

MARITIME REPORTER AND ENGINEERING NEWS



M/S White Nile

**B&W Delivers First Of Two
Hamlet Multi-Flex Ships
For Sudan Shipping Line**

(SEE PAGE 12)

MARCH 15, 1980

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* Based on DuPont Technical Bulletin No. 204 (revised)



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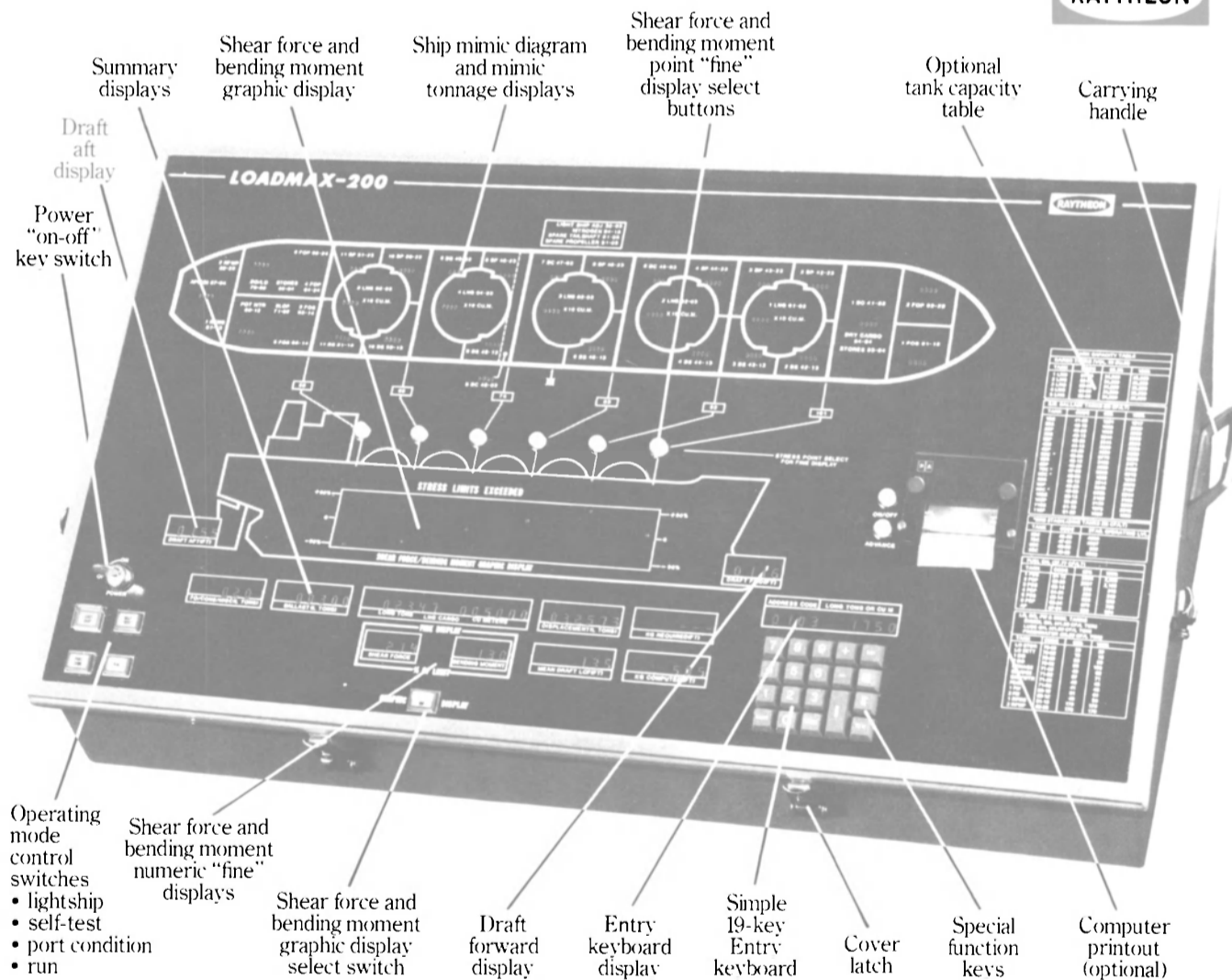
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Title XI Sought For 3 Tug-Supply Ships Costing \$10.5 Million

Point Express, Ltd., P.O. Drawer 2120, Morgan City, La. 70380, has applied for a Title XI guarantee to aid in financing the construction of three tug/supply vessels.

The 191-foot, 4,000-horsepower vessels will be operated primarily in the Gulf of Mexico. The proposed shipbuilder is Halter Marine, Inc. of New Orleans, La., and the vessels are expected to be delivered on December 1, 1980, March 15, 1981, and June 15, 1981.

If approved, the Title XI guarantee would cover \$9,187,000 of the total actual cost of \$10,500,000.

Shipcare 80 To Be Held April 21-25 In Lisbon

April 21-25 are the dates set for the 1980 Shipcare Seminar and Exhibition at the Ritz Hotel in Lisbon, Portugal.

The theme of "Shipcare" is "Towards the cost-effective operation, maintenance and repair of ships," and it affects all sectors of ship operation and repair—ship operators, repairers, classification societies, engine builders, service companies and suppliers.

Shipcare 80 is sponsored by the ship repair group of the Association of West European Shipbuilders and by the Portuguese Society of Naval Architects and Marine Engineers. The organizer is Intec Press, Ltd. of London.

Further information is available from M. Randolph Long, 310 East 46th Street, New York, N.Y. 10017, phone (212) 697-4893.

\$9.4-Million Navy Contract Awarded Coastal Drydock And Repair

Coastal Drydock and Repair Corporation, Brooklyn, N.Y., is being awarded a \$9,400,005 formally advertised firm fixed price contract for the regularly scheduled overhaul of the USS Bowen (FF-1079). The Supervisor of Shipbuilding, Conversion and Repair, USN, Brooklyn, is the contracting activity. (N62794-70-C-0010)

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**New Container Cranes
For Port Of Oakland
Expansion Program**

The Port of Oakland, Calif., has prepared plans for the construction and installation of container cranes at the Charles P. Howard Container Terminal now under construction in the Oakland Inner Harbor near Jack London Square.

The Oakland board of port commissioners recently approved a proposal to advertise for bids for the equipment, calling for alternative bids for the supply of two cranes and three cranes. The bids are to be opened in late March or April 1980.

A port official said that the use of two cranes would minimize the turnaround time

of vessels in port. A third crane would permit simultaneous operations of both berths at the terminal, as well as providing backup capability in case of a mechanical breakdown of one crane.

The new Charles P. Howard Container Terminal is being built on the site of the Grove/Market Street conventional cargo facility. The 43-acre terminal will be built in two phases—24 acres and 19 acres—and will have two berths served by the container cranes.

**Etela-Soumen Laiva Receives
New Bulk Carrier From Wartsila**

Etela-Soumen Laiva Oy, which belongs to the Aspo-concern, received the 15-knot,



The 179-meter by 25.7-meter by 10.5-meter (about 587-foot by 84-foot by 34-foot) bulk carrier M/S Kontula is powered by a Wartsila-Sulzer 6RND76, 12,850-hp engine. Auxiliary power is provided by three Wartsila Vasa 6R22B, 1,090-hp engines.

31,850-dwt bulk carrier M/S Kontula from Wartsila Turku Shipyards, Finland.

Etela-Soumen Laiva Oy's managing director, Capt. Helge Laitakari, stated that the the M/S Kontula is a bulk carrier for transport of coal, ore, grain and tramp cargo. There are five cargo holds. The cargo handling is carried out with four cranes, which can be changed from either 22-ton grabs for bulk cargo, or 28-ton cargo hooks for other cargo. The vessel's ice strengthening is of the Finnish class 1A.

To reduce pollution, engine room sewage is cleaned before discharging into the sea, while other sewage is collected in holding tanks.

The main diesel engine and the steering gear are Wartsila Turku Shipyard's own production, and the auxiliary diesels are Wartsila Vasa Factory's production. The vessel is equipped with a controllable-pitch propeller and bowthruster.

**Modern Marine Power
Delivers Twin-Screw Tug
Tybee To Atlantic Towing Co.**



The twin-screw tug Tybee (shown above) was delivered recently to Atlantic Towing Company of Savannah, Ga., by her builders, Modern Marine Power of Houma, La.

The vessel is powered by two 16-cylinder 645 E2 main engines, rated at 1,950 horsepower each. She is the most powerful addition to the steadily expanding ATCO fleet. The Tybee was designed by Norman N. DeJong, president of Norman N. DeJong & Associates, Inc., the Jacksonville, Fla.-based naval architectural firm.

The Tybee was designed as a harbor docking tug, and features a large radius bow, a short turning radius hull form, as well as large propellers for high bollard pull. The 103-foot by 33-foot by 18-foot vessel is classed A-1 Ocean Services (AMS) by the American Bureau of Shipping. She carries a complement of captain and eight crew and has a capacity of 63,352 gallons of F.O., 204 long tons of ballast, and carries 10 tons of fresh water.

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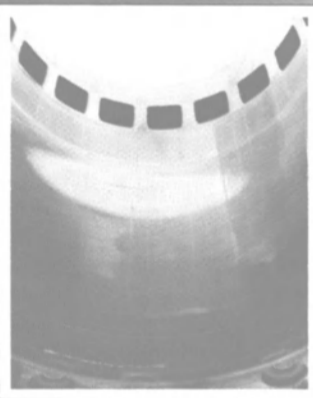
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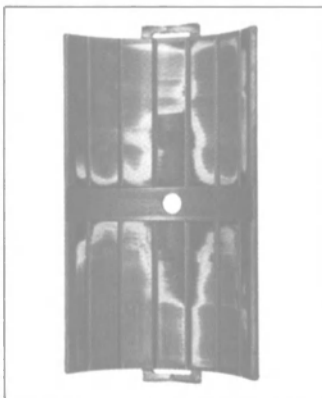
The MV "Mana" does-for Dillingham. Her 12 645 E6 engines, overhauled at 16,753 hours, looked good for many more-on **Caprinus[®] Oil.**



Ring groove fill normal. Number 3 and 4 lands clean.



Liner shows little wear. Honing marks still visible.



Silver trunnion bearing shows normal wear of lead flashing.



Valve deck illustrates cleanliness typical of both engines.

During late 1976, the then new MV Mana's engines were filled with high alkalinity *Caprinus** T Oil. Then, in 1978, the switch was made to the even more improved *Caprinus* R Oil. Since 1976 the engines have racked up 16,753 hours before scheduled overhaul — without a *single* power-pack replacement. The consensus? The engines looked good enough for 20,000 hours — probably even longer.

Dillingham Tug & Barge Corporation *needs* reliability — there are no repair stations between the Hawaiian islands and the "mainland" or throughout the South Pacific where they operate. Dillingham Tug & Barge runs a top-notch maintenance program with *Caprinus* R to keep the boats working.

Both engines were exceptionally clean. Top ring side clearance averaged 0.013" and the top rings were rated at 2 to 2A — which means the grooves were visible on the top ring on about half the pistons. Silver trunnion bearings were good. Overall engine reliability as shown by maintenance records was excellent.

Low wear rates were especially evident in the top ring side clearances, ring gap clearances, ring faces, piston ring groove widths (pistons

were reusable without machining for oversize rings), liners and piston skirts. Shell's premium MVI base oil keeps ring groove deposits soft, friable so deposits are worked out by ring action. Rings compress into the grooves and traverse the ports without breaking or chipping. The result is low ring and liner wear rates.

In addition, Dillingham's use of *Caprinus* R in its Fairbanks Morse engines has eliminated the former expensive task of intake and exhaust port cleaning of those engines three times a year.

Caprinus R Oil is Shell's one oil for big medium-speed marine diesels. Its high alkalinity reserve and dispersancy with Shell's premium MVI base oil fight corrosive wear, keep engines clean and deposits soft — so that normal engine operation keeps deposits from building up. It's been proven — in ALCO, EMD and Fairbanks Morse, as well as other engines.

For more information write: Shell Oil Company, Manager, Commercial Communications, One Shell Plaza, Houston, TX 77002.

*Caprinus is a trademark and is used as such in this writing.

Come to 
Shell for answers



M/S White Nile, recently completed by B&W Shipyard for Sudan Shipping.

B&W Shipyard Delivers M/S 'White Nile'

B&W Shipyard, Copenhagen, Denmark, has completed the first of two Hamlet Multi-Flex ships of about 12,600-dwt for Sudan Shipping Line.

The ship was named White Nile, after the river which joins the Blue Nile at the city of Khartoum, and which together continue to the Mediterranean as the river Nile. The christening ceremony was sponsored by **Ismail M. Bakheit**, chairman of Sudan Shipping Line.

Like the other ships of the Hamlet Multi-Flex type, the M/S White Nile has been built to Lloyd's Class + 100 A.1. + LMC, "Strengthened for Containers," and to the usual international conventions and regulations for cargo ships trading worldwide.

As with the first vessels in the Hamlet Multi-Flex series, each of these new ships for Sudan Shipping is propelled by one B&W turbocharged, two-stroke, diesel engine, type 5L55GFC with maximum continuous rating of 6,700 bhp at 150 rpm. The main engine is direct coupled to a four-bladed propeller, and is equipped to use fuel oil with a maximum of 3,500 Sec. Redwood I.

The new vessel is equipped with three generator sets, all powered

longitudinal hinges on the 'tween deck. Hatch covers are reinforced for stowage of containers.

The ship is equipped with a slewing stern ramp for handling of ro/ro cargo.

The cargo gear consists of five electrohydraulic derricks, including two of 12.5 tons with a combined lifting capacity of 25 tons, two of 36 tons with a combined lifting capacity of 72 tons, and one of 18 tons aft. By means of cargo yokes, a combined lifting capacity of 95 tons can be achieved with four cranes working in unison.

The M/S White Nile will accommodate 39 persons. The bridge deck contains a roomy combined wheelhouse and chartroom equipped with the most modern navigational instruments, radio station and cabins for radio officer and pilot. A swimming pool is installed aft of the wheelhouse.

The officers' deck contains living quarters for the captain, chief engineer, and other officers. The captain and chief engineer each has a suite comprising a living room, bedroom and bath.

Crew accommodations are located on one deck. Messes and dayrooms are located on the saloon deck and a hospital is located

Gulf Fleet Marine Adds 95th Vessel To Expanding Offshore Service Fleet

A 95th vessel has recently been added to Gulf Fleet Marine Corporation's growing list of offshore service boats, according to **Richard M. Currence**, president of the New Orleans, La.-based firm.

Gulf Fleet has accepted delivery of the Gulf Fleet No. 37, the largest supply boat ever built by Quality Shipyards, Inc., an affiliated company located in Houma, La.

Mr. Currence said the new vessel has been placed in service in the Gulf of Mexico and is specially equipped with extra large tanks to carry 6,000 cubic feet of bulk mud and 2,000 barrels of liquid mud for the offshore industry.

A sistership is expected to enter service in the near future.

The Gulf Fleet No. 37 measures 205 feet by 42 feet by 17 feet. The vessel's twin 16-645E7 EMD engines developed in excess of 6,100 horsepower and drive the boat at a top speed of 13 knots. The boat is equipped with an Aurora Fire Monitor driven by a 12V71 Detroit Diesel engine, and is capable of projecting 800 gallons of water per minute for a distance of 440 feet. It is also equipped with an Intercontinental DW225 winch with 340,000 pounds of line pull on a 3,000-foot, 2 1/4-inch cable.

The anchor windlass is powered by a 40 horsepower Smatco engine with 2,300 feet of 1 1/2-inch chain. There are two 2,500-pound anchors and an anchor wash-down system.

The vessel carries 186,500 gallons of fuel oil, 1,700 gallons of lube oil, a dirty oil tank of 1,700 gallons, 1,000 gallons of hydraulic oil, 1,000 gallons of gear oil, and 23,850 gallons of potable water.

Steering is provided by a Sperry Universal autopilot, with a Sperry SR130 gyrocompass, located in a forward/aft pilothouse. Emergency steering can also be provided from the engine room.

Electronic equipment includes a Decca 708 Loran C, a SSB Motorola Triton, two Decca 914C radars, a Raytheon F720D depth finder, two Drake MRT55 VHF radiotelephones and company FM

meters in length (90-130 feet), and up to 850 shp.

"The WM255 is particularly well-suited for nations with an expanding fishing industry where trouble-free operation in mid-size multipurpose fishing vessels is important," said **Charles R. Hart**, MARCO vice president.

The WM255 has two independent hydraulic drives, one for each drum. With both drums operating, this dual drive feature permits independent control of hauling speed and line pull on each drum.

A popular feature is the separate MARCO prepped control console that provides hydraulic controls for clutch, brake, speed, and direction of each drum. This console can be placed in any convenient location onboard for more effective operator control.

Two hydraulically powered levelwinds can be positioned for port or starboard purse seining or for trawling. The levelwind follower can be manually disengaged from the carriage to allow free-floating with the wire during payout.

The WM255 has two gypsies which are case hardened for use with wire rope.

Cable capacity for each drum on the WM255 is 3,000 meters (1,650 fathoms) of 16mm (5/8") wire and 2,100 meters (1,150 fathoms) of 19mm (3/4") wire.

For complete literature, write to **Charles R. Hart**, MARCO Manufactured Products Division, 2300 West Commodore Way, Seattle, Wash. 98199.

Norman Meyer Appointed VP Of Sperry Unit

Norman Meyer has been appointed vice president of strategic systems for Sperry Division's Systems Management unit, **Kurt Merl**, vice president and general manager of the unit, has announced.

Mr. Meyer, who had been manager of strategic systems, will be responsible for all aspects of engineering support and production for the Polaris, Poseidon and Trident navigation subsystems.

Mr. Meyer joined Sperry in 1950, and served in various managerial and engineering capacities with Sperry Gyroscope before being named manager for Sperry's lunar orbiter project.



more about each other's problems. Their common objectives should be to learn how to guide a technical program through a political process without losing the technical integrity necessary for success, or violating some of the basic rules of politics, which have their own penalties for failure to comply.

Dr. Tribus discussed the rules that should be followed. To ensure every possibility of success, one should make sure that goals and policy are in place, strategies have been developed, political support has been obtained, a managerial instrument has been devised, communication with bureaucracies has

and Group vice president there in 1974. Since that time, he has been responsible for foreign operations.

I.R. Foster becomes senior vice president and Group executive, McDermott Operating Unit, responsible for Harvey Division, McDermott Shipyards, Mexico, Canada, and the East and West Coasts of the U.S. Mr. Foster joined McDermott in 1957 as a field engineer. Having served as division engineer for the Marine Pipeline Division and the Offshore Division, he became manager of offshore construction in 1965. In 1975, he was named vice president of Oceanic Contractors, and in 1978, Group vice president and

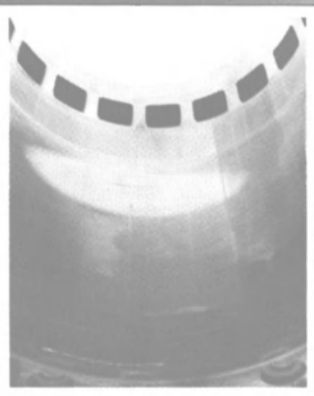
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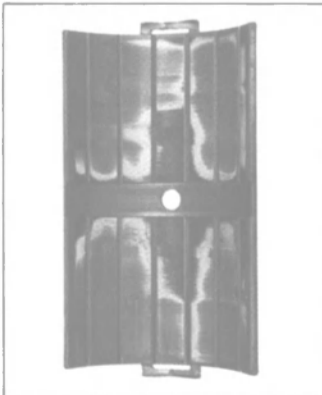
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For more information write: Shell Oil Company, Manager, Commercial Communications, One Shell Plaza, Houston, TX 77002.

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Two Voith Water Tractors For Alexandra Towing

Alexandra Towing, Liverpool, England, has recently placed orders for two Voith propelled tugs. One to be built by Richard Dunston Hesse Ltd., the other by McTay Marine Ltd.

Both vessels were designed with the following main dimensions: waterline length, 28.5 meters (about 94 feet); beam, molded, 9 meters (31 feet); draft, 4.3 meters (14 feet); and displacement, 400 tons.

Each vessel will be powered by two 980-kw Ruston diesel engines driving two size 26GII/165 Voith-Schneider cycloidal propellers.

Hagglunds Appoints Bjorkman Gen'l Manager Of Deck Machinery Div.



Stig Bjorkman

Stig Bjorkman, vice president of Hagglunds, was recently appointed general manager of the Deck Machinery Division.

Hagglunds is a member of the ASEA Group, and is one of the world's foremost manufacturers of deck and gantry cranes and cargo-handling equipment. The company is the largest engineering enterprise in northern Sweden, with about 2,300 employees.

Mr. Bjorkman has been with Hagglunds since 1975. Previously, he was director of production at Thrige-Titan, and held various other positions within the ASEA Group, which he joined in 1955.

Mr. Bjorkman will remain vice president of AB Hagglund & Soner.

Drilling Rig Delivered To Marine Drilling Co. By Bethlehem Steel

Marine Drilling Company of Corpus Christi, Texas, and Bethlehem Steel Corporation's Beaumont, Texas, shipyard recently commissioned a 200-foot mobile offshore drilling vessel.

James C. Storm, president of Marine Drilling Company, said this jackup is the first of three scheduled for delivery to Marine Drilling during 1980. During the christening ceremonies, Mrs. Kipling F. Layton, daughter of Mr. Storm, commissioned the rig-J Storm XI. Upon delivery, the unit will work in the Gulf of Mexico for Houston Oil & Minerals, as well as Mesa Petroleum.

The mat-supported jackup features a cantilevered substructure and offers the capability of being able to position its drill floor over existing offshore production platforms in order to drill development wells or to rework existing wells.

On location, the J Storm XI will have a total variable load capacity of 4.5 million pounds and handle hook plus setback loads of 1 million pounds on wells as far as 35

feet aft of the platform deck. The maximum cantilever load capacity is 750,000 pounds at the rig centerline.

The new vessel consists of a platform that is 157 feet by 132 feet supported by three 11-foot-diameter columns fixed to a large stabilizing mat that is 220 feet long and 185 feet wide. Outfitted with deep-well drilling equipment, the rig will be able to operate in waters up to 200 feet deep and

withstand hurricane forces resulting from 100-knot winds and 60-foot seas.

The J Storm XI will contain onboard, air-conditioned living accommodations for 50 employees, complete with sleeping quarters, galley, recreation room, laundry and rest rooms, and will be built to comply with U.S. Coast Guard and American Bureau of Shipping standards for offshore drilling units.

THE RUST-PROOF PROOF.

A current ABSTECH report proves Fluid Film® stands up to 9½ years of continuous ballasting without rust damage or re-coating.

Now there's solid evidence that Fluid Film® stops rust for years under the most corrosive conditions.

9½ years ago the ballast tanks of the SS *Marine Eagle*, an ammonia tank carrier, undergoing modification by Newport News Shipbuilding, were sprayed with Fluid Film Gel (B) White. They have never subsequently been touched up or re-coated (although continuously ballasted at 17-day intervals).

The results of ABSTECH Inspection Report #78-269 NN, dated 27 November 1978, are amazing: ultrasonic readings show the steel to

be in excellent condition throughout, with many of the original painted construction marks preserved.

This is important news to every ship owner and owner of offshore structures, because Fluid Film conclusively out-performs and out-saves all other coatings (including exotic coatings) under the most corrosive environments. In addition:

Fluid Film is easier to apply.

Fluid Film does not require sand-blasting or a clean, dry surface preparation; it goes right through existing rust to base metal, providing a continual non-drying protective barrier. It is applied in a single coat under any weather conditions, does not blister, peel, emulsify, crack or dry out, and it can be easily touched up if needed.

Fluid Film has a three-year, rust-proof guarantee.

Fluid Film is so effective that we guarantee it for 3 years when used in your ships' tanks. Even on in-service vessels. If in three years from date of application, Fluid Film fails to provide corrosion control under normal operating conditions, we will supply replacement material to you absolutely free*

Fluid Film stops metal replacement costs.

Look at the chart and you'll see why Fluid Film is a tremendous cost saver.

The SS *Marine Eagle* is only one of hundreds of reports that prove the important time, money and labor saving value of Fluid Film. If you are interested in more information on our entire line of Fluid Film products, call collect or write to: Eureka Chemical Company, 234 Lawrence Avenue, (P.O. Box 2205), South San Francisco, CA 94080, (415) 761-3536.

Mandatory Use Of Collision Avoidance Equipment Proposed

The Coast Guard has issued a proposal to require all self-propelled vessels of 10,000 gross tons or more, that carry oil or liquid hazardous materials in bulk as cargo or in residue, to install an electronic relative motion analyzer (ERMA) by July 1, 1982. The

proposal applies to U.S. vessels and foreign-flag vessels which call at U.S. ports.

The device, mandated by the Port & Tanker Safety Act of 1978 (P.L. 95-474), is designed to assist a ship's bridge watch officer in evaluating the patterns of radar "returns" from an object to determine the object's speed and direction of motion. This system is also referred to as a "collision

avoidance aid" or "automatic radar plotting aid."

In the preamble to the proposal, particular mention is made that compliance is not limited just to tankers, but applies to "each self-propelled vessel which carries oil or hazardous materials in bulk as cargo or in residue."

The Coast Guard estimates the average cost of the equipment at \$70,000 per vessel, and forecasts

a possible 10-percent reduction in vessel collisions and ramming. Exact specifications appear in the February 21 Federal Register.

Petromar Marine Asks Title XI For Six Tug/Supply Ships Costing \$26 Million

Petromar Marine Limited, P.O. Box 967, Rockport, Texas 98382, has applied for a Title XI guarantee to aid in financing the construction of six oceangoing tug/supply vessels.

The six vessels—four of which will be 3,000 horsepower and two of 4,000—are expected to operate in the Gulf of Mexico.

If approved, Title XI financing would cover \$22,750,000 or 87½ percent of the total actual cost of \$26,100,000.

The proposed shipbuilder is Halter Marine, Inc. of New Orleans, La., and all of the vessels are expected to be delivered in 1980, beginning October 30.

Allen R. Stern Named President Of Ingram Exploration Company

Allen R. Stern has been named president of Ingram Exploration Company, a wholly owned subsidiary of Ingram Corporation, New Orleans, La., it was announced recently by James A. O'Neill, Ingram president.



Allen R. Stern

Ingram Exploration was formed in late 1979 as a result of the corporation's decision to devote a major portion of its capital expenditures to oil and gas exploration in the U.S. and abroad. As president of Ingram Exploration, Mr. Stern brings 30 years of exploration experience to the direction of this new Ingram effort.

Since 1975, Mr. Stern has been president of Transco Exploration Company, a subsidiary of Transco Companies, Inc., Houston, Texas. Transco Exploration, under Mr. Stern's direction, has become one of the most active and successful exploration companies in the Gulf Coast and Atlantic frontier areas.

Mr. Stern began his career in the oil and gas industry in 1947 with Shell Oil Company, and in 1959 joined Burmah Oil Company in opening its first North American office in New Orleans. He also served as president of Burmah Development Company for 15 years.



Photo from ABSTECH report shows no rust damage after 9½ years. When Fluid Film (A) was scraped away from ballast tanks, no oxidation was found on base metal (B).

| Fluid Film Gel B | Exotic Coatings |
|--|--------------------------------------|
| None to minimum surface preparation | Sandblasting required |
| Can be applied to damp surface | Dry surface required |
| Needs only one coat | Two to three coats required |
| No curing time needed | 48 hours curing time necessary |
| Over 400°F flash point during application | 110°F flash point during application |
| Three-year no-rust guarantee | No other guarantees known |
| Chart comparison based on in-service ballast tank applications | |

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East Coast Division Rouse Tower, Suite 4000, 6060 Jefferson Avenue, Newport News, Virginia 23605, Tel: (804) 380-8220 • Mr. H. Warren

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Kuala Lumpur Lindeteves-Jacoberg (M) Sdn Bhd., P.O. Box 369, Kuala Lumpur, Malaysia, Telex: 37579, Tel: 775511 • Mr. J. G. Bouma

Japan Nichimen Company, Ltd., 15, Nakanoshima 2-Chome, Kita-Ku, Osaka 530, Japan, Telex: 63247, Tel: (06) 345-2111 • Mr. Y. Sawada

United Kingdom Highgate & Job Ltd., 60 Murray Street, Paisley, Scotland PA3 0QH, Telex: 31189, Tel: 041-889-3207 • Mr. John Hicks

Highgate & Job Ltd., 35 Regent Road, Liverpool, England L5 9TB, Telex: 629264 • Mr. M. C. Cameron

Federal Republic of Germany Alfred Hodi, Postfach 11 15 26, Hopfenmarkt 33, 2000 Hamburg 11, Federal Republic of Germany, Telex: 211088, Tel: (040) 362521 • Mr. B. Schultz

Sweden and Finland Henning Stenbeck AB, P.O. Box 23, S 182 51 Djursholm, Sweden, Telex: 10270, Tel: (08) 751-2775 • Mr. Bengt Bergstrom

Norway and Denmark A/S Bergstrom & Co, Gravdalsveien 14, Oslo 7, Norway, Telex: 11772, Tel: 225872 • Mr. Arild Honne

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The all-aluminum, 125' craft proves ideal in every way, including passenger comfort, overall speed and ease of maintenance. It comfortably seats 296 passengers, air-craft style, and an additional 65 in the first-class section.

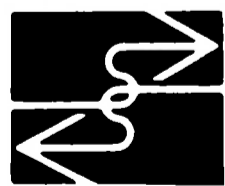
The exterior of the Gran Cacique II includes an observation deck while the interior features climate-controlled surroundings, carpeting throughout, a galley for fast-food service and a video tape projection system. Our ferry comes equipped with the latest innovations in radar and navigation accessories plus a full complement of lifesaving equipment.

Speeds to 28 knots are provided by three MTU 12V331TC71 engines with 1360 horsepower each. Fuel capacity is 5500

gallons and the craft carries approximately 300 gallons of fresh water.

