on to a three-way valve system that is used to select the correct routing of the fuel. Controls built into the system also evolved from this meeting and are designed to provide an automated system.

ACBL is enthusiastic about the benefits to be gained from using blended fuels. They anticipate being able to recover the additional cost per vessel within a year, so thereafter, they will have flexibility to make use of that fuel which provides the most economical operation.

John G. Lynch, Mayank Jain and Deepak Varshney spoke on "Selecting Heavy Fuel Engines—The Operators' Viewpoint." This article is an informal summary on some advantages and disadvantages of heavy-fuel engines. Specifically, the investigation involves tugboats/towboats and the comparison between non-U.S. built medium-speed (500 to 900 rpm) diesel engines of 2,400 hp, operating on heavy fuels, and U.S.-built engines in the same



Mayank Jain
Hannah Inland Marine

range presently on the market, operating on 2-D oil.

While most engine manufacturers claim to be able to operate on bunkers equivalent to No. 6 oil or Bunker "C", in reality there is very little, if any, long-term operating experience involving medium-speed diesels in the lower horsepower range burning bunkers with a viscosity greater than 180 centistokes at 50°C (1,500 sec. RW1 at 100°F). The state-of-the-art for smaller engines seems to be in the intermediate fuel level, IF 60 to IF 80. This is the fuel oil most manufacturers would recommend for continuous duty in towboats or tugs; it also seems to be the economic break-even point between higher capital costs and reduced operating costs.

Whether the dilemma of rising operating costs can be solved totally or partially by utilizing heavy fuel oil can only be answered by each individual owner or operator. An important consideration is that, while heavier fuel oil may be the economic answer to a vessel owner's problem, it will also be the cause of maintenance and engineering problems. It is, however, apparent that increasingly volatile fuel costs will play a more prominent role in the future selection of tugboat and towboat engines.

William Smith, vice-president of Modern Diesel Power, Inc. of New Orleans, La., presented an interesting account of a retrofit performed at Bender Ship Repair

Inc., Mobile, Ala., on the towboat Great America, owned by the Great America Boat Company.

The vessel was fitted with two S.E.M.T. Pielstick engines, model 12VPA6 280, that develop 3,600 bhp each and which were supplied by Modern Diesel Power. Basing his remarks on his experience with the engines and the repowering of the vessel, **Mr. Smith** explained the reasons for vessel design changes and described benefits expected from the first use of the French-built engines on the Mississippi River.

Both Modern Diesel Power and the Great America Boat Company are owned by the Smith family.

Mr. Smith explained the decision to retrofit was made for several reasons. It is faster than constructing a new vessel and provides a practical demonstration of engine performance in actual river operations in a vessel with an existing record of previous performance for comparison.

The engines burn heavy diesel fuel No. 5—approximately 600 Redwood Sec. I—which, **Mr. Smith** contended, along with engine efficiency, will achieve significant savings for the operator, Bunge Towing. The Great America once held the record for barge towing on the Mississippi—moving 62 barges from New Orleans to Cairo, Ill.

The new Pielstick engines will drive 117-inch-diameter stainless-steel propellers in new Kort nozzles through Falk model 3548 reverse/reduction gears at 900 rpm.

In addition to the engine retrofit, other work was done on the towboat. Thought to have a draft problem, it was discovered by Bender Ship Repair officials that the Great America actually had a trim problem that could not be solved with existing tank arrangements. To solve the problem, Bender changed the tanks around completely. In addition, the center of gravity of the vessel was changed with the new



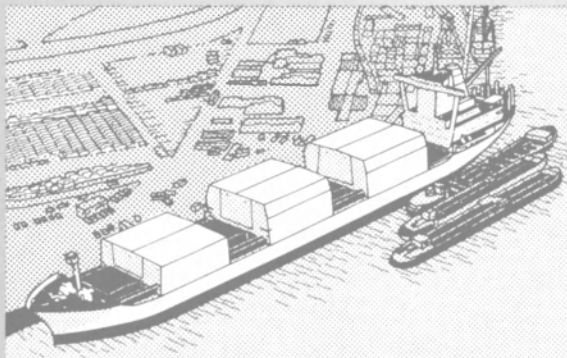
William Smith
Modern Diesel Power

machinery, producing an acceptable draft on the Mississippi River. The towboat has also been fitted with sophisticated monitoring equipment to measure fuel use, engine wear, and vessel efficiency, **Mr. Smith** noted.

For further information and copies of the above presentations, write the appropriate number on the **Reader Service Card**:

ACBL ("The ACBL Blended Fuel Program")—write 50; Alfa-Laval, Inc. ("Recommendations for Pretreatment and Cleaning of Heavy Fuel Oil")—write 51; B&W Alpha Diesel ("Alpha Propulsion Systems Intermediate Fuel Oil Recommendations")—write 52; B&W Diesel ("The Low Speed Diesel and the Future Energy Scenario")—write 53; Bergen Diesel ("Bergen Diesel Engines Operating on Intermediate Fuels")—write 55; Krupp MaK Maschinenbau GmbH ("Prospects of Medium Speed Four-stroke Diesel Engines in View of Future Fuel Problems")—write 56; Mobil Oil Corporation ("Trends in Marine Fuel Quality and Economics That Will Affect U.S. Medium-Speed Diesel Operators")—write 57; Modern Diesel Power (Repowering the Great America)—write 58; S.E.M.T. Pielstick ("Heavy Fuels and PA.6 Ship Propulsion Engines")—write 59; Sulzer Brothers, Ltd. ("Recent Developments on the Sulzer AS25-Engine")—write 60; "Selecting Heavy Fuel Engines—The Operators' Viewpoint" by Messrs Lynch, Jain and Varshney—write 61.

