

# MARITIME REPORTER AND ENGINEERING NEWS



Pride Of Texas

**Levingston Scores Many  
"Firsts" With Launching Of  
Bulk Carrier "Pride Of Texas"**

(SEE PAGE 12)

**JUNE 15, 1980**

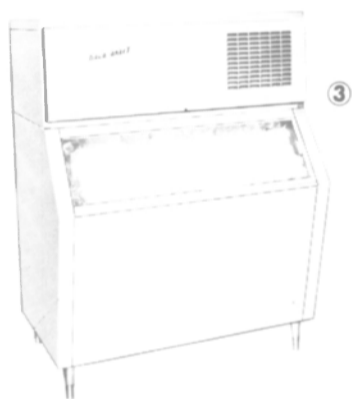
# LATEST BAILEY MODELS especially for marine use



## ① REFRIGERATORS/FREEZERS/STORAGE UNITS

You can now combine these units in less than 5 cu. ft. of floor space. Capacity of refrigerators and freezers is 6 cu. ft., storage units of 11 cu. ft. A refrigerator with ample space for ice cube trays and/or frozen foods is ideal for officers' quarters. For mess or galley, combine a refrigerator with a storage unit or a freezer. If you need 12 cu. ft. of either refrigerator or freezer space, combine two similar units using our optional stacking frame with functional air grille to save valuable deck space.

We also have a complete line of standard, portable and under-counter refrigerators from 4 to 102 cu. ft., AC or DC. AC units with blower-type evaporators are self-defrosting. All units rat-proofed in accordance with U.S. Health Service requirements.



## ② WATER COOLERS

Model B14M has an easy-to-clean top, a recessed rust-resistant base and mounting brackets for bolting cooler to the deck, all of stainless steel. Panels are of pearl gray baked-on enamel finish but are also available in stainless steel at slight extra cost.

Cooler capacity is 14 gals. of 50°F. water per hour. Bubbler has a built-in pressure regulator assuring an even flow of water at line pressures of 20 to 125 psi.



## ③ ICE CUBERS

BAILEY Kold-Draft\* Ice Cubers, occupying only 7½ sq. ft. of floor space, have a capacity of up to 1,200 lbs. per 24 hours. Add-A-Unit feature permits increasing this capacity without using more floor space. All models compensate for a 15° roll and/or pitch. Units have a special condenser, valves and fittings, permitting salt water to be used for cooling.

Models are in gray acrylic baked-on enamel; stainless steel finish is an optional extra. Daily capacities range from 110 to 1,200 lbs. using ice storage bins. Immediate delivery of complete units or repair parts from any of our four warehouses.

\*Reg. TM Uniflow Mfg. Co.

## ④ AIR CONDITIONERS

Water-cooled, self-contained units have cabinets of heavy gauge steel, protected with rust inhibiting primer possessing excellent water immersion, salt spray and humidity resistance. Finish is neutral beige, baked enamel. In 3, 5, 7½ and 10 ton models, AC or DC.

Smaller models (AC only) are available for areas where deck space is at a minimum. Whereas other models must allow several inches for breather space, these fit flush against the bulkhead because the permanent-type, air return filter is in the front and the directional, controllable air discharge grille is on the top. In models ranging from 9,400 to 27,500 BTU/hr capacity, they are self-contained and sea water cooled. May be installed easily and inexpensively anywhere on a ship.

FOR YOUR  
PROTECTION

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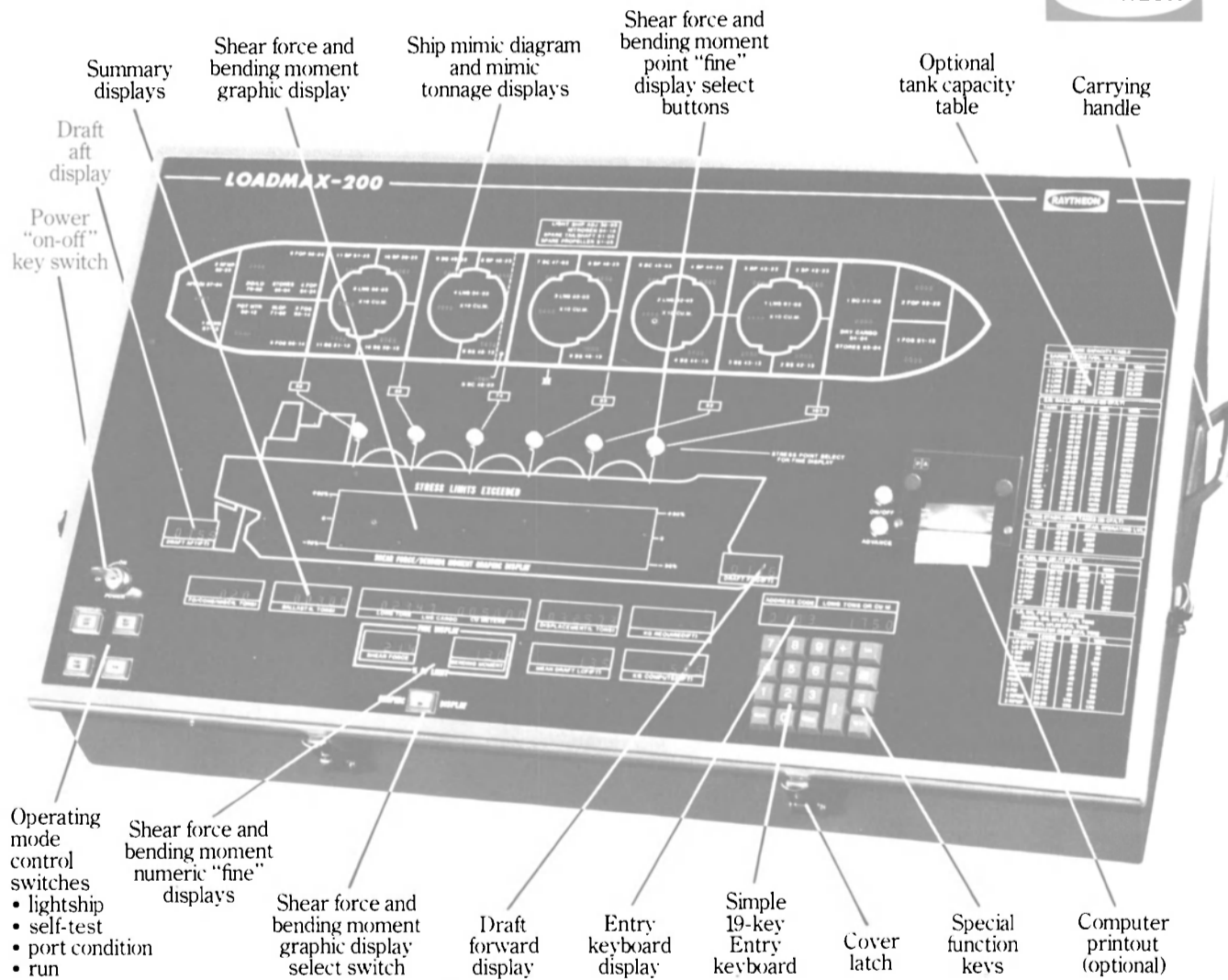
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## \$18-Million Drill Rig Contract Awarded To Ingalls Shipbuilding

Keyes Offshore, Inc. of Houston, a major drill rig owner and contractor to the offshore drilling industry, has contracted with Ingalls Shipbuilding of Pascagoula, Miss. for a third jackup drilling rig of Friede and Goldman design. Earlier this year Keyes ordered two jackup rigs from Ingalls. The contract for the third rig is for approximately \$18 million, increasing the total value of the contracts to about \$50 million.

Bill Keyes, president of Keyes Offshore, said the first two of the self-elevating rigs will be delivered in March and May of 1981, while the rig just ordered will be delivered in June that year.

Len Erb, senior vice president of Litton Industries and president of Ingalls, said fabrication work has already begun on the first of the Keyes rigs, while material and equipment procurement will begin immediately on the rig just ordered.

All three rigs are Friede and Goldman design L-780 capable of drilling to depths of 20,000 feet. One rig is designed to operate in 250 feet of water and two in 300 feet. The 5,500-ton mobile units will be 180 feet long and 175 feet wide, and have accommodations for 56 personnel. Completion of this order will bring the total of rigs owned or operated by Keyes to six.

Ingalls is the only North American contractor currently building jackups under Friede and Goldman license.

## W.L. McCollough Named Baltimore Manager For Gulf And Eastern

William L. McCollough has been appointed manager of Gulf and Eastern Steamship and Chartering Corporation, Baltimore. He has served 16 years in management capacities with prominent shipping firms in Baltimore.

Gulf and Eastern is general agent for Forest Lines, and represents A. Bottacchi S.A. in Baltimore for its service between the U.S. East Coast and the East Coast of South America.

**MARITIME  
REPORTER  
AND  
ENGINEERING NEWS**

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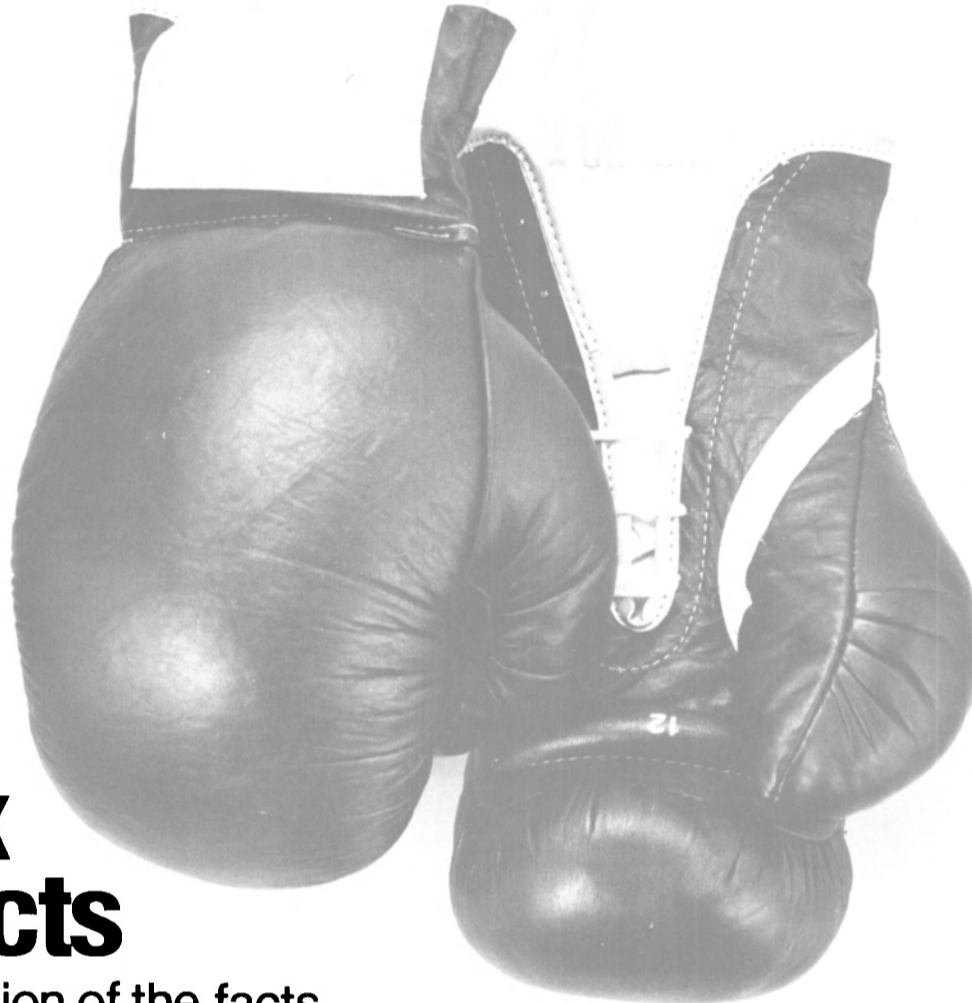
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# Hang up your gloves, round braid nylon.



## Check the facts

An examination of the facts will prove that American® Jumbo-8-Braid Nylon rope outscores round braid nylon every time.

	American® Jumbo-8-Braid Nylon	Round Braid Nylon (braid over braid) *
Lowest Cost	Yes—as much as 25%	*
Safer	Yes—strand construction permits easy inspection for internal wear.	No—"woven cover" construction conceals internal defects.
Easy Splicing	Yes—any time, even by average deck hand. <i>Even a poorly made splice in plaited rope results in relatively high splice efficiency.</i>	No—particularly difficult after use due to hardening and fusing of fibers.
Sheds Water and Dirt	Yes—water and foreign materials pass between the strands.	No—traps water and dirt causing freezing and internal wear.
Non-Kinking	Yes—defies kinking and hocking. Minimizes need for special handling.	No—internal yarns become twisted inside the cover.
Physically Fit	Yes—sturdy working strands even out working stresses.	No—when the cover yarns go, the rope is finished.
Stronger	Yes—American's special 8-strand nylon rope provides highest breaking strength.	*
Longer Life	Yes—by far	*
Easy to Handle	Yes—Sheds moisture and remains light.	No—picks up extra weight when wet. Freezes.

\*NO CONTEST

Because of its superb performance, American® Jumbo-8-Braid nylon is in demand worldwide for such applications as single-point mooring systems, end-to-end towing, shock lines, pennant lines and many more.



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# “Definitely the Best”



“When the decision was made to order four new tow-

boats built to Peavey's requirements, we wanted the best. I've been personally acquainted with St. Louis Ship for 25 years, but we visited other yards too. It was a big decision to make, so we took a look at everything available. St. Louis Ship was selected due to the overall quality and performance of their Hydrodyne Hull.

As far as I'm concerned, they're *definitely the best* on the river.” That's what Floyd Goodman, Peavey's Director of Towboat Operations told us,



when we asked why they had specified St. Louis Ship.

The four 3800 HP Hydrodyne towboats are exact duplicates, measuring 140'x 38' x 10.5'. They were christened the M/V Frederick B. Wells, M/V Frank T. Heffelfinger, M/V Mary H. Morrison and M/V Frank H. Peavey.

They are used to push Peavey's fleet of over 200 covered hopper grain barges. St. Louis Ship would like to put its experience to work for you too. If you need a towboat, or if you are interested in knowing more about our Hydrodyne Hull design (built only by St. Louis Ship),

call us at  
(314) 638-4000.