Like every vessel we make, the Gran Cacique II is tough and durable, having met rigid quality standards. Our excellent service stands behind every sale, too.

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 **swiftships inc.**

Bruce Weinstein
Appointed Coordinator
At Butterworth Systems



Bruce Weinstein

Bruce Weinstein has been named coordinator, Oil/Water Separation Systems of Butterworth Systems Inc. Butterworth Systems is an international company which manufactures equipment for oil/water separation, tank cleaning, underwater hull cleaning and high pressure water jetting.

In his new position, Mr. Weinstein will work with existing and potential Butterworth Systems customers in the selection of quality, low-maintenance, manual and fully automatic oil/water separators designed to conform to the new IMCO regulations and proposed USCG requirements.

Previously, Mr. Weinstein had been with Exxon Enterprises, Electric Power Conversion System, where he worked in international marketing.

Mr. Weinstein received a B.A. degree in American studies from Yale University, and is currently completing an MBA program at Fairleigh Dickinson University.

Butterworth Systems Inc. is located at 224 Park Avenue South, Box 352, Florham Park, N.J. 07932.

John K. Stuart Joins
Oglebay Norton Co.

John K. Stuart has been appointed assistant fleet engineer at Oglebay Norton Company, whose Columbia Transportation Division operates 18 vessels on the Great Lakes.

Formerly vice president-engineering at the Great Lakes Towing Company, Mr. Stuart had been associated with that firm since 1955. He holds a Bachelor of Science degree from the U.S. Merchant Marine Academy at Kings Point, N.Y., and in 1954 earned a Bachelor of Science degree in naval architecture and marine engineering from the University of Michigan. In three years' service with the United States Navy, he rose to the rank of lieutenant as gunnery officer aboard a destroyer. He is a member of The Society of Naval Architects and Marine Engineers, The Propeller Club, and The Society of Naval Engineers.

March 15, 1980

API Announces 1980
Tanker Conference
Set For May 11-14

Adm. John B. Hayes, Commandant of the U.S. Coast Guard, will be the keynote speaker at the American Petroleum Institute's 1980 tanker conference, May 11-14, at the Hotel del Coronado, Coronado, Calif.

The conference, which has the

theme "Tankers — Energy Lifelines for a New Decade," will deal with all aspects of tanker operations, including crew training; tanker maintenance and inspection; LPG tankers; design of steering gear control systems; and the future of the tanker industry.

The various topics will be addressed by either panel discussions or individual authors from U.S. and overseas companies.

Admiral Hayes will be the luncheon speaker on Monday, May 12. John E. Swearingen, chairman of the board, Standard Oil Co. (Indiana), is scheduled to speak at the conference banquet Tuesday evening May 13.

Conference registration information is available from the Department of Transportation American Petroleum Institute, 2101 "L" Street, N.W., Washington, D.C. 20037.



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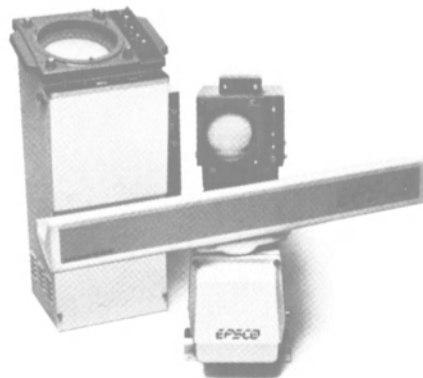
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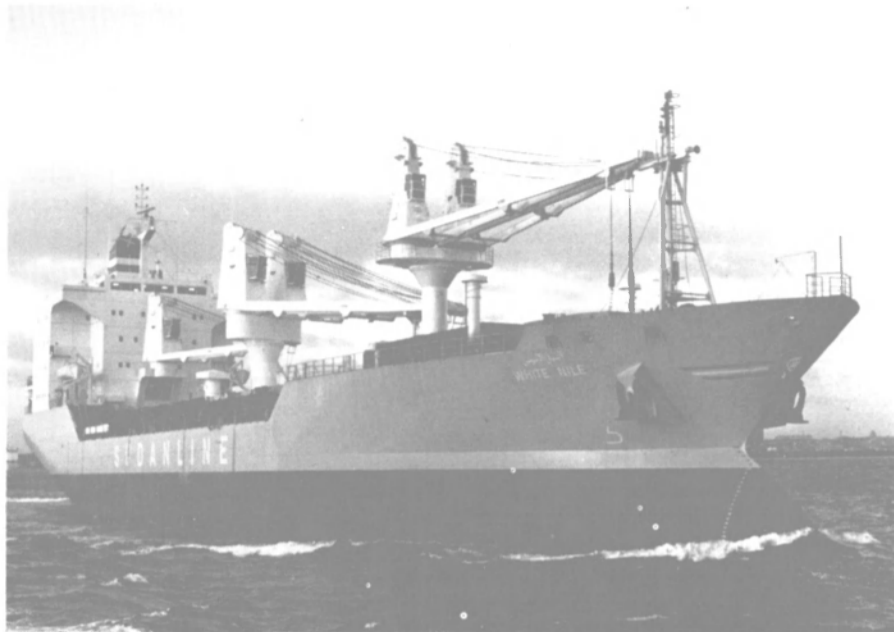


Westwood, MA

Seattle, WA

New Orleans, LA

Halifax, N.S.



M/S White Nile, recently completed by B&W Shipyard for Sudan Shipping.

B&W Shipyard Delivers M/S 'White Nile'

B&W Shipyard, Copenhagen, Denmark, has completed the first of two Hamlet Multi-Flex ships of about 12,600-dwt for Sudan Shipping Line.

The ship was named White Nile, after the river which joins the Blue Nile at the city of Khartoum, and which together continue to the Mediterranean as the river Nile. The christening ceremony was sponsored by **Ismail M. Bakheit**, chairman of Sudan Shipping Line.

Like the other ships of the Hamlet Multi-Flex type, the M/S White Nile has been built to Lloyd's Class + 100 A.1. + LMC, "Strengthened for Containers," and to the usual international conventions and regulations for cargo ships trading worldwide.

As with the first vessels in the Hamlet Multi-Flex series, each of these new ships for Sudan Shipping is propelled by one B&W turbocharged, two-stroke, diesel engine, type 5L55GFC with maximum continuous rating of 6,700 bhp at 150 rpm. The main engine is direct coupled to a four-bladed propeller, and is equipped to use fuel oil with a maximum of 3,500 Sec. Redwood I.

The new vessel is equipped with three generator sets, all powered by B&W turbocharged diesel engines.

A soundproofed control room has been installed in the engine room.

Speed during trials, at 80 percent MCR, was about 16½ knots.

The ship has four separate holds with four hatches in the upper deck and three hatches in the 'tween deck. As a special feature, cargo hold No. 1 has been arranged for carrying vegetable oils, with necessary heating and pumping systems installed. The hatches are equipped with MacGregor folding-type steel hatch covers on the upper deck and

longitudinal hinges on the 'tween deck. Hatch covers are reinforced for stowage of containers.

The ship is equipped with a slewing stern ramp for handling of ro/ro cargo.

The cargo gear consists of five electrohydraulic derricks, including two of 12.5 tons with a combined lifting capacity of 25 tons, two of 36 tons with a combined lifting capacity of 72 tons, and one of 18 tons aft. By means of cargo yokes, a combined lifting capacity of 95 tons can be achieved with four cranes working in unison.

The M/S White Nile will accommodate 39 persons. The bridge deck contains a roomy combined wheelhouse and chartroom equipped with the most modern navigational instruments, radio station and cabins for radio officer and pilot. A swimming pool is installed aft of the wheelhouse.

The officers' deck contains living quarters for the captain, chief engineer, and other officers. The captain and chief engineer each has a suite comprising a living room, bedroom and bath.

Crew accommodations are located on one deck. Messes and dayrooms are located on the saloon deck and a hospital is located on the saloon deck.

| M/S 'White Nile' | |
|------------------------------|----------------------|
| Length overall | 133.50 m (437 ft) |
| Width molded | 20.50 m (67 ft) |
| Depth molded to upper deck | 12.20 m (40 ft) |
| Draft | 9.4 m (31 ft) |
| Corresponding deadweight | 12,600 tons |
| Hold Capacity | |
| Grain | approx. 20,600 cu.m. |
| Bale | — 19,000 cu.m. |
| Bulk | — 14,900 cu.m. |
| Vegetable Oil Tank | — 500 cu.m. |
| Total Container Capacity | — 368 TEUs |
| Total Water Ballast Capacity | — 3,900 tons |

Gulf Fleet Marine Adds 95th Vessel To Expanding Offshore Service Fleet

A 95th vessel has recently been added to Gulf Fleet Marine Corporation's growing list of offshore service boats, according to **Richard M. Currence**, president of the New Orleans, La.-based firm.

Gulf Fleet has accepted delivery of the Gulf Fleet No. 37, the largest supply boat ever built by Quality Shipyards, Inc., an affiliated company located in Houma, La.

Mr. Currence said the new vessel has been placed in service in the Gulf of Mexico and is specially equipped with extra large tanks to carry 6,000 cubic feet of bulk mud and 2,000 barrels of liquid mud for the offshore industry.

A sistership is expected to enter service in the near future.

The Gulf Fleet No. 37 measures 205 feet by 42 feet by 17 feet. The vessel's twin 16-645E7 EMD engines developed in excess of 6,100 horsepower and drive the boat at a top speed of 13 knots. The boat is equipped with an Aurora Fire Monitor driven by a 12V71 Detroit Diesel engine, and is capable of projecting 800 gallons of water per minute for a distance of 440 feet. It is also equipped with an Intercontinental DW225 winch with 340,000 pounds of line pull on a 3,000-foot, 2½-inch cable.

The anchor windlass is powered by a 40 horsepower Smatoc engine with 2,300 feet of 1½-inch chain. There are two 2,500-pound anchors and an anchor wash-down system.

The vessel carries 186,500 gallons of fuel oil, 1,700 gallons of lube oil, a dirty oil tank of 1,700 gallons, 1,000 gallons of hydraulic oil, 1,000 gallons of gear oil, and 23,850 gallons of potable water.

Steering is provided by a Sperry Universal autopilot, with a Sperry SR130 gyrocompass, located in a forward aft pilothouse. Emergency steering can also be provided from the engine room.

Electronic equipment includes a Decca 708 Loran C, a SSB Motorola Triton, two Decca 914C radars, a Raytheon F720D depth finder, two Drake MRT55 VHF radiotelephones, and company FM radio by Motorola.

MARCO Offers Literature On Trawling/Seining Winch

Literature is available describing a new two-drum hydraulic winch that was specifically designed for both trawling and purse seining operations.

This winch, the MARCO WM-255 Combination Seiner-Trawler Winch, offers the power, speed, line capacity, and rugged construction for a wide range of seining and trawling applications on mid-size vessels from 27-40

meters in length (90-130 feet), and up to 850 shp.

"The WM255 is particularly well-suited for nations with an expanding fishing industry where trouble-free operation in mid-size multipurpose fishing vessels is important," said **Charles R. Hart**, MARCO vice president.

The WM255 has two independent hydraulic drives, one for each drum. With both drums operating, this dual drive feature permits independent control of hauling speed and line pull on each drum.

A popular feature is the separate MARCO prepiped control console that provides hydraulic controls for clutch, brake, speed, and direction of each drum. This console can be placed in any convenient location onboard for more effective operator control.

Two hydraulically powered levelwinds can be positioned for port or starboard purse seining or for trawling. The levelwind follower can be manually disengaged from the carriage to allow free-floating with the wire during payout.

The WM255 has two gypsies which are case hardened for use with wire rope.

Cable capacity for each drum on the WM255 is 3,000 meters (1,650 fathoms) of 16mm (5/8") wire and 2,100 meters (1,150 fathoms) of 19mm (3/4") wire.

For complete literature, write to **Charles R. Hart**, MARCO Manufactured Products Division, 2300 West Commodore Way, Seattle, Wash. 98199.

Norman Meyer Appointed VP Of Sperry Unit

Norman Meyer has been appointed vice president of strategic systems for Sperry Division's Systems Management unit, **Kurt Merl**, vice president and general manager of the unit, has announced.

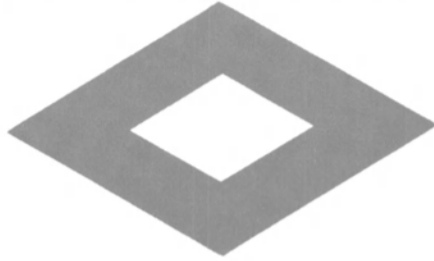
Mr. Meyer, who had been manager of strategic systems, will be responsible for all aspects of engineering support and production for the Polaris, Poseidon and Trident navigation subsystems.

Mr. Meyer joined Sperry in 1950, and served in various managerial and engineering capacities with Sperry Gyroscope before being named manager for Sperry's lunar orbiter inertial reference unit program. In 1967, he became engineering department head in the systems design department, strategic systems area, of Sperry Systems Management. He later served as manager of systems engineering on the submarine program before being appointed as manager of strategic systems in 1973.

Mr. Meyer graduated from Stevens Institute with a bachelor's degree in mechanical engineering and a master's degree in electrical engineering. He is a member of the Institute of Electrical and Electronic Engineers (IEEE) and the Naval Institute.

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Docking the EL PASO HOWARD BOYD at the
Columbia LNG Corp. Terminal at Cove Point, Md.



Shown at the SNAME Chesapeake Section/ASNE Flagship Section Joint Meeting in January are, left to right: James Schuler, NAVSEA, moderator; Dr. Myron Tribus, M.I.T., author; Rear Adm. James Lisanby, NAVSEA; William Bullock, MarAd, chairman, ASNE Flagship Section; and Dr. James Lisnyk, MarAd, chairman, SNAME Chesapeake Section.

Joint Meeting Held By SNAME Chesapeake/ASNE Flagship Sections

The Chesapeake Section of The Society of Naval Architects and Marine Engineers and the Flagship Section of the American Society of Naval Engineers recently held a joint meeting at the Bethesda Officer's Club to hear the presentation of the paper, "Seven Commandments for the Survival of a Technological Society." The author, Dr. Myron Tribus, director of the Center for Advanced Engineering Studies at the Massachusetts Institute of Technology,

was introduced by the moderator, James Schuler of NAVSEA.

Dr. Tribus related what requirements are necessary for technically trained people to move a project through a political process—a process very few people have knowledge of. Those who work in technology are becoming increasingly aware of how the political process affects them. If technical and political processes are to be joined, engineers and and politicians will have to learn

more about each other's problems. Their common objectives should be to learn how to guide a technical program through a political process without losing the technical integrity necessary for success, or violating some of the basic rules of politics, which have their own penalties for failure to comply.

Dr. Tribus discussed the rules that should be followed. To ensure every possibility of success, one should make sure that goals and policy are in place, strategies have been developed, political support has been obtained, a managerial instrument has been devised, communication with bureaucracies has been established, and a good management information system has been devised to track progress.

McDermott Restructures Operating Unit Into Five Areas Of Responsibility

R.K. Richie, president and chief operating officer of the McDermott Operating Unit of J. Ray McDermott & Co., Inc., recently announced a management realignment. In announcing the restructuring of the unit into five major areas of responsibility, Mr. Richie said the change will enable McDermott to better serve the company's clients.

C.L. Davis becomes executive vice president, Oceanic Contractors, Inc., responsible for the Middle East and Southeast Asia areas. Mr. Davis joined the McDermott organization in 1969 as an operations engineer in the Middle East, becoming vice president of the Middle East operations in 1972,

and Group vice president there in 1974. Since that time, he has been responsible for foreign operations.

I.R. Foster becomes senior vice president and Group executive, McDermott Operating Unit, responsible for Harvey Division, McDermott Shipyards, Mexico, Canada, and the East and West Coasts of the U.S. Mr. Foster joined McDermott in 1957 as a field engineer. Having served as division engineer for the Marine Pipeline Division and the Offshore Division, he became manager of offshore construction in 1965. In 1975, he was named vice president of Oceanic Contractors, and in 1978, Group vice president and assistant to the president, McDermott Operating Unit.

W.E. Earles becomes senior vice president and Group executive, McDermott Operating Unit, responsible for Fabrication and Structural, Gulf of Mexico-U.S.A. After Mr. Earles joined the company in 1955, he served in several administrative posts. He became assistant division manager of the Fabrication Division in 1964, and manager in 1966. In 1972, he became general manager of both the Fabrication and Offshore Divisions. He was named vice president in 1972, and Group vice president, Structural Group, in 1974.

E.R.H. Selley becomes senior vice president and Group executive, Oceanic Contractors, Inc., responsible for North Sea, West African, Central and South American areas. Mr. Selley joined the company in 1968 as resident managing director and Southeast Asia representative. In 1973, he became vice president of Oceanic Contractors, Inc., in charge of the Southeast Asia area, and in 1974 was named Group vice president. Since 1978, he has been the Group vice president for Oceanic Engineering Services in London.

R.E. Howson becomes senior vice president and Group executive, McDermott Engineering. Mr. Howson joined Oceanic Contractors in 1972, after having had several years of experience in the offshore field. In 1974, he was named Group vice president of Oceanic's North Sea Group.

ARAMCO Orders Voith Water Tractor For Persian Gulf Service

The Singapore Slipway shipyard has received an order from ARAMCO for the construction of a Voith-Schneider propelled vessel designed with a waterline length of 34.5 meters (about 113 feet), 12.75-meter beam (42 feet), and a draft of 5.5 meters (18 feet); the vessel will be fitted with two size 32GII/200 Voith-Schneider propellers with a total input power of about 3,300 kw.

Upon completion, the vessel is scheduled to operate at the oil terminal of Ras Tannura on the Persian Gulf.

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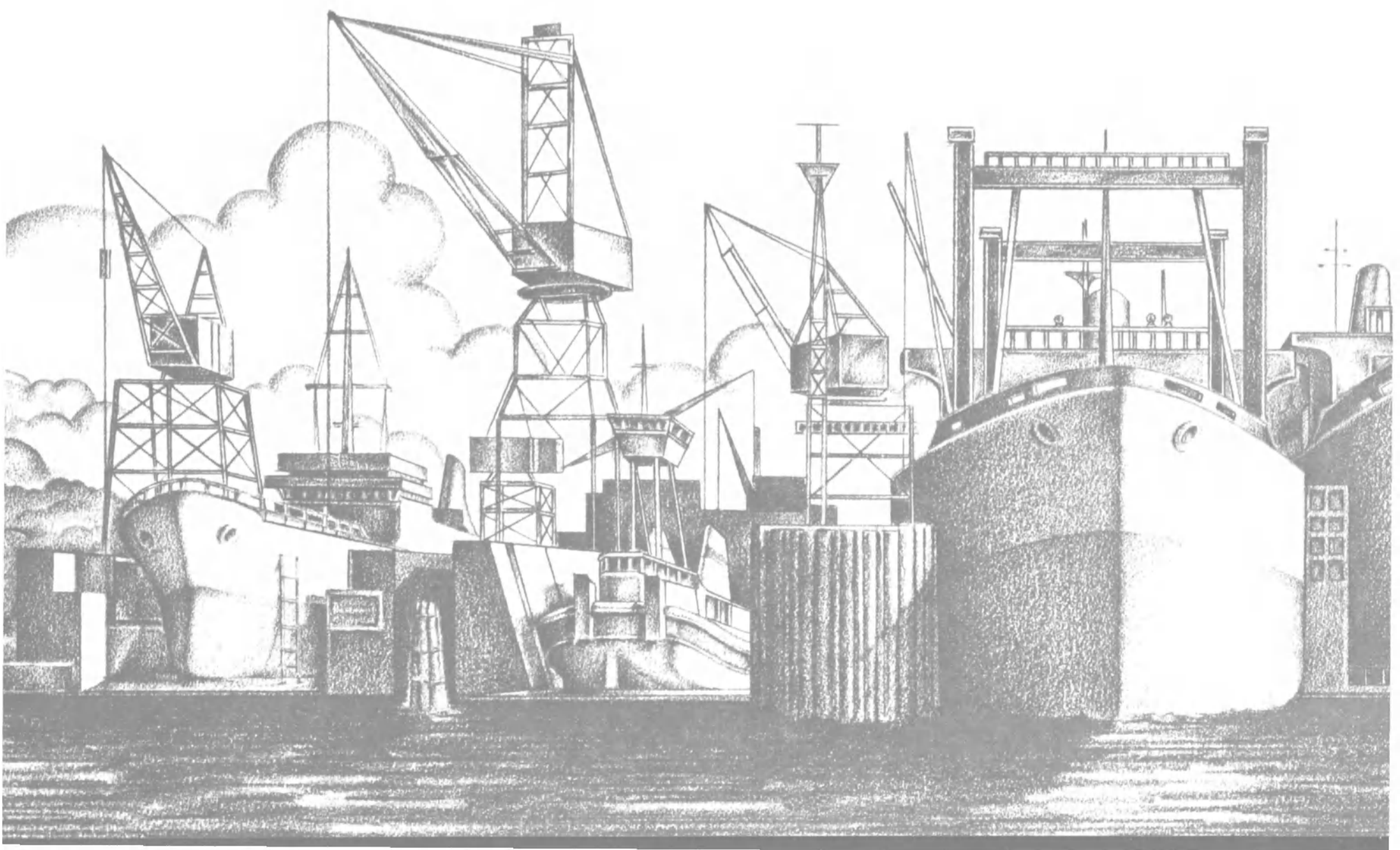
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to 275,000 dwt. No West Coast ship is too big or too small for us.

Second, we don't waste your time. Reserve dry dock time now—select a contractor, negotiate or get two or three competitive bids, even after you're up on blocks. You're assured of superior work because ships are serviced by any one of three nationally renowned companies: Dillingham Ship Repair, Northwest Marine Iron Works, and Willamette Iron and



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Contact us about your service needs. Call any of the three contractors listed or the Port of Portland. We think you'll find that our ship repair service is another reason why. . . *we may be your perfect port.*

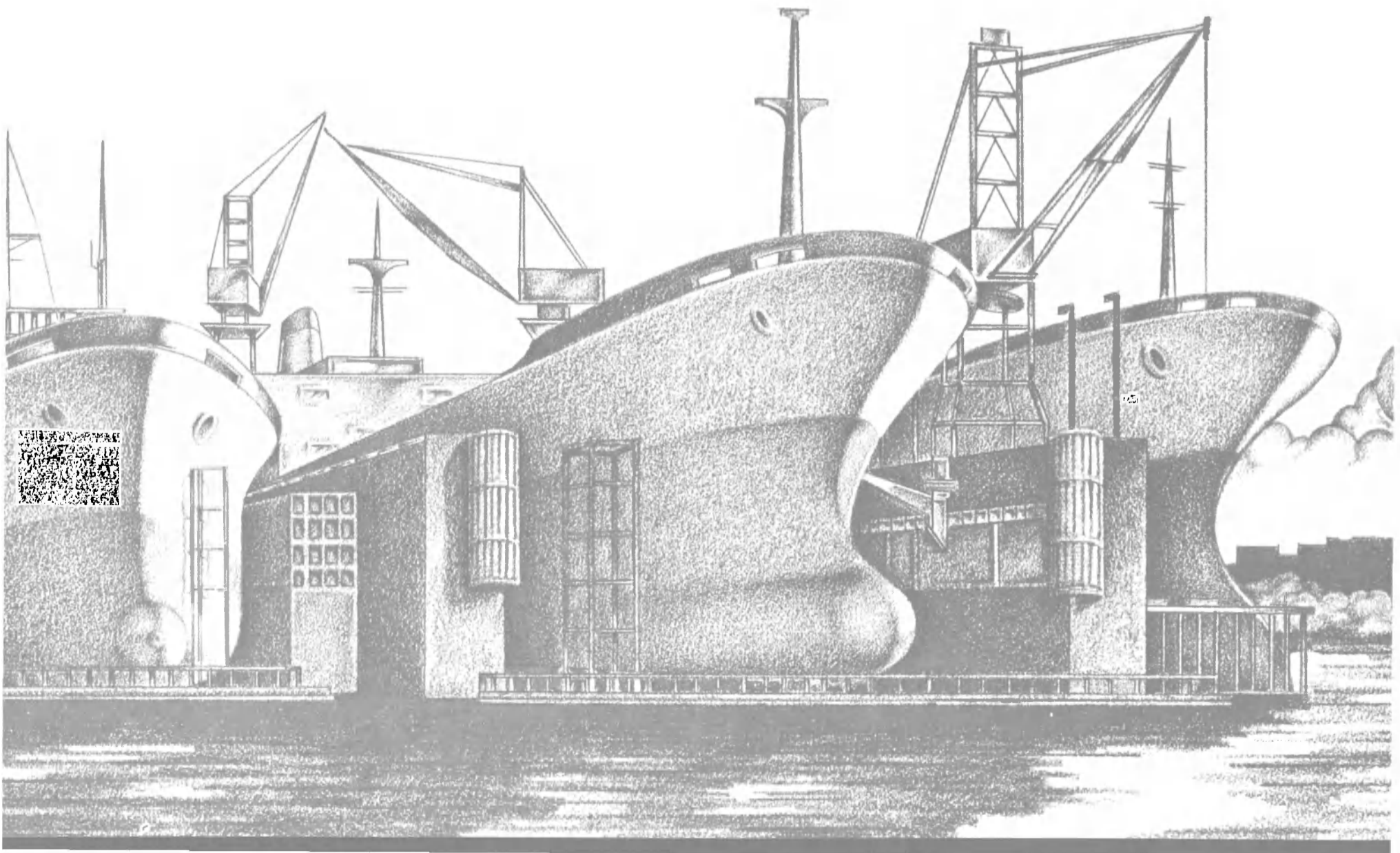
Portland Ship Repair Yard

 **Port of Portland**
800 547-8411

 **Dillingham Ship Repair**
503/285-1111

 **Northwest Marine Iron Works**
503/228-8222

 **Willamette Iron & Steel Company**
Days 503/226-5535 Nights 503/226-5200



'Ro-Ro Genova' Launched By Chantiers De France At Dunkerque



With an overall length of 170.5 meters (about 559 feet), beam of 25 meters (82 feet), and a service draft of 7 meters (23 feet), the 10,200-dwt, 17,400-hp Ro-Ro Genova will carry 691 containers at a speed of 18.8 knots.

Chantiers de France-Dunkerque, Shipbuilding Division of S.M.N.-D.N. (Empain-Schneider Group), recently launched the Ro-Ro Genova for Societe Dunkerquois d'Armement.

Two similar vessels were ordered by this subsidiary shipping company from its Dunkirk Yard. These vessels will be chartered to Saudi National Line, in which the Italian Group COSTA is a shareholder. The ships, however, will fly the French flag, and will be operated by French crews.

The Ro-Ro Genova and her sistership are almost the same as the Ville De Dunkerque and Ville Du Havre, which were delivered to Societe Dunkerquoise d'Armement in 1978.

Mitsubishi Appoints Oosterhuis Industries Gulf Coast Distributor For Diesel Engines

Mitsubishi Heavy Industries, Ltd. (MHI), Tokyo, Japan, and Mitsubishi Heavy Industries America, Inc., Chicago, Ill., have signed an agreement with Oosterhuis Industries, Inc. of Belle Chasse, La., in which Oosterhuis will become the master distributor for Mitsubishi marine diesel engines in the Gulf Coast states of Texas, Louisiana, Arkansas, Mississippi, Alabama, and Florida.

According to **Herman H. Oosterhuis**, president of Oosterhuis Industries, the Mitsubishi marine engines handled by his firm are all of original Mitsubishi design and include the Daiya diesel, a 900-rpm heavy-duty, in-line engine available up to maximum 1,100 shaft horsepower.

Other Mitsubishi engines available through Oosterhuis include the Mitsubishi "SB," "SA," and "SN" Series, a high-speed, 4-stroke diesel, economical on fuel, with ratings of 250 horsepower continuously up to maximum 1,600 horsepower at 1,800 rpm for marine application. The "S" Series is available in 6- and 8-cylinder in-line and 12- and 16-cylinder vee-type versions.

Mr. Oosterhuis stated there are Mitsubishi engines already sold and being delivered by his firm, and that an extensive spare parts inventory has been established. Dealers handling parts and service are being appointed by Oosterhuis as far away as Brownsville, Texas.

Marine Engineering, Incorporated, an affiliated company of Oosterhuis, has been appointed dealer for the New Orleans, La.,



Oosterhuis Industries, Inc., recently appointed master distributor for Mitsubishi marine diesel engines for the Gulf Coast, displayed the engines at the recent Work Boat Show in New Orleans, La. Standing in front of a Mitsubishi S8N Series engine are, left to right: **Earl Primo**, vice president and general manager, Marine Engineering, Inc.; **Shinji Okamoto**, manager, Engine Export Section, Mitsubishi Heavy Industries, Tokyo; **Herman H. Oosterhuis**, president, Oosterhuis Industries, Inc.; **Yoshio Aso**, manager, Mitsubishi Heavy Industries, Chicago, and **Mrs. Mona Oosterhuis**, manager, Public Relations, Oosterhuis Industries.

area. Arrangements have also been made with established firms for prompt service and parts supplies in East Coast, West Coast and Mexican areas.