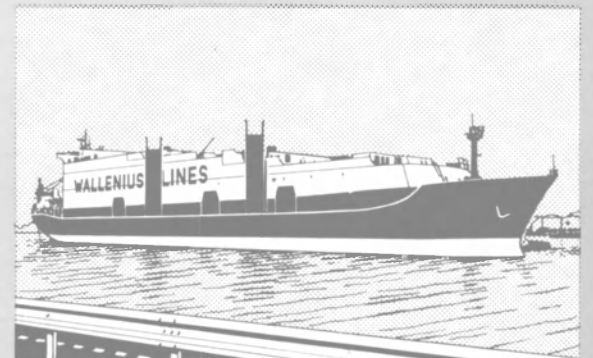
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37th SPI RP/C Conference and Products Showcase '82 Jan. 11-15

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Society of the Plastics Industry, Inc. Sheraton-Washington, D.C. Contact RP/C Conference Administration, The Society of the Plastics Industry, 355 Lexington Ave., New York, N.Y. 10017.

Europipe '82 International Conference Jan. 19-22

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Schweizer Mustermesse exhibition-congress centre, Basle, Switzerland. Contact: Access Exhibitions Ltd., 62 Vic-

toria St., St. Albans, England AL1 3XT; tel. 0727 63213.

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Hyatt Regency, New Orleans, La. Contact: David Neeb, Assoc. of Diving Contractors, 1799 Stumpf Blvd., Building 7, Suite 4, Gretna, La. 70053. Tel. (504) 362-0074.

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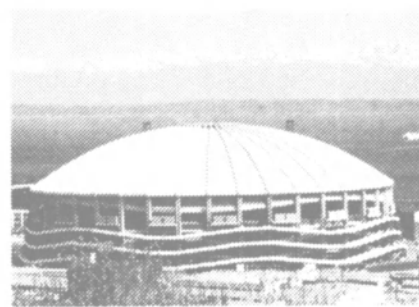
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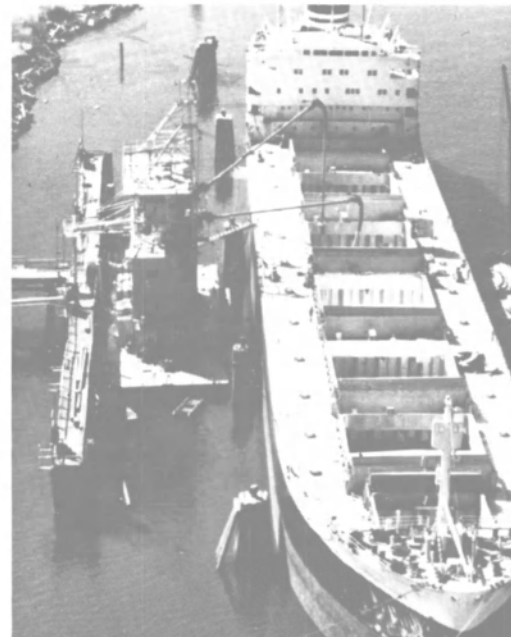
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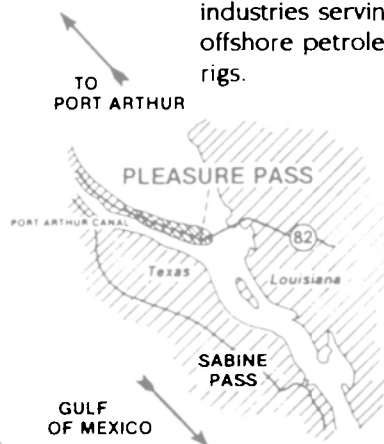
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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES HARBOR DESIGN AND CONSTRUCTION INVITATION TO COMMENT KETCHIKAN VESSEL MAINTENANCE FACILITY PROJECT NO. K61216

The Department of Transportation and Public Facilities, Southeastern Region, is currently developing plans for a Vessel Maintenance Facility at Ketchikan, Alaska, capable of servicing the Alaska Marine Highway Fleet of nine (9) ferries and provide vessel maintenance service to other operators of boats, barges and ships.

The Facility is presently planned to be a sixteen (16) acre vessel maintenance site in Ketchikan, Alaska, with a 6,000 ton capacity 90' x 400' vertical shiplift with end and side tracking capability. Support facilities will include 32,400 S.F. of workshops, 10,800 S.F. machine shop bay, boat sheds and support buildings, and utilities.

At this time, no decision has been reached on how, and by whom, the facility will be operated. One option to receive serious consideration is to operate the facility under lease agreement with private enterprise.

Therefore, the Department is seeking serious expressions of interest from potential lease operators who may then be given an opportunity to make comments on plans, layouts, and equipment lists as they are developed but prior to final construction or purchase.

Responses to this inquiry will not constitute a basis for selection of an operator, but rather, will assist the State in developing the most workable facility possible and in determining the capabilities and extent of interest by potential lease operators.

Responses should be made in writing and should include a brief narrative of your company ship repair experience and capability as well as your interest in potentially committing your resources to such an endeavor. This is not a request for specific proposals.