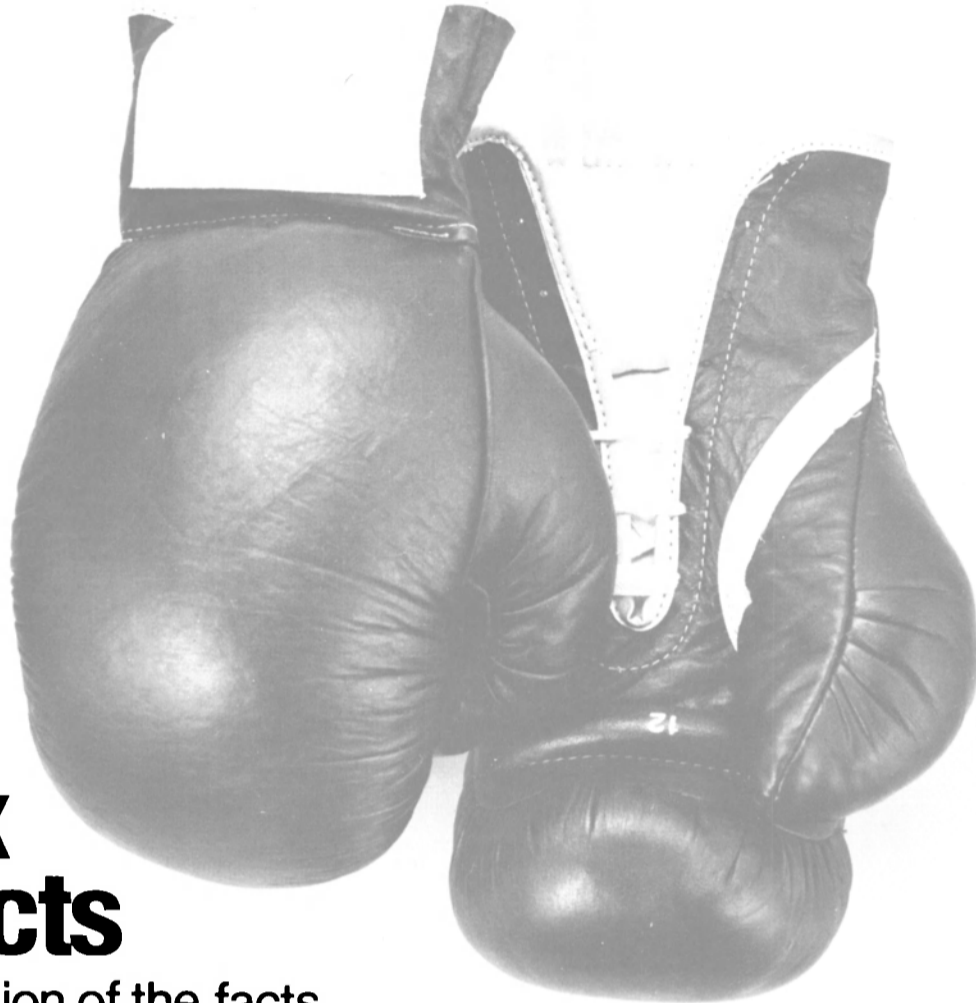


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## Check the facts

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	American <sup>®</sup> Jumbo-8-Braid Nylon	Round Braid Nylon (braid over braid)
Lowest Cost	Yes—as much as 25%	*
Safer	Yes—strand construction permits easy inspection for internal wear.	No—"woven cover" construction conceals internal defects.
Easy Splicing	Yes—any time, even by average deck hand. <i>Even a poorly made splice in plaited rope results in relatively high splice efficiency.</i>	No—particularly difficult after use due to hardening and fusing of fibers.
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### **\$8.35-Million Contract For Bethlehem's East Boston Yard**

Bethlehem Steel Corporation, East Boston, Mass., has been awarded a \$8,350,703 fixed-price contract for the regularly scheduled overhaul of the destroyer USS Manley (DD-940). The Supervisor of Shipbuilding, Conversion and Repair, USN, Boston, is the contracting activity. (N62665-77-C-0013)

### **Andrew Bodnaruk Named Executive VP At Stanwick**

Andrew Bodnaruk has been elected executive vice president of The Stanwick Corporation, Arlington, Va., replacing John F. Kalina, who has retired. Mr. Bodnaruk has been associated with the corporation's wholly owned subsidiary, Stanwick International Inc., since 1973, prior to which he served as a captain in the U.S. Navy. Until August 1978 he served as Stanwick International's senior vice president residing in Tehran, Iran. At that time he was elected president, a position he continues to hold. Mr. Kalina joined the corporation in 1969 and has been a director since 1972 and executive vice president since August 1978.

### **Title XI Asked On 15 Hopper Barges To Cost \$4,267,500**

Shearson River Barge Associates IV, New York, has applied to MarAd for a Title XI guarantee to aid in financing the construction of 15 hopper barges. These river barges, 200 feet long by 35 feet wide by 12 feet deep, will be used in general transportation service on the Mississippi River and its tributaries.

Nashville Bridge Company, Tennessee, is the proposed builder; delivery is scheduled through August 30 this year. If approved, the guarantee would cover \$3,734,000, or 87½ percent of the total actual cost of \$4,267,500.

### **\$7-Million Overhaul Contract Awarded By Navy To NASSCO**

National Steel and Shipbuilding Company, San Diego, Calif., is being awarded a \$7,059,606 negotiated cost-plus-fixed-fee contract for overhaul and repair of several FF-1052 vessels (frigates). Work will be performed at the Naval Station, San Diego. The Naval Sea Systems Command is the contracting activity. (N62791-80-C-0001)

### **Brochure Available From AAT Communications On Wesmar Products**

AAT Communications Corporation, headquartered in Staten Island, N.Y., has announced the availability of Wesmar marine

products, including scanning sonar, Loran C, and satellite navigation equipment.

In addition to the Wesmar line, AAT also supplies and services marine communications and navigation equipment manufactured by Texas Instruments, Raytheon, JRC, Redifon, EPSCO, C.A.I., Motorola, General Electric, Hewlett

Packard and other companies. AAT maintains other offices in Bloomfield, N.J., and in White Plains and Garden City Park, N.Y.

For free brochures on Wesmar or other equipment, write to Joe Amodia, Dept. MR, AAT Communications Corporation, 1854 Hylan Boulevard, Staten Island, N.Y. 10305.

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For complete details, please contact Mr. Boris Mishel, Boeing Marine Systems, P.O. Box 3707, Seattle, Washington 98124. Phone: (206) 655-5404. Cable: BOEINGAIR M/S 14-05. Telex: 32-9430 BOESEA.

**BOEING**  
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**Title XI Approved For  
\$120-Million Tanker  
Contract At NASSCO**

The Maritime Administration has approved in principle an application by American Tankships, Inc., a subsidiary of Ingram Corporation of New Orleans for a Title XI guarantee to aid in financing the construction of two

37,500-dwt tankers. National Steel and Shipbuilding Company, San Diego, is the proposed builder.

To be powered by slow-speed diesel engines, the 15-knot product carriers will operate in domestic trade between U.S. Gulf and East Coast ports. The estimated total cost of the two ships is \$119.8 million, with the approved guarantee at \$104.8 million, or 87½ percent.

**E.K. Arndt Discusses  
Fuel Conservation At  
Riverman's Conference**

At the spring meeting of the Riverman's Energy Conservation Conference in Carefree, Ariz., Edward K. Arndt presented a paper titled "Shrinking Fuel Consumption." In his presentation Mr. Arndt, who is manager of

marine and railroad sales for Mobil Oil Corporation, commented on a number of ways to conserve fuel when operating towboats on the inland waterways.



Edward K. Arndt

"The simplest way to save fuel is to slow down," Mr. Arndt said. But there are additional considerations unique to inland operations, where the width and depth of the waterway impose their own limits on optimum speed, such as not going too fast over a shallow bottom or through a narrow waterway. "In both instances," he said, "even greater increases in power are required to achieve small increases in speed."

Mr. Arndt concluded his presentation with comments on the current status regarding diesel fuel, including allocation regulations and availability.

For copies of Mr. Arndt's full presentation, which includes a summary of many successful techniques developed to reduce fuel consumption, write to Edward K. Arndt, Mobil Oil Corporation, 150 East 42nd Street, New York, N.Y. 10017.

**Atco Marine Appointed  
U.S. Agent For Peabody  
Inert Gas Systems**

Peabody Holmes Ltd., London, England, has announced the appointment of Atco Marine Corporation, Brooklyn, N.Y., as their exclusive representative in the U.S. for Peabody marine inert gas systems, including flue gas systems and inert gas generators for marine use. The agreement was signed in London by George C. Grimbilas, president of Atco Marine, and R.H. Stubington, director, Peabody Holmes Ltd.

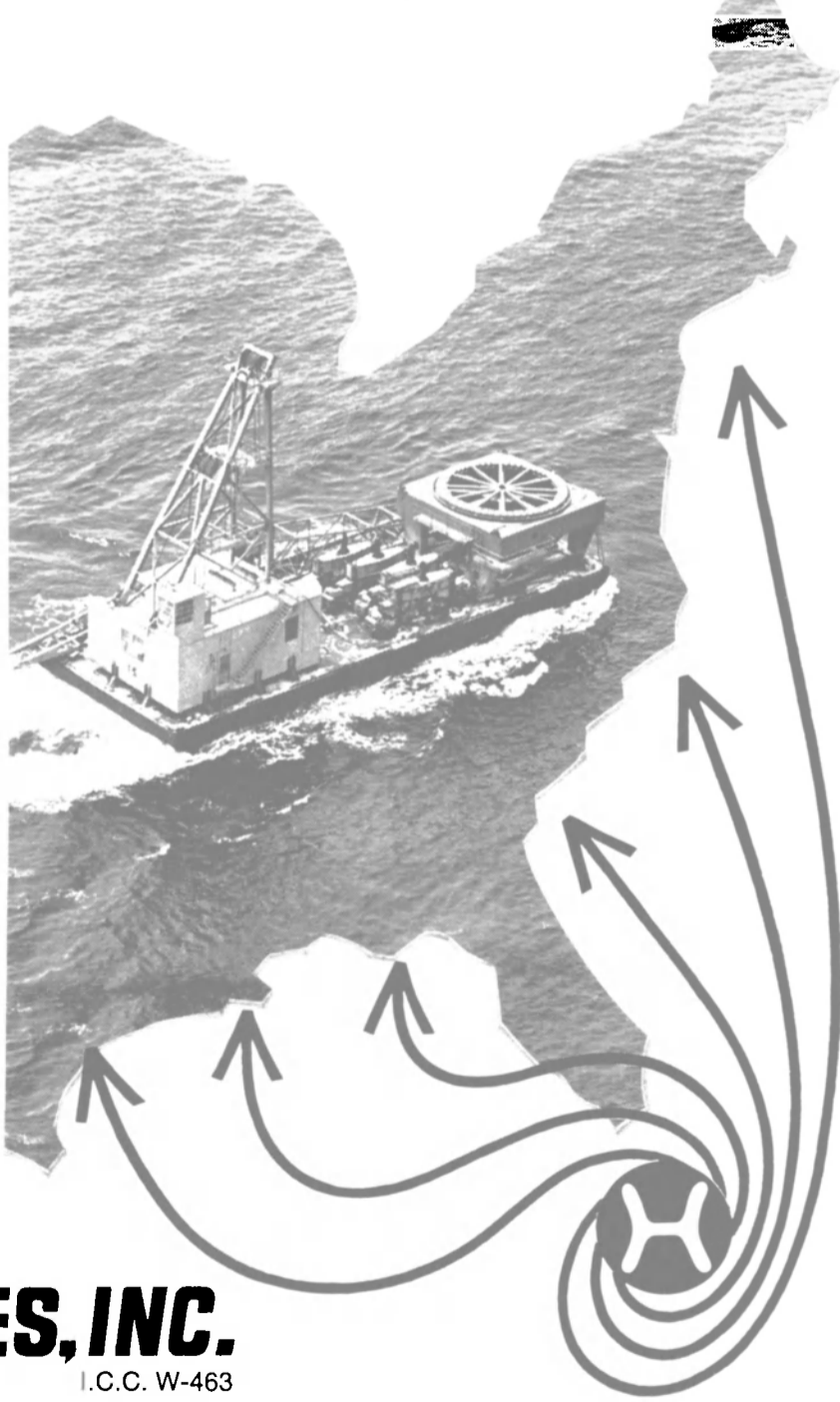
The technology for the systems originated with Peabody Holmes, a United Kingdom company and part of Peabody International Corporation of Stamford, Conn.

The phased fitting of inert gas systems to tankers is a recommendation of the Inter-Governmental Maritime Consultative Organization, and is increasingly becoming a requirement of the various national and port authorities.

Peabody Holmes has over 15 years' experience in marine inerting systems, and provides for new construction and retrofits throughout the world. Over 300 systems have been engineered and supplied in Europe and Japan.

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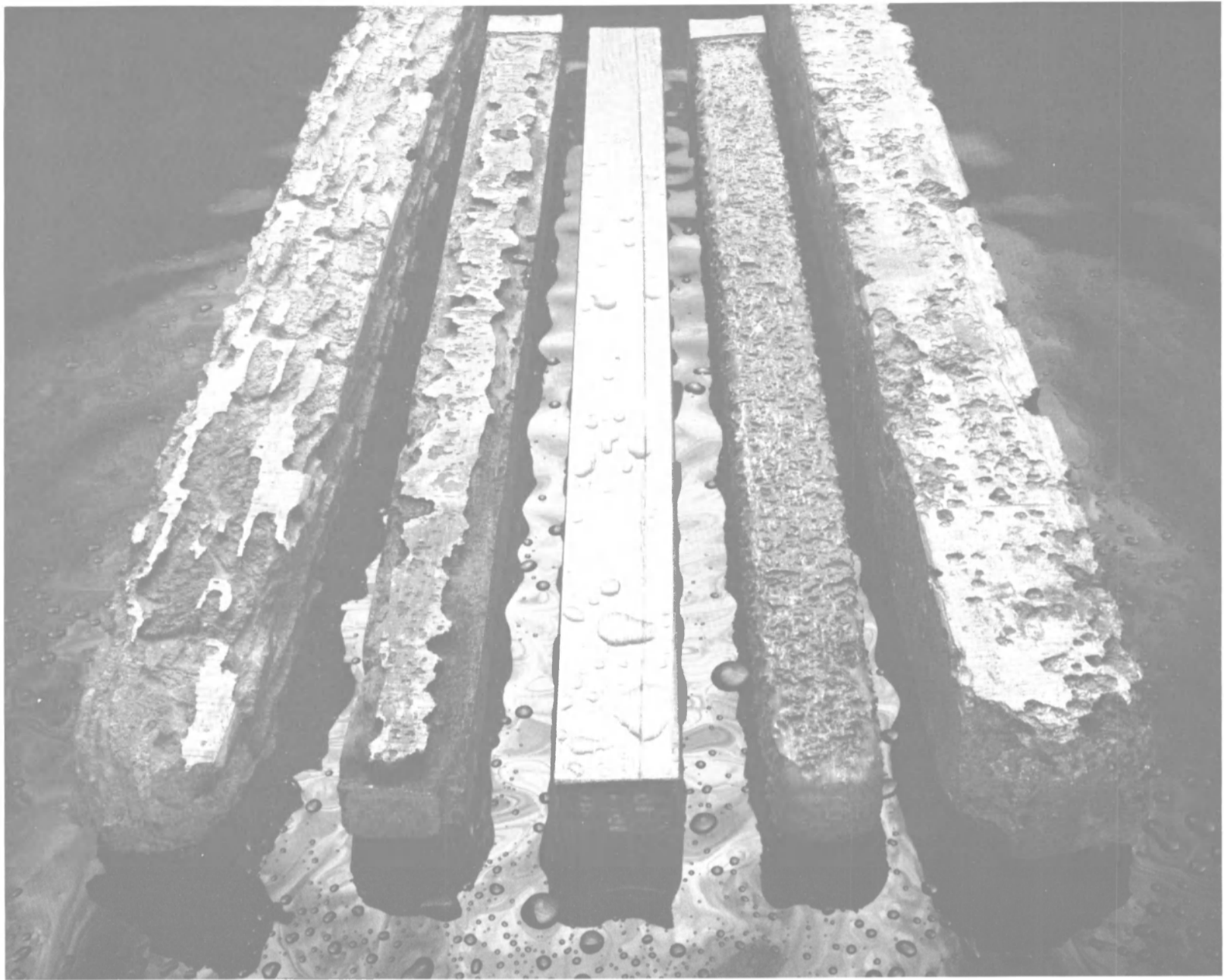
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**Melvin And Rosenow Elected  
VPs At Adams & Porter**

The Board of Directors of Adams & Porter Incorporated, international marine insurance brokers, has announced the election of **Edward T. Melvin** and **Gerd W. Rosenow** to the office of vice president.