Hongkong United Dock Ships 210-Ton Buoy For PEMEX



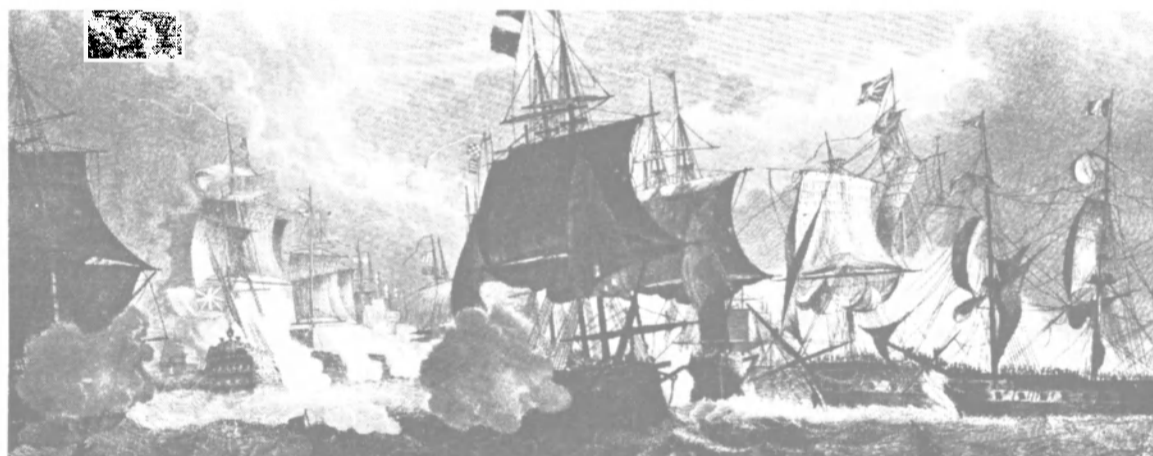
The 210-ton buoy, constructed by Hongkong United Dockyards Ltd. (HUD) for PEMEX, being lifted onto heavy lift vessel John Henry prior to shipment.

A 210-ton buoy was recently raised onboard the heavy-lift vessel John Henry in Hong Kong for shipment to Mexico. The buoy was ordered by IMODCO for PEMEX, the Mexican national oil company, and constructed by Hongkong United Dockyards Ltd. of Hong Kong.

The buoy had been previously lifted by the giant floating crane Proteus I from the Kowloon yard into the water, and was moored alongside the dockyard until it was loaded onto the John Henry.

The buoy consists of a circular hull bound by one rotating assembly. The hull measures 12.5 meters in diameter, 4.27 meters in height (41 feet by 14 feet), and is divided into six compartments, half of which are filled with polyurethane foam materials.

The vessel loading operation involved twin derricks, each capable of lifting 216 tons. Once onboard, the buoy was lashed in position before the John Henry began its trans-Pacific voyage to Cortzacoalcos, near Veracruz in the Gulf of Mexico.



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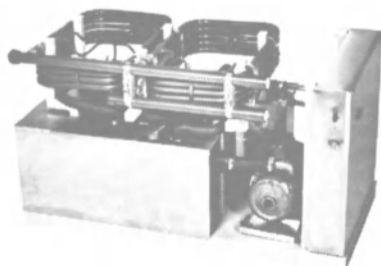
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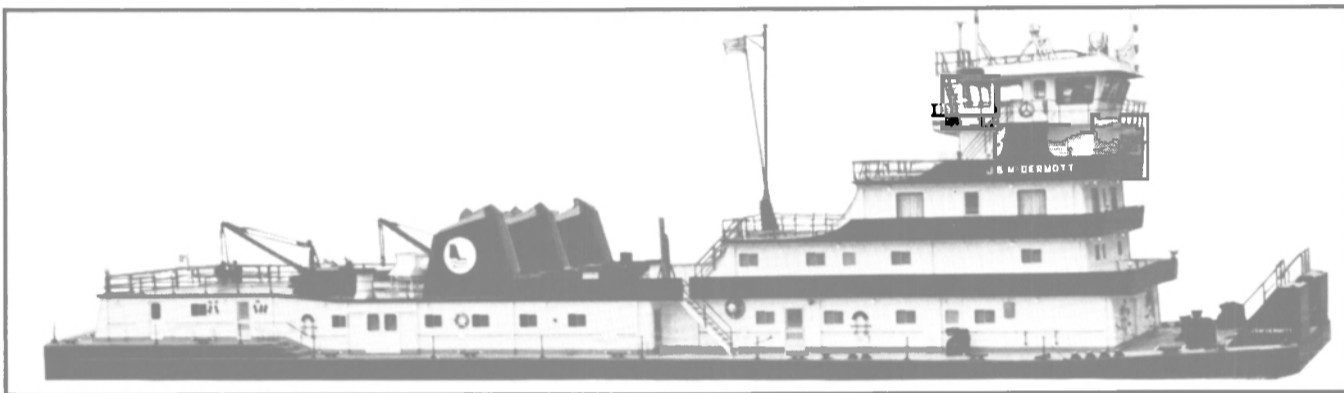
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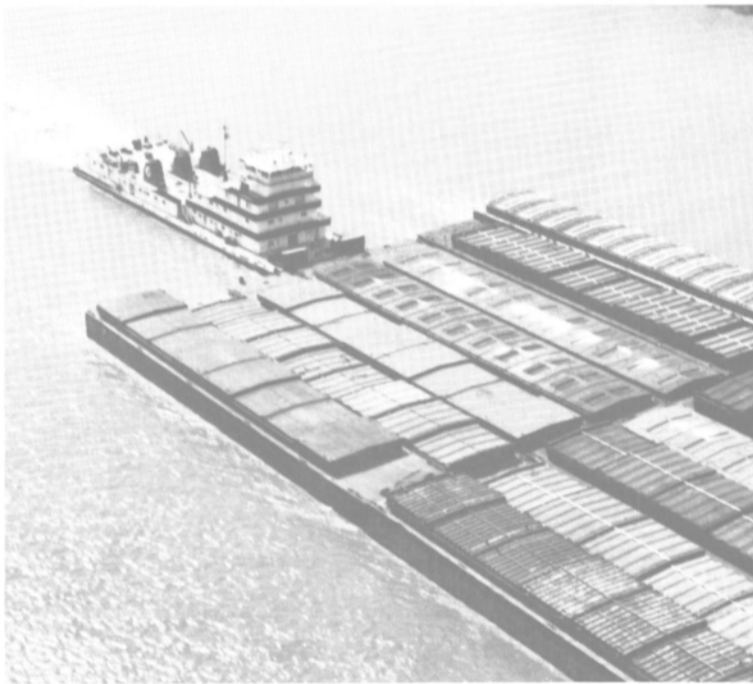


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FEDERAL'S 10,500 HP SUPERPUSH



Carrying on its noted tradition, Federal Barge Lines recently added a new super towboat to its fleet. The M/V J.S. McDermott is shown pushing a large tow on the lower Mississippi. The McDermott is one of the largest Hydrodyne towboats ever built by St. Louis Ship, as well as the largest and most powerful towboat in Federal's fleet. Federal Barge pioneered the concept of the "super towboat," when it built the 9000 HP M/V United States in 1958, and the 9000 HP M/V America in 1960. Whether your needs are for a very large towboat, or for a small one, St. Louis Ship will engineer, design and build a Hydrodyne towboat of maximum efficiency to satisfy your requirements. Please call us at (314) 638-4000.



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\$35-Million Two-Rig Contract For Ingalls

Keyes Offshore, Inc. of Houston, Texas, and the Ingalls Shipbuilding Division of Litton Industries recently announced an agreement for the construction of two offshore oil drilling rigs at Ingalls facilities in Pascagoula, Miss.

Keyes Offshore president **Bill Keyes** said the first of the self-

elevating "jackup" rigs will be ready for drilling operations in early 1981. Value of the two-rig construction contract with Ingalls is about \$35 million.

Len Erb, senior vice president of Litton Industries and president of Ingalls, said work on the rigs would begin immediately with detail design and material and equipment procurement. Fabrication will start in May.

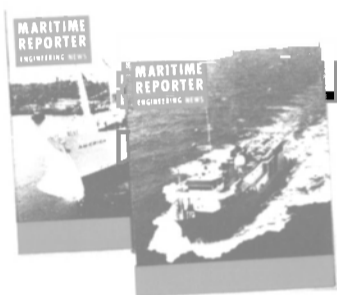
Designed by the naval archi-

tectural firm of Friede and Goldman of New Orleans, La., the rigs will be capable of operating in water depths of up to 300 feet, and will be able to drill to depths of 20,000 feet. The rigs' self-elevating feature, a jacking system which allows the hull of the structure to raise or lower itself on its support legs, will provide the units with maximum flexibility for ocean transit and operation positioning.

With accommodations for 56 personnel, the 5,500-ton mobile units will be 180 feet long and 175 feet wide. In addition to the two new rigs being ordered from Ingalls, Keyes has two other drilling units under construction.

Ingalls, a designer and builder of marine structures for defense and commerce since 1938, will construct the new rigs at its 800-acre facility in Pascagoula, Miss. The first rig will be delivered to Keyes in March 1981, and the second in May 1981.

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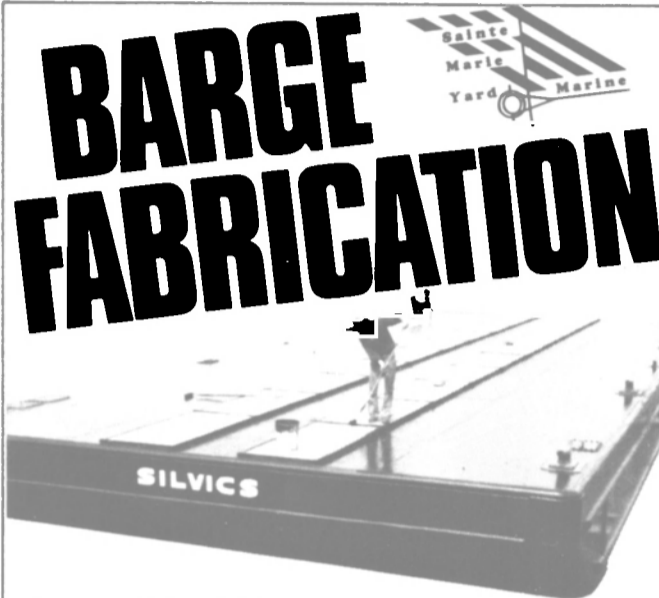
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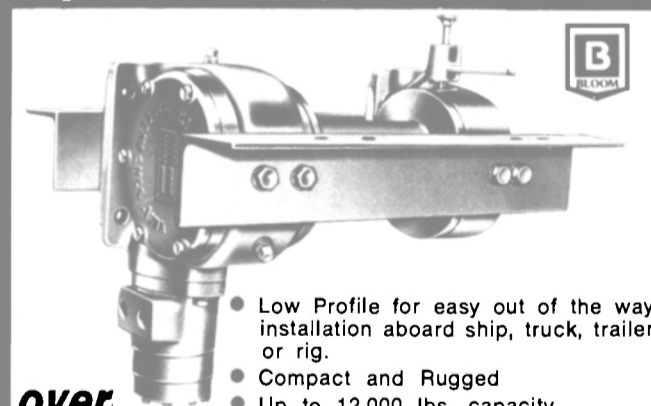
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Singapore Signs Contract For Imodco Harbor Terminal

The Port of Singapore Authority has signed a contract for Imodco to design and engineer a Single Point Mooring terminal system to be anchored in 32 meters (about 105 feet) of water in Singapore Harbor.

The single grade buoy will be capable of mooring fully loaded tankers of up to 320,000 dwt for the discharge of crude oil, and is scheduled for completion and delivery exactly 7½ months after the mid-December contract award.

Design of the 12.5-meter diameter (about 41 feet) terminal system will include a telemetry control monitoring unit and calls for withstanding such storm conditions as a wind velocity of 32 meters per second and wave heights of 2.5 meters (about 8 feet).

The Port Authority project is the second for Imodco in Singapore. A CALM for ESSO Singapore Private, Ltd., for handling crude oil tankers of up to 252,000 dwt, has been in operation since 1970.

Collision Avoidance Literature Offered By Iotron Corp.

Iotron Corporation of Bedford, Mass., is offering literature on its new Model R Series DIGILOT collision avoidance system. DIGILOT Models RM and RR have a 20 and 40 target tracking capability. They fully meet all impending U.S. Coast Guard and IMCO specifications.

The other new models, RA and RS, are capable of automatically acquiring and tracking up to 60 targets.

Features common to all four new models are their ability to interface with any marine radar, gyro, and log, and provide true automatic target acquisition anywhere within the tracking range of the machine.

For complete literature on Iotron's Collision Avoidance Systems, write **Dick Hylan**, Iotron Corporation, 5 Alfred Circle, Bedford, Mass. 01730.

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Modernize your B&W air cooler and save about 2% on fuel costs!

B&W Marine Service has launched a topical innovation: The FUEL SAVING UNIT 2 programme.

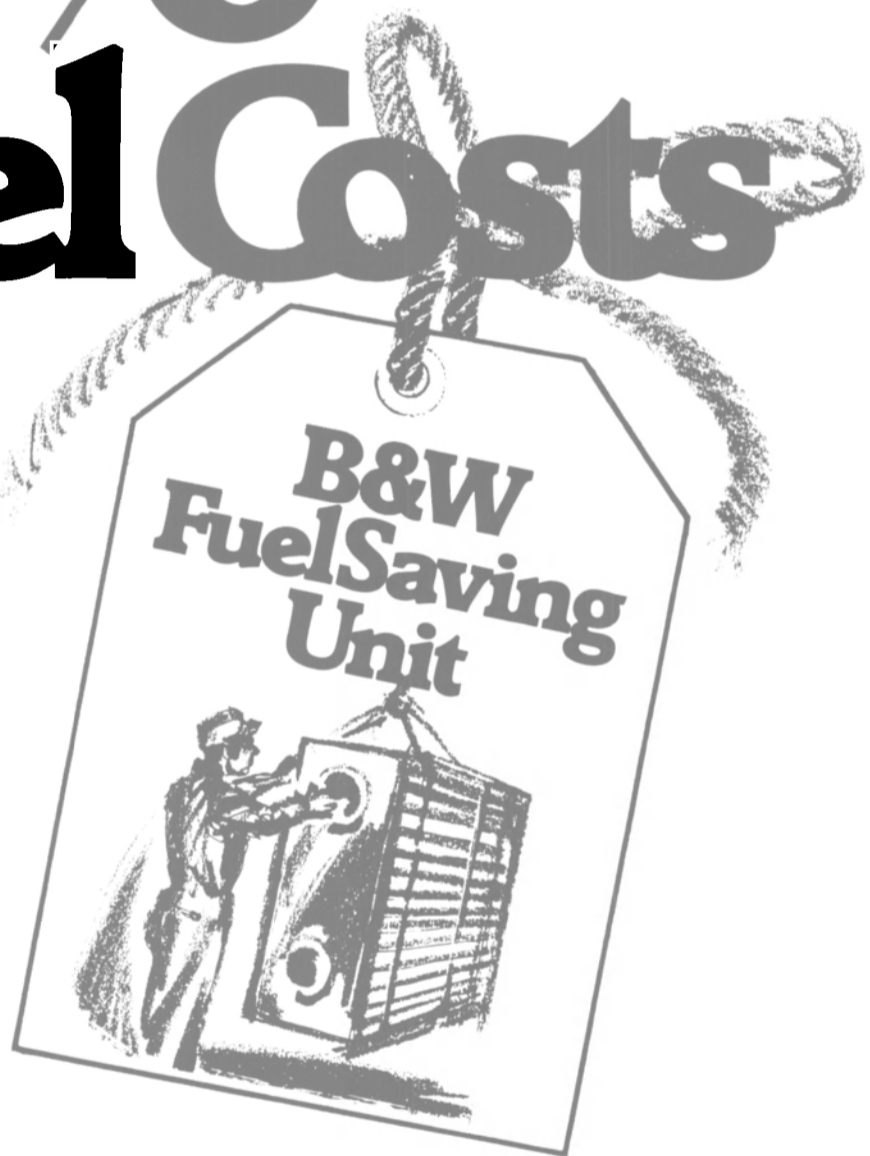
This means that your B&W air cooler can be easily modernized by building in a water mist catcher - thereby immediately achieving significantly lower fuel consumption.

The water mist catcher permits a reduction of the scavenging air temperature - and for every 10°C reduction, fuel consumption decreases by 1-1,5 g/BHP. Dependent on the sea water temperature you can save about 2% on your fuel costs.

At the same time you achieve a lower exhaust temperature - and spare parts costs for thermally loaded parts will fall significantly. If your coolers are corroded this investment will have a pay back time of 3-5 months.

The FUEL SAVING UNIT 2 can be installed on all B&W main engine types K67GF, K80GF and K90GF which were built before 1978.

Contact B&W Marine Service for further information - also concerning YOUR specific saving potential.



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New York — One State Street Plaza, New York, N.Y. 10004

Ingram Asks Title XI To Build 3 Towboats Costing \$8.7 Million

Ingram Towing Co., 4304 Harding Road, Nashville, Tenn. 37205, a subsidiary of Ingram Industries, Inc., has applied for a Title XI guarantee to aid in the construction of three diesel-powered towboats to be operated in the inland waterways of the United States.

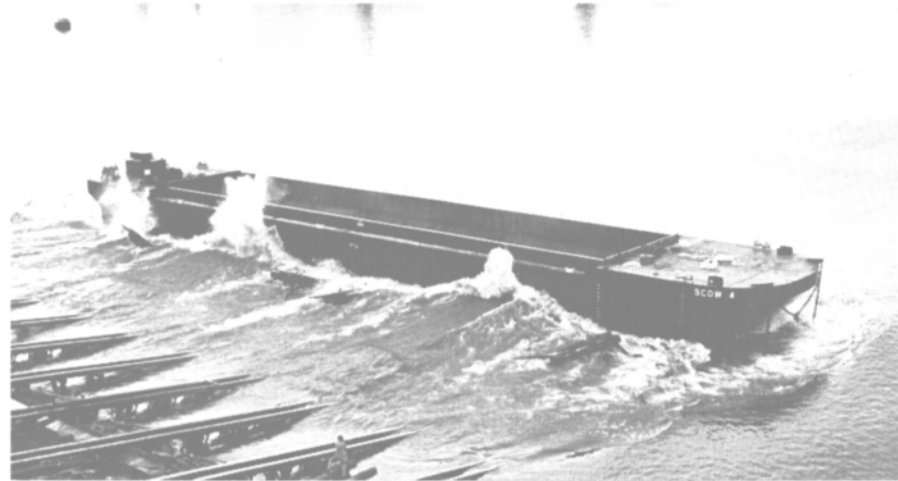
One of the vessels, to be built by St. Louis Ship, St. Louis, Mo., will be 200 feet long with 9,000 horsepower, and is scheduled to be delivered on May 1, 1980. Another, to be built by Janoush Marine, Inc., Rosedale, Miss., will be 100 feet long with 2,280 horsepower, and is scheduled to be delivered on December 15, 1980. The third will be 60 feet long, with 700 horsepower. No contract for its construction has yet been awarded.

If approved, the Title XI guarantee would cover \$6,570,000 or 75 percent of the actual cost of \$8,760,830 for the three vessels.

American Ship Building Names R.E. Bartlome VP For Administration

Robert E. Bartlome has been recently named to the new position of vice president of administration of The American Ship Building Company, Cleveland, Ohio.

Mr. Bartlome, who joined the company in 1965, was vice president of personnel as well as assistant secretary, a responsibility he retains in the new position. Earlier, he was secretary of several corporate subsidiaries including Nabrico Division (Nashville Bridge Company), and both Standard Metal Fabricating Company and the Cincinnati Sheet Metal and Roofing Company, which were joined to form the existing Building Products Division. From 1945 to 1955, Mr. Bartlome worked in an executive capacity with Thew-Lorain Company. He holds a B.A. degree from Hiram College.



Self-Dumping Barge Launched By FMC

With a traditional crash of champagne against its hull, a 258-foot hydro-dump barge was launched recently by the Marine and Rail Equipment Division of FMC Corporation, Portland, Ore. The barge (shown above) was christened by Marge Dolle, wife of Henry Dolle, a recently retired employee of Smith-Rice Company, a dredging business based in San Francisco, Calif. Smith-Rice purchased the barge for transporting and dumping dredge material in the San Francisco Bay region.

According to William R. Galbraith, FMC's vice president of sales, "The 3,000-cubic-yard-capacity barge was built in two halves along its longitudinal axis, and incorporates an unusual self-dumping design. Two giant hinges connect the barge at either end. A large hydraulic cylinder near each hinge and powered by a diesel engine controls the opening

and closing sequence. The system can be operated remotely by radio from a tugboat. "The best feature of the self-dumping design is its economy of operation in that it can be loaded in the conventional way and then dumped at a prime disposal area without further equipment. Radio control adds to the safety, speed, and simplicity of operation."

The Marine and Rail Equipment Division of FMC is a manufacturer of two types of transportation equipment in Portland—marine vessels and railroad freight cars. FMC Corporation, headquartered in Chicago, Ill., is a major producer of machinery and chemicals for industry and agriculture, with 1979 sales of \$3.31 billion. Worldwide, the company has more than 45,000 employees located at 136 manufacturing facilities in 33 states in the United States and 14 other nations.

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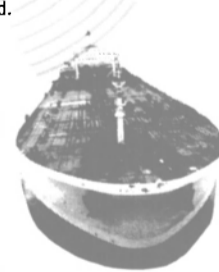
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Swedish-Built Offshore Support Vessels Double As Rescue Ships

Four multipurpose support vessels for offshore applications, under construction at Oresundsvarvet, Landskrona, Sweden, are de-

den. The first unit, MSV Stena Constructor, has already been completed.

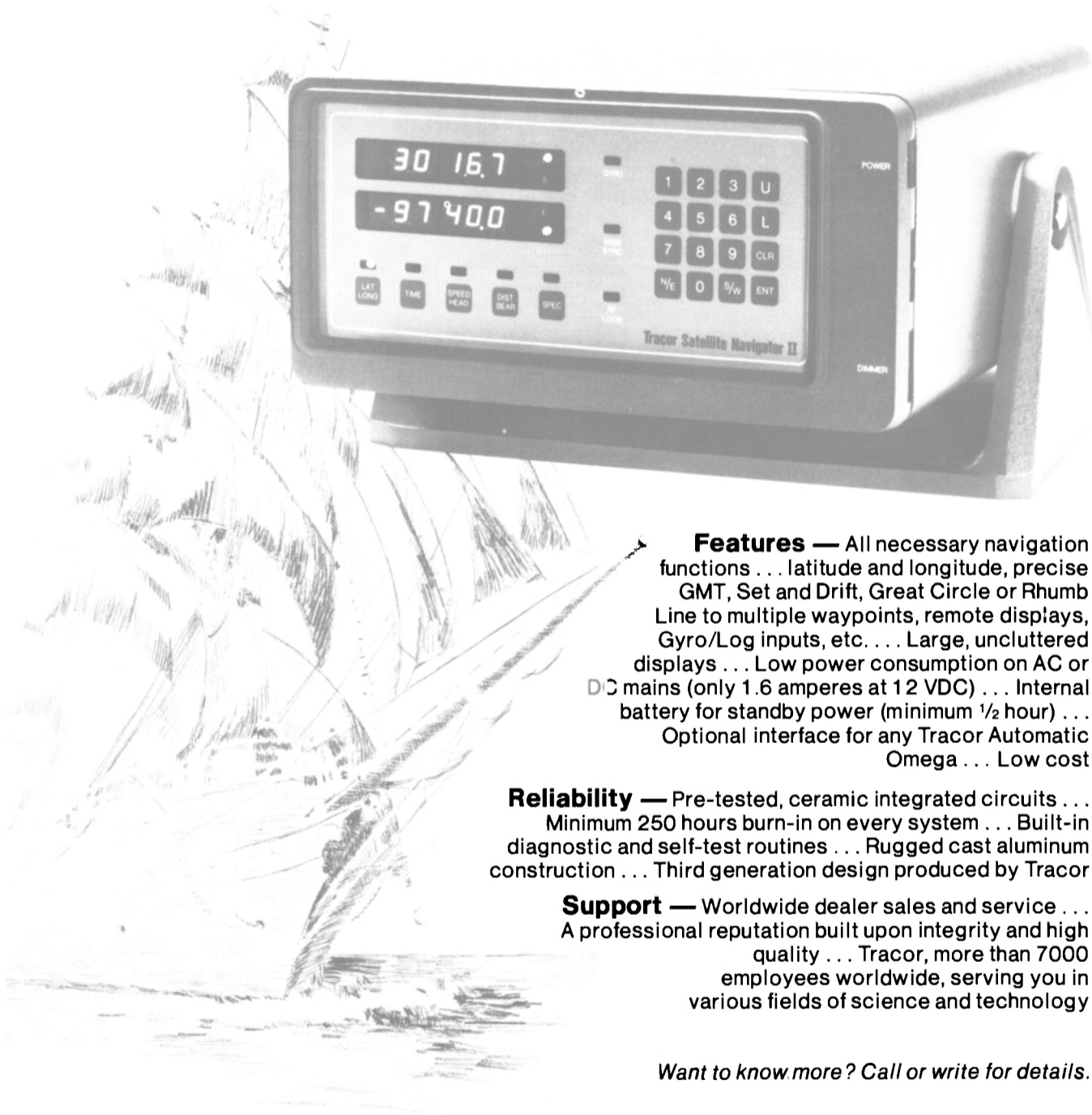
The new ships—with a crew of 82—are designed to supply oil-drilling platforms with drilling pipe, cement, fresh water and drilling water. They also permit repair and maintenance work to

length of 112 meters (367 feet) and a beam of 20 meters (66 feet). Top speed is 15.6 knots, and each has a weight of 5,850 dwt. Five diesel-electric engines supply 18,000 hp to five propellers, simultaneously activating water pumps during firefighting operations and providing power for diving operations. The ships are

Safety and security operations are among the ships' most vital functions, and the highly advanced firefighting equipment can spray 8,300 tons of foam and water per hour to a height of 70 meters (230 feet) and a distance of 150 meters (492 feet). Tank capacity for fuel oil is 970 cubic meters and the corresponding 1-

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J.J. Henry Co. Opens Houston Office

J.J. Henry Co., Inc., consulting naval architects and designers of many distinctive ships since its establishment in 1947, has opened a branch office in Houston, Texas, it was announced by **Charles Zeien**, president.

Mr. Zeien stated that the Houston office, which is under the

management of **David Logan**, will serve marine transportation and offshore companies located in the Gulf area. It supplements the engineering and design facilities of the J.J. Henry Co. heretofore located primarily in the Northeast part of the country.

J.J. Henry Co. is well-known to Gulf Coast companies. Its services to Gulf clients have included the design of bulk carriers for the Caribbean Steamship Company,

Lykes SEABEES barge carriers, El Paso LNG vessels, and most recently, 10 tugs of the Hvide Catug type. Three of the latter are under construction at Avondale Shipyards, New Orleans, La., for Occidental Corporation; six at Halter Marine, New Orleans, for Amerada Hess/Apex Marine; and one at Halter for California and Hawaiian Sugar Co. In addition, three super phosphoric acid barges under construction at Avondale

for Occidental were designed by J.J. Henry Co.

Mr. Logan was formerly a project manager in the company's New York office. The Houston office of J.J. Henry Co., Inc. is located at Suite 112, 9225 Katy Freeway, Houston, Texas 77024, telephone (713) 461-8553.

Cambridge Tankers Plan \$33-Million Reconstruction —Seeks Title XI

Cambridge Tankers, Inc., a subsidiary of Overseas Shipholding Group, Inc., New York, N.Y., has applied for a Title XI guarantee to aid in financing reconstruction of the tanker Seatiger.

The 121,739-deadweight-ton diesel-powered tanker, which will be renamed Overseas Boston, is expected to operate in the Alaskan oil trade.

The Seatiger, built by Mitsubishi Heavy Industries, Ltd. of Hiroshima, Japan, in 1974, was purchased by Cambridge on August 22, 1979.

If approved, Title XI financing would cover \$27,000,000 or 87½ percent of the actual estimated cost of \$33,000,000.

General Dynamics Corp., Quincy, Mass., has been proposed to reconstruct the vessel. Delivery is expected on or about September 3, 1980.

Bethlehem Steel Appoints Gesell As Sales Engineer

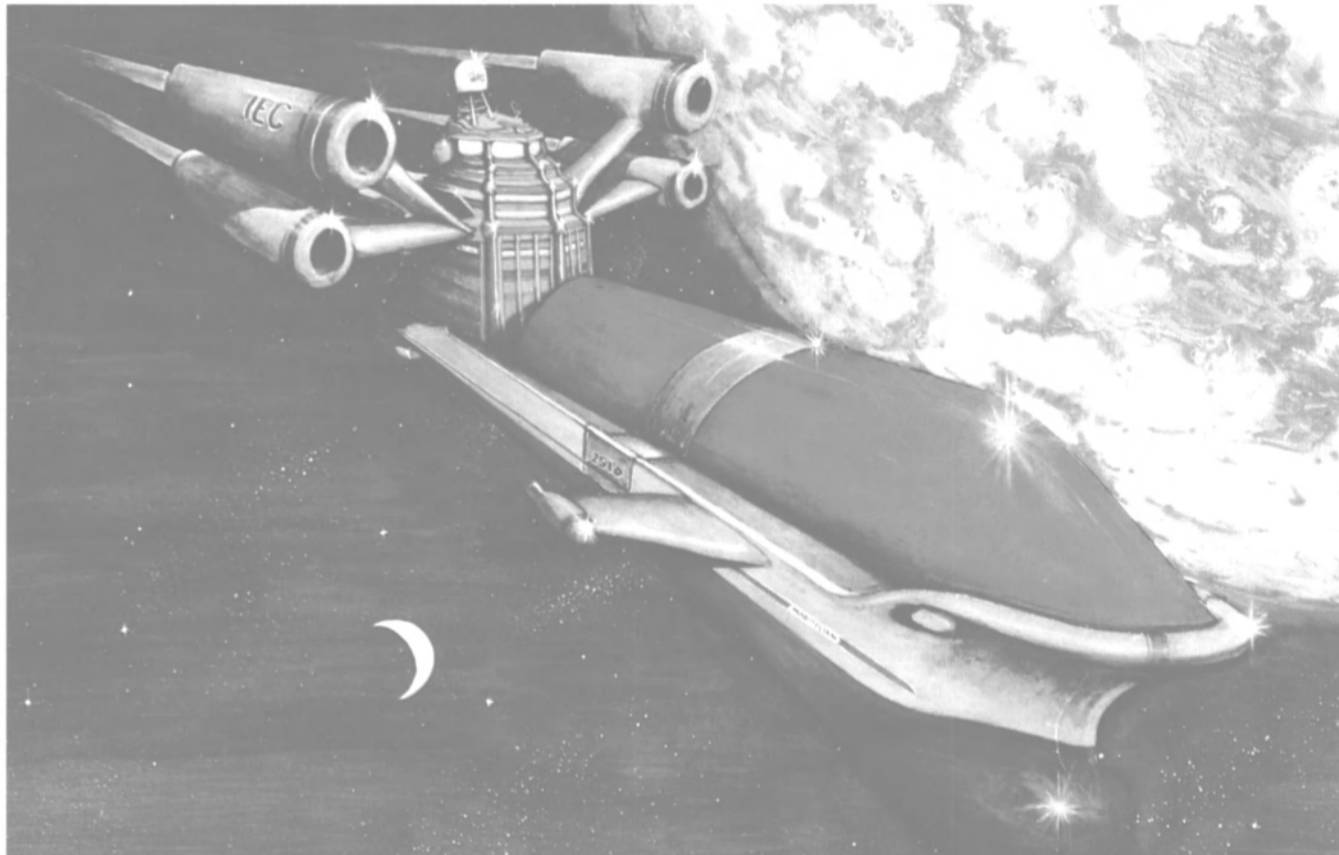


Edward J. Gesell

The appointment of **Edward J. Gesell** as sales engineer, industrial products sales, in Bethlehem Steel Corporation's shipbuilding department, was announced recently by **David H. Klinges**, vice president in charge of shipbuilding.