Direct correspondence to:

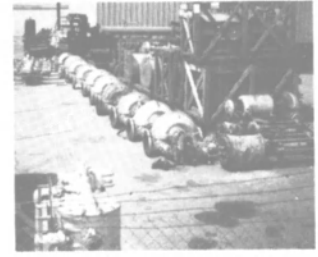
Department of Transportation & Public Facilities
802 3RD Street
Room 215, Island Center Building, Douglas, Alaska
Harbor Design & Construction
Pouch Z, Juneau, Alaska 99811
Attn: Harold Moeser, P.E., Project Manager

Robert W. Ward
Commissioner
Department of Transportation
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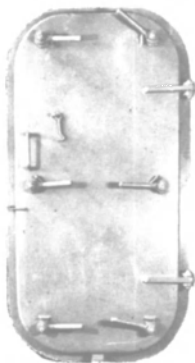
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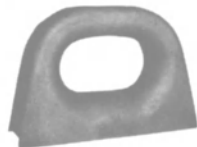
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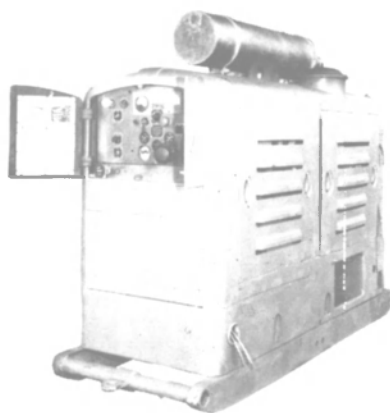
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NEW — UNUSED 4-ROLLER TYPE UNIVERSAL SHIPBOARD FAIRLEADS

Opening between vertical rollers 10" — between horizontal rollers 4". Roller size 7 1/2" — pin size 2 1/2". Rollers 24" long. Extended legs for welding to deck. All are 18 1/4" x 33 1/2" at top angled to 44" x 46 1/2" at bottom. 7/8" Steel. Rollers have grease fittings. Plans available on request. SUITABLE FOR VESSELS UP TO 200,000 TONS. WIRE SIZE UP TO 5" CIRCUMFERENCE OR 95 TONS, NORMAL BREAKING STRENGTH. MAXIMUM LEAD 80°.

6 ROLLER TYPE

MOORING FAIRLEADS

WITH 12" CLEAR OPENING



\$2750

4 Vertical rollers — 5 1/2" diameter—2 horizontal rollers—5 1/2" diameter, split to enable working from either end of fairlead. Steel sideframe 5/16"—top & bottom 1". Handles 1 1/2" wire easily—up to maximum lead 80°.

THE BOSTON METALS COMPANY

313 E. Baltimore St. Baltimore, Md. 21202
Marine Warehouse (301) 752-1077
TWX: 710-234-1637

CROUSE HINDS 1000 WATT FLOODLIGHTS

IN STOCK

NEW — UNUSED

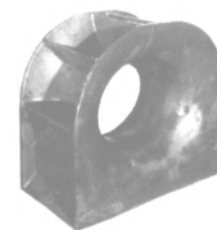


HEAVY DUTY CAST ALUMINUM marine floodlights—series 48116—ADE 16. U.L. Marine listing 595—also USCG accepted. Mogul base —will handle 1000 watt incandescent or clear metal Halide bulb. Corrosion-resistant—hinged door.

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EXTRA HEAVY DUTY EXTRA LARGE PANAMA CHOCKS



Clear opening 16" X 20" — 10" Radius. 36 1/2" High — 40 1/2" long.

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THE DIESEL DEAL OF THE YEAR!

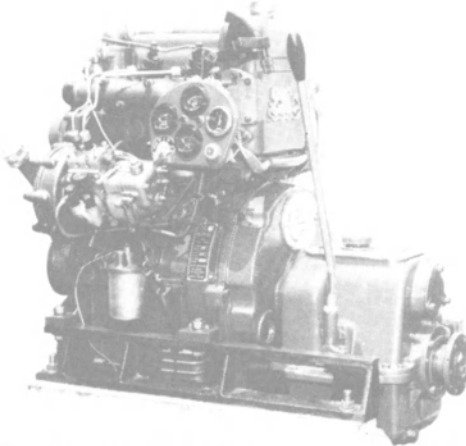
20 HP Marine Diesel Engine

Complete with 2.1:1 Gear, 2 Batteries, Tools and Maintenance Spare Parts

SPECIAL INTRODUCTORY PRICE
\$1749
F.O.B. BALTIMORE

OUR SERIES 90

perfect for powering small pleasure, fishing and commercial boats, auxiliary engine use, etc.



CHECK THE SPECS!

- | | | | |
|--|----------|---|---------|
| • Cylinders | 2 | • 12-Hr. SHP output rating | 18.4 HP |
| • Max. rated HP | 20 | • Approx. speed of output shaft at rated RPM: | |
| • Rated RPM | 2000 | Forward | 712 |
| • Fuel Consumption at rated output approx. | 2 gal/hr | Reverse | 735 |
| • Rotation: Clockwise when running forward and viewed from output end of shaft | | | |

FACTORY

NEW — IN CRATES — AND COMPLETE WITH INSTRUCTION BOOK, PARTS LIST AND PERFORMANCE CURVES

Precision made and beautifully crafted, our series 90 marine diesel is a rugged power plant. Versatile, compact and dependable, it's an exceptional engine. At 880 lbs (400Kg) it's a surprisingly

light high-speed 2-cyl. 4-cycle diesel. Water-cooled with a non-ferrous heat exchanger and sea water pump, it's equipped with reverse reduction gear box.

While possible from our warehouse inventory, we offer

IMMEDIATE DELIVERY

We are your Direct Factory Outlet nearest to Gulf and Florida Ports

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WAREHOUSE (301) 752-1077

Baltimore, Md. 21202 U.S.A.