Mr. **Melvin** has been with Adams & Porter since 1970 and specializes in property and casualty and group insurances. He holds a law degree from New York Law School and is a member of the New York State Bar Association.

Mr. **Rosenow** joined the firm in 1972 as



**Gerd W. Rosenow**

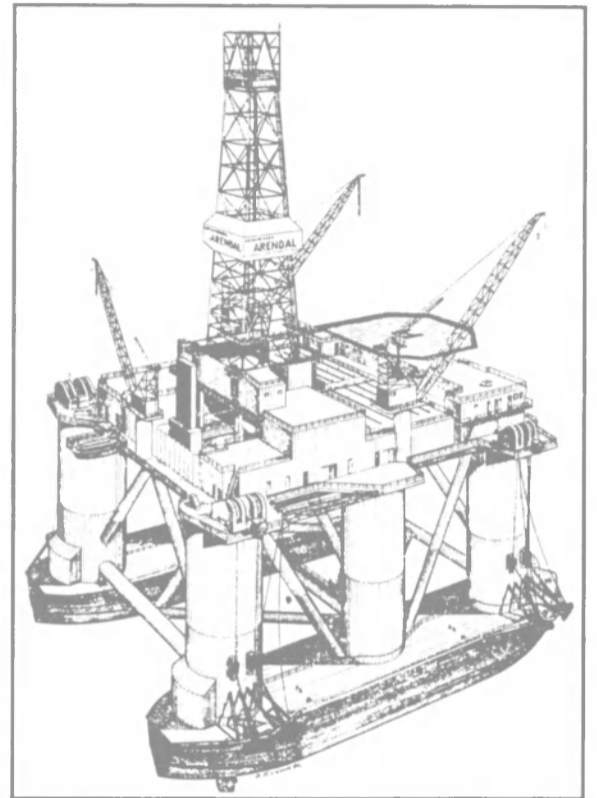
**Edward T. Melvin**

manager of the Cargo Claims Department. In 1975 he was promoted to assistant vice president in that department.

**Gotaverken Signs Contract  
For \$85-Million Semisubmersible**

Gotaverken Arendal AB of Gothenburg, Sweden, recently signed a contract with Wilh. Wilhelmsen of Oslo to build a semisubmersible drilling rig at a cost of about \$85 million. Delivery is scheduled for 1982.

Following a decision by the Norwegian Parliament to start oil drilling north of the 62nd parallel, the rig will be operated in that area. Wilh. Wilhelmsen has a five-year time charter with Norsk Hydro.



Semisubmersible drilling rig that Gotaverken Arendal yard will build for Wilh. Wilhelmsen is based on the Friede and Goldman Pacesetter Class, further developed for severe North Sea conditions.

The rig is based on Friede and Goldman's Pacesetter design, further developed by Gotaverken Arendal for severe North Sea conditions. All structural components and exposed equipment are designed to operate at an ambient air temperature of minus 20 C (minus 4 F).

The semisubmersible can operate in water up to 450 meters (1,476.4 feet) deep, and has a drilling capability of 7,600 meters (24,935 feet).



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**CERTIFICATE OF APPRECIATION** for Section chairman was presented at recent 30th Annual Dinner-Dance of the Philadelphia Section of The Society of Naval Architects and Marine Engineers. The annual affair ending the Section's 1979-80 season was attended by some 400 members and guests. **Robert G. Mende** (left), secretary and executive director of SNAME, presented the certificate to **Anthony C. Brown**, who accepted it on behalf of Section chairman **K. Gyswyt**, who was unable to attend.



**DESTROYER DELIVERIES CONTINUE**—The 29th ship in the series of jet-powered, multi-mission Spruance-class destroyers, designed and built by Ingalls Shipbuilding Division of Litton Industries, officially entered the U.S. Navy fleet in recent commissioning ceremonies at Pascagoula, Miss. The Fife (DD-991) joins 13 other ships of the DD-963 class operating with the Pacific Fleet, and will be homeported in San Diego. A total of 15 more of the 7,800-ton, 563-foot ships are now operating with the Atlantic Fleet. Comdr. **John Y. Schrader** accepted command of the Fife; **Thomas A. Brown**, Deputy Assistant Secretary of the Navy for Strategic Programs, was the principal speaker at the commissioning ceremonies.

#### **Bulk Carrier Delivered By Naikai Zosen Setoda Yard**

The 26,977-dwt bulk carrier Seagrind Ace, constructed at the Setoda Shipyard of Naikai Zosen, an affiliate of Hitachi Zosen, was delivered recently to Seagrind Company, Ltd.

The new vessel is a diesel-driven, single-screw, single-decker type bulk carrier, with an aft engine room, forecabin, and poop. With cargo space divided into five holds, the ship can carry not only bulk cargoes but also

lumber, rolled steel coils, ore, and general cargoes. Lumber can also be carried on deck. The No. 5 hold is equipped with a 25-ton Thompson derrick, and the other four holds are each provided with a 25-ton deck crane for efficient cargo handling. Hatch covers are of watertight box construction, designed to permit easy and quick operation by a single deck-crane-driven wire rope.

The Seagrind Ace has an overall length of 172.50 meters, beam of 23.10 meters, depth of 14.75 meters, and full-load draft of 10.62 meters (566 by 75.8 by 48.4 by 34.8 feet).

Main propulsion is provided by a single Hitachi/B&W diesel engine, model 8L55GFC. Maximum continuous output is 10,700 bhp



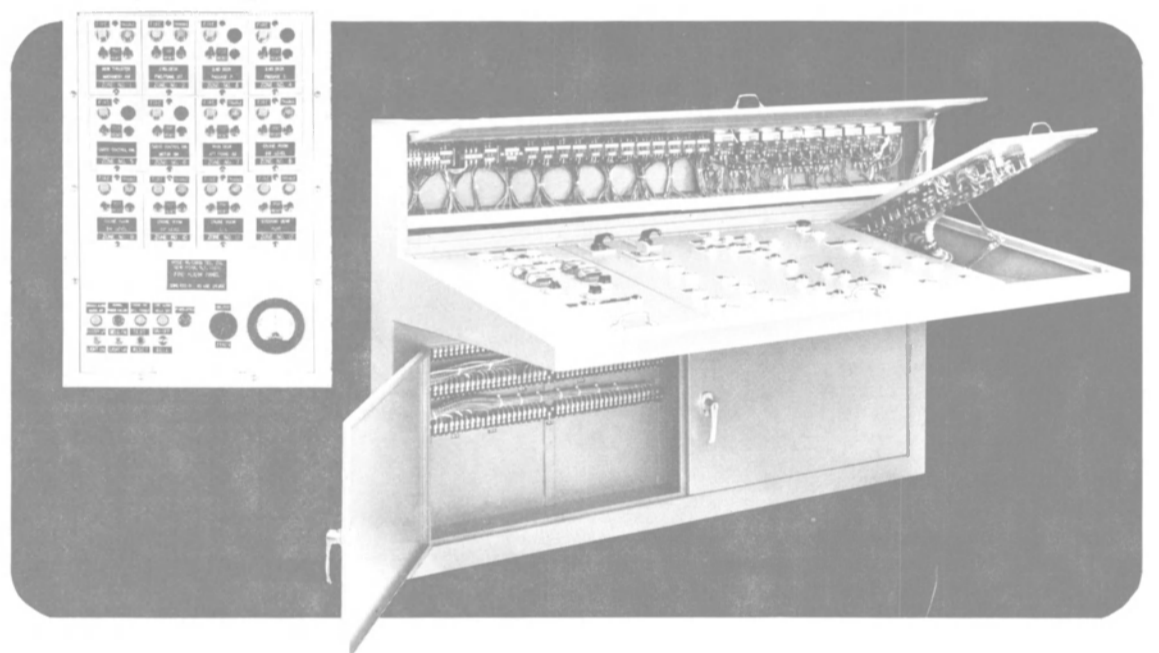
Bulk carrier Seagrind Ace has been delivered by Naikai Zosen's Setoda yard to Seagrind Company, Ltd.

at 150 rpm, which gave a trial speed of 17.76 knots. Normal engine output is 9,750 bhp at 145 rpm providing a full-load service speed of 14.8 knots.

# HOSE McCANN

## SIGNAL AND ALARM PANELS

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Big splash, balloons, and streamers marked recent launching of bulk carrier *Pride of Texas* at Orange, Texas, yard of Levingston Shipbuilding Company.

## Levingston Launches U.S.-Flag Bulk Carrier 'Pride Of Texas'

Levingston Shipbuilding Company recently launched the motor vessel *Pride of Texas* at its Orange, Texas, shipyard. The 36,000-dwt dry bulk carrier was christened by **Mrs. Valerie Nemirow**, wife of Assistant Secretary of Commerce for Maritime Affairs **Samuel B. Nemirow**, in the presence of some 750 guests and about 2,000 shipyard workers and their families.

The ship has an overall length of 611 feet 10 inches, beam of 93 feet 2 inches, and depth of 50 feet 2½ inches (186.5 by 28.4 by 15.3 meters). She has a gross tonnage of 23,500 and capacity of 1,589,570 cubic feet (45,005 cubic meters).

The *Pride of Texas* is designed to carry grain and other dry bulk cargoes in the foreign trade of the United States for the Levingston Falcon Shipping Company, a partnership of Levingston Shipbuilding and the Falcon Group of Houston. She is powered by two Transamerica Delaval Enterprise DMRV-12-4, medium-speed diesel engines having a total maximum continuous rating of 14,824 bhp at 450 rpm. Her maximum speed will be 17 knots, but full-load service speed is 15.7 knots. The vessel has been built to meet all the requirements of the American Bureau of Shipping and the U.S. Coast Guard for unlimited ocean service. She will be manned by a crew of 26.

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Main diesel engines (2) and reduction gears, Transamerica Delaval, Inc.
625-kw generators, KATO, driven by Detroit Diesel 12V-149 T engines.
Anchors, Baldt.
Lifeboats, Marine Safety.
Sewage treatment system, Marland.
Deck machinery, Lake Shore.
Steering gear, Sperry.
Cargo hatches, MacGregor Comerain.
Air-conditioning, Carrier.
Paint, International.
Steel, United States Steel, Armco.

ships for the same owners, the *Pride of Texas* is the first dry bulk carrier to be built in the U.S. that is specifically designed for service in U.S. foreign trade, in competition with ships of foreign owners. She is also the first vessel to be built in the U.S. to a Japanese design and with the assistance of Japanese shipbuilding experts. The design is the highly successful "Future-32" standard bulk carrier developed by Ishikawajima-Harima Heavy Industries Company, Ltd. (IHI) of Tokyo. For the past 18 months shipyard engineers from IHI have been assisting Levingston personnel in an unprecedented "Technology Transfer" that is designed to help improve U.S. shipbuilding productivity.

The principal speaker at the christening ceremony was **Samuel B. Nemirow**, Assistant Secretary of Commerce for Maritime Affairs. Other speakers were **Edward E. Paden**, president of Levingston Shipbuilding; **C.C. Wei**,

president of Falcon Carriers; and **Yotaro Kanoh**, director of the International Division of IHI.

In the platform party for the christening ceremony were: **Lester Rosenblatt**, president of The Society of Naval Architects and Marine Engineers, and **Mrs. Rosenblatt**; **Father Patrick J. O'Shaughnessy** of St. Thomas Catholic Church in Hattiesburg, Miss., who gave the invocation; and other officers of Levingston Shipbuilding Company and its parent Ashland Oil, and from the Falcon Group.

Levingston has built more than 700 vessels of all types since it started steel ship construction in 1933. Of this total, 164 were for the offshore industry—including nine drillships, seven semisubmersibles, nine jackups, and 139 barges and tenders of various types. The company has also built 167 vessels for the U.S. Government including four frigates, the first surface-effect ship, and 162 tugs and coastal vessels. For the commercial marine industry Levingston has built a total of 372 vessels, mostly barges of various types and sizes but also tankers, roll-on/roll-off ships, and ferries.

## Hitachi Awarded \$13-Million Contract For Diesel Conversion

Hitachi Zosen of Japan recently received an order from Compania Espanola de Petroleos, S.A. (CEPSA) to change the main engine of the 173,266-dwt tanker *Valencia* from steam turbine to diesel. This is Hitachi's first order for main engine conversion work for a supertanker. The value of the contract is approximately 2,900 million yen (about \$13 million).

CEPSA decided to replace the ship's 32,000-shp steam turbine plant with two fuel-efficient, medium-speed diesel engines. The engine selected is a type 12V52/55A Hitachi/Sulzer-M.A.N. diesel. Two engines have a combined output of 25,320 bhp, giving the ship a service speed of 14.3 knots. Fuel consumption is calculated at 86.5 tons per day, about 30 percent less than the steam plant used.

The conversion will be done at Hitachi's Osaka (Sakai) Shipyard, with completion scheduled for May 1981.

## Shipbuilding Technology Transfer Discussed By New York SNAME



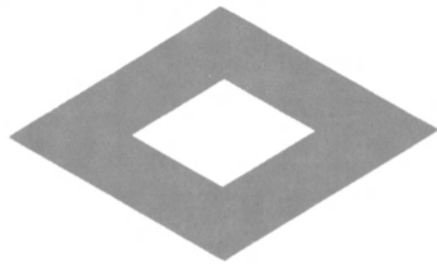
Officers and authors at recent meeting of SNAME New York Metropolitan Section (L to R): **Eric E. Lithen**, Section vice chairman and chairman-elect for 80-81 meeting year; **Yukinori Mikami**, IHI Marine Technology, Inc., author; **Walter M. Maclean**, Section chairman; **Timothy J.V. Colton**, Levingston Shipbuilding Company, author; **Naresh Maniar**, Papers Committee chairman.

Levingston Shipbuilding Company, Orange, Texas, and IHI Marine Technology, Inc., a subsidiary of Ishikawajima-Harima Heavy Industries Company, Ltd. (IHI) of Japan are working together to introduce a number of Japanese shipbuilding techniques at the Levingston yard. This work is being performed under a research and development contract from the U.S. Maritime Administration, the cost of which is being shared 50-50 between MarAd and Levingston. The program is part of the National Shipbuilding Research Program managed by MarAd's Office of Advanced Ship Development.