Mr. Gesell is advancing from industrial products supervisor at the corporation's shipyard at Sparrows Point, Md. He succeeds **Bradford J. Sibley**, whose retirement has been announced.

Mr. Gesell was graduated from the University of Maryland in 1965 with a degree in civil engineering. He joined Bethlehem Steel at the Sparrows Point Yard in 1966 as a junior estimator. The following year, he was promoted to estimator, and in 1973 he became a supervisor in that department.



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German Yard Delivers Barge-Container-Liner

Thyssen Nordseewerke GmbH, Emden, West Germany, has recently delivered a second barge-container-liner (Baco-Liner®), named Baco-Liner 2. The new vessel was ordered by Baco-Liner GmbH & Co. KG, Emden, and will be operated by Rhein-, Mass- und See-Schiffahrtskontor GmbH, Duisburg. She will be in service between Europe and West Africa

like her sister vessel Baco-Liner 1, which was delivered to her owners in July 1979.

The Baco-Liner has a length of 205 meters (approximately 673 feet), and a breadth of 28 meters (92 feet). The draft will be about 6.6 meters (22 feet). The engine room has been laid out to provide 16 hours watch-free operation. At an engine output of 7,800 kw (10,700 bhp) the ship will reach a speed of about 15 knots.

These vessels represent a spe-

cialized type developed in cooperation with Rhein-, Mass- und See-Schiffahrtskontor, Duisburg, and Captain Moncke, Bremen. With a deadweight capacity of 21,000 tons they can load 500 TEU containers on deck by means of the ships' gantry crane and can carry up to 12 barges of 800 dwt each inside the hull. The barges will be floated in and out of the semi-submersible hull through bow doors.

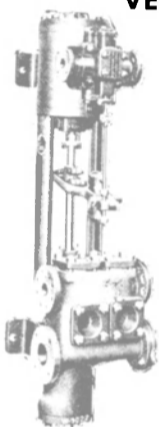
Rockwell International Awarded \$5-Million Dutch Navy Contract

The Royal Netherlands Navy (RNLN) has awarded a \$5-million contract to Rockwell International Corporation's Collins Communications Systems Division, Dallas, Texas, for Link 11 digital data communications systems.

This award marks the first international sale of the new Collins AN/USC-35 line of digital data communications systems.

PUMPS

UNUSED WORTHINGTON VERTICAL SIMPLEX PUMPS

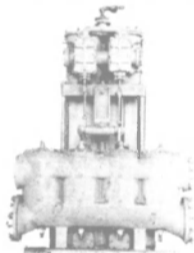


8 to 20 GPM—up to 350#. Also suitable for small boiler feed service. Steam WP 220# and 10# exhaust.

for Liberty Ships EC-2 & Victory Ships VC2, AP2 & AP3. (Fuel oil service) Liquid capacity from 7½ x 4 x 10—3" suction—2" discharge—1¼" steam—1½" exhaust. OAH 5'2"; OA depth 23"; OAW over air dome 2'2". Weight about 800#. Suitable

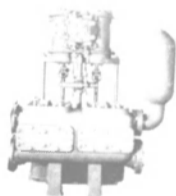
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WORTHINGTON 16" X 14" X 18" VERTICAL DUPLEX STRIPPING PUMP



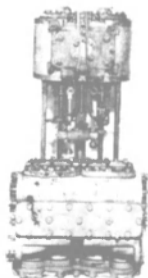
1400 GPM @ 110 PSI — suction lift 11.5 ft. — steam back pressure 15 lbs. 14" Suction — 10" discharge — 2½" steam — 4" exhaust. Overall width 6'8" — overall height 9'1½" — depth 3'9½". Wt. approx. 10,000 lbs.

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8" X 8" X 10" VERTICAL DUPLEX PUMP



Hendy design Suction 8" — discharge 6" — 160 GPM @ 100 PSI.

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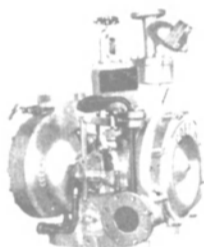
8 X 8—125 lb. working pressure. Reversible.

COFFIN FEED PUMPS — ALL SIZES — TYPE DE



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8450 RPM — 585 PSIG — 0°-200° superheat — exhaust pressure 15 lbs — NSPH 30 — typical serial 4683DE



TYPE CG

2 TYPE CG 350 GPM 1880' NET HEAD

7220 RPM—311 HP. Steam pressure 580 PSIG—0°-100° superheat. Exhaust 15 lbs—typical serial #5437-CG-8-8-33

DAVIT — WINCH

Mfg. by Skagit

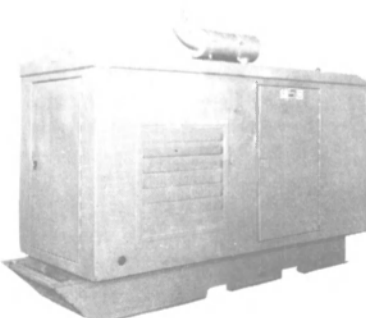
Rated 4000 lbs. @ 80 FPM

6500 LBS OF BOAT & MAN AT 40 F.P.M.



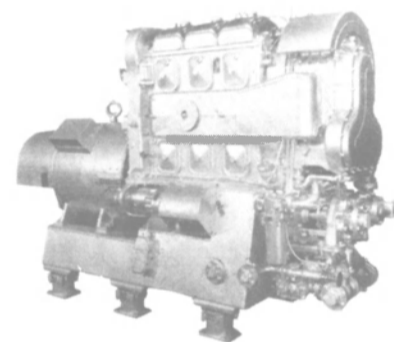
Motor: 13.5 HP — 440/3/60. Designed for ½" 6x37 wire rope. Divided drum with 2 spooling areas. Drum 8½ wide — 4" flange — 10" diameter. Complete with level wind. Also capable of manual operation by crank in case of motor failure. Hand brake & speed limiting brake are provided for holding & lowering boat by gravity. Non-magnetic.

GM 4-71-T TURBO-CHARGED 100 KW 440/220/3/60 10 WIRE DIESEL GENERATOR SET ALL VOLTAGES POSSIBLE



UNIT WITH CABINET IN PLACE

G. M. 3-268A 100 KW A.C. DIESEL GENERATOR SETS



ENGINE: GM 3-268A — 6½ x 7 — 1200 RPM — 80% power factor — electric starting. GENERATOR: 100 KW — 440/3/60/1200 RPM — 161 amps. Dripproof — open — self-ventilated. (Class "A" insulation stator — Class "B" insulation on field). EXCITATION: 2 KW DC unit — 9' 1¼" long — 37" wide.

FOR C4-SA1-VESSELS

"General" Class — like-new condition

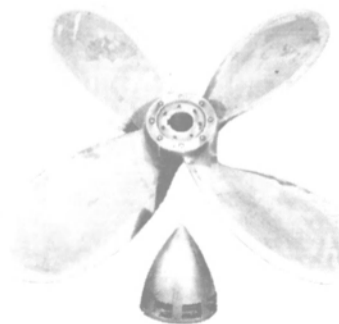
2 MAIN CF2V CONDENSATE PUMPS

Size 6X3 — 175 GPM 185 Ft. Head — 1750 RPM

ALSO AVAILABLE

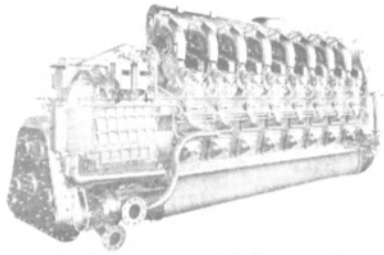
Turbine rotors — transfer pumps — complete Turbo Generators, etc.

4-BLADE LST BRONZE PROPELLERS



Starboard — 7' diameter — pitch constant 4.699: Bore tapers from 6½" to 4¾". 14½" taper equal to 1" / foot on diameter. U.S. Navy reconditioned. Average weight 1760 lbs.

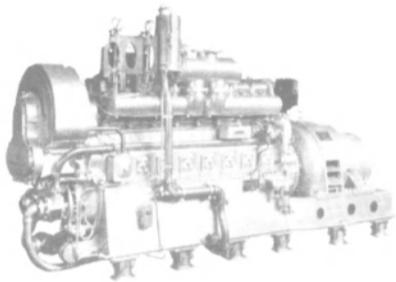
G. M. 16-278A 1700 H. P. DIESEL ENGINES



Limited supply remaining

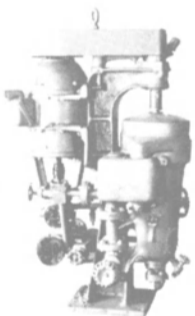
Complete, clean and in very good condition. As removed from U.S. Naval vessels. 1700 HP @ 750 R.P.M. Your inspection invited.

G. M. 8-268A 200 KW A.C. DIESEL GENERATOR SETS



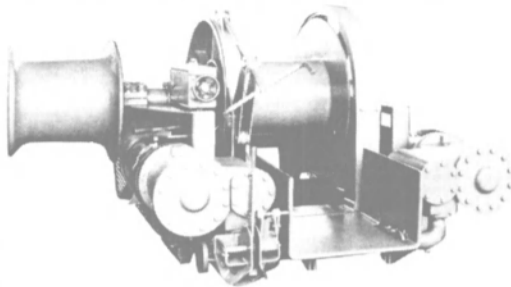
ENGINE: 8-268A—6½" bore—7" stroke—1200 RPM—driving Westinghouse generator—200 KW—440 volts—3-phase—60 cycle—321 amps—80% power factor at 1200 RPM. Switchgear available.

SHARPLES OIL PURIFIER



Ex. U.S.N. As removed from vessel. For lube or fuel oil. 225 GPH—viscosity 45, SSU @ 100°F fuel oil. 225 GPH—viscosity 180-200 SSU—130° lube oil. For lube oil models M-85-34-5-23BM-44— for fuel oil M-85-35-5-8CA-13. Bowl speed 17,000 RPM—1" oil inlet & outlet. Vertical 2 HP 440/4/3400 RPM motor. Many units with stainless steel bowls.

STEAM MOORING WINCHES 12" x 14" — AUTOMATIC TENSIONING with foot brake & declutchable gypsy head 20,000 LBS @ 100 FPM—FIRST LAYER



ALSO HANDLES 16,000 LBS @ 150 FPM
OR 50,000 LBS @ 8 FPM

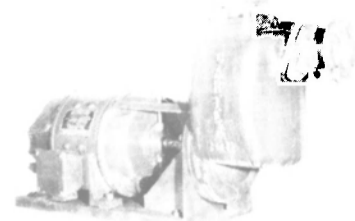
Drum will show 1500 ft of 1½" wire in 9 layers. Steam inlet 3½" — 4" exhaust—171 PSI working pressure. BASE DIMENSIONS: 6' x 6' 3½" — overall 8' 4½" wide x 9' long. Mfg by Friedrich Kocks—Bremen, Germany. Recently removed from ARCO "Challenger".

ALSO IN STOCK

12" x 14" Double Gypsy Unit

ALL UNITS CAN BE DEMONSTRATED RUNNING

CARTER BRONZE SELF-PRIMING BILGE & GEN. SERVICE PUMP



85 GPM @ 50 lbs. — 3500 RPM — 2" X 2". 5 HP — 115 VDC — 1750 RPM motor.

\$1466

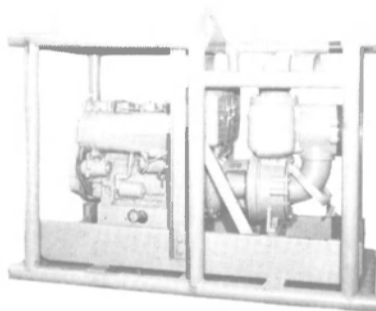
100 KW GBD-8 DIESEL GENs.



From LST vessels. 120/240 VDC — 417 amps — stab shunt — 1200 RPM — Delco gen.—self-excited. ENGINE: Superior GBD-8 — 8 cyl — 5½x7 — 150 HP — 30 volt electric starting. Reconditioned to ABS. Dry wt 10,000 lbs — DAL 124" — 65-11/16" high — 42" wide. Ht necessary to pull piston 68". Fuel consumption 0.620 lbs/hr

MARLOW

6" Self-Priming Salvage Pump



Marlow model 6EF18—driven by VM air-cooled 3-cylinder 52 HP diesel engine. 96,000 GPH at 40 ft. Maximum heads to 70 feet.

T-2 EQUIPMENT

Selected Items Listed

T-2 UNUSED G.E. MAIN PROPULSION STEAM TURBINE WITH ROTOR

10 Stage — 435# — 720°T.T.

Turbine complete with rotor — serial No. 109166 — 4925/5400 KW — 3600/3720 RPM — 10-stage — 435# — 720°TT — 28.5" VAC.

WESTINGHOUSE MAIN PROPULSION GENERATOR STATOR

From Ex-Pecos — in like-new condition. With A.B.S.

5-SPEED FORCED DRAFT FAN MOTOR



For T-2 Tanker. MOTOR: Totally enclosed—frame 505-S—440/3/60 —1770 RPM—typical serial #673-1807. CONTROLLER: 50 HP — CR-5333-820 — Cat. 932-1485. Max. amps 60.

WESTINGHOUSE 538KW TURBINE ROTORS

WESTINGHOUSE 538 KW AUX. GENERATOR EXCITER ARMATURE 400 KW REVOLVING FIELDS

We have both types:

110KW — 32KW — 5.5KW
110KW — 28KW — 5.5KW

FOR G.E. 525 KW T-2 TURBO GENs.

- G.E. DORV-325M TURBINE ROTORS
- 400 KW 450/3/60/1200 A.C. 6-POLE REVOLVING FIELDS
- D.C. EXCITERS — 75KW/55KW
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J.J. McMullen Receives Design Contract From Ingalls Shipbuilding

John J. McMullen Associates, Inc. (JJMA) recently received a contract from Ingalls Shipbuilding Division of Litton Industries, Pascagoula, Miss., to provide complete detail design and engineering services for the construction of two offshore drilling rigs for Keyes Offshore, Inc. of Houston,

Texas. This work will be carried out by JJMA's Hampton Roads Operation, located at Newport News, Va.

This office, established in 1978, offers the services of a full capability staff of about 130 persons, providing an average shipyard-oriented design experience of 16 years. In addition to the Litton contract, JJMA is currently providing major detail ship design services to Sun Ship, Inc. and Avondale Shipyards.

Dravo Receives \$3-Million Barge Unloader Contract

Dravo Corporation, Pittsburgh, Pa., has been awarded a contract in excess of \$3 million by Alabama's State Docks Department, for the engineering, supply and erection of a continuous barge unloader.

The new bucket elevator barge unloader will be installed at the McDuffie Terminal, Mobile, Ala.,

to supplement existing facilities. Designed to unload 5,000 tons of coal per hour, the project is scheduled for completion in mid-1981.

Dravo, with more than 50 years' experience, is one of the world's major designers and builders of bulk materials handling systems.

\$5.8-Million Navy Overhaul Contract Awarded Lockheed-Seattle

Lockheed Shipbuilding and Construction Company, Seattle, Wash., is being awarded a \$5,822,936 formally advertised firm fixed price contract for the regularly scheduled overhaul of the USS Sacramento (AOE-1). The Supervisor of Shipbuilding, Conversion and Repair, USN, Seattle, is the contracting activity. (N62799-70-C-0009)

Ship Systems Symposium Announced For Oct. 2-3

A Ship Systems Symposium jointly sponsored by The Delaware Valley Chapter of The American Society of Naval Engineers, Philadelphia Naval Shipyard, and the Naval Ship System Engineering Station will be held October 2-3, 1980, at the Cherry Hill Inn, Cherry Hill, N.J. Technical sessions on Ship Systems Life Cycle Improvement and related topics will be presented on both days.

The symposium is designed to bring together the operator and engineer in open forum for the purpose of identifying and proposing solutions to current and future problems relative to the life cycle, operation, maintenance, and effectiveness of hull, propulsion, and auxiliary systems. For further information, contact Paulette Bonivich, Code 190 Building 7, Philadelphia Naval Shipyard, Philadelphia, Pa. 19112.

N. Bachko To Head N.Y. Office Of IMA

International Maritime Associates, Inc. (IMA) has established a branch office in New York City. It is located in the American Bureau of Shipping Building at 65 Broadway, New York, N.Y. 10006.

The firm, based in Washington, D.C. since 1974, offers a complete range of management and technical consulting services in the U.S. and other countries.

Nicholas Bachko, formerly senior vice president for planning of United States Lines, is now associated with IMA, and will manage the new office. He can be reached in New York at (212) 943-2770, or in Washington at (202) 296-4615.

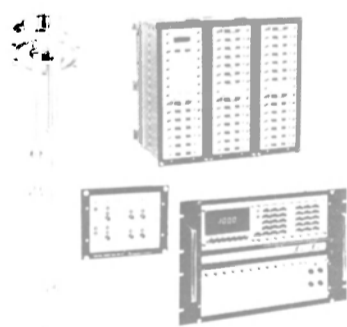


Planning a new ship? Autronica has all the alarm systems you need.

The main product categories are:

Centralized integrated alarm systems for diesel engine plants and ships engine rooms. Approved by all main classification societies.

Condition monitoring equipment for diesel engines; pressure analyser (MIP-calculator), piston ring oscilloscope and thermal load analyser. Saves fuel and maintenance costs.



Alarm systems for temperature, pressure and levels of cargo (chemical and product carriers). Installed on more than 70 modern vessels.

Fire alarm systems. Panels and detectors manufactured by Autronica. **We can offer you 18 years of experience in diesel condition monitoring and alarm systems.**

More than 4,500 installations in ships of all nationalities.

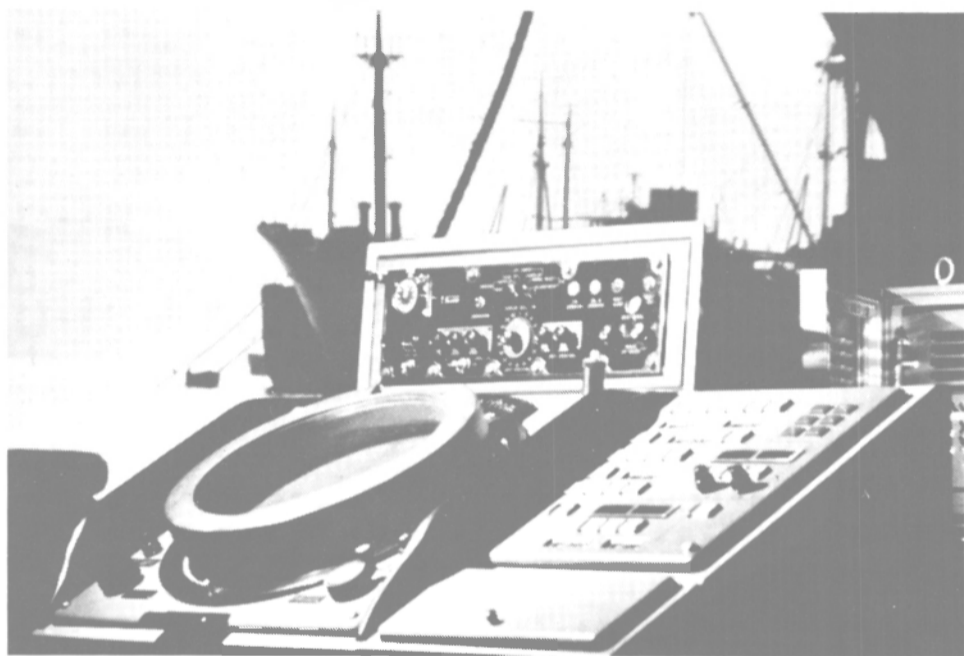
All equipment have a high degree of reliability, is easy to install and service and easy to operate.

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Selenia is one of the world's largest suppliers of high power marine radars. Today there are more than 10,000 marine radars in service worldwide, most of which are marked with the Raytheon name, of Selenia design and manufacture, supported internationally by a network of over 250 service organizations.

ITT Mackay Marine is now the exclusive Selenia radar distributor and the authorized factory service company in the United States, Canada and Puerto Rico.

Through ITT Mackay Marine you'll have greater opportunity to take advantage of Selenia product advances. A new line of accessories is available now. Including:

Multiscan—a multilevel system of video processing, producing a very bright display.

Eleplotter—an electronic plotter giving fast and precise readout of selected targets and dynamic data.

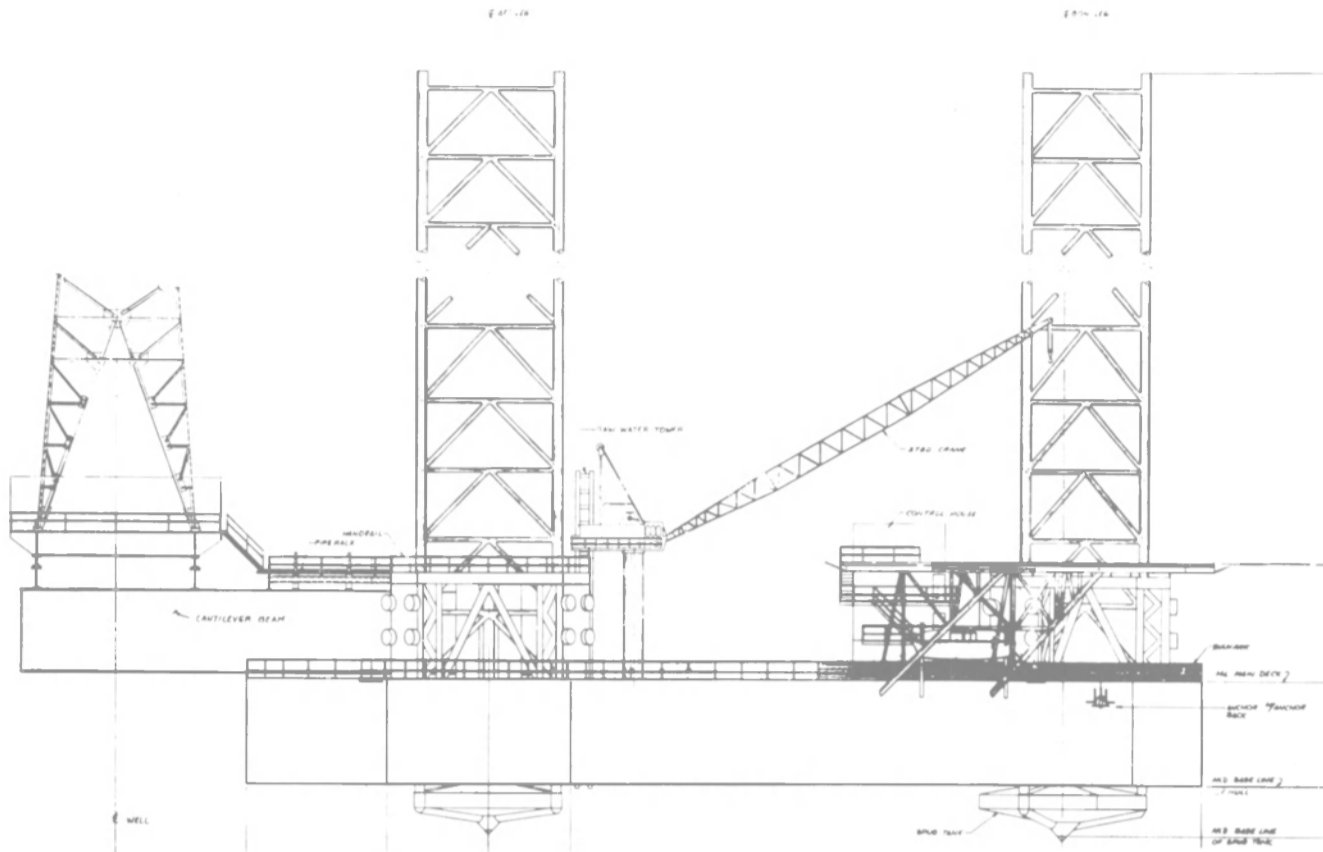
Radar Alarm Unit—this provides an audible and visible alert of approaching targets.

Radar Performance Monitor—for accurate measurement of individual radar parameters.

Benefit directly from the wide range of services and system know-how of ITT Mackay Marine plus the technical resources of Selenia.

Contact us today. Write: ITT Mackay Marine, Dept. 370, 2912 Wake Forest Road, Raleigh, NC 27611. Or telephone (919) 828-4441.

Mackay Marine **ITT**



Zapata's new "Canada-class" jackup rig, to be built by Promet (Pte.) Ltd. of Singapore, was designed by Baker Marine Corporation of Ingleside, Texas. Dimensions of the severe environment jackup, which will work initially for Mobil Oil of Canada under a three-year contract, are: (hull) length, 230 feet; width, 212 feet; depth, 27 feet. The \$42-million rig will be equipped with adequate leg length to permit seasonal drilling in water depths to 200 feet.

Zapata Orders Three Rigs Costing \$105 Million

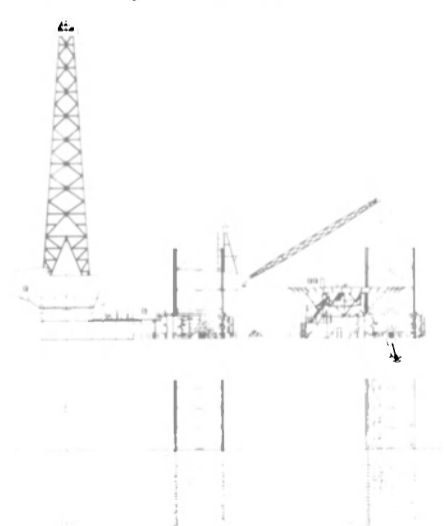
Zapata Corporation, Houston, Texas, announced recently that it has signed contracts for the construction of three new jackup rigs for its offshore drilling fleet in two Singapore shipyards. The company said the U.S.-flag rigs will be owned and operated by Zapata Off-Shore Company, are scheduled for 1981 delivery, and will have an estimated total cost of \$105 million.

The company said that one of the jackups is being built for operation in severe environments, and will work initially for Mobil Oil of Canada under a three-year contract to drill in a new exploration area about 100 miles east of Nova Scotia. Zapata called the \$42-million rig "one of the world's largest jackups in terms of storage capacity and structural strength."

The company said the other two jackups will be moderate environment rigs suitable for work in Southeast Asia, the Middle East, the Gulf of Mexico and most other active exploration areas. They will cost approximately \$31 million each.

R.C. Lassiter, Zapata Corporation president and chief operating officer, said construction of the three jackups is part of a plan to upgrade and extend the company's offshore drilling fleet to meet increasing long-term demand. He explained that all three units are of a three-legged, cantilever con-

figuration which enables them to drill both exploration and development wells, extending by several years the usefulness of a rig in a successful exploration area. Mr. Lassiter said that in view of their size and versatility, and projected markets for that class of rig, the company does not anticipate any problems finding work for the two smaller jackups, which have not yet been contracted.



Two of the three new jackups to be built by Far East-Levingston Shipbuilding, Ltd., Singapore, for Zapata Corporation are based on the Friede & Goldman L-780 design. The two units will have hull dimensions of 180 feet by 175 feet by 25 feet, with overall leg length of approximately 340 feet. These \$31-million units will have living quarters for 84 men, and will be suitable for operation in water depths of 250 feet.

Zapata said the specifications and design of the "Canada-class" jackup, developed by Baker Marine Corporation of Ingleside, Texas, for construction by Promet (Pte.) Ltd., Singapore, include the ability to withstand strong currents and 81-foot seas at a 150-foot water depth. The rig's variable deckload capacity will be 2,500 tons, and installed leg length will permit seasonal drilling in water depths to 200 feet. Leg length can be added later for drilling in deeper water in less severe environments.

The company said the other two jackup units, to be built by Far East-Levingston Shipbuilding, Ltd., will be equipped to drill in water depths to 250 feet. The rigs were designed by Friede & Goldman, New Orleans, La. All three rigs will be built to conform to regulations of the American Bureau of Shipping and the U.S. Coast Guard.

Jotun Baltimore Offers Literature On Baltoflake Coating System

Jotun B.C.P. recently published literature on their Baltoflake coating system.

A solvent free fine particle flake glass reinforced polyester coating, Baltoflake provides abrasion and

corrosion protection with minimum maintenance. The one-coat application system requires no more pretreatment than multi-coat systems for maintenance.

For a copy of the Baltoflake brochure, complete with specifications performance capabilities and applications, write **Nicholas J. Scotland**, Jotun-B.C.P., 501 Key Highway, Baltimore, Md. 21230.