LOUIS-ALLIS M.G. SETS

2.5 KW 120 Volt Single Phase 60 Cycle Output
120 Volt D.C. Input — 1800 RPM
NEW - UNUSED EX - U.S.N.



2½ KW—115 volts single phase A.C. output. GENERATOR: Type GNA—class 1G— Frame 28A—Form A—1800 RPM—5 KVA—2.5 KW 115 volts AC— 60 cycle —50% PF—43.4 amps. MOTOR: Louis Allis—Type GNA—Class E—Frame 25A—Form A—1800 RPM—115 volts DC—32 amps—shunt wound (with attached Ward-Leonard frequency regulator). Some control panels available.

CAN FURNISH WITH 230 VOLT DC INPUT

THE BOSTON METALS COMPANY

Marine Warehouse (301) 752-1077
313 E. Baltimore St. Baltimore, Md. 21202
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NEW — UNUSED 32' ALUMINUM ACCOMMODATION LADDERS



Mfg. by Ramp Master. With 24" wide treaded aluminum steps. Self-feathering — with lower platform and safety rails. (Turntables not available.) New from factory, ladder only would be approximately \$10,500 and lower platform \$450.

OUR PRICE \$4995 (New turntables cost about \$3300)

THE BOSTON METALS COMPANY

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TWX: 710-234-1637

Four New Branch Managers Appointed At M. Rosenblatt

Lester Rosenblatt, president and chairman of the board of M. Rosenblatt & Son, Inc., one of the nation's largest independent naval architectural and marine engineering firms, recently announced the appointment of four new branch managers.

Amos Baki has been promoted to assistant vice president and has assumed the management of the Washington, D.C., area branch. He has 14 years of experience in naval architecture, marine economics, marine engineering, and computer-aided ship design. The Washington branch has a staff of over 100 persons working in the areas of conceptual, feasibility, contract, and detail design tasks and research.



Amos Baki



Alan H. Donkin

Alan H. Donkin has assumed the management of the Hingham, Mass. branch. Mr. Donkin has had over 34 years' experience in the marine field, including design supervision of hull arrangements, preliminary design, hull design, assistant chief hull and structural design, and as a shipyard program manager for a class of Navy replenishment oilers.



Edward J. Stock



Anthony Tortora

Edward J. Stock has been appointed manager of the Newport News branch. Prior to joining M. Rosenblatt & Son, Inc. as a senior project engineer in 1965, Mr. Stock spent over 20 years in the U.S. Navy. His experience includes assignments as supervisor of shipbuilding office, New York, manager of a repair yard in Key West, Fla., assistant project manager, Bureau of Ships, production superintendent, Charleston Naval Shipyard, and chief engineer of a Navy destroyer. His civilian experience includes project engineer for all Navy collection, holding and transfer systems, program manager for design of a U.S. submarine tender, and a military hydrofoil.

Anthony Tortora has assumed the management of the Jacksonville office. Mr. Tortora served in the U.S. Navy for over 26 years. His tours of duty included supervisor of shipbuilding conversion and repair, Brooklyn, N.Y.; force maintenance officer, Atlantic Fleet; repair officer, Boston Naval Shipyard; design superintendent, New York Naval Shipyard; and chief engineer on a carrier and an oiler. His prior duties at M. Rosenblatt & Son, Inc. were as senior project engineer in New York.