The two authors—**Timothy Colton** of Levingston and **Yukinori Mikami** of IMT—explained the origins and background of the program, how it is organized, and how the results are being shared with other U.S. shipyards. They outlined the distinctive features of the Japanese philosophy of shipbuilding management, and the principal characteristics of the technology being transferred. Finally, they described the principal findings of the program thus far, the applications that have been or are being implemented, the results achieved, and their expectations for the future.

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



Delivered recently by Delaware Marine & Manufacturing yard was the mini-tanker **Dagwood**. Tiny Tankers, Inc. of Seattle will operate the vessel in Puget Sound.

## Mini-Tanker 'Dagwood' Delivered By Delaware Marine Shipyard

The 10,000-gallon-capacity mini-tanker **Dagwood** was delivered recently to Tiny Tankers, Inc. of Seattle by Delaware Marine & Manufacturing Company. Delivery was made at the builder's

yard in Milford, Del., after which Tiny Tankers' president **Dick Timmerman** piloted the boat to Galveston, Texas, from where it was delivered overland to its permanent home port of Seattle. The

waterborne part of the journey took about three weeks.

The **Dagwood** has an overall length of 42 feet 6 inches, a beam of 15 feet, and a loaded draft of about 5 feet. She is certificated by the U.S. Coast Guard for carriage of Grade E petroleum products.

The welded steel vessel is powered by a Detroit Diesel model 6-71 engine that delivers 174 bhp to a 39-inch-diameter, four-blade

propeller through a 3:1 reduction gear and 3-inch-diameter stainless-steel propeller shaft. The cargo pump is a 300-gpm Viking, hydraulically driven.

Tiny Tankers is using the vessel in Puget Sound to service ships with fuel and lube oil.

Delaware Marine & Manufacturing also designs and builds tugs, barges, crewboats, and fishing vessels.

## \$14-Million Navy Contract Awarded To Detyens Yard

Detyens Shipyard, Inc., Mt. Pleasant, S.C., has been awarded a \$13,988,000 fixed-price contract for extensive modifications and overhaul work on the USNS **Truckee**, a Navy oiler. The Navy Military Sealift Command is the contracting activity. (N00033-70-C-0019)

## Brochure Available On Columbia Offshore Technical Services Ltd.

Columbia Offshore Technical Services Ltd., a Division of Columbia Surveyors (Marine) Ltd. of Vancouver, Canada, has avail-

able a new brochure describing the company's diverse marine-oriented services. Columbia Offshore was established in July 1979 to further expand the parent company's interests in marine fields.

Among the consulting services provided by the firm are construction and design management, hull surveys, and salvage operations. An experienced staff is available for consultation on marine operations feasibility, vessel requirements, pollution control, vessel routing economics, environmental studies, navigation procedures, and more.

For a free copy of the brochure write to Capt. **C.M.C. Meiklejohn**, Columbia Offshore Technical Services Ltd., 1600 West 6th Avenue, Vancouver, British Columbia, Canada V6J 1R3.

*This announcement appears as a matter of record only.*

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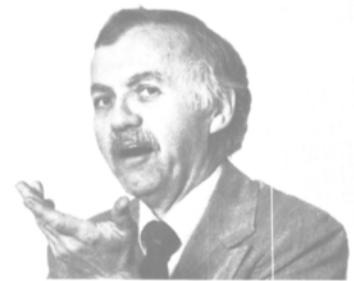
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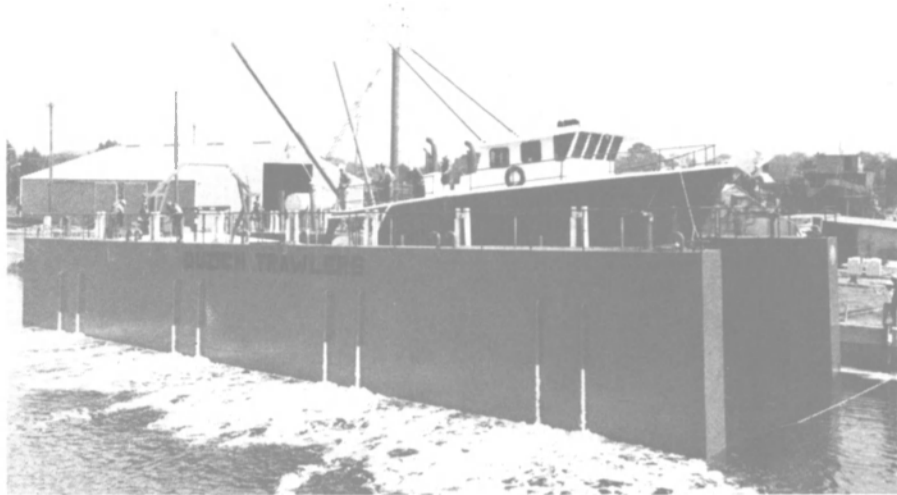
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Floating drydock Capt. Tony has been delivered by St. Augustine Trawlers, Inc. to Duzich Trawlers of Newport News, Va.

## Floating Drydock Delivered By St. Augustine Trawlers

Another innovative first for St. Augustine Trawlers, Inc., St. Augustine, Fla., the Capt. Tony, a 100-foot by 40-foot floating drydock, was completed recently for

Duzich Trawlers of Newport News, Va.

Duzich Trawlers operates 34 St. Augustine trawler vessels in steel and wood. Marion Duzich recently

stated, "I realized the need for this type drydock for my operation if for nothing other than normal maintenance. It was designed for and will completely take care of my needs both for maintenance and repairs."

St. Augustine Trawlers is one of the largest commercial boat manufacturers in the world. It expanded from one type boat, wood, to

boats of steel and fiberglass as well in only eight years of operation.

"With our acreage, building and employment expansion, we decided to live up to our name of diversified manufacturer and add other lines and designs to our operation. This is just one of the new things we have ongoing at this time and have accepted orders for several additional drydocks," said Jerry Thompson, general manager.

## D.M. Surgenor Named VP/General Manager Of Nickum & Spaulding

Donald M. Surgenor has been appointed vice president and general manager of Nickum & Spaulding Associates, Seattle, with the retirement of Harry Hofmann, according to Philip F. Spaulding, president. The appointment is step one in an internal reorganization plan that will streamline operations so that the firm may address its expertise to increasingly complex marketing opportunities in both the government and private sectors.

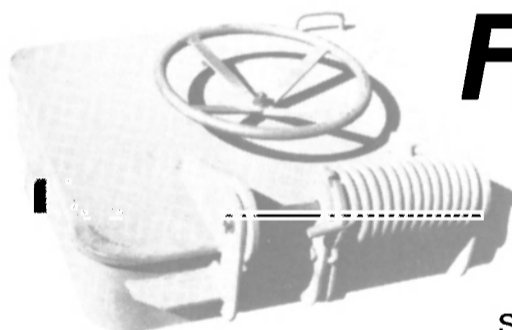
Mr. Surgenor brings to Nickum & Spaulding 20 years of experience in conceptualization of vessel characteristics, vessel design, repair maintenance, construction, and shipyard operations and management. He has worked closely with major engineering firms in siting and conceptual design of



Donald M. Surgenor

marine facilities criteria for vessel construction, maintenance, moorage and upland facilities, shipyard arrangements and drydocks; his experience includes management, engineering and design for The Boeing Company, Bethlehem Steel, Todd Shipyards, Campbell Industries, and Mullen Construction, as well as independent consulting.

Mr. Hofmann will provide consulting services to the firm on a continuing basis.

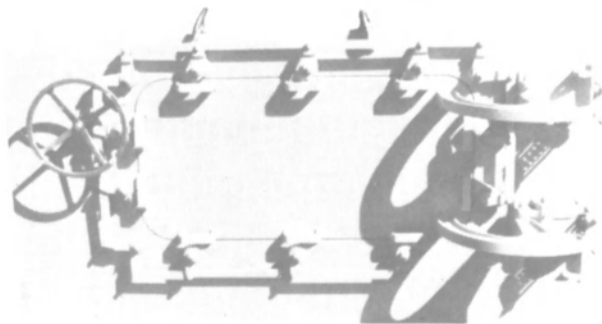
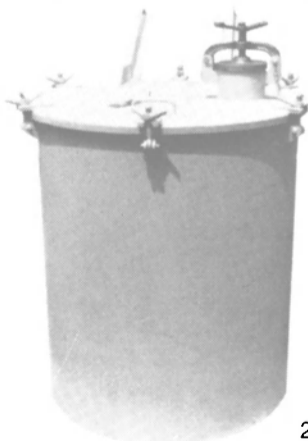
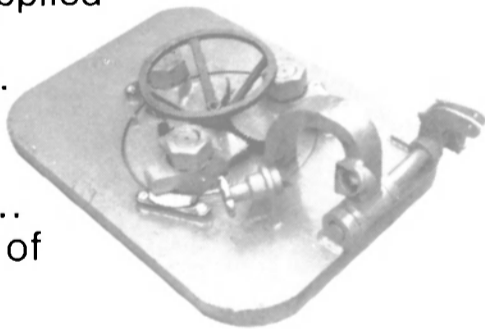


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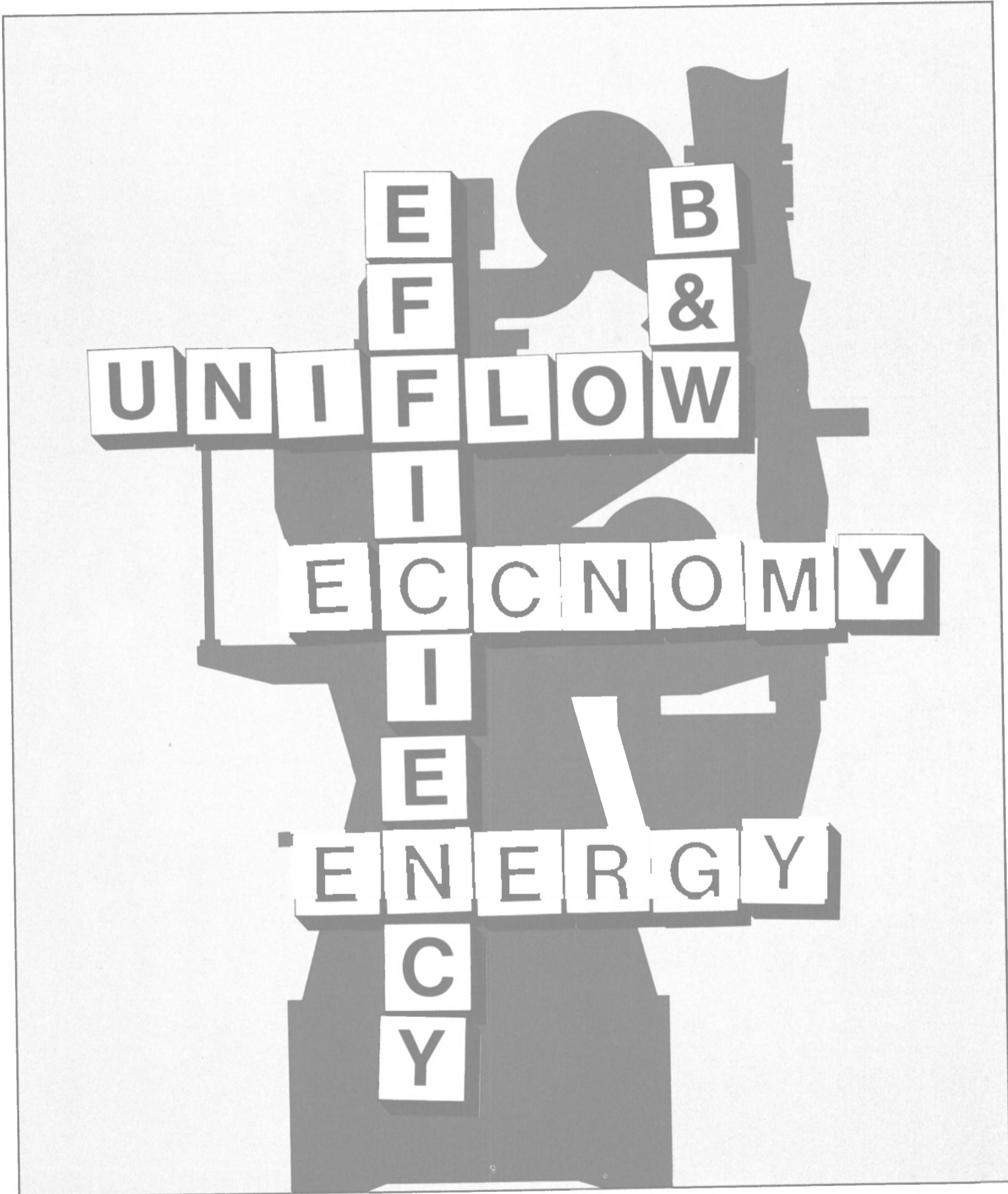
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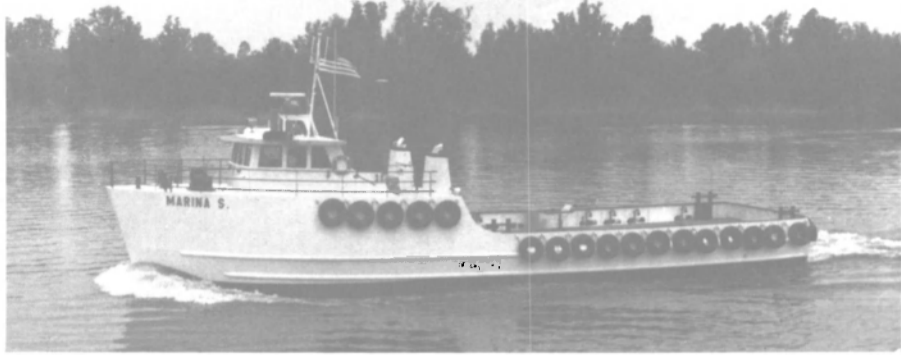
# Solving the puzzle



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The passenger/supply vessel Marina S. was delivered by Mississippi Marine of Greenville. She is second built by that yard for Dinko's Marine Service.

## Passenger/Supply Vessel Delivered By Mississippi Marine

The Marina S., a passenger/supply vessel built for Dinko's Marine Service of Aransas Pass, Texas, has been completed by Mississippi Marine Towboat Corporation of Greenville, Miss. The new vessel will be available for contract work in Gulf waters from Brownsville, Texas, to Key West, Fla.

Marina S. can accommodate 33 passengers plus a crew of four. She is 100 feet long, with a beam of 24 feet, depth of 11 feet 6

inches, and normal operating draft of 8 feet.

The craft is powered by twin Detroit Diesel 16V-71 engines with a total output of 910 bhp, coupled to Twin Disc gears with a reduction ratio of 5.17:1.

A pair of Lima 50-kw generators driven by Detroit Diesel model 4-71 engines operating at 1,200 rpm provide electrical power. The vessel is fitted with a dual station Orbitrol steering system, Decca RM914C radar, Sperry 8T

autopilot, and a central water-cooled air-conditioning system.