Navidyne Receives Orders For Satellite Navigation Systems

Olympic Maritime S.A. (Onassis Group), and Sea-Land Service, Inc. have chosen the Navidyne ESZ-4000 Satellite Navigator for their merchant fleets. Sea-Land has purchased 27 Navidyne sets, and Olympic has ordered 22, with an option to buy as many as 18 more, according to **A. Clifford Barker**, president of Navidyne Corporation.

Olympic Maritime purchased the Navidyne satellite navigators through Anschuetz of America, New York. The first sets were installed aboard Olympic vessels in September. Installation of the initial 22 units will be completed by the end of this year.

Sea-Land is installing the ESZ-4000 aboard all ships in its fleet of SL-7s and SL-18s. As the new D-9s go into service next year, they will also be fitted with the Navidyne unit.

For literature and full information on Navidyne satellite navigation receivers, write to **A. Clifford Barker**, Navidyne Corp., 11824 Fishing Point Drive, Newport News, Va. 23606.

Perry Oceanographics, Inc. Offers Services And Products Brochures

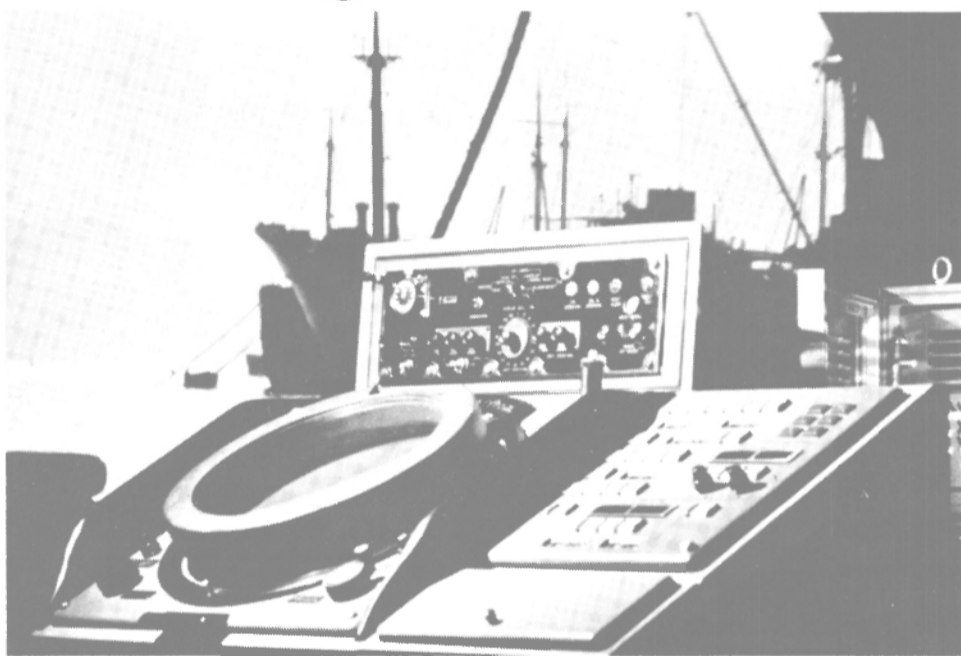
Perry Oceanographics, Inc. has recently published a series of single-page brochures describing engineering services and products offered by the firm.

Perry has long been recognized as a leader in the design and fabrication of submersibles and dive systems. Perry is now offering shipyard support services, including interface engineering to incorporate submersibles or dive systems onto surface support ships; general naval architectural and marine engineering calculations; and contract plan and specification preparation.

The product brochures describe available engineering services and provide specifications on submersibles, dive systems, remote control vehicles, manipulator arms, and thrusters.

For free copies of these brochures, write **Mrs. Rita Pellen**, Perry Oceanographics, Inc., P.O. Box 10297, Riviera Beach, Fla. 33404.

Let ITT Mackay Marine show you the benefits of a Selenia radar system.



Selenia is one of the world's largest suppliers of high power marine radars. Today there are more than 10,000 marine radars in service worldwide, most of which are marked with the Raytheon name, of Selenia design and manufacture, supported internationally by a network of over 250 service organizations.

ITT Mackay Marine is now the exclusive Selenia radar distributor and the authorized factory service company in the United States, Canada and Puerto Rico.

Through ITT Mackay Marine you'll have greater opportunity to take advantage of Selenia product advances. A new line of accessories is available now. Including:

Multiscan—a multilevel system of video processing, producing a very bright display.

Eleplotter—an electronic plotter giving fast and precise readout of selected targets and dynamic data.

Radar Alarm Unit—this provides an audible and visible alert of approaching targets.

Radar Performance Monitor—for accurate measurement of individual radar parameters.

Benefit directly from the wide range of services and system know-how of ITT Mackay Marine plus the technical resources of Selenia.

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We build high-speed offshore crewboats for service anywhere in 65' to 105' standard designs. Or to your specifications. Aluminum or steel, their design creates exceptional stability, speed and seakeeping capabilities. We build modifications of the standard designs. For pilot boats, inspection, research and surveying craft. We can build the small boat you need. Ask us.

We build tugs for towing ships, barges and drilling rigs, for anchor handling and offshore support, for inland and harbor use, ship handling, mooring, docking and tendering. And we build special use tugs for unusual operations. We can build the tug you need. Ask us.

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We build more anchor handling, rig towing, unrestricted ocean service offshore supply/support ships than anyone else in the world. They are highly developed, well-planned platforms from which work is performed with ease, safety and economy. We can build the support ship you need. Ask us.

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the Patrol Boat



the Supply Boat



the Special Boat

Our ten shipyards build more offshore support vessels than anyone else in the world. Many of our designs have become world standards, we pioneered and perfected the use of high-strength, low-alloy steel in ship construction, and we are experts in aluminum and fiberglass boatbuilding. We build fishing boats—and patrol boats to protect them and national fisheries—and a great variety of small versatile workboat classes for any operation. We can build any boat you need. Ask us. Halter Marine, Inc., Box 29266, New Orleans, La. 70189 U.S.A. Dept. 3-4A 504/246-8900 International Telex—6821246 Domestic Telex—58-4200 Cable: HALMAR.

The Total Shipbuilding Group



Specifications Available On New Model Facsimile Receiver By Raytheon

Information and specifications are now available on a new automatic facsimile receiver by Raytheon Marine Company.

The RAYFAX 300 receiver features a four-band, crystal-controlled, single-sideband radio with push-button station selectors

which can be set for any eight of the more than 50 facsimile stations worldwide. The RAYFAX 300 will receive high-definition weather charts, wave height charts, sea ice conditions, hurricane tracks, storm warnings, satellite cloud pictures, surface temperature, and other facsimile data transmissions. All are reproduced on dry, odorless, 12-inch-wide aluminized recording paper.

According to Raytheon, special

features of the RAYFAX 300 include controls for fine-tuning the antenna for peak reception and for precise positioning of the recording on the chart paper. The chart recorder portion is available separately, for use with any suitable wide-band receiver, or with the eight-channel receiver.

The compact, 29-pound recorder is designed for table-top mounting. The 8-pound receiver may be secured on top of the recorder or

mounted in a remote location. Connection to the 24V d-c power source and an HF long-wire or whip antenna completes the simple installation. Provision is made for a second receiver if desired.

Information and complete specifications can be obtained by writing to Stanley Clark, Raytheon Marine Company, 676 Island Pond Road, Manchester, N.H. 03103.

\$5.3-Million Navy Overhaul Contract Awarded Metro Machine

Metro Machine Corporation, Norfolk, Va., is being awarded a \$5,348,876 formally advertised firm fixed price contract for the regularly scheduled overhaul of the USS Sumter (LST-1181). The Supervisor of Shipbuilding, Conversion and Repair, USN, Portsmouth, Va., is the contracting activity. (N62678-70-C-0016)

Gerald Albert Promoted To President Of EDO Corp.



Gerald Albert

Following a board of directors meeting recently, EDO Corporation, College Point, N.Y., announced a top executive change. Gerald Albert, an officer and director of the company was promoted to president and chief operating officer of the 55-year-old aerospace-electronics firm. William R. Ryan, who relinquished the president's post, will continue to serve as chairman of the board and chief executive officer. He has filled both executive posts since 1972.

Mr. Albert joined EDO as a staff engineer in 1949, and has been a director since 1971. He was group president of the company's Industrial and Government Products Division for the past several years, heading up its Government Products Division for eight years before that. He holds a degree in electrical engineering (CCNY), which he received after serving in the U.S. Navy for three years in World War II. He is on the board of trustees of the National Security Industrial Association.

EDO Corporation designs and manufactures advanced electronic and specialized equipment for military, general aviation, marine and industrial markets.



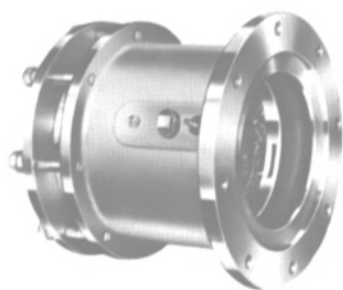
We help make the going More Reliable



Performance reliability is what sea-going tugs like the Mary and Savare DeFelice must have.

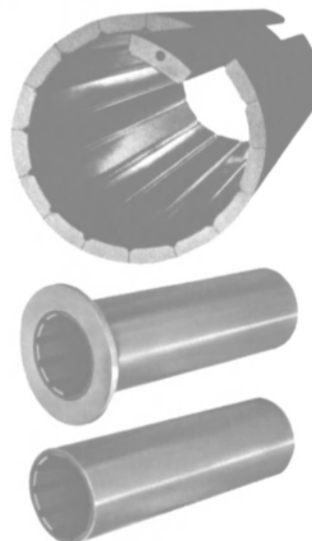
When Quality Shipyard, Inc., Houma, Louisiana built these 95-foot vessels for Gulf Fleet Marine Corporation, DeFelice Division, New Orleans, they selected quality engineered Johnson®-Duramax® Shaft Bearings and Stuffing Boxes to meet these high performance requirements.

For the extras in quality and performance reliability, install Johnson-Duramax Marine Products.



Several styles of Stuffing Boxes are available for combinations of Air/Water/Grease service. Also included are types with air inflatable rubber ring which seals out sea water during packing change.

**Write or Call for Data on
Bearings, Stuffing Boxes
and Keel Coolers.**



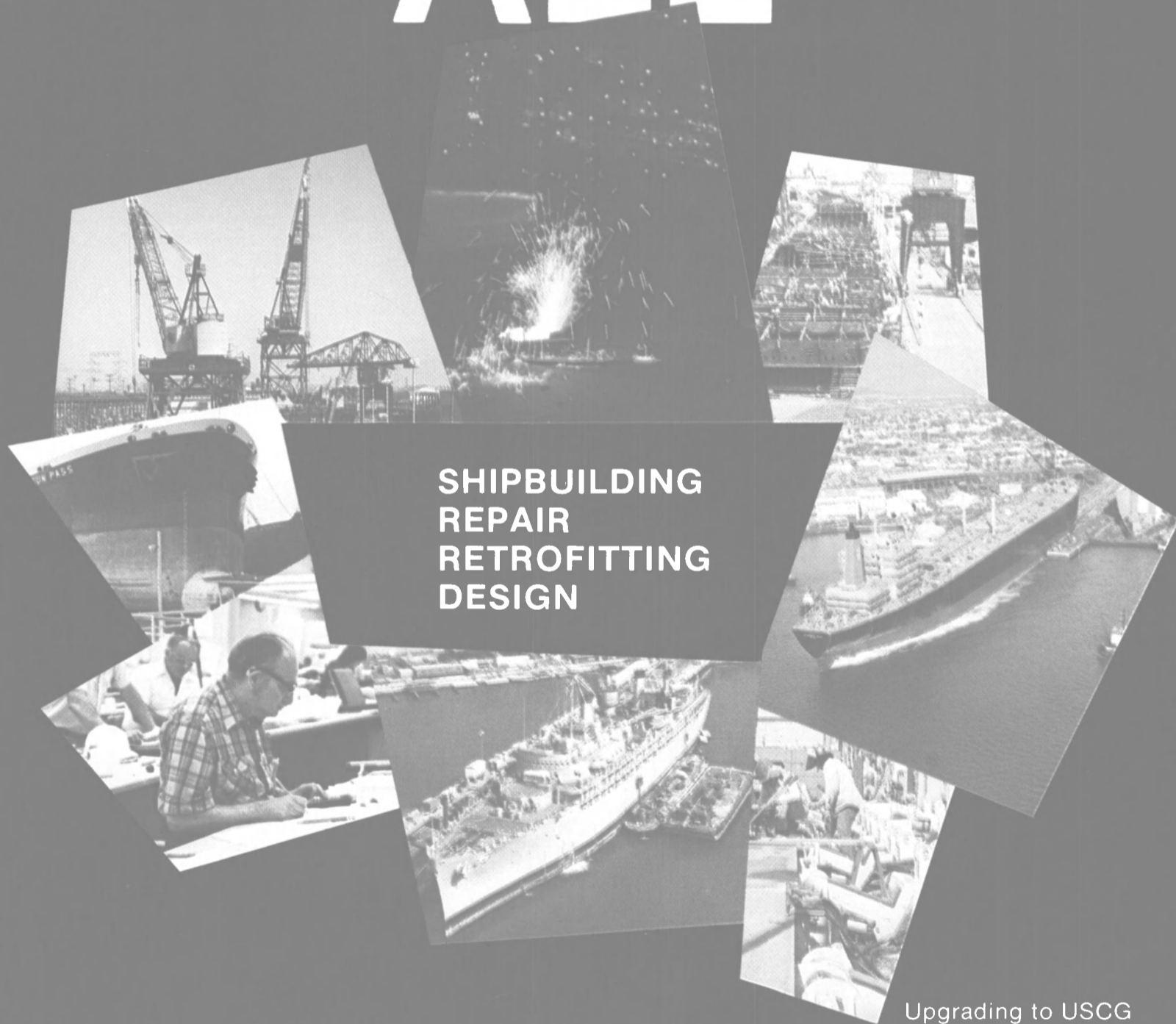
Johnson Duramax Bearings meet a full range of shaft sizes. Choose Sleeve or Flanged, or the De-mountable Stave Type. They're quality engineered, quality built for ease of installation, low maintenance, and superior performance.

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Upgrading to USCG
and IMCO Standards

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Technical Management Reorganization Announced By B&W Engineering

With the establishment of the new company, B&W Diesel A/S, comprising the four divisions — B&W Marine Service, B&W Alpha Diesel AS, B&W Holeby AS, and B&W Engineering—changes have taken place in the technical man-

agement positions of B&W Engineering, Copenhagen.

Headed by divisional managing director **J. Dragsted**, the technical organization now consists of five departments.

The Two-Stroke Design & Development Department will be headed by **J. Schmidt-Sorensen**, with **E. Eriksen** in charge of Development and Advanced Calculations, **C.E. Egeberg** of Design,

and **K. Fursund** of Material Research.

The Two-Stroke Operation Department and Research Laboratory will be headed by **J. Christensen**, with **U. Mikkelsen** in charge of Operation. **W. Wroblewski** will continue to direct the Research Laboratory.

The Marine Installation Department will continue to be run by **H. Klintonp**, with **O. Grone** taking

over Marine Installation, and **P. Brendorp**, Projects.

In the Four-Stroke Design, Development & Operation Department, **O. Pedersen** will remain as general manager, with **K. Rommelmayer Larsen** as manager of Design and Development, and **O. Schnohr** as manager of Operation.

B. Leidland will continue as general manager of the Constructional Service & Production Technique Department.

Navidyne's new ESZ-7000 looks more like a satellite navigator than a Loran C.

With good reason.

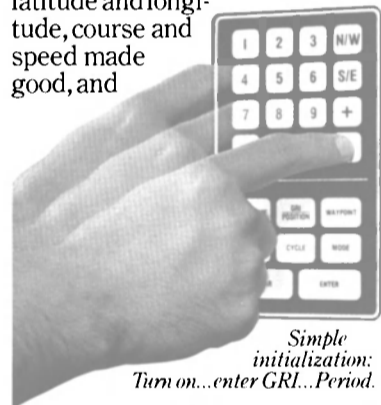
Much of the same technology that made Navidyne's satellite navigator the world's best went into our new Loran C Navigator.

So no wonder our Loran C doesn't look like any other. It's more advanced than any other.

IT LOOKS TOO SIMPLE TO BE SO SOPHISTICATED.

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course and distance to any of nine preselected waypoints for both great circle and rhumb line routes. Also the total distance run and estimated time of arrival. Even left-right steering commands for maintaining a precise predetermined course.

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And if you ever need service, count

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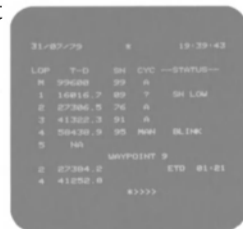
IT LOOKS TOO EXPENSIVE TO BE SO AFFORDABLE.

By now, you probably think this is the most expensive Loran C on the market.

Not so.

Compare its features to units costing far more — and there's no comparison. The ESZ-7000 sets a whole new standard.

TWO WAYS OF LOOKING AT THE ESZ-7000.



LOP reading also available as well as LAT/LONG.

If warnings indicate possible tracking problems, you can easily change from the fully automatic latitude/longitude-reading screen to a

NAVIDYNE'S NEW LORAN C. ITS LOOKS ARE DECEIVING.



New Ferry For The Strait Of Messina

A modern double-ended ferry is being built at Cantiere Navale Visentini Shipyard, Donada, Italy, for Caronte. The vessel will be 86 meters (about 282 feet) on the waterline, with a beam of 17 meters (about 56 feet), and a draft of 3.2 meters (10 feet). Power will be about 3,500 kw (4,800 hp) to two size 32GII/200 Voith-Schneider propellers, giving the vessel a speed of 15.5 to 16 knots.

When completed, this will be the seventh Voith-Schneider propelled ferry in service between Sicily and the Italian mainland.

John G. Rogers Appointed Facility Services Manager At Bethlehem Steel Corp.

The appointment of **John G. Rogers** as manager, facility services, in Bethlehem Steel Corporation's shipbuilding department was announced recently by **David H. Klinges**, vice president in charge of shipbuilding.



John G. Rogers

Mr. Rogers is advancing from planning engineer. In his new capacity, **Mr. Rogers** will be responsible for all matters concerning facilities for the shipbuilding department.

Mr. Rogers was graduated from Stevens Institute of Technology in 1938 with a degree in mechanical engineering. He joined Bethlehem Steel in 1942 at its former Staten Island Yard, and later that year was assigned to shipbuilding headquarters in New York City as an engineer in facilities engineering.

In 1944, he was assigned to the Hoboken (N.J.) yard as plant engineer, and four years later returned to shipbuilding headquarters as assistant to construction engineer. In 1969, **Mr. Rogers** was promoted to planning engineer in facilities engineering.

display of up to five time differences (TDs) as shown here. With all pertinent information about the condition of each signal.

A simplified version of the ESZ-7000 is also available which displays Loran C time differences only. But even it offers more information at a glance than any other Loran C.

In fact, any way you look at our new unit, you find it's worth a closer look.

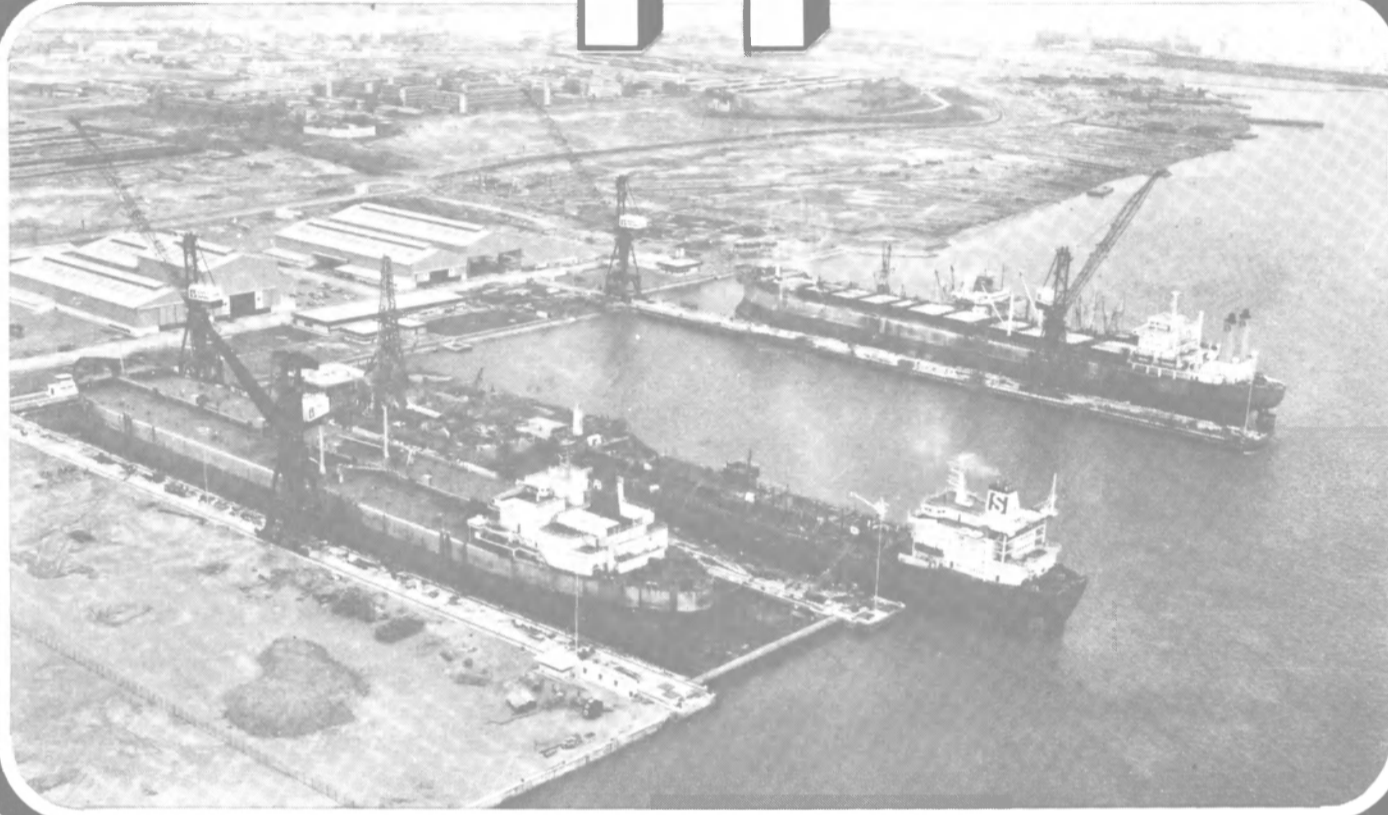
For more information and the location of your nearest dealer, contact: Navidyne, 11824 Fishing Point Drive Newport

News, Virginia 23606 USA. Telephone: 804/874-4488. Telex: 82-3653 (NAVIDYNE NPNS).



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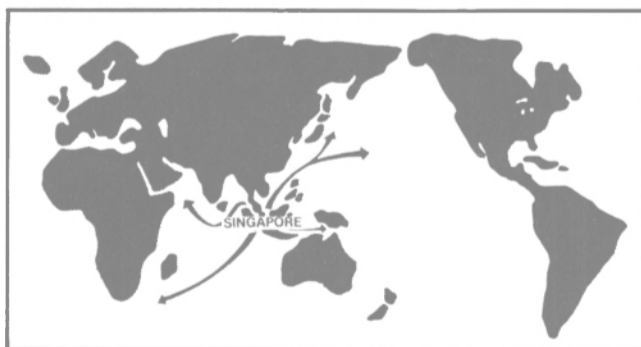
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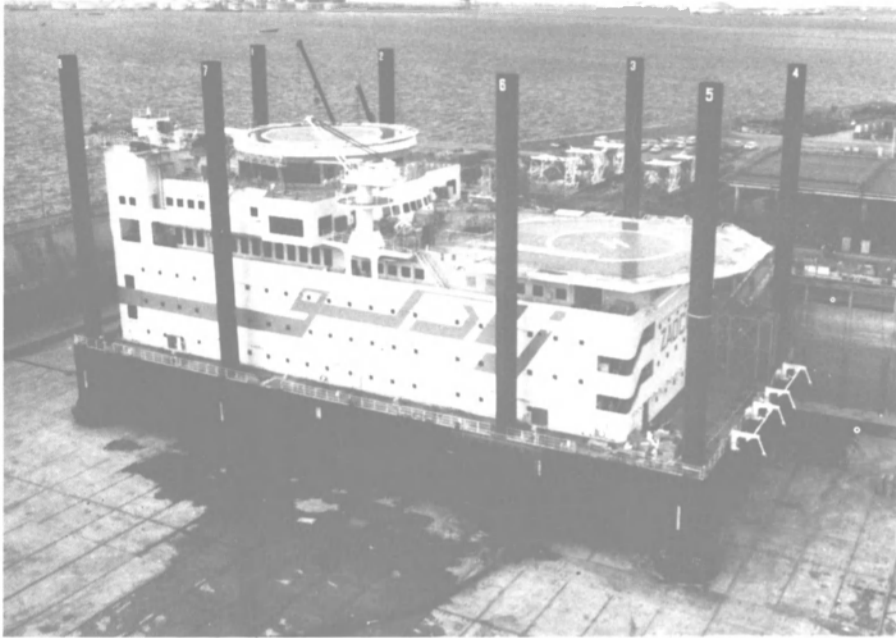
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IHI Completes Accommodation Barge For Abu Dhabi Oilfield

A jackup accommodation barge for Zakum Development Company (ZADCO), Abu Dhabi, United Arab Emirates, has been constructed by IHI (Ishikawajima-Harima Heavy Industries Co., Ltd.), Japan, for use in the Persian Gulf.

It will be a control and accommodation center for 180 personnel employed aboard offshore oil production platforms in the Upper Zakum oilfield, 80 km off the coast of Abu Dhabi, U.A.E.

This new barge, (shown above),

measuring about 32 meters by 71 meters (approximately 105 feet by 233 feet), will be permanently installed on site. Durability is expected to be over 40 years.

IHI is performing the accommodation barge project on a full turnkey basis, which includes engineering, construction, transportation and offshore erection, under the supervision and management of TOTAL CFP—Compagnie Francaise des Petroles—acting as manager for the overall Upper Zakum project. ETPM (Entre-

pose G.T.M. pour les Travaux Petroliers Maritimes, France), in charge of offshore civil works, and GEM HERSENT (France), in charge of jacking operations, will perform the installation of the barge as subcontractors. Participating in engineering work is Ateliers et Chantiers de Bretagne (ACB-France). Work will be conducted under the supervision and management of the prime contractor, IHI.

The accommodation barge provides a control block with a control room having a panoramic view over the entire central complex, a control equipment room with computer facilities for the complex, private offices, two helicopter decks, helicopter reception areas, a radio room, medical center, etc. The accommodation block consists of 179 single rooms, each with a spare berth, a manager's suite, messing facilities, recreational areas including patio space with many large live trees and shops, restaurant, squash room, sports/game rooms, swimming pool and laundry and sanitary installations, etc.

The barge also provides general utilities, such as air-conditioning units, desalination plants, emergency power generators, sewage treatment units, waste/disposal unit (full automatic incinerator), firefighting system and safety system. Most of the above equipment was imported from European vendors through IHI's overseas network.

A radio and telemetry mast with a height of about 100 meters above sea level (about 328 feet) is provided on the control block for communications.

Sulzer Appoints New Head Of Diesel Engine & Marine Equipment Sales

Effective May 7, 1980, Felix van der Schaar will become vice president and head of sales for diesel engines and marine equipment for the Sulzer Group. Mr. van der Schaar was head of Sulzer Oslo from 1967-1975, and head of Sulzer New York since March 1975. He will succeed Peter Georg Sulzer, who has been appointed to the corporate executive management by the board of directors. This appointment will also become effective on May 7, 1980.

Morris Guralnick Assoc. Names Darrel W. Starr Jr. Chief Mechanical Engineer



Capt. Darrel W. Starr Jr.

Capt. Darrel W. Starr Jr., USCG (ret.), has been appointed to the position of chief mechanical engineer with Morris Guralnick Associates, Inc., San Francisco, Calif. The appointment was announced recently by Hugh F. Munroe, president and chief executive officer of the West Coast firm of naval architects and marine engineers. In this position, Captain Starr will supervise the Guralnick machinery design group, which is concerned mainly with machinery arrangements, piping systems, and heating, ventilating and air-conditioning systems.

Captain Starr earned his bachelor's degree at the U.S. Coast Guard Academy, New London, Conn., and was selected for further study at the University of Michigan, where he was awarded a Master of Science degree in naval architecture and marine engineering.

Following retirement from the Coast Guard, he was engaged by the Bechtel Corporation of San Francisco and SEDCO, Inc. of Dallas, serving one year with each firm, mainly in the design and construction of nuclear powerplants and offshore drilling rigs.

Captain Starr is a member of The Society of Naval Architects and Marine Engineers and The American Society of Naval Engineers.

Morris Guralnick Associates, now in its 34th year of operation, is one of the largest architectural and engineering firms of its type on the West Coast.



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Lockheed Receives Navy Contract For \$38.2 Million

Lockheed Shipbuilding and Construction Company, Seattle, Wash., is being awarded a \$38,293,411 negotiated cost-plus-fixed-fee contract for advance procurement of equipment, materials and commodities for the LSD-41, including advance engineering and program support activities. The Naval Sea Systems Command is the contracting activity. (N000-24-80-C-2080)

Swedish Shipbuilders Assn Report For 1979

The Swedish Shipbuilders Association has recently reported that in 1979 Swedish shipyards launched 37 vessels with an aggregate 0.5-million gross tons. Additionally, 44 vessels totaling 0.6 million gross tons, with a value of US\$747 million (Kr.3.1 billion), were completed. Thirteen of the completed vessels totaling 0.3 million gross tons, and valued at Kr.1.8 billion, were for export.

Orderbooks at the end of 1979 stood at 58 ships aggregating 1 million gross tons, or roughly 4 percent of the total orders on hand at the world's shipyards. The value of Swedish yards orderbooks, including alternative production, was Kr.7.7 billion, of which Kr.2.0 billion will be for export.