- Navidyne Corp., 11824 Fishing Point Drive, Newport News, VA 23606
- North American Philips Communication Corp., 55 Knights Bridge Road, Piscataway, NJ 08854
- RCA Service Co., Building 204-2, Camden, N.J. 08101
- Racal-Decca Marine, Inc., P.O. Box G, #1 Commerce Blvd., Palm Coast, FL 32037
- Racal-Decca Marine, Inc., 4200 23rd Avenue West, Seattle, WA 98199
- Radar Devices, Inc., 2955 Merced Street, San Leandro, CA 94577
- Raytheon Marine Co., 676 Island Pond Road, Manchester, N.H. 03103
- Raytheon Ocean Systems Company, Westminster Park, Risho Avenue, East Providence, RI 02914
- Raytheon Service Co., 103 Roesler Rd., Glen Burnie, MD 21061
- Simrad Inc., 1 Labriola Court, Armonk, N.Y. 10504
- Southern Marine Research, Inc., 1401 N.W. 89th Court, Miami, FL 33172
- Tracor, Inc., Industrial Products Div., 6500 Tracor Lane, Austin, Texas 78721
- OILS—Marine—Additives**
- B. P. Marine North America Trading, Plaza 9, 900 Route 9, Woodbridge, NJ 07095
- 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
- Houston Marine Services, Inc., 505 Atrium One, 11811 1-10 East, Houston, TX 77029
- Shell Oil Co., 1 Shell Plaza, Houston, Texas 77002
- 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**
- Alfa-Laval, Inc., 2115 Linwood Avenue, Ft. Lee, NJ 07024
- Butterworth Systems Inc., 224 Park Ave., Florham Park, N.J. 07932
- National Marine Service, Inc., 1750 Brentwood Blvd., St. Louis, MO 63144
- Sigma Treatment Systems, Merry Meadows, RD 1 Box 70, Chester Springs, PA 19425
- PAINTS—COATINGS—CORROSION CONTROL**
- American Abrasive Metals, 460 Coit Street, Irvington, NJ 07111
- Ameron, 4700 Ramona Blvd., Monterey Park, CA 91754
- "CONSOL" manufactured by Hanline Bros., Inc., 1400 Warner St., Baltimore, MD 21230
- Devoe Marine Coatings Co., P.O. Box 7600 Louisville, KY 40207
- E.I. Dupont de Nemours & Co., Inc., Nemours Bldg. Rm. N-2504-2, Wilmington, DE 19898
- Eureka Chemical Company, 234 Lawrence Ave., So. San Francisco, CA 94080
- Henkel Corporation, 4620 West 77th Street, Minneapolis, MN 55435
- International Paint Co., 17 Battery Place North, Suite 1150, New York, N.Y. 10004
- Jotun-Baltimore Copper Paint Co., 840 Key Highway, Baltimore, MD 21230
- Mobay Chemical Corporation, Plastics & Coatings Div., Pittsburgh, PA 15205
- Mobil Chemical Co., Maintenance & Marine Coatings Dept., P.O. Box 250, Edison, N.J. 08817
- Palmer Products Inc., P.O. Box 8, Worcester, PA 19490
- Selby, Battersby & Company, 5220 Whiby Avenue, Philadelphia, PA 19143
- PETROLEUM SUPPLIES**
- Houston Marine Services, Inc., 505 Atrium One, 11811 1-10 East, Houston, TX 77029
- Shell Oil Co., 1 Shell Plaza, Houston, Texas 77002
- PIPE-HOSE—Cargo Transfer, Clamps, Couplings, Coatings**
- Camlock Flange Sales Corp., 449 Sheridan Blvd., Inwood, L.I., N.Y. 11696
- CUNICO Corp., Cooney Pipe & Copper Works Div., 214 N. Hawaiian Ave., Wilmington, CA 90748
- Hydro-Craft, Inc., 4223 Edgeland, Royal Oak, Mich. 48073
- Kubota Ltd., 2-47, Shikit Suhigashi 1-Chome, Naniwa-Ku, Osaka 556-91, Japan
- Penco Division/Hudson Engineering Co., 1114 Clinton St., Hoboken, N.J. 07030
- Sanchem, Inc., 1600 South Canal Street, Chicago, IL 60616
- Tioga Pipe & Supply Company, 2450 Wheatshaf Lane, Philadelphia, PA 19137
- PLAQUES—BRONZE—ALUMINUM**
- Duramax Metals, Inc., 2401 Wesley Street, Portsmouth, VA 23707
- PLASTICS—Marine Applications**
- Hubeva Marine Plastics, Inc., 390 Hamilton Ave., Bklyn, N.Y. 11231
- PROPULSION EQUIPMENT—Bowthrusters, Diesel Engines, Gears, Propellers, Shafts, Turbines**
- Alca Power Inc., 100 Orchard St., Auburn, N.Y. 13021
- Armo Steel/Advanced Materials Div., 703 Curtis St., Middletown, OH 45043
- Avondale Shipyards, Inc., P.O. Box 52080, New Orleans, La. 70150
- Bird Johnson Company, 110 Norfolk St., Walpole, Mass. 02081
- Burmeister & Wain Alpha Diesel AS, DK-1400 Copenhagen K, Denmark
- Centrico, Inc., 100 Fairway Court, Northvale, NJ 07647
- Colt Industries' Fairbanks Morse Engine Division, Beloit, Wisc. 53511
- Combustion Engineering, Inc., Windsor, Connecticut 06095
- General Electric Co., Diesel Power Products, 2901 E. Lake Rd., Erie, PA 16531
- Kawasaki Heavy Industries, Ltd., 2-4-1 Hamamtsu-cho, Minato-ku, Tokyo, Japan
- Krupp Mak Diesels, Inc., 9701 West Higgins Road, Rosemont, IL 60018
- MTU of North America, Inc., 10450 Corporate Drive, Sugar Land, TX 77478
- Maritime Industries, Ltd., 6307 Laurel St., Burnaby, B.C. Canada V5B 3B3
- Michigan Wheel, 1501 Buchanan Ave., S.W., Grand Rapids, MI 49507
- Omnithruster Inc., 15418 Cornet Ave., Santa Fe Springs, CA 90670
- Oosterhuis Industries, Inc. (Marine Engineering, Inc.), P.O. Box 30587, New Orleans, LA 70190
- P.J. Plishner Marine, 2 Lake Avenue Ext., Danbury, CT 06810
- Port Electric Turbine Div., 155-157 Perry St., New York, N.Y. 10014
- Propulsion Systems Inc., 21213 76th Ave., So., Kent, WA 98031
- Schottel of America, Inc., 8375 N.W. 56 Street, Miami, Fla. 33166
- Skinner Engine Company, P.O. Box 1149, Erie, PA 16512
- Steamco Corporation, 1020 East 8th Street, Jacksonville, FL 32206
- Tacoma Boat Co./Escher Wyss, 1840 Marine View Dr., Tacoma, WA 98422
- Transamerica DeLaval Inc., Engine & Compressor Div., 550 85th Ave., Oakland, CA 94621