Other equipment includes Raytheon VHF-50A radio, Dubose SSB radio, T1-9900 Loran C from Texas Instruments, a Furuno F-850 depth finder, and a Kahlenberg D-2 air horn.

Fuel capacity is 18,494 gallons, potable water capacity 1,705 gallons, cargo water capacity 37,644 gallons, lube oil capacity 150 gallons, and deck cargo capacity of approximately 35 tons.

## Ray Tsuneyoshi Named Vice President For Pacific Towboat

Tom Opatz, president of Pacific Towboat & Salvage, Seattle, announced recently that Ray Tsuneyoshi has been promoted to the new position of vice president and manager of marketing and planning for Pacific Towboat & Salvage. According to Mr. Opatz, "The appointment follows the continuous growth in Dillingham Maritime and, in particular, Pacific Towboat & Salvage."

Mr. Tsuneyoshi will be responsible for marketing and planning for the entire division. In addition, he will continue to manage the THUMS contract for the duration of the current contract term. He will also assume the responsibility of assistant division manager and will handle addi-

Mississippi Marine, based on Lake Ferguson at Greenville, offers towboat design and construction from initial design through completion. The yard also builds barges, towboats, and offshore vessels, offering several stock designs that can be custom-outfitted where necessary to fit individual companies' needs.

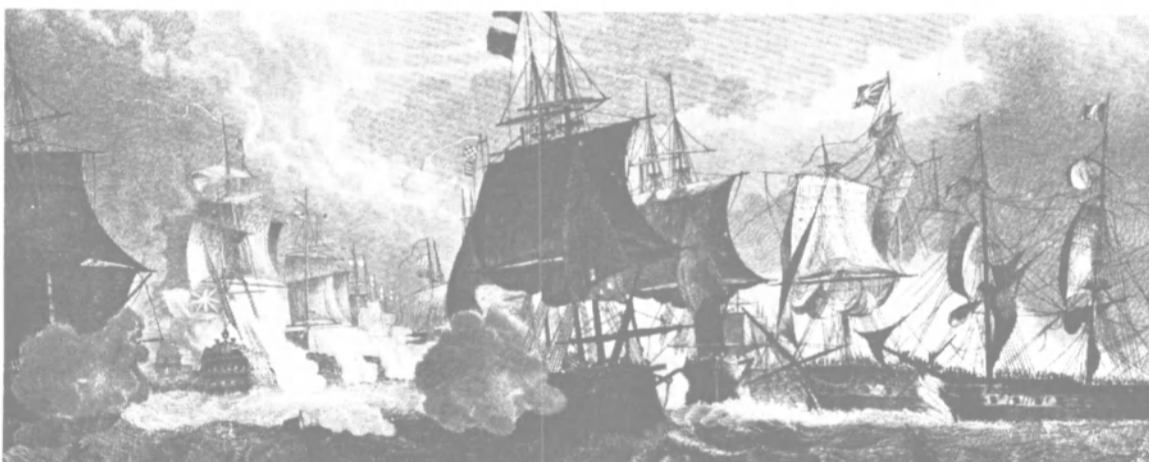
The Marina S. was designed by New Orleans naval architect Coe M. Best Jr.

tional special assignments to be made in the future. Prior to his promotion, Mr. Tsuneyoshi served as manager of sales and harbor operations.

## Huthnance Drilling Asks Title XI Aid For \$24.4-Million Drill Barge

Huthnance Drilling Company Charger I Ltd., Houston, has applied to the Maritime Administration for a Title XI guarantee to aid in financing the construction of a cantilever drilling barge. Baker Marine Corporation, San Patricio County, Texas, is the proposed builder. Delivery is scheduled for June 1981.

If approved, Title XI financing would cover \$18,200,000, approximately 75 percent of the total cost of \$24,384,223.



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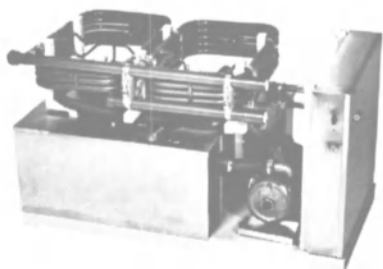
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With only 1400 hours on her three 16-645-E5 EMD engines, the Dennis Hendrix was switched over to Shell's MVI Caprinus® R Oil. That was in the Summer of 1977. When launched, on July 16, 1977, the boat started working the Lower Mississippi pushing tows of up to 40 barges of 1500 tons each. On August 19, 1979, she was finally ready for her first scheduled overhaul. Total engine hours averaged 17,885. Individual engine hours were; port — 18,124, center — 17,421 and starboard — 18,110. Total elapsed time from the date of launch; 18,312 hours. And work on the Lower Mississippi usually means long runs with few interruptions. It was estimated that the load factor was averaging about 80% during these hours. In over two years, the engines averaged only 2.3% downtime.

The Dennis Hendrix was the first American Commercial Barge Line vessel to use Caprinus R. So, when the overhaul was scheduled, Shell went along to see the results. As is usual with Caprinus R oil, the engines were very clean, with relatively low deposit levels. Wear was low for the time and type of service. Used oil analysis showed that the premium MVI Caprinus R Oil had equilibrated at a TBN-E of 3.0, which means corrosion protection was adequate even though the engines were operated in 'no drain' service. Carbon deposits were as expected with an MVI oil, soft and flaky.

All three engines appeared about equal in appearance, and the port engine was selected for

detailed inspection. Top rings all rated 2A, #2 rings rated 2 and 2A and #3 compression rings all rated 1. These values are well within the normal range for engines at overhaul. Liner wear was normal for the hours. All three engines had done their job well. The oil had done its job well. MVI Caprinus R oil had helped the Dennis Hendrix stay on the job with minimum downtime and maximum reliability.

MVI oils have been proven in almost half a century of operation in medium-speed diesels. Shell's MVI Caprinus R Oil maintains that reputation of MVI oil and uses a modern additive package to meet the latest engine service requirements.

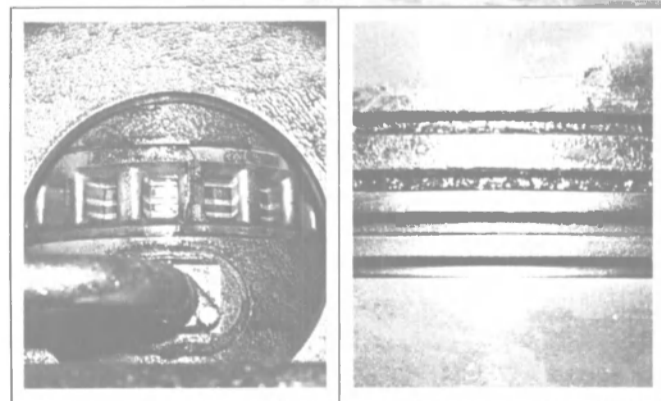
### Shell doubling MVI capacity

Since Shell is doubling its MVI lube oil capacity, there is no need to switch to HVI oils, as suggested by some MVI-short suppliers. HVI oils form harder, denser carbon deposits that can block port areas and crowd rings in their grooves. With Caprinus R Oil, you can usually operate without changing oil in most engine types with good engine protection. A used oil analysis program can be the means to longer life and excellent engine protection with Caprinus R Oil.

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The light carbon deposits in the airbox are typical of a premium MVI oil such as Caprinus R. Soft deposits will clean up rapidly, and even after 17,000 hours, are not blocking air flow.

Pistons had no scuffing or scoring. Ring groove fill and ring wear were normal for the time and type of engine service. Rings were free.

## GE Wins \$11-Million Spanish Ship Control System Contract

The General Electric Company, Simulation and Control Systems Department, Daytona Beach, Fla., has been awarded an \$11-million contract to furnish central control systems for four new Spanish Navy ships. The equipment pro-

vided under the contract will control the shipboard propulsion, electrical, auxiliary and damage control systems.

The contract was awarded by Empresa Nacional Bazan De Construcciones Navales Militaries of El Ferrol, Spain. In a major effort to update its Naval forces, the Spanish Government has commissioned the El Ferrol Shipyard to build three guided missile frig-

ates (FFG) and one aircraft carrier.

The FFGs are similar to U.S. Navy FFGs which use General Electric Control Systems. The aircraft carrier, which is designed for vertical take-off and landing (VTOL) and short take-off and landing (STOL) aircraft, is the first ship of its type to use the GE Control Systems.

Commenting on the award, Dr.

Charles E. Cheeseman, manager of General Electric's Digital Control Systems Business in Daytona Beach, said: "This award is the result of many months of work by our GE team with the Spanish Government and representatives of the El Ferrol Shipyard. Our experience and good program performance with similar systems for the U.S. Navy put us in a good position to win this contract. We will be working closely with the shipyard and will have people on site in Spain as delivery of the hardware starts in 1982."

The central control systems will be produced at the Simulation and Control Systems Department in Daytona Beach. The department broke ground on January 18, 1980, for a new 65,000-square-foot production facility. Current employment is now about 1,300. This contract has been anticipated by the department's current expansion plans and will not require additional employees to complete.

## R.P. Magrath Joins Adams & Porter As Vice President



Richard P. Magrath

Richard P. Magrath has joined Adams & Porter Incorporated, the international insurance brokerage company with headquarters in New York, as a vice president in the Property and Casualty Department. He formerly was president and chief executive officer of Cornwall & Stevens Company, Inc.

## New Norfolk Office Opened By American Marine Services

American Marine Services, Inc. has announced the opening of a new office in Norfolk, Va., Monticello Arcade, 208 East Plume Street, Suite 217. The office will be managed by James P. McLaughlin, who has been with the company's Philadelphia office since January 1979. The announcement was made by Kjell G. Hansen, president.

American Marine also has offices in Jersey City, Brooklyn, Camden, Baltimore, and Port Newark. The firm provides experts in practically every field, from cargo, hull and machinery, oil spills, general averages, LASH barges, container inspection and certification, and employs 26 surveyors.

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“Our design experience, knowledge of materials and accessories, and our construction flexibility let us build a quality barge, to customer specs, delivered on-time, all at a competitive price. This combination has kept our customers coming back.”

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Formerly named Hillman Barge & Construction Company.

Brownsville, Pennsylvania 15417

Phone: (412) 785-6100

**Bruce McAllister Named Deputy To Assistant Secretary Of Commerce For Maritime Affairs**

The appointment of Bruce A. McAllister as Deputy Assistant Secretary for Maritime Affairs has been announced by Samuel B. Nemirow, Assistant Secretary of Commerce for Maritime Af-

fairs and head of the Maritime Administration.

Mr. McAllister, formerly president and chief executive officer of McAllister Brothers, Inc., marine towing and transportation company headquartered in New York, fills the vacancy created when Mr. Nemirow moved up to succeed Robert J. Blackwell about a year ago. He also will serve on the three-member Maritime Sub-

side Board, which Mr. Nemirow chairs.

Elected president of McAllister Brothers in June 1976, Mr. McAllister previously had served the company as vice president, general counsel, and as a member of the board of directors. From 1964 until 1974 he was an associate and partner in the New York law firm of Healy and Baillie, where he handled major litigation and

negotiation with a special focus on maritime commercial law.



Bruce A. McAllister

While with McAllister Brothers, he also served on the board of directors of the American Mutual Steamship Protection and Indemnity Association, as vice chairman of the New York area Marine Transportation Employers' Association, and as a director of the Maritime Association of the Port of New York.

McAllister Brothers, a 116-year-old company, has operations in New York, Philadelphia, Norfolk, Baltimore, the Gulf of Mexico, Puerto Rico, Panama, the Netherlands Antilles, and Saudi Arabia. The company operates more than 60 tugs and 40 barges in harbor docking and undocking operations, container feeder transportation, bulk liquid and dry cargo movements, and supply and crew vessels for offshore drilling.

**Brochure Available On 'Sea Fence' Oil Containment Boom**

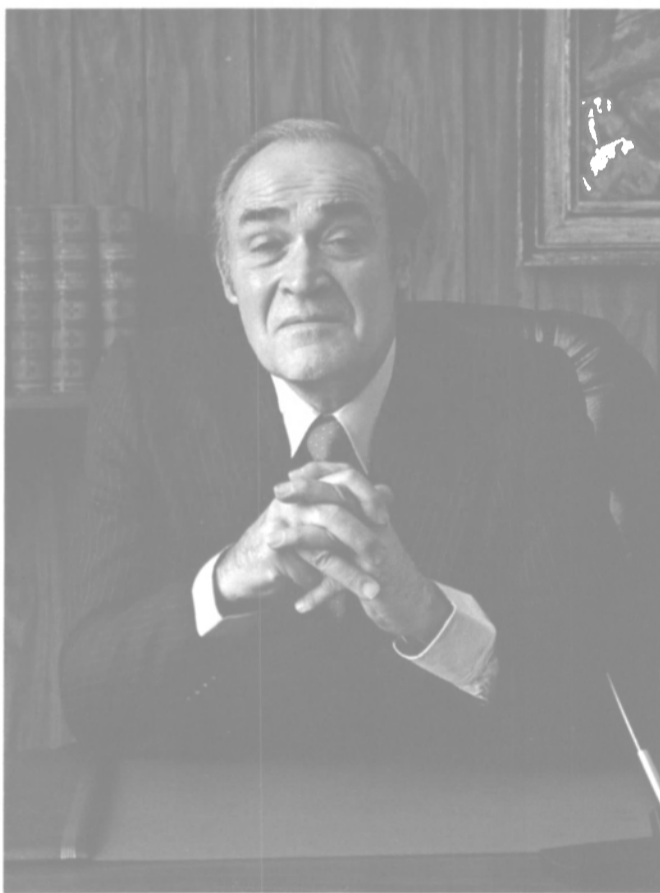
A full-color brochure on the Sea Fence® oil containment boom, the newest environmental protection product developed by Seaward International, Inc., is now available from the Falls Church, Va. company.

The brochure describes the construction of the Sea Fence and details specifications of the boom, which is available in both Inner Harbor and Outer Harbor sizes. Floats on the boom are cut from blocks of flexible closed-cell foam. Bottom tension for this fence-type boom is provided by a belt of lightweight Kelvar filaments. A final coating of polyurethane elastomer covers the entire assembly, and is said to give the Sea Fence outstanding resistance to oil, water, sunlight, and abrasion.

Originally designed for the U.S. Navy, the Sea Fence boom combines the light weight and ease of handling required for quick response with the toughness of a permanent type boom. Rapid deployment is made easy by its ability to be stored on and deployed from a reel.

For a free copy of the brochure, write to Gus Ruetenik, Dept. MR, Seaward International, Inc., 6269 Leesburg Pike, Falls Church, Va. 22044.