Among the 32 new contracts, totaling 0.3 million gross tons, signed in 1979 are six tankers, five car and passenger ferries, four chemical carriers, four supply ships, and two car carriers.

McDermott Unit Names Five New Vice Presidents

Robert K. Richie, president and chief operating officer of the McDermott Operating Unit of J. Ray McDermott & Co., Inc., announced that five new vice presidents have been named in the Unit.

R.V. Joffrion has been named vice president and general manager, Marine Pipeline and Harvey Fabrication Divisions, McDermott Operating Unit. Mr. Joffrion joined the company in 1961 as a scheduling engineer. He became supervising project engineer in 1970 and division manager of the Harvey Fabrication Division in 1972. Since 1974, he has been senior division manager of the Harvey Fabrication and Marine Pipeline Divisions.

W.D. Howell has been named vice president and general manager, West Africa Area, Oceanic Contractors, Inc. Mr. Howell joined the company in 1971 as a field engineer. He became the manager of the marine pipeline operations in the North Sea branch of Oceanic Contractors in 1977 and manager of the West Africa area in 1978, a position he has held since then.

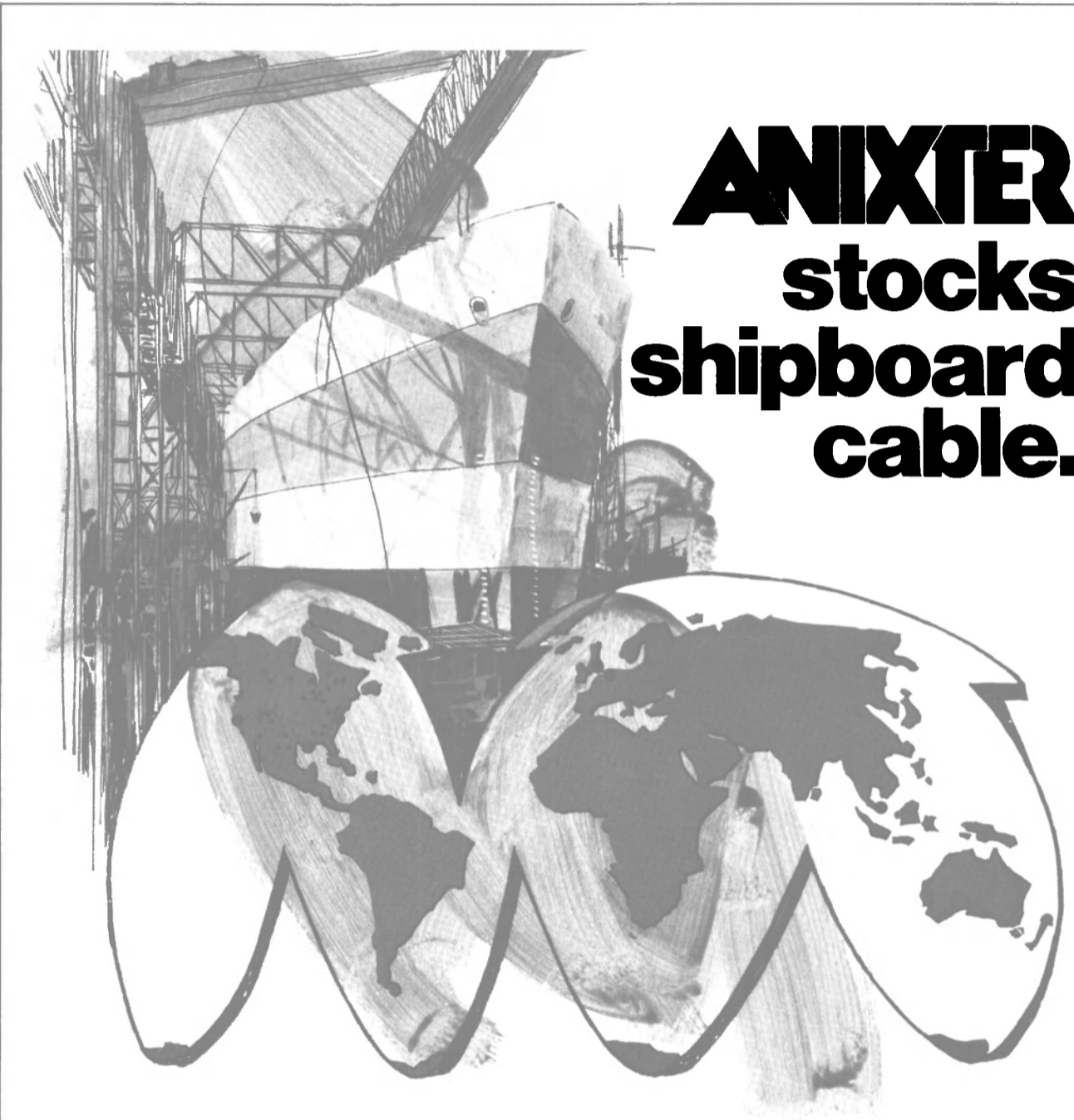
C.W. Dyerson has been named vice president and general man-

ager, Fabrication Divisions, McDermott Operating Unit. Mr. Dyerson joined the McDermott Fabricators Division in Morgan City, La., in 1962 as an engineer, became senior division engineer in 1968, and division chief engineer in 1972. He was division manager, McDermott Offshore Division, from 1973 to 1978, when he became division manager of McDermott Fabricators.

W.H. Fraser has been named vice president and general manager, McDermott Engineering-London, Oceanic Contractors, Inc. Mr. Fraser joined the Oceanic Engineering Services Group in London in 1978 as senior division manager and has held that position until his present appointment.

L.E. Walker has been named vice president and general manager, South East Asia Operations,

Oceanic Contractors, Inc. Mr. Walker joined the company as a field engineer in 1968, and has held engineering positions with Oceanic Contractors in Singapore, the Middle East and Southeast Asia. He became manager of off-shore operations for McDermott South East Asia Pte. Ltd. in 1977, a position he has held since then.



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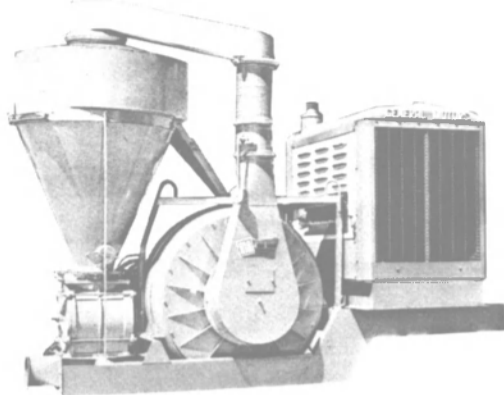
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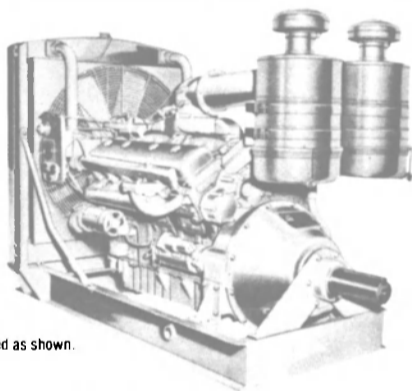
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| Deck Clearance | 9 3/8" | Fan Diameter | 38" |
| Weight (approx.) | 10,750 lbs | Fan Housing | 1 piece Spinning |
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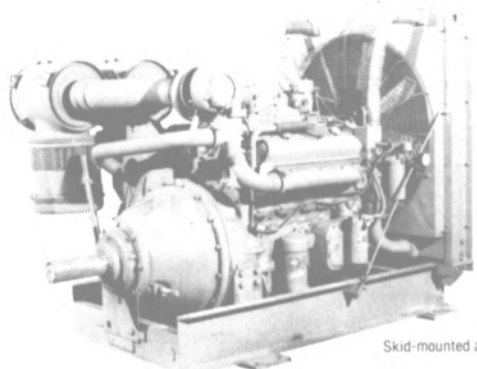
Skid-mounted as shown.

| | |
|------------------------------|-------------------|
| Engine Type | 2 cycle V8 Diesel |
| Number of Cylinders | 8 |
| Bore and Stroke | 4 1/4" x 5" |
| Total Displacement | 568 cu. /in. |
| Max. Brake H.P. Basic Engine | 336 @ 2300 RPM |
| Net Weight, Dry | 5400 lbs. |

EQUIPMENT Heavy-Duty P.T.O. Starting Equipment and Governor
 F.O.B. Our warehouse New Jersey

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NEW! GMC 8V92TI Diesel Engine



Skid-mounted as shown

| | |
|------------------------------|--------------------------------|
| Engine Type | 2 cycle V8 Diesel |
| Number of Cylinders | 8 |
| Bore and Stroke | 4 84"x5" |
| Total Displacement | 736 cu. /in. |
| Max. Brake H.P. Basic Engine | 550 @ 2300 RPM (Turbo-charged) |

Net Weight, Dry 6200 lbs.
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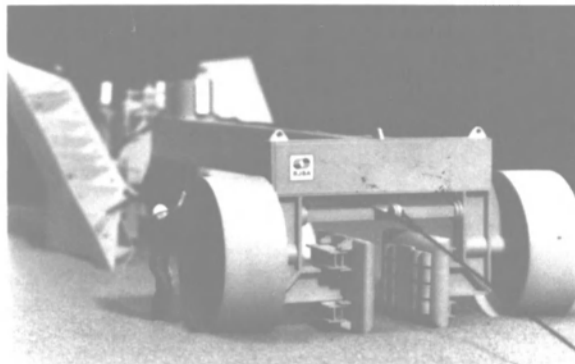
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R.J. Brown & Associates
Receive Esso Contract For
Pipeline Post-Trenching Plow



A 1:50 scale model of the Esso Australia pipeline post-trenching plow used by R.J. Brown and Associates.

R.J. Brown and Associates has been awarded a contract by Esso Australia Ltd. for the design of an underwater plow to trench-in a pipeline following its installation in Bass Strait, off Southeast Australia. The 23-mile 24-inch gas transmission line will connect the Snapper "A" production platform to shore at Ninety Mile Beach. RJBA's responsibilities cover design, supervision of fabrication and testing, development of procedures, and supervision of plowing operations including deployment, towing and recovery of the plow. Fabrication of the plow structure and installation of associated instrumentation is being performed by Harbour & Marine Engineering Pty. Ltd. of Melbourne, under RJBA supervision, with completion of manufacture scheduled for March 1980.

RJBA will supervise the testing of the plow onshore and offshore Barry Beach, Bass Strait. Trenching of the Snapper pipeline will start at the inshore end, with the plow being towed by a barge or tug through the outer surf zone and progressively seaward to the production platform which stands in a water depth of approximately 200 feet. The soil along the route is carbonate sand, with locally-cemented areas, through which the plow will cut a Vee-shaped trench of about 4-foot depth. It is anticipated that trenching-in the full length of the pipeline will only occupy several days.

Overall, use of a plow is intended to reduce the risk of damage occurring during pipeline trenching operations, to reduce the time required to stabilize the line on the seabed, and to reduce the cost of pipe burial.

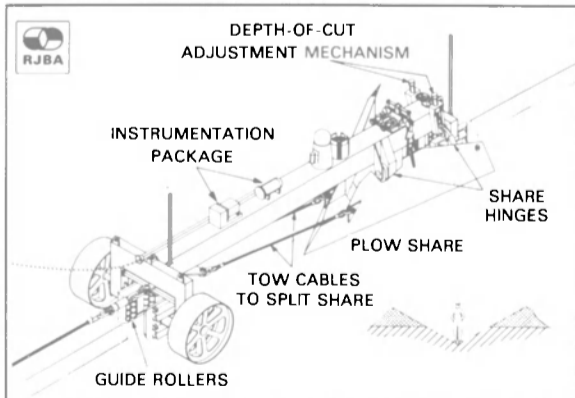
The RJBA post-trenching plow which, it is believed, will be the first of its type to be built, tested and commercially utilized, is the outcome of a long-term development and model-testing program which was initiated on behalf of Esso Australia in 1977, with a technical economic feasibility study. Subsequently in 1978, a 29-foot long, 1:3 scale pre-trenching plow of RJBA design was

built and successfully tested in Australia onshore and offshore the Gippsland Shelf Area, Bass Strait. This plow was used to pre-cut a 36-inch-deep trench through the 2/3-mile surf zone during the shore-pull of the Snapper pipeline at the start of pipelay operations in November last year.

The new post-trenching plow measures 60 feet long, 26 feet wide and 12 feet high, and will weigh around 65 tons. It comprises a main structural beam which is supported at the front on two wide-flanged wheels, and at the back on skids either side of the pipeline. Innovative features of the plow's design include (1) the use of a hinged, split share which facilitates deployment of the plow around the pipeline and its subsequent retrieval, (2) attachment of the tow cable to the halves of the split share so that the towing force is applied to the component which is subject to the maximum plowing load; this arrangement assists in reducing the overall weight, (3) the use of rollers fore and aft to protect the pipeline when passing through the plow and which, at the front, are used to guide the wheels along the pipeline route, (4) means for depth-of-cut adjustment during towing by variation in the vertical positioning of the rear support skids, and (5) use of remote-reading instrumentation on the plow to provide the tow vessel with signals of tow cable tension, tow cable angle relative to the plow, and plow cutting depth.

In late 1978/early 1979, prior to design and construction of the full-scale post-trenching plow, RJBA, on behalf of Esso Australia, built and tested 1:50 and 1:5 scale model plows. The 1:50 scale model was used to confirm the closure mechanism of the split share and to develop operating and retrieval procedures for the plow. The 1:5 scale plow, which was tested on the beach at Den Helder in northwest Holland, was used to determine the pull forces required for differing depths of the trench, to confirm the correct operation of the plow, and to determine structural loads and stresses on the plow.

R.J. Brown and Associates is an international company headquartered in Switzerland, and with engineering offices in the Netherlands; Houston, Texas; and Singapore. Work on the Esso Australia plows has been handled by engineers from the Netherlands and Singapore offices. R.J. Brown and Associates provides a wide range of engineering and project management services to the offshore pipeline industry worldwide.



Sixty-foot-long pipeline post-trenching plow, designed by R.J. Brown and Associates for trenching-in Esso Australia's 23-mile, 24-inch-diameter gas transmission line.



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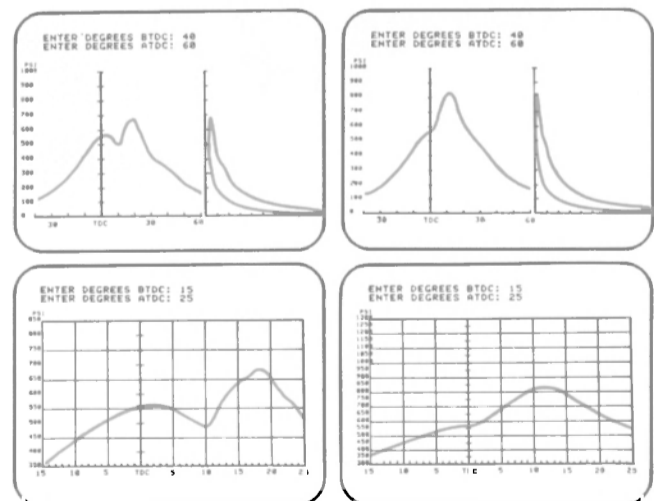
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ful-color illustrations, and Bulletin 601-B, with technical information, write **Nancy Heck**, Philadelphia Resins Corporation, Montgomeryville, Pa. 18936.

Marine Services Unlimited Opens New Office At Newport News, Va.

Marine Services Unlimited, Tampa, Fla., has opened a new divisional location, **Casey Kaust**, president of the corporation has announced.

The new division, located at 6060 Jefferson Avenue, Newport News, Va., will serve the Port of Hampton Roads and the entire East Coast. The Newport News Division will be managed by **Jim Rama**, formerly of Newport News Shipbuilding and Dry Dock Company. Mr. Rama will provide personnel to perform competent inspections and specialized maintenance on vessels entering and leaving Hampton Roads Harbor.

Hakenjos Named President Of A.G.C. Chapter



Carl B. Hakenjos

Carl B. Hakenjos, vice president of William-McWilliams Co., Inc. in New Orleans, La., was elected president of the Mississippi Valley Flood Control Branch of the Associated General Contractors of America, Inc. at its recent annual meeting at the Monteleone Hotel in New Orleans. Other officers elected were **Bernard McMenemy**, 1st vice president, and **Leonard H. Maharry**, vice president.

The Associated General Contractors of America is a trade association representing 8,000 contractors. Members of the Mississippi Valley Flood Control Branch of this organization perform flood control and navigation work on the Mississippi River and its tributaries from Cape Girardeau, Mo., to the Gulf of Mexico, and on the Red River and Tennessee-Tombigbee in Mississippi. This work consists, in part, of channel work, dredging, lock and dam construction, revetment, river stabilization, levees, dikes, and other such works necessary for flood control and navigation.

Mr. Hakenjos is also 1st vice president of the Western Dredging Association and president of the Gulf Coast Dredging Association.

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Officers and guests shown in attendance at the SNAME San Diego Section's January meeting are, left to right: **Angus Murdoch**, chairman; **Don MacDonough**, secretary-treasurer; **Ralph Bradford**, featured speaker and author; **Larry Russon**, public relations; **Wes Hickman**, vice chairman, and **Dick Severs**, Papers chairman.

SNAME San Diego Section Discusses LHA Rampwell Design

At the San Diego Section of The Society of Naval Architects and Marine Engineers meeting held in January 1980, **Ralph J. Bradford**, chief marine engineer from National Steel and Shipbuilding Company, presented an interesting paper entitled "LHA Rampwell Design, a Successful Failure."

The paper described a unique landing craft handling concept that was developed and successfully tested — full scale — during the LHA contract definition competition in the spring of 1968. The concept was applied to an un-

solicited proposal for conversion of the LSD 37, 38, 39 and 40. It would have resulted in a significant increase in cargo and troop capacity from conversion of existing ballast tanks to troop and cargo spaces. Although the full-scale test was a success, the Navy rejected the concept. However, the author concluded with the belief that the concept is still viable for implementation on existing LSD and LPD vessels.

Sixty members and guests in attendance concluded the meeting with a question and discussion period.

IMODCO Wins Ivory Coast Offshore Terminal Contract

Societe Ivoirienne de Raffinage of Ivory Coast, West Africa, has signed a contract with IMODCO, the offshore marine terminal company based in Los Angeles, Calif., for the engineering and construction of a terminal system to handle additional imported crude oil for an expanded refinery in Abidjan, the capital city.

The two-grade terminal for crude oil and ballast will be installed offshore the Port of Bonet at a water depth of 50 meters (about 164 feet), and will be capable of handling oil tankers of up to 250,000 dwt. Crude oil from incoming vessels will flow through the Catenary Anchor Leg Mooring terminal and an undersea pipeline to storage tanks ashore.

The buoy will measure 12.5 meters in diameter (about 41 feet), and be able to handle wave heights of 8 meters (26 feet), and wind velocity of 50 kilometers per hour.

Completion and installation are scheduled for the fall of 1980.

George C. Cassa Promoted At J.J. Henry Co.

Charles Zeien, president, J.J. Henry Co., Inc., naval architects and marine engineers, has announced the promotion of **George C. Cassa** to the position of assistant chief marine engineer in the New York City office of the company. Mr. Cassa will report to **Charles H. Gross Jr.**, assistant vice president.

Mr. Cassa is a graduate of the

U.S. Merchant Marine Academy, Kings Point, N.Y., with a Bachelor of Science degree in marine engineering, and a Master of Management Science degree from Stevens Institute of Technology, Hoboken, N.J. In addition to sailing as a licensed engineer for two years, he was employed for three years as an automation specialist, including on-site installation and startup supervision of propulsion plant instrumentation and control systems. Mr. Cassa joined the machinery group of J.J. Henry Co. in 1974, and has been involved in plan and specification development, detailed design review and approval, and research, evaluation and development studies, including reliability improvements for vessel steering systems. He is an associate member of The Society of Naval Architects and Marine Engineers, and serves on the M-19 Panel (Tests and Trials) of SNAME.

The J.J. Henry Co., founded in 1947, has principal offices in New York City and Moorestown, N.J., and branch offices in Cohasset, Mass.; Crystal City, Va.; Houston, Texas, and Portsmouth, Va.

K.A. Steel Chemicals To Order 2 Tank Barges— Total Cost \$1.6 Million

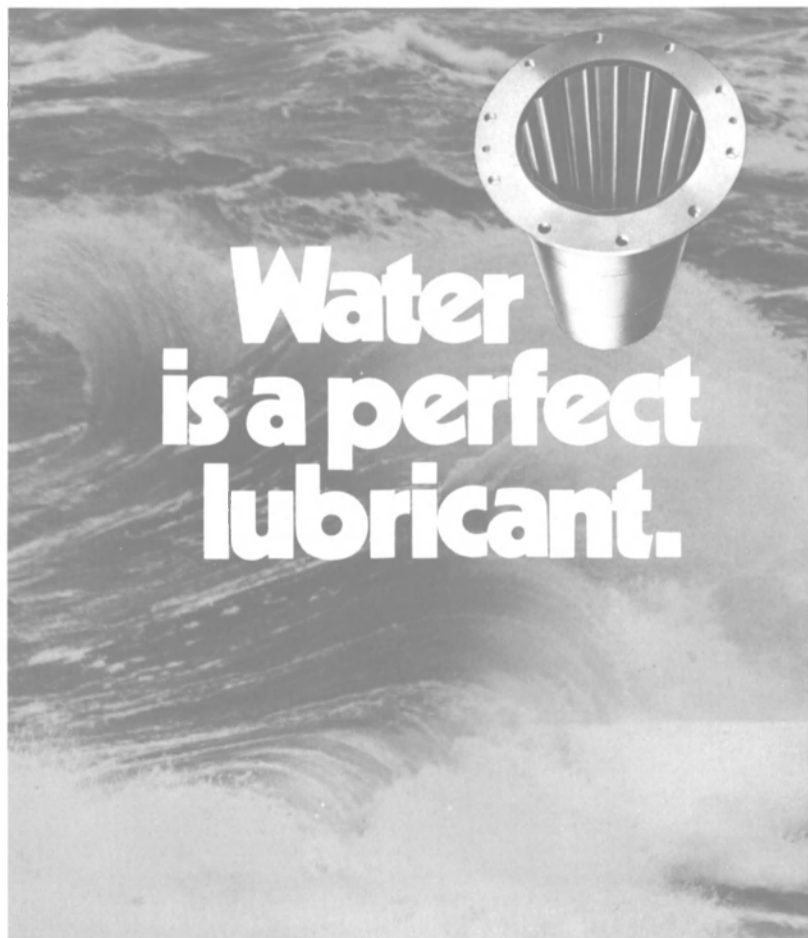
K.A. Steel Chemicals, 2700 River Road, Des Plaines, Ill. 60018, has applied for a Title XI guarantee to aid in financing the construction of two tank chemical barges. The vessels, to be 200 feet by 35 feet, are expected to operate on the Ohio, Mississippi, and Illinois Rivers.

The actual cost of the vessels is approximately \$1,600,000. If approved, the Title XI guarantee would cover 87½ percent of the actual cost, or \$1,400,000. The proposed shipbuilder for the vessels, which are expected to be delivered in August 1980, is Jeffboat, Inc. of Jeffersonville, Ind.

Gdynia America Line Names Wittkamp Asst. VP For Intermodal Operations

In anticipation of the arrival of Polish Ocean Lines' new CONRO vessels early in 1981, **Anton J. Wittkamp** has been named assistant vice president for intermodal operations. The announcement was made by **Donald D'Agostino**, executive vice president of Gdynia America Line, Inc., New York, general agents for POL in the U.S. and Canada.

According to Mr. D'Agostino, Mr. Wittkamp will have total responsibility for the expansion of the present intermodal operations department. A veteran of over 20 years in the ocean shipping and intermodal transportation industry, Mr. Wittkamp formerly served in management capacities with the Holland America Line, and most recently with U.S. Navigation, Inc.



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Bauer Elected President Engineering Controls



Warner H. Bauer

Warner H. Bauer has been named president of Engineering Controls, a division of Pott Industries' St. Louis (Mo.) Ship Group.

Engineering Controls, since 1939, has engineered and supplied "VAPORPHASE" high-temperature cooling and waste heat recovery equipment for engines ranging in size from 35 to 10,000 hp in steam and hot water. The division also supplies exhaust waste heat recovery silencers for turbines and other heat sources, such as incineration, up to 10,000 hp, in a variety of working transfer fluids.

Mr. Bauer joined Engineering Controls in 1959 as a project engineer and served in various capacities, most recently as vice president. Mr. Bauer attended Washington University, and is a member of the American Society of Mechanical Engineers, and The Society of Naval Architects and Marine Engineers.

\$8.5 Million Allocated For Six Container Cranes At Port Of Houston

In response to the rapidly growing container business at the Barbours Cut facility, the Port of Houston, Texas, commissioners have allocated \$8.5 million for six new container cranes. Commission chairman Fentesa Bracewell said two of the cranes will be the large Paceco-type, while the four others will be smaller.

Richard Leach, executive director of the port, said the cargo tonnage last year hit a record 112 million tons, up to 3 percent over the 1978 mark. Mr. Leach estimated that of this total, containerization showed one of the sharpest gains, accounting for a 97-percent hike over the previous year.

P. Takis Veliotis Elected Executive VP-Marine At General Dynamics

The board of directors of General Dynamics recently elected P. Takis Veliotis as executive vice president-Marine. In this new position, Mr. Veliotis will be responsible for the company's Electric Boat Division operations at Groton, Conn., and Quonset Point,

R.I., and the Quincy Shipbuilding Division operations at Quincy, Mass., and Charleston, S.C.

"This appointment is highly deserved," said David S. Lewis, chairman of the board and chief executive officer of General Dynamics. "Mr. Veliotis is in large measure responsible for the substantially improved performance on our submarine and shipbuilding programs. In his new position, he will be able to apply his val-

uable experience and leadership with maximum effect throughout our very important marine operations."

Mr. Veliotis has been a General Dynamics vice president and general manager of the Electric Boat Division since October 1977. He joined General Dynamics in 1973 as president and general manager of the Quincy Shipbuilding Division.

Before joining General Dynam-

ics, Mr. Veliotis was president and general manager of Davie Shipbuilding Limited, Quebec, Canada.

He is a member of the U.S. Naval Institute, the Navy League, the Naval War College Foundation, American Bureau of Shipping, Lloyd's Register of Shipping, The Society of Naval Architects and Marine Engineers, The Propeller Club (Port of Boston), and is a director of the Shipbuilders Council of America.



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Sun Ship 'Christens' New Living Accommodations For Navy Crews



Mrs. Carl A. Brettschneider, wife of the Commandant, Fourth Naval District, christens Sun Ship's new U.S. Navy living accommodations facility.

Sun Ship, Inc., Chester, Pa., "christened" its Navy Berthing Facility in true maritime fashion as Mrs. Carl A. Brettschneider broke the traditional bottle of champagne on the building's cornerstone during recent dedication ceremonies. Dedication of the building by Mrs. Brettschneider, wife of the Commandant, Fourth Naval District, was witnessed by local and state officials, U.S. Naval District personnel, Sun Ship management, and officers and enlisted men of the USS Portland, the building's first occupants.

The recently constructed shipyard building was designed to provide living accommodations for up to 350 U.S. Navy crew members whose ships are at Sun Ship

for overhaul and repair. Cost of the building, including furnishings and decoration, was a little over \$1 million.

This facility is further evidence of Sun Ship's commitment to attract more U.S. Navy shipbuilding business to its Chester yard.

Jumbo America, Inc.—New Heavy-Lift Co. Formed

Norton, Lilly & Co., Inc., general agents for Jumbo Shipping Co., S.A., Geneva, has announced the formation of a new company named Jumbo America, Inc., which will be headquartered in Houston, Texas. This new company, solely owned by Jumbo Shipping Co., S.A., will devote itself to serving shippers in the U.S. Gulf area, and will be represented nationwide by the 24 offices of Norton, Lilly & Co.

Jumbo is one of the largest carriers of heavy-lift project cargoes in the world, and now manages a fleet of 11 modern vessels. These vessels are capable of lifting pieces which weigh from 60 metric tons to 700 metric tons, and are also especially fitted to handle large dimensional deck cargo up to 95 by 8.4 meters.

Per Haugaard will head the new office in Houston. Mr. Haugaard comes to Jumbo America with experience in the heavy-lift project field gained through his association with J.S. Connor, Inc. of Baltimore, Md.

The address of the new office is: Jumbo America, Inc., 1121 Walker Street, Suite 508, Houston, Texas 77002, telephone (713) 225-0444.

Burmeister & Wain Wins Engine Contract From Hellenic Shipyards

Burmeister & Wain, Copenhagen, Denmark, has concluded a contract for the delivery of a number of engines, including main and auxiliary engines, as well as engine room components and design work for Hellenic Shipyards, the largest shipyard in Greece.

The contract includes a package containing six main engines of the B&W Longstroke Type 6L67-GFCA, 18 auxiliary engines from B&W Holeby, and engine room modules and components from B&W Shipbuilding Services, a division of the B&W Shipyard. The contract totals approximately \$20 million, including an option for the delivery of four additional B&W engine packages.

The engines are to be manufactured by B&W's Polish licensee H. Cegielski, and installed in six product carriers of approximately 38,000 dwt to be built by Hellenic Shipyards.

Schnitzer-Levin Marine Company Names Hemphill Marine Services Manager

Howard H. Hemphill has joined Schnitzer-Levin Marine Company in San Francisco, Calif., as manager of marine service, according to Wallace Z. Levin, general manager of the firm.

Mr. Hemphill is owner of Earthwide Marine Service, and formerly a field service engineer for new construction and repair at IS&E of the General Electric Company.

Schnitzer-Levin Marine Company, part of the Schnitzer Group of companies, markets a wide range of commercial marine engineered products such as main propulsion turbines and gears, turbine generators, diesel engines and generators, pumps, ventilation equipment, specialized valves, winches, windlasses, and electrical equipment.