- Transamerica DeLaval, Inc., Turbine & Compressor Div., P.O. Box 8788, Trenton, N.J. 08650
- Turbine Specialties, Inc., P. O. Box 207, West State Street Road, Salina, KS 67401
- Voith Schneider of America—U.S. Agent: Eli Sharprut, 347 Evelyn St., Paramis, N.J. 07652
- Waukesha Engine Division, Waukesha, WI 53187
- PUMPS—Repairs—Drives**
- Barco Corporation, 16 Bahama Circle, Tampa, FL 36606
- Penco Division/Hudson Engineering Co., 1114 Clinton St., Hoboken, N.J. 07030
- Transamerica DeLaval, IMO Pump Division, P.O. Box 447, Monroe, NC 28110
- Worthington Group-McGraw Edison Co., 270 Sheffield Street, Mountainside, NJ 07092
- REFRIGERATION—Refrigerant Valves**
- Bailey Refrigeration Co., Inc., 74 Sullivan St., Brooklyn, N.Y. 11231
- Port Refrigeration Div., 157 Perry Street, New York, N.Y. 10014
- ROPE—Manila—Nylon—Hawsers—Fibers**
- American Mfg. Co., Inc., Willow Avenue, Honesdale, Pa. 18431
- Atlantic Cordage Corp., 60 Grant Avenue, Carteret, NJ 07008
- Samson Ocean Systems, Inc., 99 High Street, Boston, Mass. 02110
- 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
- Modular Systems, 164 Franklin Avenue, Rockaway, NJ 07866
- SAFETY EQUIPMENT**
- ACR Electronics, Inc., 3901 North 29th Avenue, Hollywood, FL 33020
- Datrex, 3795 N.W. 25th Street, Miami, FL 33142
- SANITATION DEVICES—Pollution Control**
- American United Marine Corp., 575 Madison Avenue, New York, NY 10022
- Argo Marine Pollution Systems Division, 140 Franklin St., New York, N.Y. 10013
- Chapman Engineers (Omnipure Division), 6101 Southwest Freeway, Suite 100, Houston, TX 77057
- Effluent Technology Corporation, P.O. Box 2094, Tacoma, WA 98401
- Envirovac (Division of Dometic Inc.), 1260 Turret Drive, Rockford, IL 61111
- 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
- St. Louis Ship FAST Sewage Systems, 611 East Marceau St., St. Louis, Mo. 63111
- Somat Corporation, Pomeroy, PA 19367
- SCAFFOLDING EQUIPMENT—Work Platforms**
- Patent Scaffolding Co., 2125 Center Ave., Fort Lee, N.J. 07024
- SHACKLES**
- West Footsray Engineering Works P/L, 52 Cross Street, West Footsray, Melbourne, Victoria, 30 12, Australia
- SHAFT SEALS, REVOLUTION INDICATOR EQUIPMENT**
- Bird-Johnson Co., 100 Norfolk St., Walpole, MA 02081
- 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
- SHIPBREAKING—Salvage**
- The Boston Metals Co., 313 E. Baltimore St., Baltimore, Md. 21202
- Zidell 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**
- A.D.M. (Amsterdam Drydock Mfg.), Moatschappij bv, P.O. Box 3006, 1003 AA, Amsterdam, Holland
- AMT, Inc., 2400 N.W. 39th Avenue, Miami, FL 33142
- Asmar Shipyards Co., Astilleros y Maestranzas de la Armada, Prat 856, Piso 14, Casilla 150-V, Valpariso, Chile, S.A.
- Astilleros Espanoles S.A., 17 Padilla, P.O. Box 815, Madrid, Spain
- Astilleros Unidos de Veracruz, S.A., San Juan de Ulua S/N, Apdo. Postal 647, Veracruz, Ver., Mexico
- Atlantic Marine Inc., P.O. Box 138 Ft. George Island, Jacksonville, FL 32226
- Avondale Shipyards, Inc., P.O. Box 52080, New Orleans, La. 70150
- Bay Shipbuilding Corporation, 605 North Third Avenue, Sturgeon Bay, WI 54235
- Bender Shipbuilding & Repair, P.O. Box 42, Mobile, AL 36601
- Bergeron Industries Inc., P.O. Box 38, St. Bernard, La. 70085
- Bethlehem Steel Corp., One State Street Plaza, N.Y. 10004
- Blum & Voss Company, 55 Morris Avenue, Springfield, NJ 07081
- Bludworth Bond Shipyards Inc., P.O. Box 5065, Houston, TX 77012
- Boeing Marine Systems, P.O. Box 3707, Mail Stop 14-11, Seattle, WA 98124
- Cantiere Navali Riuniti, Via Cipro, 11, 16100 Genova, Italy
- Carrington Slipways Pty, Ltd., Old Punt Road, Tomago, N.S.W., Australia 2322
- Centromar, One World Trade Center, Suite 3557, New York, N.Y. 10048
- China Shipbuilding Corp., c/o Allegro Transportation Supply Co., One Penn Plaza, Room 1606, New York, NY 10119
- Conrad Industries, P.O. Box 790, Morgan City, La. 70380
- Curacao Drydock Company Inc., 26 Broadway, Suite 741, New York, NY 10004
- Dorbyl Ltd., Military Road, 1 Industrial Sites, West Bank, 5201 East London Republic of South Africa
- Dravo Steelship Corp., R.4, Box 167, Pine Bluff, Ark. 71602
- FMC Corp., Marine & Rail Equipment Div., 4700 N.W. Front Ave., Portland, Oregon 97208
- Galveston Shipbuilding Co., P.O. Drawer 2660, Galveston, TX 77553
- HBC Barge, Inc., Grant Building, Pittsburgh, PA 15219
- Halifax Industries Ltd., P.O. Box 1477, Halifax, Nova Scotia, Canada, B3K 5H7
- Halter Marine, Inc., P.O. Box 29266, New Orleans, La. 70189
- Havre de Grace, Havre de Grace, Md.
- Hong Kong United Dockyards Ltd., P.O. Box 534, Kowloon Central Post Office, Kowloon, Hong Kong
- Hudson Shipbuilders, Inc., P.O. Box Q, Pascagoula, MS 39567
- Jeffboat, Inc., Jeffersonville, Ind. 47130
- Levingston Shipbuilding, P.O. Box 968, Orange, TX 77630
- Lockheed Shipbuilding and Construction Co., 2929 16th Avenue, S.W., Seattle, Wash. 98134
- McDermott Incorporated, 1010 Common Street, New Orleans, LA 70160
- MacGregor Land & Sea, Inc., 135 Dermody Street, Cranford, NJ 07016
- Marine Fabricators, P.O. Box 246, Green Cove Springs, FL 32043
- Matton Shipyards Co., Inc., P.O. Box 645, Cohoes, New York 12047
- Midland Marine Corporation, One Pennsylvania Plaza, New York, NY 10001