# The new Sperry ASM reduces your need for bunkers and bankers.



If you're tired of all too frequent bunkering and borrowing, Sperry has a "savings plan" for you. The Adaptive Steering Module (ASM). When used with our Universal Gyropilot,™ the ASM can provide an annual fuel savings of more than 1.5% when operating in sea states 4 and 5. Based on present fuel costs, this could save more than \$50,000 annually. It also will save time and effort. The ASM eliminates manual readjustments by automatically adapting the gyropilot as sea conditions change. In fact, only two manual inputs are required: set the ASM for light or loaded condition and open or confined waters. Then, simply activate the mode switch on the gyropilot, and the module takes over. The ASM's dedicated microprocessor control system automatically adjusts weather and gain settings on a continual basis. These adjustments are based

on ship speed and type, yaw and rudder angle deviations, and load conditions. The ASM also executes controlled turns with virtually no overshoot. Audible and visual alarms warn the officer of loss of speed input, computer problems, and loss of power supply. Yet, with all these practical features, you don't have to be a banker to buy the ASM. For details, see your Marine Systems representative, or call or write: Sperry Division Headquarters, Marine Systems, Great Neck, New York 11020. (516) 574-3088.



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## The Adaptive Steering Module





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What's the measure of a well designed barge? Listen to the people who design them to meet the customer's needs. HBC Barge Designer, Carl Malek:

“Some of our competitors offer options. But we know that giving our customers the barge they want means more than offering a limited list of options.

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## This is what sets HBC Barge apart.”

electrical or mechanical power sources, pumping and piping systems. Even special welding for certain applications.

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**Go beyond options and get what you want.**

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# HBC Barge™

HBC Barge, Inc.

Formerly named Hillman Barge & Construction Company

Brownsville, Pennsylvania 15417

Phone: (412) 785-6100

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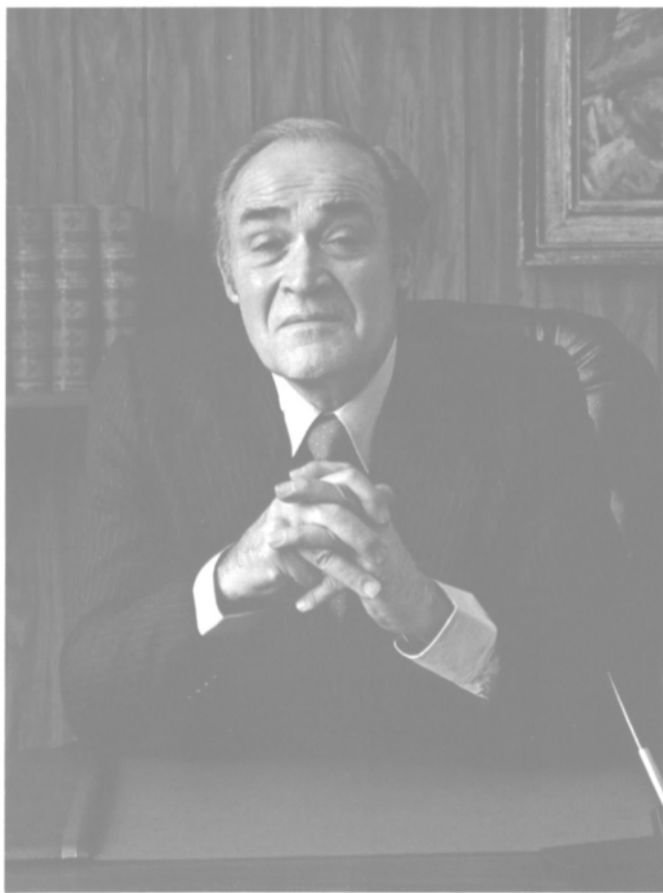
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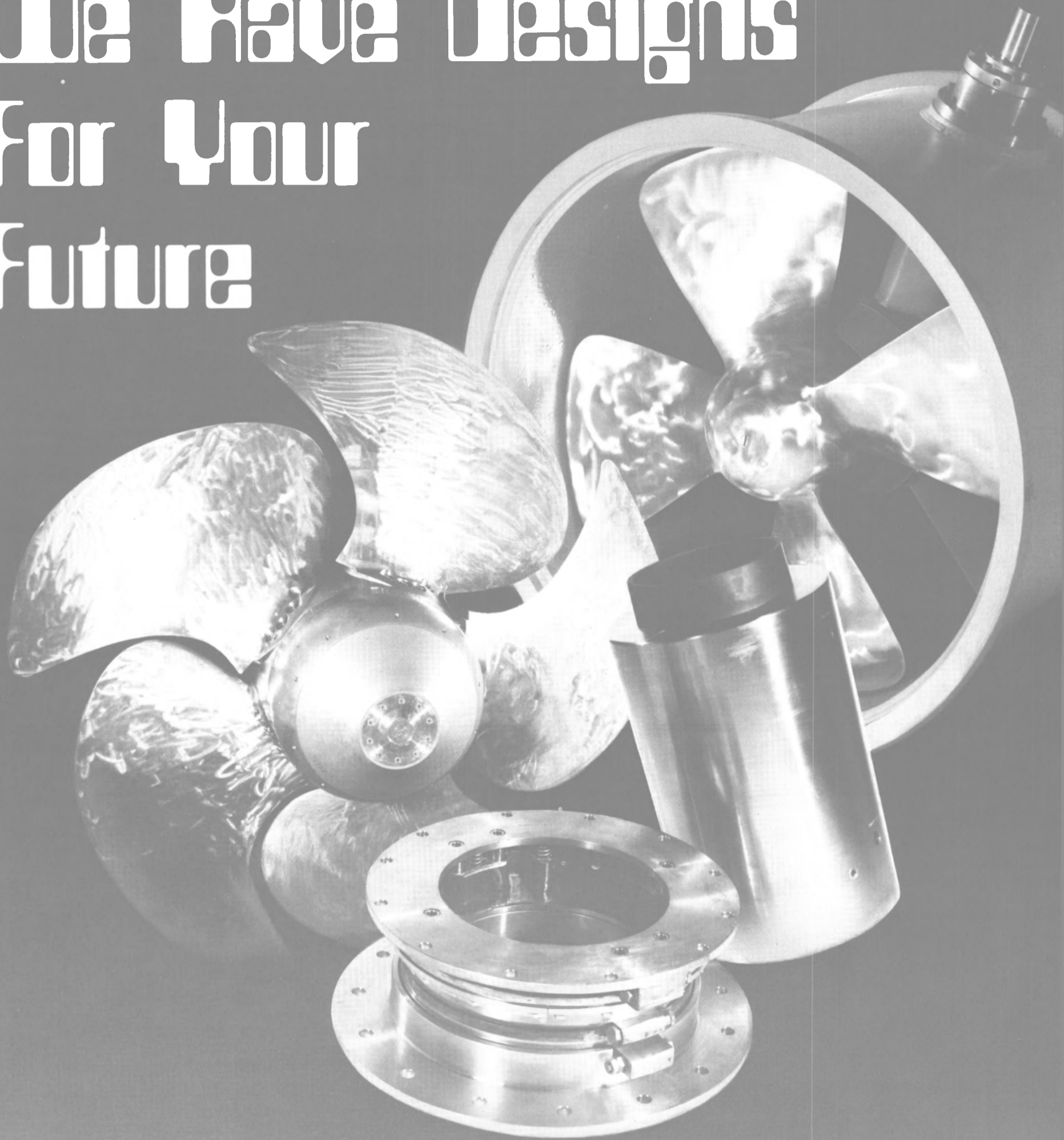
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# The Adaptive Steering Module

# We Have Designs For Your Future



**BIRD-JOHNSON  
COMPANY** MARINE  
DIVISION

Power transmission products to satisfy tomorrow's needs. KaMeWa Controllable Pitch Propellers for fuel economy. KaMeWa Controllable and Fixed Pitch Thrusters for maximum safety. Cedervall Stern Tube Seals for reliability. SKF Keyless Couplings for ease of installation. For details on how to put our technical expertise and experience to work for you, write or call Gary W. Dayton, 110 Norfolk Street, Walpole, MA 02081, (617) 668-9610.

## Davie Will Build Two Drill Rigs At Total Cost Of \$70 Million

Davie Shipbuilding Limited of Lauzon, Quebec, and Global Marine Drilling Company of Houston have signed a letter of intent for the construction of two offshore, jackup drilling platforms valued at \$35 million each for de-

livery in late 1981 and mid-82. These rigs are the eighth and ninth obtained by Davie since June 1978, when it signed a contract with Global for its first unit. Seven rigs have been contracted for with Global, one with Salen Offshore, and one with Petrobras of Brazil.

Two rigs were delivered to Global in 1979 and are at work in the Gulf of Mexico. Three rigs

will be delivered this year, including one for Salen and two for Global. Three rigs will also be delivered in 1981, two to Global and one to Petrobras, while the ninth rig will be completed in 1982 for Global. All of these rigs are of Marathon LeTourneau design.

All of these contracts were made possible through the support of the Canadian Government's Shipbuilding Assistance

Program, Export-Development Corporation financing, and the Export Assistance Program of the Societe de Developpement Industriel du Quebec.

With this latest contract, Davie now has a total orderbook of approximately \$240 million, including a 11,000-dwt tanker for its own fleet, a 400-foot by 100-foot arctic barge for Cominco, and miscellaneous orders for a wide range of steel products.

## Lamparelli Named To Bethlehem's New York Repair Sales Staff

Nicholas C. Lamparelli has been promoted to salesman in Bethlehem Steel Corporation's ship repair sales office in New York. The announcement was made by David H. Klinges, vice president in charge of shipbuilding. Mr. Lamparelli is advancing from senior ship superintendent at Bethlehem's shipyard in Hoboken, N.J.

Mr. Lamparelli was graduated from the Maine Maritime Academy in 1973 and joined Bethlehem as a member of that year's Loop course, which is a management training program for college graduates. In 1974 he was promoted to ship superintendent at the Hoboken yard and three years later became senior ship superintendent.

## New Pall Filter Assembly Is Bi-Directional—Literature Available

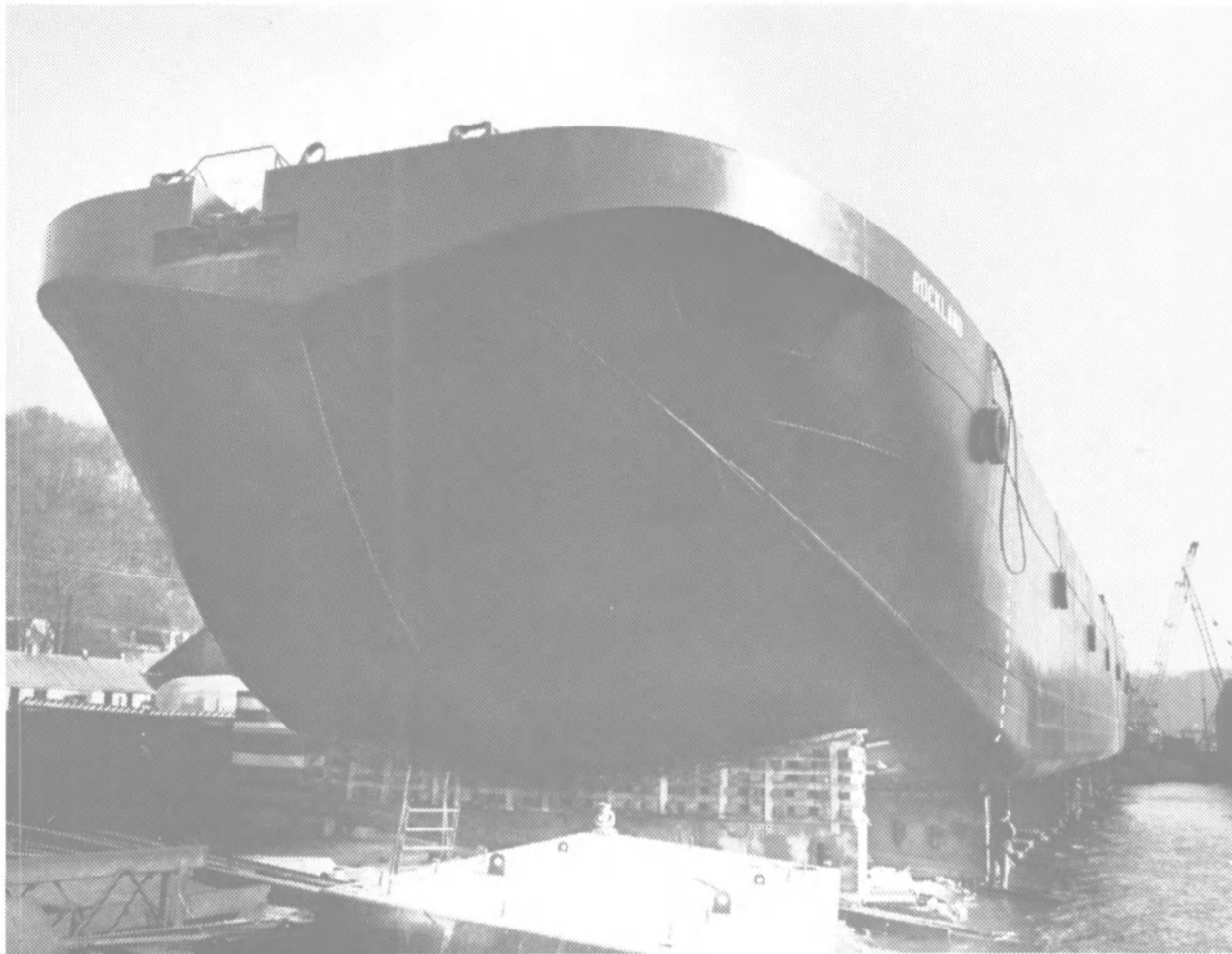
Pall Industrial Hydraulics Corporation has introduced the new Biflow filter assembly, a bi-directional filter in a single housing. It provides continuous filtration with either direction of flow through the filter. This new filter has been designed for use in open-loop hydraulic systems and in closed-loop, reversible hydrostatic transmissions to prevent the circulation of dirt.

The single compact housing contains four dual-operating, spring-loaded, coaxial poppet valves. Whatever the direction of flow through the filter assembly, flow through the element is always outside-to-inside, providing full filtered flow at system pressure.

A single Biflow filter thus can replace two filter assemblies, each with reverse flow valve, or a single filter assembly with four external check valves. The Biflow filter accepts Pall's Deltadyne® differential pressure measuring device that signals when the element needs to be changed.

The Biflow filter is available with a flow capacity of 50 gpm, with one-inch nominal ports and SAE four-bolt, split-flange fittings.

For further information write to Gerald Palmer, Dept. MR, Pall Corporation, Glen Cove, N.Y. 11542.



## When bigger barges are built, Wiley will build them.

A case in point: Pittston Marine's new tank barge, a floating oil field over 315 feet long was recently built by Wiley. Designed for manned coastwise service or unmanned ocean service, the "Rockland" carries up to 70,000 barrels of Grade A petroleum products and lower, with approximately 3.4 miles of heating coils for hot oil.

Deep well pumps are on the

deck, with drive engines in an all-weather enclosure. A recessed house for quarters and galley is heated and air-conditioned.

The "Rockland" is the latest in the Wiley built deck, tank, dump crane and coal barges; clamshell dredges; tugs and towboats; tankers, passenger and fishing vessels. With Wiley's broad marine capabilities, we can custom-build to your

specifications.