Schnitzer-Levin's main office is in San Francisco, with branch offices in New York City and Portland, Ore. Mr. Hemphill will be able to draw upon the marine resources of the Schnitzer Group of companies and Lasco Shipping Co., which manages a fleet of modern bulk carriers operating in the Pacific Rim.

Philadelphia Marine Trade Assn Reelects Officers

The Philadelphia Marine Trade Association has announced the reelection of Alfred Corry as president, and Thomas P. Kelly as executive secretary. Mr. Corry completed 25 years as the organization's chief staff officer last July.

J.J. Gibbons, Lavino Shipping Co., and C.C. Bradford, Norton, Lilly & Co., were reelected directors for three-year terms.

W.H. Meyle Jr., Independent Pier Co., was reelected treasurer for a one-year term.

Literature Describes New Gems Shock Cushioned Liquid Level Switch

Literature is available describing the LS-38760 level switch from Gems Sensors Division. Designed with a "shock-absorber" cushioned float and cushion-mounted switch, it is ideal for use wherever liquids are turbulent, and where there is excessive vibration in fuel or chemical applications in tank trucks and mobile construction equipment.

The switch offers double protection with O-rings to cushion the float, and with internal rubber grommets to cushion the reed switch element. The switch is lightweight, featuring an aluminum stem. Mounting is available for electrical grounding. The float is made of Buna N; float cushions are made of Viton A. It withstands temperatures to 180 F and pressures to 150 psi.

The simple design of this switch incorporates only one moving part, the float. This magnetic float will only respond to the surface of the liquid. The output signal is a direct level measurement as opposed to inferred or indirect measurement as is found in alternative devices.

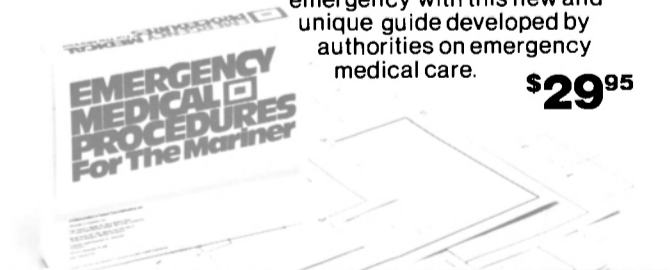
For complete literature, write to George Angelovich, Gems Sensors Division, Transamerica Delaval Inc., Farmington, Conn. 06032.

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**John Farris Named
To Planning Post
At Pall Corporation**



John A. Farris

John A. Farris, until recently president of Pall Industrial Hydraulics Corporation, has been appointed corporate director of Aerospace and Fluid Power Development and Planning for the Pall Corporation. Mr. Farris will be responsible for medium and long-range planning, and for identifying marketing opportunities that are not presently being exploited. In his new position, Mr. Farris will report to Abraham Krasnoff, president of Pall Corporation.

Mark Kachur, formerly vice president, Sales, of Pall Trinity Micro Corporation, succeeds Mr. Farris as president of Pall Industrial Hydraulics Corporation.

Mr. Farris joined Pall Corporation in 1956. Initially, he was associated with Aircraft Porous Media, Incorporated, Pall's subsidiary in the aerospace field, where he served as vice president, Sales. Since 1968, he has been in charge of industrial hydraulic filters.

Both companies have successfully promoted the concept of using silt-control filters to eliminate abrasive particles and reduce wear of components, and thereby extend the life and reliability of hydraulic and lubrication systems.

Aircraft Porous Media, Incorporated, with manufacturing facilities in Pinellas Park, Fla., and Pall Industrial Hydraulics Corporation, with manufacturing facilities in Ft. Myers, Fla., and Liquillo, Puerto Rico, are both subsidiaries of Pall Corporation, an international leader in the design and manufacture of filters and fluid clarification devices for fluid processing, aerospace, fluid power, and biomedical applications.

**Information Available
On Oil Containment Boom**

Literature is now available describing the SEA FENCE Oil Containment Boom, originally designed by Seaward International, Inc., for the U.S. Navy. The unique SEA FENCE boom combines the ease of handling required for quick response with the toughness and service life of

a permanent type boom, according to its manufacturer.

The durability of the SEA FENCE is due to the tough polyester fabric base, Kevlar bottom tension reinforcement and the rugged urethane elastomer coating which seals in the components and gives the SEA FENCE outstanding resistance to oil, water, sunlight and abrasion. The smooth, seamless exterior of the SEA FENCE makes the boom

snag-free and allows easy cleaning and maintenance.

Since the lightweight Kevlar tension member is constructed as part of the boom and is encased in the elastomer coating, there is no pocket where oil can be trapped or external cables that can be snagged.

Rapid deployment of up to 1,000 feet of SEA FENCE boom is made possible using a single boom storage reel available from Seaward.

And, the integrally cast handles on the boom provide a sure grip for deployment.

The SEA FENCE Oil Containment Boom is offered in two sizes: the Outer Harbor Boom is 28 inches in overall height and weighs 4.0 lb ft; Inner Harbor Boom is 17 1/2 inches high and weighs 2.6 lb ft.

For full information, write Gus Ruetenik at Seaward International, Inc., 6269 Leesburg Pike, Falls Church, Va. 22044.

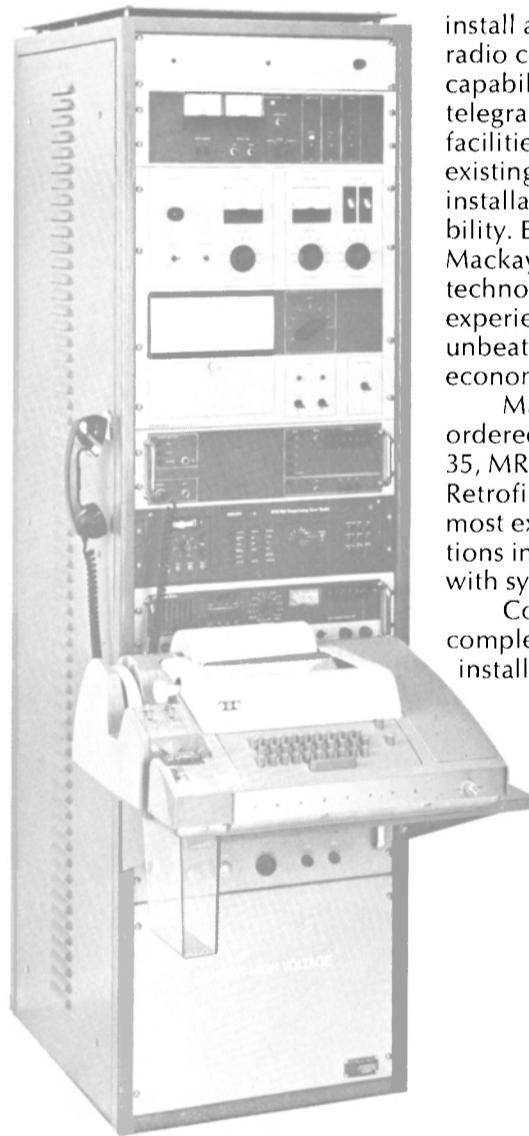
Two ways to add Telex communications to your ships at sea.

ITT Mackay Marine and North American Philips Corporation offer teleprinting-over-radio for both new vessels and retrofit applications.

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Pictured at the SNAME N.Y. Metropolitan Section February meeting are, left to right: Naresh Maniar, ABS, Section Papers Committee chairman; Donald Liu, ABS, author; Moe Hirschowitz, USMMA, Membership Committee chairman; Eric Lithen, J.J. McMullen Co., Section vice chairman; Abe Bakker, ABS, author; John Daidola, M. Rosenblatt & Son, member Executive Committee, and Neil Reddy, ABS, secretary-treasurer.

N.Y. Metropolitan Section SNAME Hears Technical Paper On Finite Element Analysis Techniques

The New York Metropolitan Section of The Society of Naval Architects and Marine Engineers held its February meeting at the Whitehall Club in New York City. The technical paper presented at the meeting was entitled "Practical Procedures for Technical and Economic Investigation of Ship Structural Details." The authors were Donald Liu and Abe Bakker of the American Bureau of Shipping. Mr. Liu gave the paper, which included a slide presentation.

The paper brought to the attention of the marine industry that costly repairs and lay-up time of a vessel due to structural failures can often be prevented, provided that problem areas are recognized and investigated in the ship design stages. In this regard, local structural problems and resultant failures are frequently the result of stress concentrations. It was shown that the application of finite element analysis techniques can be economically employed in the investigation of structural de-

tails. Additionally, practical procedures for analyzing structural details, including cost analyses, were presented in the paper.

Coastal Drydock & Repair Receives \$8.4-Million Navy Contract

Coastal Drydock and Repair Corporation, Brooklyn, N.Y., is being awarded a \$8,447,003 formally advertised firm fixed price contract for the regularly scheduled overhaul of the USS Aylwin (FF-1081). The Supervisor of Shipbuilding, Conversion and Repair, USN, Brooklyn, is the contracting activity. (N62794-70-C-0010)

Portable Ventilation Equipment Catalog Offered By Coppus

A new 38-page catalog covering performance, dimensional, technical and application data on 33 different models of Coppus portable blower exhausters and accessory equipment, plus welding fume arm systems designed for use with portable welding fume exhausters is now available.

The catalog contains detailed descriptions of air, steam and water-driven turbine types, gasoline engine and electric motor-driven units, Venturi blowers with no moving parts that operate on air or steam, and a unique air-driven reaction fan blower/exhauster.

Performance tables and technical data make it easy to select the "just-right" ventilator for a

specific application. Performance tables show free air capacities, performance at various static pressures, and air flow through flexible duct. Technical data includes sound levels for each type unit and friction loss curves for flexible duct, water and compressed air hose.

Coppus's broad line of blowers, blower/exhausters and ventilators include designs that are specifically engineered to help meet OSHA and local ventilation safety requirements established for refineries, petrochemical, chemical processing, manufacturing, fabricating plants, construction sites and onboard ship applications.

All Coppus portable ventilators are constructed to withstand the abuse associated with rigorous industrial use.

The catalog is profusely illustrated with application photographs and drawings showing air flow patterns in typical ventilating applications. A listing of the company's worldwide sales office and service center locations is also provided.

For a copy of Catalog No. 100, write Anthony Pandiscio, Coppus Engineering Corporation, 344 Park Avenue, Worcester, Mass. 01610.

Harry R. Kraus Appointed VP At Dravo Division



Harry R. Kraus

Harry R. Kraus has been appointed vice president of operations for the Civil, Mining & Marine Division of Dravo Engineers and Constructors, Pittsburgh, Pa. He will be responsible for managing all construction operations in the division.

Mr. Kraus has 30 years' experience in all phases of construction and mining. Mr. Kraus is a civil engineering graduate of Iowa State University. He assumes his new position following a 2½-year absence, during which time he served as president of Hardaway Constructors, Inc.

Dravo Engineers and Constructors was recently formed by Dravo Corporation to consolidate its domestic and international engineering construction operations into a single company. Headquartered in Pittsburgh, Pa., Dravo Engineers and Constructors has major offices as well as subsidiary and affiliate companies worldwide.

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American Canadian Line Appoints Nancy E. Blount VP-Operations



Nancy E. Blount

Nancy E. Blount has been named vice president, director of operations of American Canadian Line, Inc., a Warren, R.I.-based cruise line that operates from the U.S. to Canada and in the Out Islands of the Bahamas.

Before joining American Canadian Line, Miss Blount was employed as a media buyer for Valley Forge Associates, Frazer, Pa. She has also worked as a marketing analyst for National Liberty Corp., Valley Forge, Pa.

Miss Blount has a Bachelor of Science degree in marketing from the University of Vermont and an Associates degree from Colby Sawyer College in New Hampshire.

Louis Allis Brochure Describes Marine Motors, Power Supplies, Drives

Louis Allis Bulletin 1200 offers a look at the varied equipment provided for Navy and marine duty by this division of Litton Industries. Described are auxiliary propulsion motors which are seawater cooled and lubricated, a-c and d-c motors from 1 through 10,000 horsepower, Navy Service "A" and "C" motors, sonar power supplies, automatic degaussing systems, and a wide variety of marine duty motors and drives.

To receive single or multiple copies of this brochure, write to J.A. Westrich, Louis Allis Div., Litton Industrial Products, Inc., P.O. Box 2020, Milwaukee, Wis. 53201.

Port Of New Orleans Mariners Club Elects New Officers & Directors

The Mariners Club of the Port of New Orleans, La., recently announced their new officers for 1980. Elected by the board of directors are: president, Frank A. Courtenay of Courtenay, Forstall & Grace, admiralty attorneys; vice president, William V. Trufant Jr. of G & M Marine, Inc., marine underwriters; secretary, Robert L. McKee of John A. McKee & Co., Inc., marine surveyors; and treasurer, Henry N. Feste of Albert R. Lee & Co. (Southern), Inc., marine surveyors.

Elected to the board of directors for a three-year term were past president Ralph Vaccaro of

Gulf Fleet Marine Corporation, and Henry N. Feste and Ed Goodwin of J. Ray McDermott & Co., Inc.

President Courtenay is a graduate of Tulane Law School and a partner in the law firm of Courtenay, Forstall & Grace. Mr. Courtenay is also a member of the Maritime Law Association of the United States, The Propeller Club,

the Water Resources Congress and the advisory board of the Louisiana Maritime Museum.

The Mariners Club membership encompasses the maritime trade by representing the fields of marine claims; marine insurance sales, brokerage, and underwriting; marine surveying; marine risk management and admiralty law in the representation of ves-

sel interests, marine employers and cargo insurers.

Those interested in applying for membership should telephone the membership chairman, William Ransom, at (504) 568-1320, or any of the officers or board members. The Mariners Club meets once a month, featuring a speaker prominent in the maritime industry.

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MARINE SALINITY (SALINOMETER) REPLACEMENT GUIDE

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|--|---------------------|--|
| Model | Manufacturer | |
| Aqua Purometer | McNab | SEA WATCH SEVEN—Bulletin B116 SB |
| CC-10 | McNab | |
| SL 20/SL 30 | Electro Mekano | Specify Meter Scale and Sensor Type |
| RC 46/2 Aqualarm | Electronic Inst Ltd | |
| RC 41, RC 42, RC 43 | EIL | C-80 SERIES—Multiple Point Panel See Bulletin B117 SB and B112 TAP for add'l models |
| MDM-ATC-10IDwg 175501 | McNab | |
| M-ATC | McNab | |
| MM-ATC | McNab | C-63 SERIES or M SERIES—Bulletin B112 TAP |
| MS 60 | EIL | |
| NOTE: Monitoring panels other than those shown can be replaced by standard or modified GPM panels. See B114 AD Survey and let us send you our proposal | | GPM Manufactures a complete line of FLOW CONTROL VALVES (DUMP) in the following standard iron pipe sizes: 1/2", 3/4", 1", 1 1/4", 1 1/2", 2". See Bulletin B101 SB |

SENSORS—VALVES—TEST RESISTORS

| Model | Manufacturer | |
|--|----------------|--|
| ESC | EIL | CN 77-See Bulletin B116 SB |
| MC-6 | McNab | CN 77-Direct pipe screw in—1" NPT |
| VP (Dwg. 11907A) | Electro Mekano | CN 77 + ADAPTOR (if required) |
| 2143 Test Resistor | McNab | CTR-77 Test Resistor |
| EWB/EWC | EIL | CN1 - See Bulletin B112 TAP |
| MC-1G/MC-1/C-1 (Dwg. 15080, 1009-5, 2003) | McNab | CN1 - sensor |
| L2/L2K Valve (Dwg. 1009-6, 2104G) | McNab | CN1V Push Pull Valve |
| 14139A Test Resistor | McNab | CTR-1 Test Resistor |
| SC8 (Dwg. RS-4974) | Rikadenki | CN8C - See Bulletin 60058P |
| 1 1/4" Gate Valve | | Standard 1 1/4" IPS Gate Valve with Fittings |
| MC8 (Dwg. 15095) | McNab | CN7C with fittings |
| Cell Test Resistor | McNab | CTR-3 Test Resistor |
| Telex orders for most GPM replacements or even complete salinity systems can be shipped within 24-48 hours | | All GPM Sensors shown above feature fast automatic temperature compensation (3 wire system) A full line of non-compensated sensors are available for special conditions. |

Send for FREE Salinity Replacement Guide (B114) and FREE Salinity Calculator (B 105 TD-1)

Vickers Limited Announces Acquisition Of Jered Industries

E.R. Davies, chairman of the board of Jered Industries, Inc., Troy, Mich., and Derek P. Muir of the Engineering Group of Vickers Limited, have jointly announced the acquisition of Jered Industries by Vickers Limited of England.

Jered Industries is a major supplier of highly engineered marine equipment to U.S. Naval and commercial vessels and offshore drill rigs. Jered Industries will be renamed Jered Brown Brothers Inc., and will become part of the Vickers Marine Group within the Vickers Engineering Division. Mr. Muir, chairman and managing director of Brown Brothers and Company Ltd. of Scotland, a wholly owned subsidiary of Vickers Limited, will become chairman of the board of Jered Brown Brothers Inc. Other officers, all from

Jered Industries, will be J.J. Bolton Jr., vice chairman; Richard W. Glenn, president; Brian F. York, vice president and treasurer; and D.H. Davies, vice president. Mr. Muir has stated that the engineering and manufacturing facilities and personnel will remain essentially unchanged in the United States.

E.R. Davies, chairman of Jered Industries, has agreed to serve as consultant to the Marine Engineering Group of Vickers Limited and will be active in marketing the Group's products throughout the world.



FOURTH IN A SERIES — Gotaverken Arendal AB has delivered another refrigerated cargo vessel of 14,800 dwt to the Salen Shipping Companies, Stockholm, Sweden. The vessel, named M/S Winter Sea, is 169 meters (about 554 feet) in length, with a beam of 25.7 meters (84 feet), and a cargo capacity of 590,000 cubic feet. She is the last of a series of four vessels delivered to Salens (MARITIME REPORTER/Engineering News, January 1, 1980, page 40). The M/S Winter Sea and her sisterships are primarily intended to transport perishable goods such as fruit, vegetables, frozen meat and fish, but they can also carry containers and cars.

NASSCO Appoints Two To New Executive Posts

The board of directors of National Steel and Shipbuilding Company (NASSCO), San Diego, Calif., has elected Richard H. Vortmann to the new position of executive vice president, and Kristian K. Christensen to the new position of vice president of Planning and Programs.



Richard H. Vortmann

Kristian K. Christensen

In announcing the promotions, NASSCO president C.L. French pointed out that the changes are responsive to the growing complexity of individual ships and the demands of engineering and building numerous classes of ships simultaneously. Currently, the company has a backlog of more than \$750 million for tankers, product carriers and Navy ships.

Mr. Vortmann will be responsible for ensuring the coordination of day-to-day operations which include all production, engineering, planning, estimating, materials and information systems activities for both new ship construction and repair operations. He will report to Mr. French. All new ship construction planning and scheduling will be

centralized under Mr. Christensen, who is also responsible for production control and contract performance analysis. He will report to Mr. Vortmann.

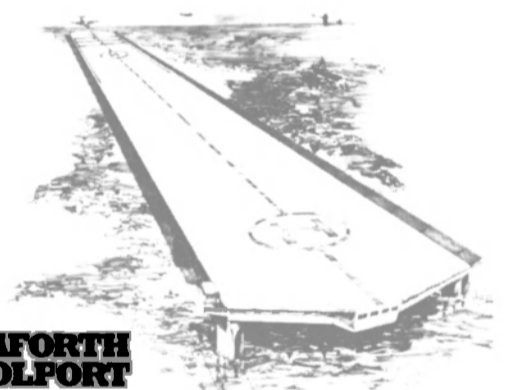
Mr. Vortmann joined NASSCO in 1976 as vice president of Finance. He was elected to the NASSCO board of directors in 1978. Previously, he was employed by the Kaiser companies for seven years in various management capacities including controller, Kaiser Glass Fiber Corporation; assistant corporate controller and director of corporate planning for Kaiser Industries Corporation. He graduated from the University of California, Berkeley, with a B.S. degree in business administration in 1966, and an MBA degree in 1967.

Prior to his recent promotion, Mr. Christensen was director of the NASSCO Program Management Office. Mr. Christensen is a naval architect with over 30 years of shipbuilding experience, including key positions at Litton Industries and Bethlehem Steel Corporation.

Two Unique Proposals By Seaforth Maritime

Seaforth Maritime has announced revised plans for one of the North Sea's most ambitious project proposals—a floating airport with a 2,000-foot runway capable of taking four-engined 50-seat aircraft.

Seaforth originally proposed an airport based on the hull of a very large crude carrier, but has now opted for a new design based on a purpose-built semisubmersible hull structure offering good stability characteristics. It would have three main levels, the runway on top, passenger lounges, restaurants, duty-free shops and travel offices on the second level, and aircraft and helicopter parking and maintenance areas on the third level.



An artist's impression of the "Seaforth Stolport, a floating airport with a 2,000-foot runway capable of taking four-engined 50-seat aircraft, and one of the North Sea's most ambitious project proposals.

The company believes the "Seaforth Stolport," as the project has been named, could revolutionize the transportation of personnel to and from 17 oil production platforms, which are likely to be in operation in the East Shetland Basin area by 1983.

Some of the world's worst weather conditions disrupt movements in and out of Sumburgh airport in the Shetland Islands. The floating airport would mean that flights could bypass Sumburgh and fly direct to the platforms from Aberdeen, saving costly man-hours.

The floating airport, which the company believes could operate in Gale Force 8 conditions, would be maneuvered by built-in thrusters. The project is still at the theoretical stage.

Plans were also announced for a new multifunctional service vessel (MSV) for Shell (UK) Ltd. The company was awarded the main contract for the design, construc-

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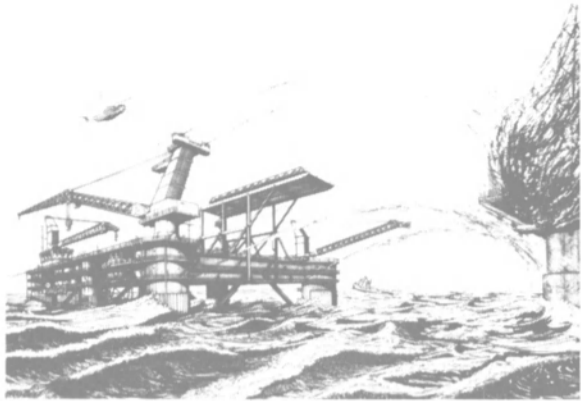
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An artist's impression of the new multifunctional service vessel (MSV) being built for Shell (UK) Ltd.

tion supervision and operational management of the MSV in 1979.

The vessel will be 100 meters (328 feet) long, and have a helideck capable of taking the large Boeing Chinook helicopters; three high specification cranes; a sick bay; 17 firefighting monitors capable of delivering a total of 40,000 gallons of seawater per minute over a fire site; and a saturation diving system capable of handling a team of 24 divers in saturation at any one time. It will be a fully dynamically positioned six-column semisubmersible vessel.

For further information, write **John Ling**, Seaforth Maritime Ltd., Seaforth Centre, Waterloo Quay, Aberdeen AB2 1BS, Scotland.



JACKET LAUNCHING BARGE COMPLETED—M44, a jacket launching barge for a Micoperi group offshore construction company, was recently completed at the Osaka Works (Sakai) of Hitachi Zosen. The largest of its kind in the world, M44 (shown above) is capable of carrying and launching up to 30,000-ton jackets. It is the first jacket launching barge constructed by Hitachi Zosen. M44 measures 190 meters in length, 50 meters in breadth and 11.4 meters in depth (about 623.36 feet by 164.04 feet by 37.25 feet). Two fixed skid beams and two jacking units are installed on the barge. Furthermore, the barge is provided with double-hinge-type rocker arms at the stern to facilitate the launching of the jacket.



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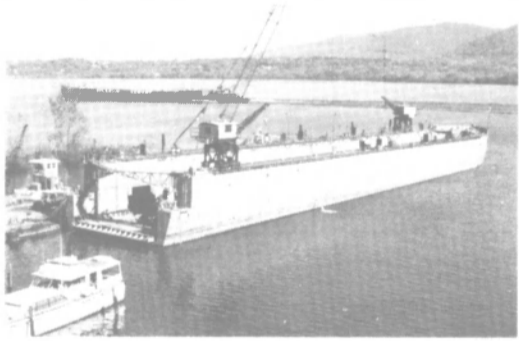
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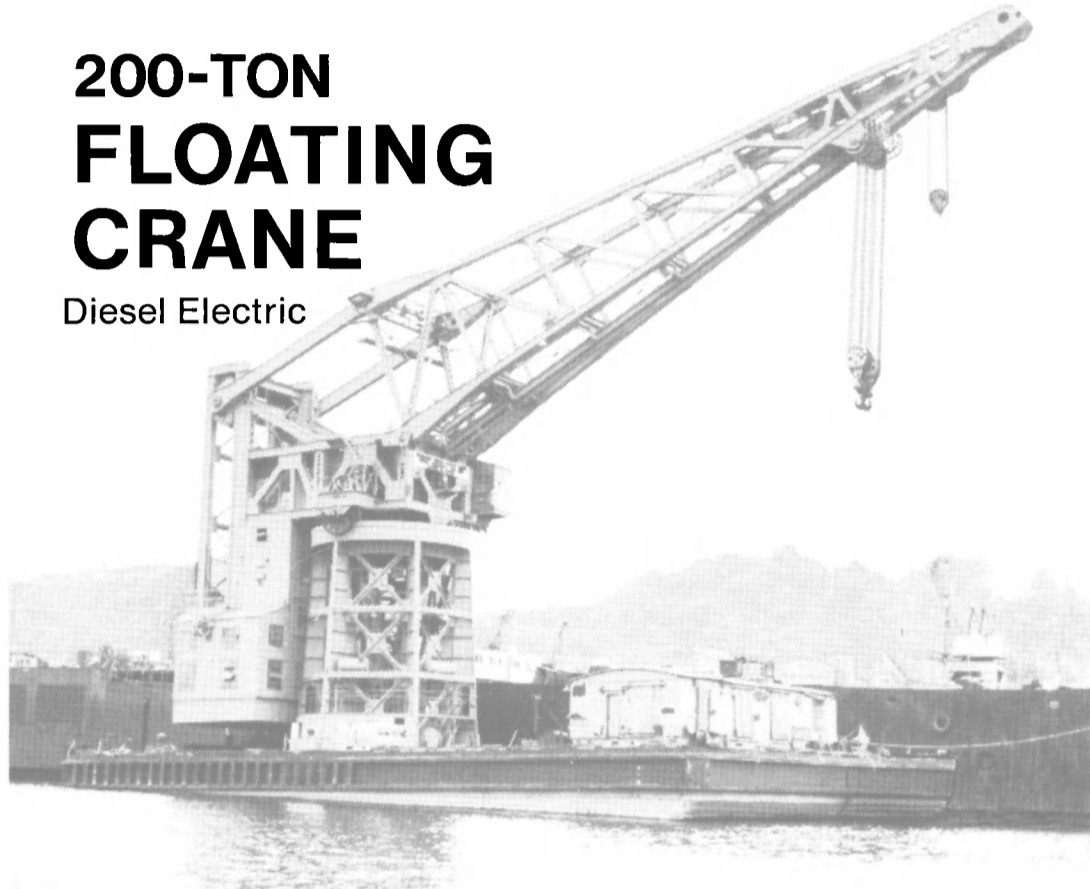
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Diesel Electric



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LENGTH OVERALL 140 FT.
BEAM 84 FT.
DRAFT 7 FT.
LIGHT DISPLACEMENT 2,334 TONS
ALL STEEL CONSTRUCTION
ELECTRIC REVOLVING TYPE—FULL 360°
WEB BOOM 146 FT.
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Each block carries 2,050 ft. of 1½",
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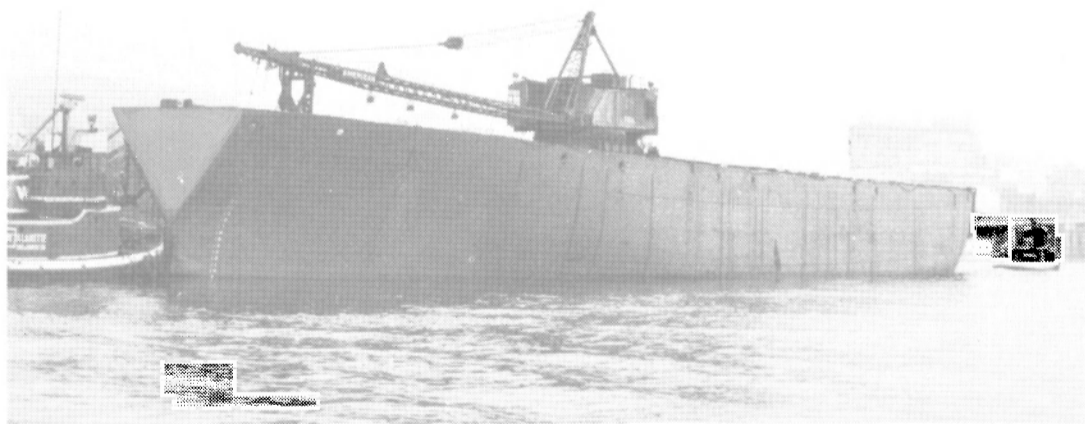
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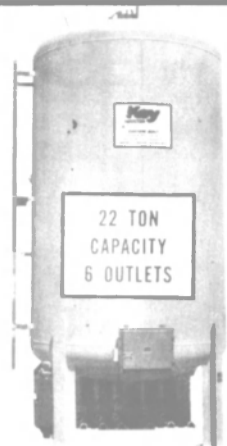


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Sealed bids in single copy for furnishing all labor, materials, and equipment and performing all work on Project F9500(4) described herein will be received until 3:00 PM prevailing time April 3, 1980 in the Division Directors Office, Division of Highway Design and Construction, Island Center Building, Douglas, Alaska.