- Misener Industries, Inc., 5353 Tyson Avenue, P.O. Box 13625, Tampa, Fla. 33681
- Monark Boat Co., P.O. Box 210, Monticello, Ark. 71655
- Nashville Bridge Company, P.O. Box 239, Nashville, TN 37202
- National Steel & Shipbuilding Corp., San Diego, Calif. 92112
- Newport News Shipbuilding & Dry Dock Co., 4101 Washington Ave., Newport News, Va. 23607
- O.A.R.N. (Officine Allestimento-Riprazioni Navi), P.O. Box 1395, Genoa, Italy 16100
- Paceco Inc. (a division of Fruehauf), West Seaway Access Road, Gulfport, MS 39501
- Pearlson Engineering Co., P.O. Box 8, Kendall Branch, Miami, Fla. 33156
- Port Allen Marine Service, Inc., P.O. Box 108, Port Allen, LA 70767
- Progressive Shipbuilders & Fabricators, Inc., P.O. Box 9130, Houma, LA 70361
- Promet (PTE) Ltd., 27 Pandam Rd., Jurong Industrial Estate, Singapore 22
- Puerto Rico Drydock & Marine Terminals, Inc., P.O. Box 2209, San Juan, Puerto Rico 00903
- St. Louis Shipbuilding—Federal Barge, Inc., 611 East Marceau, St. Louis, Mo. 63111
- Savannah Shipyard Co., P.O. Box 787, Savannah, GA 31402
- Southwest Marine, Inc., P.O. Box 13308, San Diego, Ca 92113
- Sudoimport, 5 Kalyaevskaya, Moscow K-6, USSR
- Sun Ship Inc., Chester, PA 19013
- Swiftships Inc., P.O. Box 1908, Morgan City, LA 70380
- Tacoma Boatbuilding Co., Inc., 1840 Marine View Drive, Tacoma, WA 98422
- Tandanor (Piacentini), Antartida Argentina 555 Darsena Norte, (1104) Buenos Aires-Republica Argentina
- Thomas Marine Inc., 37 Bransford Street, Patchogue, NY 11772
- 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, N5201 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
- West Coast Salvage And Contracting, 2150 East Kent Avenue, Vancouver, B.C. V5P 2T2
- SHIPPING—PACKING**
- Candia Shipping (USA) Inc., One World Trade Center, Suite 1611, New York, NY 10048
- Crane Packing Co., 435 Regina Drive, Clarksburg, MD 20734
- 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
- SURVEYS AND CONSULTANTS**
- Francis B. Crocco, Inc., P.O. Box 1411, San Juan, Puerto Rico 00903
- 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
- Environmental Chemicals, Inc., 487 Division Street, Boonton, NJ 07005
- Penco Division/Hudson Engineering Co., 1114 Clinton St., Hoboken, N.J. 07030
- Salwico, Inc., 5 Marine View Plaza, Hoboken, NJ 07030
- TANK LEVELING INDICATORS**
- Transamerica DeLaval, Inc., Gems Sensors Division, Cowles Road, Plainville, CT 06062
- Vitronics, P.O. Box 42305, Houston, TX 77042
- Vu-Gage System, 150 E. 42nd St. (Room 910), New York, NY 10017
- TERMINALS—Oil-Transfer**
- Caicos Petroleum Services Div., Federal Chicago Corp., 2222 North Elston Avenue, Chicago, IL 60614
- TOWING—Barges, Vessel Chartering, Lighterage, Salvage, etc.**
- Bay-Houston Towing Co., 805 World Trade Bldg., Houston, Texas 77002
- Chatin Transportation, Inc., 580 Walnut St., Cincinnati, Ohio 45202
- Curtis Bay Towing Co., Mercantile Bldg., Baltimore, Md. 21202
- Henry Gillan's Sons Lighterage, 21 West Main St., Oyster Bay, N.Y. 11771
- Great Lakes Towing Company, 1800 Terminal Tower, Cleveland, OH 44113
- James Hughes, Inc., 17 Battery Pl., New York, N.Y. 10004
- 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
- Ocean Salvors Company, One World Trade Center, New York, NY 10048
- Smit International (Americas) Inc., 17 Battery Place, New York, NY 10004
- Suderman & Young Co., Inc., 918 World Trade Bldg., Houston, Texas 77002
- Turecamo Coastal & Harbor Towing Corp., One Edgewater St., Clifton, Staten Island, N.Y. 10305
- TRAINING SERVICES—Simulator**
- Ship Analytics, Park Circle, Centerport, NY 11721
- VALVES AND FITTINGS**
- American United Marine, 575 Madison Avenue, New York, NY 10022
- Dover Corporation, Narris Division, P.O. Box 1739, Tulsa, OK 74101
- Hayward Marine Products, 900 Fairmount Avenue, Elizabeth, NJ 07207
- Marine Moisture Control Co., 449 Sheridan Blvd., Inwood, N.Y. 11696
- Marland Environmental Systems Inc., N. Main St., Walworth, WI 53184
- Parker-Hannifin Corporation, 17325 Euclid Avenue, Cleveland, OH 44112
- 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
- Zidell Explorations, Inc. (Valve Division), 3121 S.W. Moody Avenue, Portland, OR 97201
- WATER PURIFIERS**
- Everpure, Inc., 660 N. Blackhawk Dr., Westmont, IL 60559
- Specific Equipment Company, P.O. Box 55626, Houston, TX 77055
- WINCHES AND FAIRLEADERS**
- Markey Machinery Co., 79 South Horton St., Seattle, Washington 98134
- Smith-Berger Manufacturing Corporation, 3236 16th Avenue S.W., Seattle, WA 98134
- Superior-Lidgerwood-Mundy Corp., 1101 John Avenue, Superior, WI 54880
- WINDOWS**
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- 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 Oliver 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
- A.L. Don Company, Foot of Dock Street, Matawan, NJ 07747
- ZINC**
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Dais guests at the ASNE Long Beach-Greater Los Angeles Section meeting were, left to right: Capt. Richard Thomas, USN; Lt. Richard D. Hepburn, USN; Mrs. Debbie Hepburn; Mrs. Sally Skolnick; Capt. J.A. Gildea, USN, section chairman; Capt. Alfred Skolnick, USN, speaker; John E. Marriner; Craig Smith; Phil Finkelstein; Mrs. Verna Finkelstein.