Wiley's facilities are located in Port Deposit, Maryland.

For more information, contact:

**WILEY** MFG

A Unit of AMCA International Corporation  
P.O. Box 97  
Port Deposit, Maryland 21904 U.S.A. (301) 378-4111  
Telex: 90-8232



# When it comes to protecting ships, the Vikings have a world of experience.

## FOSTER WHEELER AND MOSS ROSENBERG OF NORWAY OFFER TWO INERT GAS SYSTEMS.

Moss Rosenberg has 60 years of shipbuilding experience, plus over 150 inert gas plants aboard ships around the world. Foster Wheeler has 50 years of marine experience, including a leadership role in boiler design and manufacture.

Now our combined experience is working together to bring you inert gas protection. Because Foster Wheeler is manufacturing two proven, reliable systems in the U.S. under license from Moss:

1. A flue gas scrubber system that provides inert gas by utilizing boiler stack gas output.

2. A compact gas generator system for ships with unsuitable or insufficient stack gas output.

That means we're not locked into one system or the other. We can deliver the inert gas protection you need, in a wide range of output capacities—for retrofitting or for new vessels.

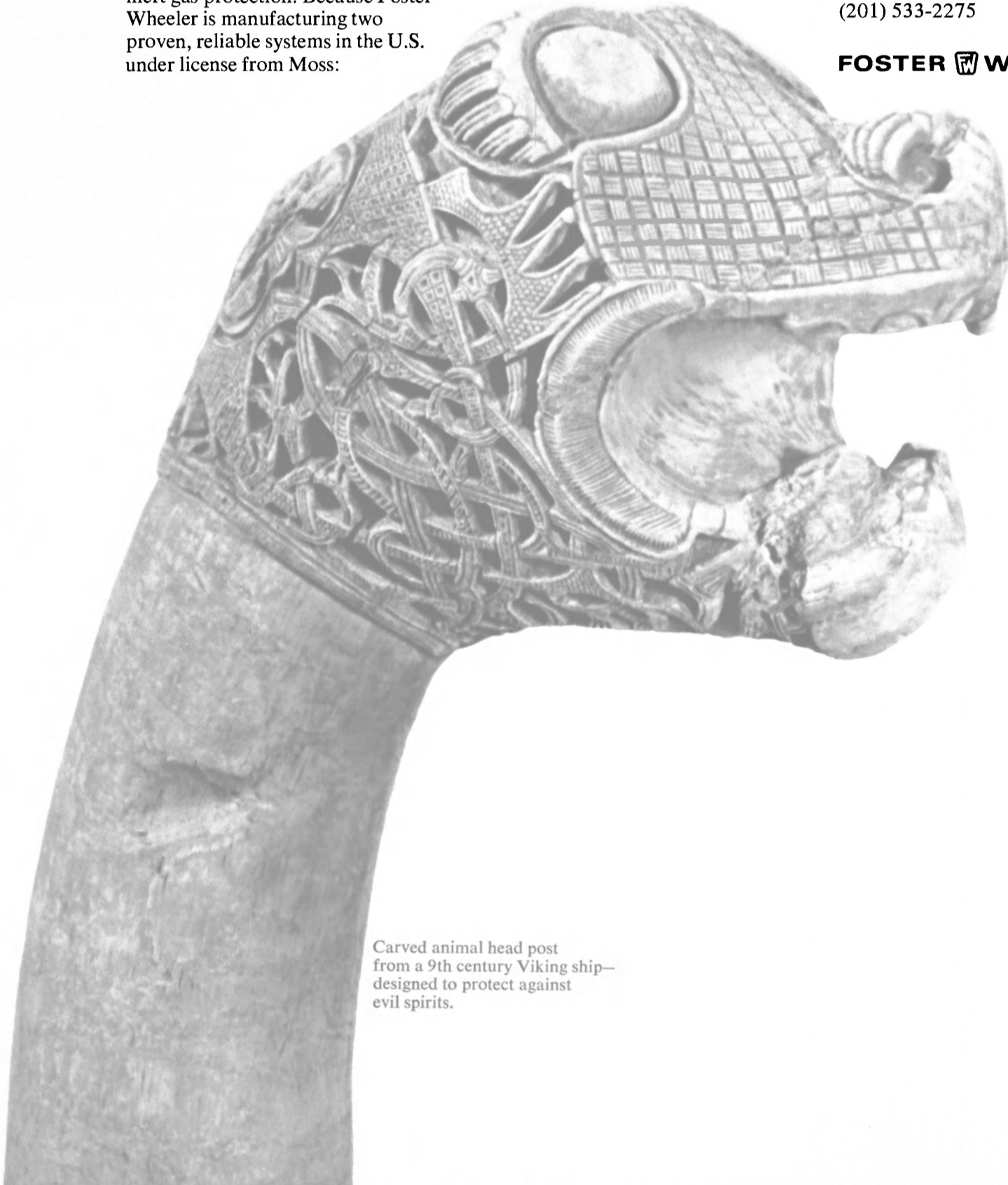
We'll be glad to review your ship's requirements and evaluate your inert gas needs—as only marine and combustion experts can.

For details on this service, and a copy of our new brochure on inert gas systems, write or call Mr. Arthur Christenson.

We'll respond quickly and decisively. In the best Viking tradition.

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**FOSTER  WHEELER**



Carved animal head post  
from a 9th century Viking ship—  
designed to protect against  
evil spirits.

## McDermott And Dominion Bridge To Form Joint Venture In Canada

J. Ray McDermott & Co., Inc. of New Orleans and the Dominion Bridge Company, Limited of Montreal have announced their intention to develop a Canadian-headquartered joint enterprise that will carry out research, engineering, fabrication, and construction

work for the offshore oil and gas industry in Canada.

Dominion Bridge is a diversified international company engaged in manufacturing, engineering, and construction activities on a worldwide basis. It also produces, fabricates, distributes, and erects steel throughout Canada.

McDermott, an international marine construction contractor and energy services company, is

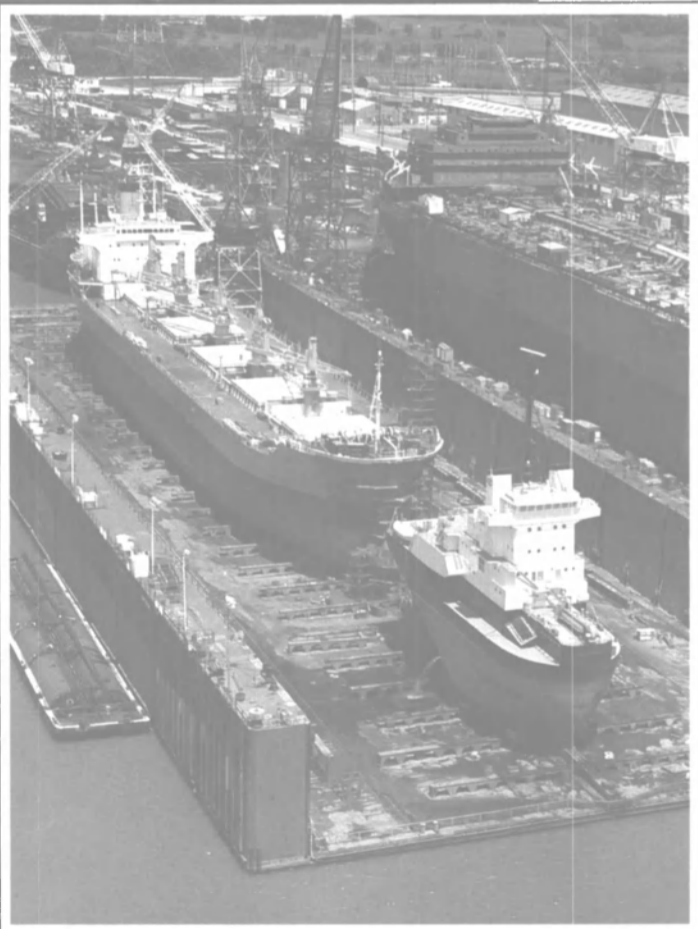
a world leader in the construction of offshore production platforms and installation of marine pipelines. The New Orleans firm will provide research, engineering, and offshore construction capabilities, equipment, and facilities for the enterprise. Dominion Bridge will provide onshore support, fabrication capabilities, and facilities.

The partners will work closely to develop new business opportunities in the Canadian offshore

industry. The new joint enterprise will provide a full-line service including the design and building of offshore drilling and production platforms, the laying of subsea pipelines, and a variety of ancillary services to the offshore oil and gas industry in Canadian waters.

The enterprise is subject to approval by appropriate Canadian governmental agencies as may be required.

# For the Broad of Beam



Avondale's drydock at the Main yard can accommodate any vessel that can navigate the Mississippi River. Our yard flexibility and efficiency allow for service of all ocean going vessels including drill rigs up to 215' wide, and of course... all types of inland vessels.

When your needs are yard needs; come to Avondale. The experience counts and you'll get quick turnaround. Quick, efficient and dependable. We feel good about being best.

## Avondale Shipyards, Inc. Marine Repair Division



P.O. Box 50280  
New Orleans, Louisiana 70150  
(504) 436-5274  
A subsidiary of Ogden Corporation.

## Executive Changes Announced At Stanwick

Tad Stanwick, chairman of the board of The Stanwick Corporation, Arlington, Va., has announced the election of **Ralph L. Shifley** as vice chairman of the board. He joined the corporation in 1971 upon his retirement from the U.S. Navy as vice admiral, and has served as president and treasurer since August 1978. As vice chairman, he will function as the corporation's principal officer for financial matters.

Mr. Stanwick, president of the corporation prior to Mr. Shifley, has assumed that position in addition to retaining the title of chairman and chief executive officer.

**Gordon E. Hamlet** has been elected treasurer of The Stanwick Corporation. Mr. Hamlet, who previously held the position of assistant treasurer, retains the title of vice president. He joined the corporation in 1969, and was previously associated with the international accounting firm of Arthur Andersen & Company.

## New Worthington Pumps Feature Energy Savings —Literature Available

Energy savings are cited as one of the advantages of a new line of lightweight, low-horsepower, high-pressure pumps for installations requiring capacities up to 500 gpm and heads to 1,500 feet. Worthington Pump R&D developed the Type WD pumps to combat the rising costs associated with delivering low capacity at high pressures.

According to its designers, the Type WD pumps overcome these deficiencies. Advantages cited for the WD line include superior operating efficiency, reliability, space saving, and interchangeable parts.

Typical applications for the WD pumps are in boiler feed, high pressure, spray washing, fuel oil burner service, descaling, or any other low-flow, high-pressure applications with pumping temperatures from minus 20 to 300°F (-29 to 149 C).

For detailed specifications on the WD line write to **Fred Paine**, Dept. MR, Worthington Pump, 270 Sheffield Street, Mountainside, N.J. 07092.



Dead engine. Dead in the water. Dead loss.  
Mobil EM/PA can help protect you from all that.  
Because EM/PA—Engine Maintenance through Progressive  
Analysis—is the systematic and consistent analysis of your engine oil.  
It's performed by specialists in Mobil labs who report to you in writing.  
(In an emergency, your Mobil representative will phone you directly.)  
What the program does is to spot potential trouble before it does  
engine damage...and you wind up dead in the water. Trace elements  
in the oil, when properly identified and analyzed, can signal all sorts of  
upcoming malfunctions—from a leaking gasket to a loose connection  
to excessive piston wear.  
In this way, just a few ounces of engine oil, properly analyzed,  
could save an engine. And your profits.  
Why not launch Mobil EM/PA? Every vessel should have an  
engine saver.

**If we can't  
save you money,  
we don't deserve  
your business.**

**Mobil®**

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## \$2.34-Million Navy Contract Awarded To Sperry Division

The U.S. Naval Sea Systems Command has awarded the Sperry Division of Sperry Corporation a \$2.34-million contract to develop and produce an advanced velocity measuring system for Navy submarines.

These new systems, called Dop-

pler Sonar Velocity Logs (DSVL), will be produced and delivered to the Navy in 1981 for testing. Velocity logs are used to measure ship's speed through water as well as the ship's speed over the sea bottom, and to provide data for navigation and fire control solutions.

The Sperry DSVL will use advanced doppler sonar coupled with data enhancement to provide higher accuracy and greater reliabil-

ity than existing electromagnetic and pitometer log equipment, which is now used by the Navy to measure velocity. The DSVL will provide velocity measurement in all three axes of the vessel.

Morton J. Howard, Sperry's marketing manager for the project, said that Sperry plans to adapt this new velocity log for use on military surface ships.

## Coastal Awarded Navy Overhaul Contract For \$18.5 Million

Coastal Dry Dock and Repair Corporation, Brooklyn, has been awarded an \$18,467,148 fixed-price contract for the regularly scheduled overhaul of the USS Milwaukee (AOR-2). The Supervisor of Shipbuilding, Conversion and Repair, USN, N.Y., is the contracting activity. (N62794-70-C-0010)

## Literature Available On National Marine Service Master Clock System

A marine digital master clock system that displays master and local time is now available from National Marine Service for all vessels. Master time can be Greenwich Mean or home port time, while local time is ship's time.

The system also has an automatic digital calendar that provides serial time information for data and bell logging or other processing equipment. Microprocessor-based, solid-state electronics assure that the system is maintenance-free. And because of a locking panel, the master clock system is free from unauthorized time changes. The digital display automatically dims at night according to the pre-set intensity level of the dimmer control.

An unlimited number of remote units can be installed up to 2,000 feet distant. The clock system comes in free-standing or flush-mounted models. And should a ship's power fail, battery backup powers the system for 24 hours.

More information may be obtained by writing to Charles L. Thompson, Products Division, Dept. MR, National Marine Service Incorporated, 827 Hanley Industrial Court, St. Louis, Mo. 63144.

## Contract To Sembawang From Union Oil For Living Quarters Unit

Sembawang Engineering, Singapore, has won a multimillion-dollar contract for the procurement, fabrication, loadout, and transportation of a living quarters unit for Union Oil Company of Thailand.

The unit is a four-story module with rooftop helideck, and will be fabricated as a single structure that will provide accommodation, recreation, and amenity facilities for 120 persons in the Gulf of Thailand.

This unit will be the ninth living quarters structure to be built by Sembawang Engineering; it is scheduled to be completed in March 1981.