The project consists of refurbishing M V TAKU by; replacing or rebuilding major machinery components, living accommodations and food facilities, the addition of a solarium, a passenger freight elevator and installation of a Type I Marine Sanitation Device. ALL WORK SHALL BE COMPLETED BY APRIL 30, 1981.

In accordance with requirements set forth by the Federal Highway Administration, the following provisions are made a part of all advertisements for construction contracts; "Bidders must submit certification stating whether or not they intend to subcontract a portion of the work and, if so, that they have taken affirmative action to seek out and consider minority business enterprises as potential subcontractors. Each bidder intending to subcontract part of the contract work shall make contact with potential minority business enterprise subcontractors to affirmatively solicit their interest, capability and prices and shall document the results of such contracts. A bidder's failure to submit this certification or submission of a false certification shall render his bid nonresponsive."

Plans and Specifications may be obtained by potential prime contractors for bidding purposes by contacting the Director, Division of Harbor Design and Construction, Pouch Z, Juneau, Alaska 99811, (907) 586-2195.

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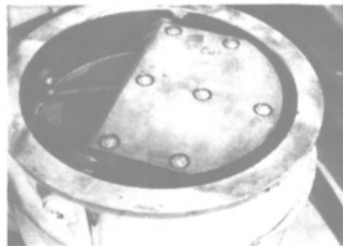
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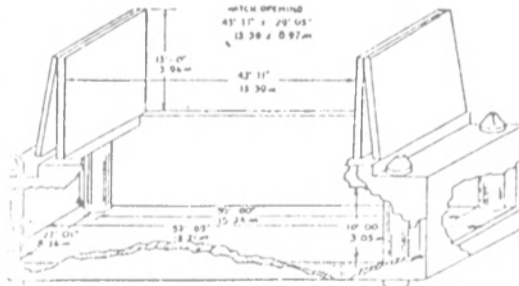
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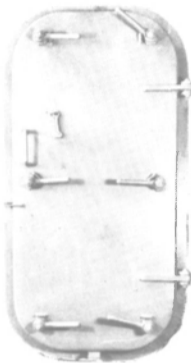
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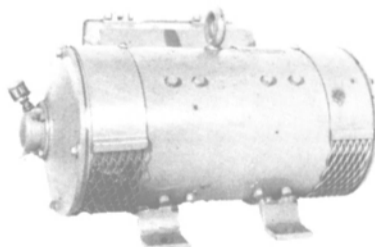
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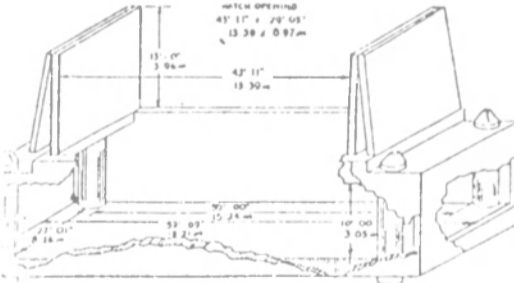
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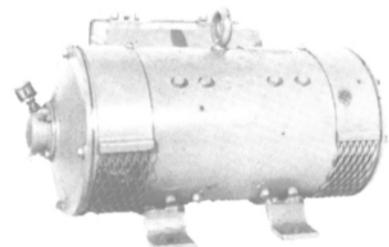
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- Rockwell International, Collins Telecommunications Products Division, Cedar Rapids, IA 52406
- Rockwell International, Flow Control Division, 400 N. Lexington Ave., Pittsburgh, PA 15208
- Simrad Inc., 1 Labriola Court, Armonk, N.Y. 10504
- SI-TEX, P.O. Box 6700, Clearwater, Texas 77002
- Sperry Marine Systems Div., Charlottesville, Va. 22901, Division of Sperry Rand Corp.
- Tracor, Inc., Industrial Products Div., 6500 Tracor Lane, Austin, Texas 78721
- OILS—Marine—Additives**
- Ferrous Corporation, P.O. Box 1764, Bellevue, WA 98009
- Gulf Oil Company—U.S. (Domestic Oils), 909 Fannin Street, Houston, TX 77001
- Gulf Oil Trading Co., 1290 Ave. of Americas, New York, N.Y. 10019
- Shell Oil Co., 1 Shell Plaza, Houston, Texas 77002
- A. Margolis & Sons Corp., One World Trade Center, Suite 8751, New York, N.Y. 10048
- Mobil Oil Corporation, 150 East 42nd St., New York, N.Y. 10017
- Texaco, Inc. (International Marine), 135 East 42nd St., N.Y., N.Y. 10017
- OIL/WATER SEPARATORS**
- Alfa-Laval, Inc., 2115 Lindwood 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
- PAINT—Coatings, Protective**
- "CONSOL" manufactured by Hanline Bros., Inc., 1400 Warner St., Baltimore, MD 21230
- Devoe & Reynolds Co., Inc., P.O. Box 7600, Louisville, Ky. 40207
- Fairbairn Company, 8200 Fischer Road, Baltimore, MD 21222
- International Paint Co., 17 Battery Place North, Suite 1150, New York, N.Y. 10004
- Mobil Chemical Co., Maintenance & Marine Coatings Dept., P.O. Box 250, Edison, N.J. 08817
- Woolsey Marine Industries, Inc., 100 Saw Mill Rd., Danbury, CT 06810
- PETROLEUM SUPPLIES**
- Shell Oil Co., 1 Shell Plaza, Houston, Texas 77002
- PILOT LADDERS—Wood Products**
- A.L. Don Co., 58 Grant Avenue, Carteret, N.J. 07008
- PIPE—HOSE—Cargo Transfer, Clamps, Couplings**
- Camlock Flange Sales Corp., 449 Sheridan Blvd., Inwood, L.I., N.Y. 11696
- Hydro-Craft, Inc., 4223 Edgeland, Royal Oak, Mich. 48073
- Kubota, Ltd., 22, Funade-cho 2-chome, Naniwa-Ku, Osaka, Japan
- Penco Division/Hudson Engineering Co., 1114 Clinton St., Hoboken, N.J. 07030
- PLASTICS—Marine Applications**
- Hubeva Marine Plastics, Inc., 390 Hamilton Ave., Bklyn, N.Y. 11231
- PROPELLERS: NEW AND RECONDITIONED—SYSTEMS**
- Avondale Shipyards, Inc., P.O. Box 52080, New Orleans, La. 70150
- Bird Johnson Company, 110 Norfolk St., Walpole, Mass. 02081
- Coolidge Propellers, 1601 Fairview Ave. East, Seattle, Wash. 98102
- Michigan Wheel/Gulf Coast, P.O. Box 1528, Pascagoula, MS 39567
- Voith Schneider of America—U.S. Agent: Eli Sharprut, 347 Evelyn St., Paramis, N.J. 07652
- Tacoma Boatbuilding Co./Escher Wyss, 1840 Marine View Dr., Tacoma, WA 98422
- PROPULSION—Marine**
- Combustion Engineering, Inc., Windsor, Connecticut 06095
- Maritime Industries, Ltd., 6307 Laurel St., Burnaby, B.C. Canada V5B 3B3
- Port Electric Turbine Div., 155-157 Perry St., New York, N.Y. 10014
- Schottel of America, Inc., 8375 N.W. 56 Street, Miami, Fla. 33166
- Transamerica Delaval, Inc., Turbine & Compressor Div., P.O. Box 8788, Trenton, N.J. 08650
- PUMPS—Repairs—Drives**
- Penco Division/Hudson Engineering Co., 1114 Clinton St., Hoboken, N.J. 07030
- Transamerica Delaval, Inc., IMO Pump Div., P.O. Box 321, Trenton, NJ 08602
- Warren Pumps, Inc., Bridges Ave., Warren, Mass. 01083
- Worthington Pump Inc., P.O. Box 1250, Mountainside, N.J. 07092
- RATCHETS**
- CM American, Division Columbus McKinnon Corp., P.O. Box 74, McKees Rocks, Pa. 15136
- REELS—Coiling Systems**
- Reel-O-Matic Systems, Inc., 418 Hellman St., Wrightsville, Pa. 17368
- REFRIGERATION—Refrigerant Valves**
- Bailey Refrigeration Co., Inc., 74 Sullivan St., Brooklyn, N.Y. 11231
- Port Refrigeration Div., 157 Perry Street, New York, N.Y. 10014
- ROPE—Manila—Nylon—Hawsers—Fibers**
- American Mfg. Co., Inc., Willow Avenue, Honesdale, Pa. 18431
- Jackson Rope Co., Reading, Pa. 19603
- Samson Ocean Systems, Inc., 99 High Street, Boston, Mass. 02110
- Tubbs Cordage Co., Orange, CA 92666
- RUDDER ANGLE INDICATORS**
- Electric Tachometer Corp., 68th & Upland St., Philadelphia, Pa. 19142
- Henschel Corp., 14 Cedar St., Amesbury, Mass. 01913
- Hose McCann Telephone Co., Inc., 524 W. 23rd St., N.Y. 10011
- Sperry Marine Systems Div., Charlottesville, Va. 22901, Division of Sperry Rand Corp.
- SANITATION DEVICES—Pollution Control**
- Argo Marine Pollution Systems Division, 140 Franklin St., New York, N.Y. 10013
- Demco, Inc., P.O. Box 94700, Oklahoma City, OK 73109
- Envirovac (Division of Dometic Inc.), 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
- Research Products/Blankenship, 2639 Andjon, Dallas, Texas 75220
- St. Louis Ship FAST Sewage Systems, 611 East Marceau St., St. Louis, Mo. 63111
- Sigma Treatment Systems, 2 Davis Ave., Frazer, PA 19355
- SCAFFOLDING EQUIPMENT—Work Platforms**
- Patent Scaffolding Co., 2125 Center Ave., Fort Lee, N.J. 07024
- Spider Staging Sales Co., P.O. Box 182, Renton, Washington 98055
- Trus Joist Corp., P.O. Box 60, Boise, Idaho 83707
- SHACKLES**
- West Footscray Engineering Works Pty. Ltd., P.O. Box 144, West Footscray, Victoria, 3012 Australia
- SHAFTS, SHAFT SEALS, REVOLUTION INDICATOR EQUIPMENT**
- Armco Steel/Advanced Materials Div., 703 Curtis St., Middletown, OH 45043
- Electric Tachometer Corp., 68th & Upland St., Philadelphia, Pa. 19142
- Henschel Corp., 14 Cedar St., Amesbury, Mass. 01913
- Penco Division/Hudson Engineering Co., 1114 Clinton St., Hoboken, N.J. 07030
- SHIPBREAKING—Salvage**
- American Ship Dismantlers, Inc., Division of Schnitzer Industries, 3300 N.W. Yeon Avenue, Portland, Ore. 97210
- The Boston Metals Co., 313 E. Baltimore St., Baltimore, Md. 21202
- Eastchester Towing Co., 642 City Island Ave., Bronx, NY 10464
- National Metal & Steel Corp., 691 New Dock St., Terminal Island, Cal. 90731
- Zidell Explorations, Inc., 3121 S.W. Moody St., Portland, Ore. 97201
- SHIPBUILDING STEEL**
- Armco Steel Corp., 703 Curtis St., Middletown, Ohio 45042
- Bethlehem Steel Corp., One State Street Plaza, N.Y. 10004
- SHIPBUILDING—Repairs, Maintenance, Drydocking**
- Asmar Shipyards Co., Astilleros y Maestranos de la Armada, Prat 856, Piso 14, Casilla 150-V, Valparaiso, Chile, S.A.
- Astilleros Espanoles, S.A., 17, Padilla, Madrid 6, Spain
- Avondale Shipyards, Inc., P.O. Box 52080, New Orleans, La. 70150
- Bergeron Industries Inc., P.O. Box 38, St. Bernard, La. 70085
- Bethlehem Steel Corp., One State Street Plaza, N.Y. 10004
- Blohm + Voss AG, D-2000 Hamburg 1, P.O.B. 10 07 20
- Blohm + Voss Co., 55 Morris Ave., Springfield, N.J. 07081
- Blount Marine Corp., P.O. Box 368, Warren, RI 02885
- Boeing Marine Systems, P.O. Box 3707, Mail Stop 14-11, Seattle, WA 98124
- Ira S. Bushey & Sons, Inc., 764 Court Street, Brooklyn, N.Y. 11231
- Camden Ship Repair Co., Inc., Point & Erie Streets, Camden, N.J. 08102
- Carrington Slipways Pty. Ltd., Old Punt Road, Tomago, N.S.W., Australia 2322
- Centromor, 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 10001
- Coastal Dry Dock & Repair Co., Building 131, Brooklyn Navy Yard, Brooklyn, N.Y. 11205
- Conrad Industries, P.O. Box 790, Morgan City, La. 70380
- Curacao Drydock Co., Inc., P.O. Box 153, Willemstad, Curacao, Netherlands Antilles
- Curacao Drydock, 26 Broadway, Suite 741, New York, N.Y. 10004
- Dorbyl Ltd., Military Road, 1 Industrial Sites, West Bank, 5201 East London Republic of South Africa
- Dravo Steelship Corp., R.4, Box 167, Pine Bluff, Ark. 71602
- Equitable Shipyards, Inc., P.O. Box 8001, New Orleans, La. 70122
- FMC Corp., Marine & Rail Equipment Div., 4700 N.W. Front Ave., Portland, Oregon 97208
- Galveston Shipbuilding Co., P.O. Drawer 2660, Galveston, TX 77553
- General Dynamics, Quincy Division, Quincy, Mass. 02169
- 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.
- Hillman Barge & Construction Co., P.O. Box 510, Brownsville, Pa. 15417
- Hitachi Shipbuilding & Engrg. Co., Ltd., 47 Edoberi 1-Chome, Nishi-Ku, Osaka, Japan
- Hongkong United Dockyards Ltd., Kowloon Docks, Hong Kong
- Hudson Shipbuilders, Inc., P.O. Box Q, Pascagoula, MS 39567
- Ingalls Shipbuilding, P.O. Box 149, Pascagoula, MS 39567
- Jackson/New York, 29 45 Richmond Terrace, Staten Island, NY 10303
- Jeffboat, Inc., Jeffersonville, Ind. 47130
- Keppel Shipyard Ltd., P.O. Box 2169, 325, Telok Blangah Road, Singapore 4
- Kockums Shipyard, S-201, 10 Malma 1, Sweden
- Lockheed Shipbuilding and Construction Co., 2929 16th Avenue, S.W., Seattle, Wash. 98134
- MacGregor Land & Sea, Inc., 135 Dermody Street, Cranford, NJ 07016
- Mangone Shipbuilding Co., 819 South 80th Street, P.O. Box 5446, Houston, TX 77012
- Marathon Manufacturing Company
- Marathon LeTourneau Offshore Company, 1700 Marathon Building, 600 Jefferson, Houston, Texas 77002
- Marathon LeTourneau Gulf Marine Division, P.O. Box 3189, Brownsville, Texas 78520
- Marinette Marine, Ely Street, Marinette, WI 54143
- Mattson Shipyard Co., Inc., P.O. Box 645, Cohoes, New York 12047
- J. Ray McDermott & Co., Inc., P.O. Box 60035, New Orleans, LA 70160
- Misener Industries, Inc., 5353 Tyson Avenue, P.O. Box 13625, Tampa, Fla. 33681
- Mississippi Marine Towboat Corp., P.O. Box 539, Harbor Front Industrial Park, Greenville, MS 38701
- Mitsui Shipbuilding & Engrg. Co. Ltd., 6-4, Tsukiji 5-chome, Chuo-ku, Tokyo, Japan
- Monark Boat Co., P.O. Box 210, Monticello, Ark. 71655
- National Steel & Shipbuilding Corp., San Diego, Calif. 92112
- Newpark Shipbuilding & Repair, P.O. Box 5426, Houston, TX 77012
- Newport News Shipbuilding & Dry Dock Co., 4101 Washington Ave., Newport News, Va. 23607
- Norfolk Shipbuilding & Drydock Corp., P.O. Box 2100, Norfolk, Va. 23501
- Northwest Marine Iron Works, P.O. Box 3109, Portland, Oregon 97208
- O.A.R.N. (Officine Allestimento-Riprazioni Navi), P.O. Box 1395, Genoa, Italy 16100
- Paceco Div. Fruehauf Corp., 2350 Blanding Ave., Alameda, Calif. 94501
- Pearlson Engineering Co., P.O. Box 8, Kendall Branch, Miami, Fla. 33156
- Perth Amboy Dry Dock Co., Perth Amboy, N.J. 08862
- Port Allen Marine Service, Inc., P.O. Box 108, Port Allen, LA 70767
- Port Houston Marine, Inc., 7220 J.W. Peavy Drive, Houston, TX 77012
- Port of Portland, P.O. Box 3529, Portland, OR 97208
- St. Louis Shipbuilding—Federal Barge, Inc., 611 East Marceau, St. Louis, Mo. 63111
- STE Marie & Marine, Inc., 741 East Portage Ave., Sault Ste Marie, MI 49783
- Savannah Machine & Shipyard Co., P.O. Box 787, Savannah, Ga. 31402
- Setenave-Estaleiros Navais De Setubal, P.O. Box 135, Setubal, Portugal
- Sudoimport, 5 Kalyaevskaya, Moscow K-6, USSR
- Sun Shipbuilding, Foot of Morton Ave., Chester, Pa. 19013
- Swiftships Inc., P.O. Box 1908, Morgan City, LA 70380
- Tacoma Boatbuilding Co., Inc., 1840 Marine View Drive, Tacoma, WA 98422
- Todd Shipyards Corp., 1 State St. Plaza, New York, N.Y. 10004
- Total Transportation Systems Inc., 813 Forest Dr., Newport News, VA 23606
- Total Transportation Systems (International) A/S, Bjornegarden, P.O. Box 28, 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
- Valmet OY, Helsinki Shipyard, Laivanrakentajantie 2, P.O. Box 910 SF-00101 Helsinki 10, Finland
- Wall Shipyard, P.O. Box 419, Harvey, La. 70058
- Wiley Manufacturing, a unit of AMCA International Corp., P.O. Box 97, Port Deposit, MD 21904
- Zigler Shipyards, P.O. Box 2607, Morgan City, La. 70380
- SHIP STABILIZERS**
- Sperry Marine Systems Div., Charlottesville, Va. 22901, Division of Sperry Rand Corp.
- SMOKE INDICATORS**
- Robert H. Wager Co., Inc., Passaic Avenue, Chatham, N.J. 07928
- STUFFING BOXES**
- Johnson Rubber Co. (Marine Div.), 16025 Johnson St., Middlefield, Ohio 44062
- SURVEYORS AND CONSULTANTS**
- Hull & Cargo Surveyors, Inc., 99 John St., New York, NY 10038
- TANK CLEANING**
- Butterworth Systems Inc., 224 Park Ave., P.O. Box 352, Florham Park, N.J. 07932
- Penco Division/Hudson Engineering Co., 1114 Clinton St., Hoboken, N.J. 07030
- Salwico, Inc., 77 River St., Hoboken, N.J. 07030
- TANK LEVELING INDICATORS**
- Transamerica Delaval, Inc., Gem Sensors Div., Spring Lane, Farmington, CT 06032
- Vu-Gage System, 150 E. 42nd St. (Room 910), New York, NY 10017
- TERMINALS—Oil-Transfer**
- Delong Corp., 29 Broadway, New York, N.Y. 10006
- Transportation Concepts & Techniques, Inc., 551 Fifth Avenue, New York, N.Y. 10017
- TOWING—Barges, Vessel Chartering, Lighterage, Salvage, etc.**
- Bay-Houston Towing Co., 805 World Trade Bldg., Houston, Texas 77002
- Chotin Transportation, Inc., 580 Walnut St., Cincinnati, Ohio 45202
- Curtis Bay Towing Co., Mercantile Bldg., Baltimore, Md. 21202
- Delmar Systems, Inc., 160 Industrial Parkway, Lafayette, La. 70501
- Henry Gillen's Sons Lighterage, 21 West Main St., Oyster Bay, N.Y. 11771
- Gulf Fleet Marine Corp., 225 Baronne St., Suite 600, New Orleans, LA 70112
- 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
- Suderman & Young Co., Inc., 918 World Trade Bldg., Houston, Texas 77002
- Turcamo Coastal & Harbor Towing Corp., One Edgewater St., Clifton, Staten Island, N.Y. 10305
- UNDERWATER SERVICES—Contracting**
- SeaTec International Ltd., Blackburn Industrial Center, Gloucester, MA 01930
- VALVES AND FITTINGS**
- American United Marine, Corp., 575 Madison Ave., New York, NY 10022
- Demco, Inc., P.O. Box 94700, Oklahoma City, Okla. 73109
- Marine Moisture Control Co., 449 Sheridan Blvd., Inwood, N.Y. 11696
- Mechanical Marine Co., 900 Fairmount Ave., Elizabeth, N.J. 07027
- Stacey Valve Co., 29 Meserole Ave., Brooklyn, N.Y. 11222
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- Robert H. Wager Co., Inc., Passaic Avenue, Chatham, N.J. 07928
- Waukesha Bearings Corp., P.O. Box 798, Waukesha, WI 53186
- VIDEO EQUIPMENT**
- Video Library Systems, 185 Osoer Avenue, Hauppauge, NY 11787
- WATER PURIFIERS**
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- WELDING SYSTEMS**
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- WINDOWS**
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- WIRE AND CABLE**
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- Seacoast Electric Supply Corp., 225 Passaic St., Passaic, NJ 07055
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- ZINC**
- Smith & McCorken, 153 Franklin St., New York, N.Y. 10013

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RO-RO 80

The 4th International Conference & Exhibition
on Marine Transport
using Roll-on/Roll-off Methods
Monte Carlo, 15-17 April 1980

CONFERENCE PROGRAMME

Tuesday 15 April

Session 1 14.00h. — 17.00h.

Ro-Ro Operations and Trades

The potential of the Ro-Ro vessel as a multi-purpose carrier in general cargo trades between developed and lesser developed countries.

Speaker: Bjorn Ervell, Johansson Group Management Board Member responsible for Ro-Ro Services to the Middle East, Pakistan, India, US Gulf and Mexico.

The uncommon box — the relationship of an intermodal equipment lessor to the intermodal community, the free flow on intermodal trailers between hauliers, railroads and the Ro-Ro operators.

Speaker: Gordon C. Miller, Vice-President, Transamerica Realco Inc, Chicago.

The adaptation of the Ro-Ro concept to the integrated transport system — a major shipper will give his thoughts on refining the systems, both administratively and physically to give better economies, especially capital rationalisation.

Speaker: Rune Svensson, Transport Director, AB Volvo, Sweden.

The Ro-Ro Market in the Caribbean — an examination of the existing trades and future opportunities for European shipowners to place their vessels in the Caribbean.

Speaker: Peter S. Shaerf, Director, Common Brothers USA Ltd., New York.

Slow or fast — is the move towards faster Ro-Ro's really necessary? The economics of a new concept of vehicle/passenger ship — designed to operate at slower speeds with bow access only and unusual machinery arrangement — is compared to conventional designs.

Speaker: Pekka Kandelin, Naval Architect, Oy Wartsila, Finland.

19.00h. Reception given by the Principality of Monaco.

Wednesday 16 April

Session 2 09.15h. — 10.30h.

Ship Design

Seaborne Rail Transportation — the growing interest in integral rail transport systems emphasises the need to define common criteria to achieve optimum results.

Speaker: George Spalatin, Naval Architect, Inkobrod, Zagreb, Yugoslavia.

The planning of a Ro-Ro fleet for developing countries.

Speaker: to be confirmed.

Session 3 11.00h. — 12.30h.

Stability and SOLAS Session

Ro-Ro Damaged Stability — a joint presentation by: P. Fagerlund, Technical Director, Transatlantic Rederi A/B, Gothenburg.

P. Damkjaer-Nielsen, Naval Architect, East Asiatic Co, Copenhagen.

B. Berg, Assistant Manager, Wilh. Wilhelmsen, Oslo.

Cargo Ship or Passenger Ship? Some notes on coping with regulations on the survival capability of Ro-Ro ships in the light of recent IMCO recommendations.

Speakers: Martin A. W. M. van Hees, Naval Architect, Rhine-Schelde-Verolme, Netherlands.

Patrick G. Martin, Naval Architect, Verolme Cork Dockyard Ltd (RSV Group), Ireland.

Fire-fighting and water clearance on trailer decks and other safety considerations in the design of a family of wide beam, shallow draft container/Ro-Ro ships.

Speaker: E. J. B. Pawsey, Director, Hart Fenton & Co. Ltd, Consultant Naval Architects to the Sea Containers Group of Companies, London.

E. Vossnack, Chief Naval Architect, Nedlloyd Fleet Services will also contribute to this session.

Session 4 14.30h.

Mediterranean Ro-Ro Operations

Introduction by Session Chairman Franco Dellepiane, Managing Director, Adriatica di Navigazione SpA, Venice.

The commercial and economic aspects of East Mediterranean Operations.

Speaker: Captain Oktay Sonmez, Commercial Director, DB Turkish Cargo Lines, Istanbul.

The importance of a Ro-Ro capacity on containerhips.

Speaker: Dr. Fabrizio Serena, Director General, Italia Navigazione SpA, Genoa.

Other panellists taking part in the Mediterranean Session will be:

J. P. Isoard, Managing Director, SNCM (Societe Maritime Corse Mediterranee), Marseilles.

Comm. Spiro Magliveras, Managing Director, Traghetti del Mediterraneo, Genoa.
Eugenio Belloni, Director, Andrea Merzario SpA, Milan.

19.30h. Reception for Conference Delegates.

Thursday 17 April

The operation of self-sustaining container Ro-Ro vessels — a film presentation introduced by Nigel J. Tatham, Director, Sea Containers Services Ltd, London.

Session 5 11.30h. — 16.00h.

Ports and Terminals

Bridging the Gap — solutions to the Ro-Ro access problems in the world's ports utilising experience from both the ship and quay sides of the Ro-Ro interface.

Speaker: Geoffrey A. Stokoe, Managing Director, MacGregor Ports and Terminals Ltd, London.

Simplifying the Ro-Ro interface — the instigator of the portable linkspan looks towards simple systems to be applied to the totally committed container port whose present economics he questions.

Speaker: John Rose, Managing Director, Marine Development (Glasgow) Ltd, UK.

The application of articulated steering on terminal tractors. The author discusses new case studies of terminal operations where articulated steered terminal trucks and trailers have replaced the all-wheel-steered straddle carriers.

Speaker: Douglas Ross, President, CTEC Company, Bellevue, Washington, USA.

Aligning Ro-Ro equipment to handle specialised bulk and unitised loads — how far can the ship operator be asked to go towards integrated systems?

Speaker: Warren S. Lister, Terminal Handling Consultant, Managing Director, Listavia Ltd, UK.

Pavement Design for Ro-Ro port areas. No recommendations have been issued for the design of Ro-Ro Port Pavements and every port has developed its own means of solving its paving problems. The authors have studied some 30 structures at 17 different ports and report their conclusions and suggest a coherent design philosophy.

Speakers: S. D. Barber and J. Knapton, Department of Civil Engineering, University of Newcastle upon Tyne, UK.

Ro-Ro Exhibition

More than 40 international companies will be exhibiting the latest Ro-Ro technologies and services during the three days of the Conference.

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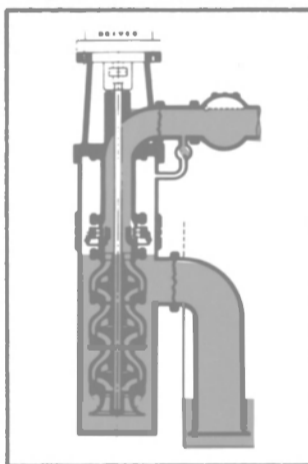
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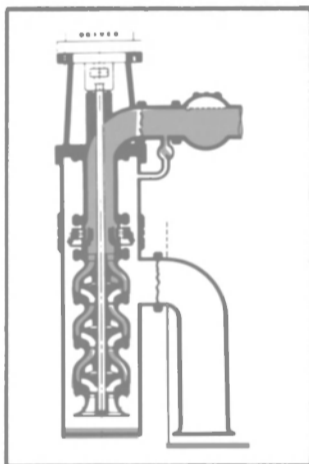
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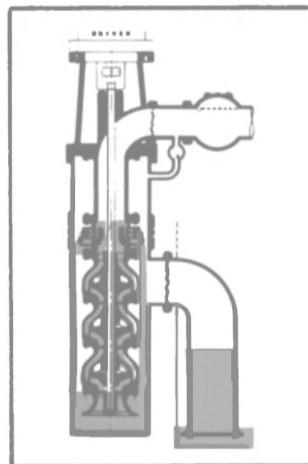
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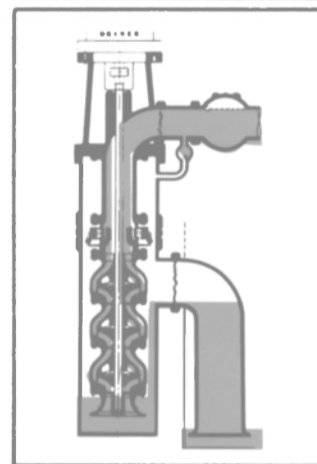
1. Normal Operation



2. Loss of Suction



3. Recycling



4. Repriming

The PrimaVac vertically mounted centrifugal system, together with any pump, provides positive suction that will lift most liquid products 30 feet to the pump. In addition, it completely eliminates such problems as back-flooding and pump contamination. It automatically reprimers itself and can strip tanks empty, thus eliminating the need for costly priming and stripping equipment. It evacuates air and gasses with fluid product, instead of venting into the atmosphere. And its recycling and repriming capabilities allow the PrimaVac to run indefinitely without danger of overheating.

Over 3000 already in operation worldwide.

ONLY AVAILABLE THROUGH

PENCO

**Division of Hudson Engineering Company
1114 Clinton St., Hoboken, N.J. 07030
(201) 659-2600 • Telex: 12-7373**