Report On Laser Technology Made To ASNE Long-Beach-Greater L.A. Section

The first meeting of the 1981-82 year for the Long Beach-Greater Los Angeles Section of ASNE was held recently at the Los Alamitos Armed Forces Reserve Center Officers Club. Following dinner, Capt. J.A. Gildea, USN, chairman, welcomed the 57 members and guests.

Chairman Gildea next introduced the speaker for the evening, Capt. Alfred Skolnick, USN, whose topic was "Laser Development and Application to the U.S. Navy." Captain Skolnick is project manager of High Energy

Lasers, P.M. 22, of the Naval Sea Systems Command.

Captain Skolnick's presentation covered the Navy's application of high-energy lasers. He reviewed the laser research and development programs of all of the branches of the military with a look at the manning effort and costs of each, rating the Air Force, Navy and Army in that order.

He interspersed his talk with color slides of some of the developmental work done at TRW's Mission Viejo facility and cited

the lasers' ability to shoot down a towed missile that was only 6 inches in diameter and 6 feet long. He explained that the focused energy of the laser beam melted the outer dome cap of the missile and the molten metal shorted out the fuse, thus exploding the missile. He said that there is currently under development a laser which uses a chemical reaction to create a high-energy pulse that can be focused on a target by means of mirrors. Since the laser is used to burn or melt the metal of the target vehicle, the power of the laser beam must be increased as the thickness of the metal it is to attack increases.

On ships or other vehicles having plating in excess of half an inch, present lasers would merely burn off the paint and do little or no damage to the metal. Also, he pointed out, laser beams are attenuated by atmospheric conditions such as fog, rain, and clouds and thus have rather severe limitations in low altitude combat applications. However, he noted, laser beams in outer space or in upper atmosphere can be very effective since vacuum is very beneficial to laser beam range and intensity.

While much of the laser development is highly classified, Captain Skolnick said that the Russians are spending tremendous amounts of resources in research and development of the subject. The U.S. Navy is currently building a test facility at White Sands Proving Grounds, New Mexico, to



Mrs. Sally Skolnick, representing ASNE National Headquarters, speaking to the September 17, 1981 meeting of the Long Beach-Greater Los Angeles Section of ASNE.

further research and develop laser techniques and applications.

Captain Skolnick's presentation of the unclassified elements of a very sophisticated area of current technology held the attention of the audience for almost an hour, and he further enlightened them in the ensuing question and answer session which followed.

Award \$7-Million Overhaul Contract For USS St. Louis To Triple A. South

Triple A. South, San Diego, Calif., has been awarded a \$7,000,000 formerly advertised firm-fixed price contract for the regularly scheduled overhaul of the USS St. Louis (LKA-116). Work will be performed in San Diego. The Naval Sea Systems Command is the contracting activity. (N62-791-74-C-0030)

Krupp Atlas Names Bligh East Coast Regional Mgr.



Paul H. Bligh

It has been announced by Krupp Atlas Elektronik that Paul H. Bligh will be their new East Coast regional manager, headquartered in Jersey City, N.J. His duties will include coordinating all dealer activities as well as direct sales for all the Atlas products.

Most recently Mr. Bligh was employed by Racal-Decca in Florida in several operations and sales positions. His most recent position for Racal was the sales administration manager.

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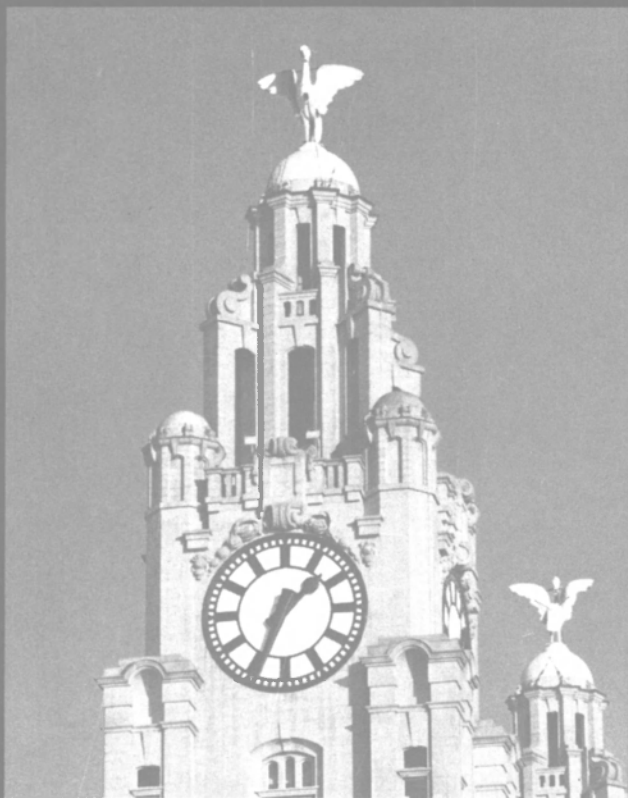


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