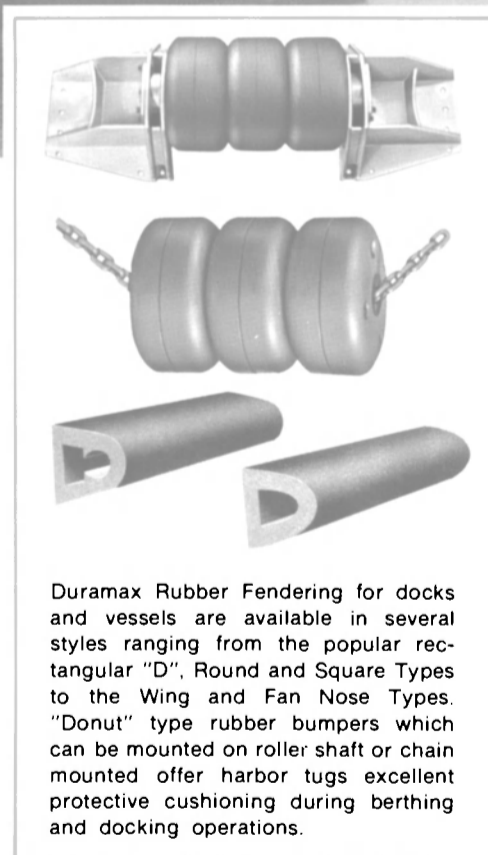


## Rubber Bow Fenders help give this vessel service versatility



The R&L No. 1 is designed with the kind of versatility that makes her both a rugged working tug as well as an efficient supply vessel. The R&L No. 1 was built by Hike Metal Products Ltd., Wheatley, Ontario for Wakeman & Son., Ltd., Hamilton, Ontario, Canada. The 92 foot tug with its kort nozzles has an output of 1570 horsepower. On her bow, more than a hundred lineal feet of shock absorbing Duramax Rubber rectangular "D" shaped fendering provides major protection when engaged in lake freighter berthing operations. The bow is strengthened for working in ice, contributing to the vessel's year 'round operational capabilities.

Whether you're building or operating work vessels or fish boats, tugs or dredges, you can rely on Johnson Duramax Marine Products—known the world over for quality and performance reliability.



Duramax Rubber Fendering for docks and vessels are available in several styles ranging from the popular rectangular "D", Round and Square Types to the Wing and Fan Nose Types. "Donut" type rubber bumpers which can be mounted on roller shaft or chain mounted offer harbor tugs excellent protective cushioning during berthing and docking operations.

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

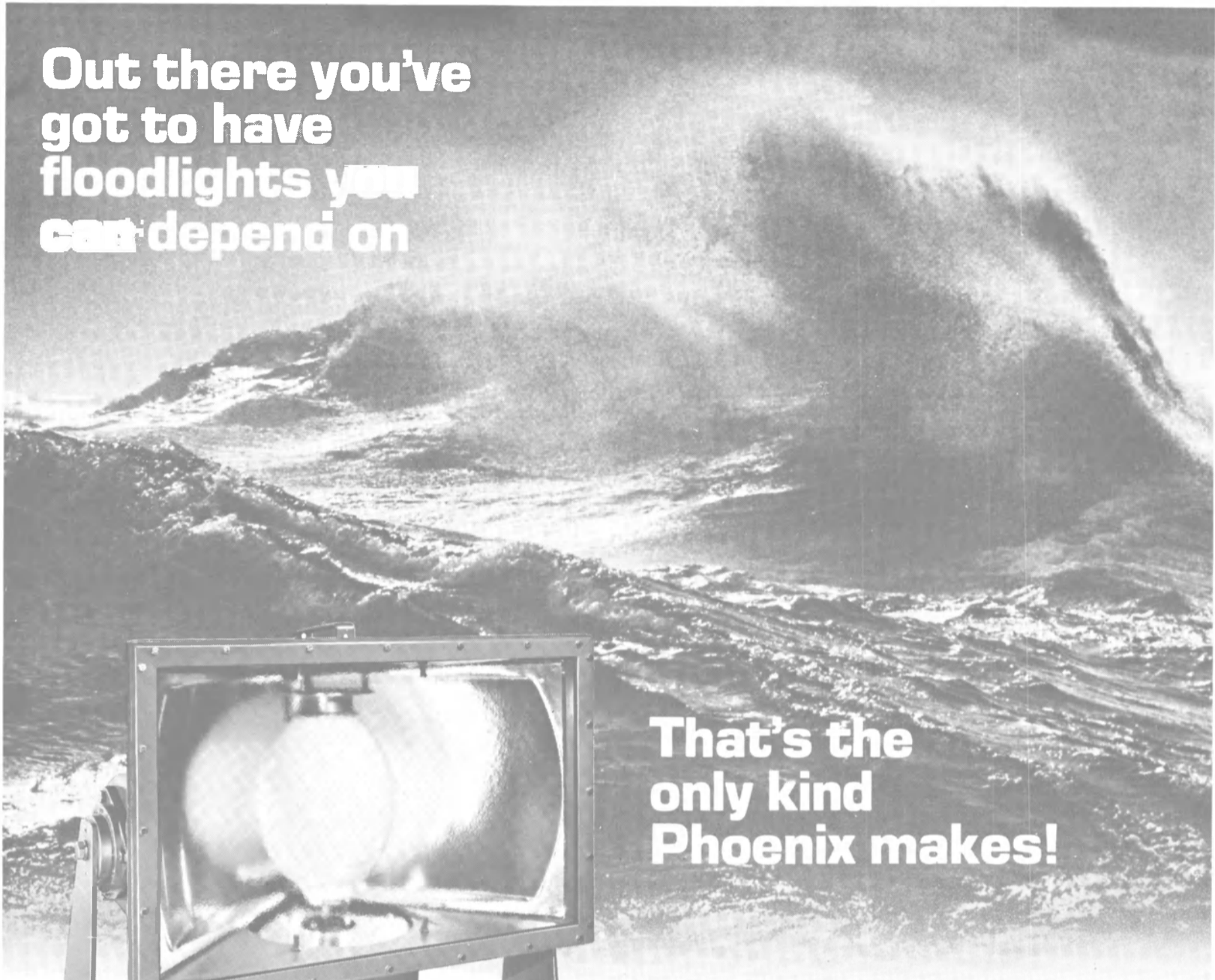
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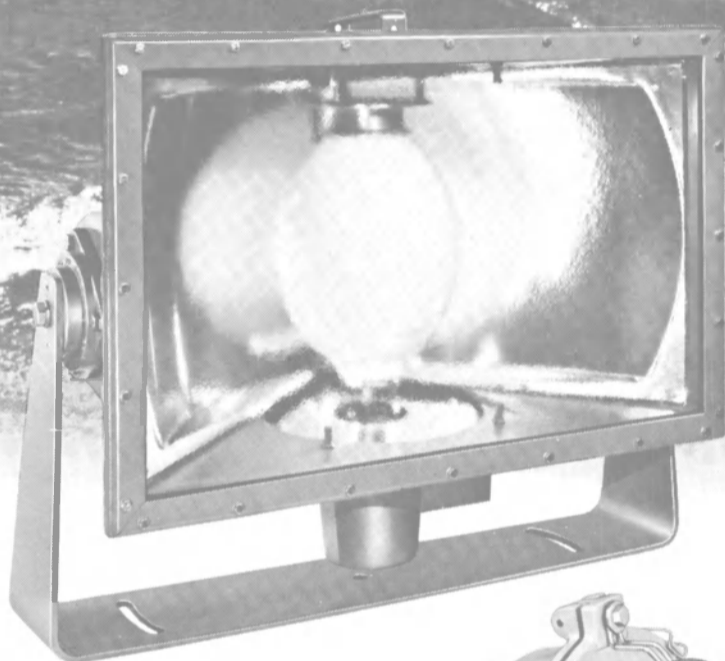
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**Out there you've  
got to have  
floodlights you  
can depend on**



**That's the  
only kind  
Phoenix makes!**



Model SRS-E-1000  
wide beam 1000 watt  
floodlight

Weather-tight  
Model MS-120/56/500  
with wire lens  
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Model MRS 64/1000  
floodlight is also  
available as  
searchlight.

Out where you can't take chances with lighting, you need Phoenix Super-Marine® floodlights and spotlights. They're built to give trouble-free service under the toughest conditions, with features like:

"Free-floating" shock and vibration resistant lamp mounting. Water-tight, gasketed enclosures with tempered, heat-resistant cover lenses. Heavy-duty copper-free cast aluminum housings finished in baked acrylic enamel. Stainless steel hardware. Easy relamping without tools. And many others.

Over 24 models available, including UL595 (Salt Water) and UL844 (Hazardous Location) listed. With your choice of Mercury Vapor, High Pressure Sodium, Metal Halide, Halogen Cycle, or Incandescent lamps.

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The **Willkate**, a harbor supply vessel built by Delaware Marine & Manufacturing yard, was delivered recently to Marine Launch Company of Baltimore.

## Harbor Supply Vessel Completed By Delaware Marine

A recent delivery from the shipbuilding yard of Delaware Marine & Manufacturing Company was the harbor supply vessel **Willkate**, which was built for Marine Launch Company, Inc. of Balti-

more. The all-welded steel vessel has been placed in service in Baltimore's Inner Harbor where it is being used to carry provisions and lube oil, in sealed containers, to ships using the port.

The **Willkate** has an overall length of 64 feet 11 inches, a beam of 18 feet 6 inches, and a loaded draft of 6 feet 4 inches. The vessel is certificated by the U.S. Coast Guard to carry 28 containers of lube oil containing 500 gallons each. All cargo is carried on the vessel's flat afterdeck.

The husky workboat is powered by a 270-bhp Cummins model NT-855-M marine diesel, which drives a 42-inch-diameter, 28-inch-pitch three-blade propeller through a 3:1 reduction gear and 2¾-inch-diameter stainless steel propeller shaft. Service speed is about 12 knots. The main cargo pump is a 200-gpm Viking driven by a four-cylinder Chrysler diesel engine.

Delaware Marine & Manufacturing also designs and builds tugs, barges, crewboats, and fishing vessels at its shipyard in Milford, Del.

## Brochure Lists Variety Of Rig Components Built By Derrick Service Int'l

Masts, derricks, and other rig components to meet a wide variety of applications are described in a brochure available from Derrick Service International, Inc. of Tomball, Texas.

Dimensions and capacities are listed for 14 different mast designs, including four for trailer mounting, and two derrick designs for offshore platforms. The company's three locations—Tomball and Conroe, Texas, and Edmonton, Alberta, Canada — also can custom engineer and build rig substructures, trailer-mounted rigs, and specialized products for equipment handling, such as bridge cranes for offshore operations. The brochure is illustrated with photographs demonstrating the firm's versatility in structural engineering.

For a free copy of Bulletin No. 640MR, write to Derrick Service International, Inc., P.O. Box Z, Tomball, Texas 77375.

## ASNE Delaware Valley Section Hears Paper On Large Gas Turbines



Officers and author at recent meeting of ASNE Delaware Valley Section (left to right): Capt. **Ray E. Pierce**, Section chairman, Philadelphia Naval Shipyard; **George B. Manning**, author, U.S. Department of Energy; and **Eugene P. Weinert**, Section vice chairman, Naval Ship Systems Engineering Station, Philadelphia.

The American Society of Naval Engineers, Delaware Valley Chapter, Philadelphia, Pa., held a recent meeting at the Officer's Club, U.S. Naval Base, Philadelphia.

Following a social hour and dinner, Chapter chairman Capt. **Ray Pierce** formally opened the meeting and turned over the technical session to meeting coordinator **John Siemietkowski**, Naval Ship Systems Engineering Station, Philadelphia, who introduced **George Manning**, Department of Energy, Washington, D.C., presenter and author of the evening's paper titled "Multiple Fuel Capacity for Large Gas Turbines."

The author reviewed the gas turbine fuel system, which presently burns liquid fuel. However, it was noted that there is a great amount of interest in gas turbines which would use a coal-derived fuel. The paper described a most interesting current research and development program on the largest coal-burning gas turbines being developed by the Department of Energy. A lively question and answer and discussion period concluded the technical presentation.

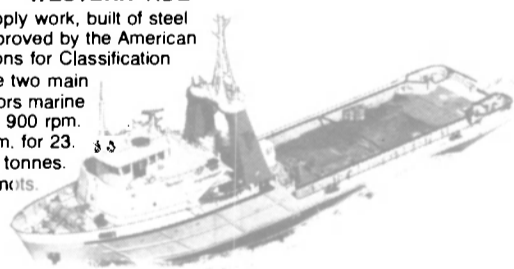
Captain **Pierce** presented **George Manning** with a Certificate of Appreciation for a timely and outstanding presentation.

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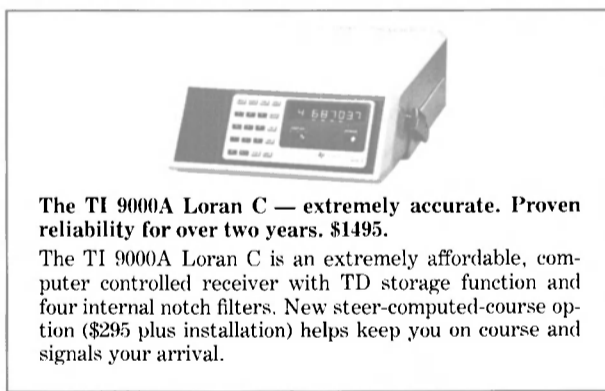
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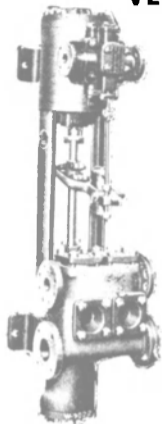
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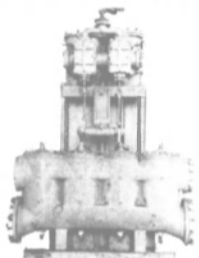


8 to 20 GPM—up to 350#. Also suitable for small boiler feed service. Steam WP 220# and 10# exhaust.

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

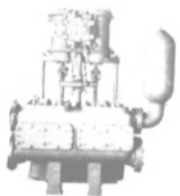
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## WORTHINGTON 16" X 14" X 18" VERTICAL DUPLEX STRIPPING PUMP



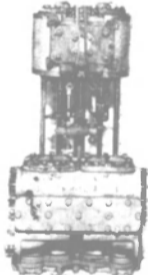
1400 GPM @ 110 PSI — suction lift 11.5 ft. — steam back pressure 15 lbs. 14" Suction — 10" discharge — 2½" steam — 4" exhaust. Overall width 6'8" — overall height 9'1½" — depth 3'9½". Wt. approx. 10,000 lbs.

## STEAM DRIVEN VERTICAL DUPLEX FIRE & GENERAL SERVICE PUMPS



10 X 11 X 12 — Worthington — 560 GPM @ 125# G. 8" Suction — 6" discharge pumps bronze fitted.

## 8" X 8" X 10" VERTICAL DUPLEX PUMP



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

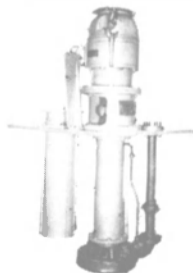
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## LIDGERWOOD STEAM CAPSTAN



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

## 4 NEW UNUSED SUMP OR LOW PRESSURE DRAIN PUMPS



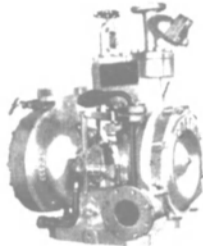
Bronze—40 GPM @ 40 PSI. 2" discharge—single impeller—CW rotation—32" from deck plate to base. Complete with flotation equipment. Totally enclosed 5HP 440/3/60 1725 RPM motor. Repair parts for motor & pump included.

## COFFIN FEED PUMPS — ALL SIZES — TYPE DE



### 3 TYPE DE-2 540 GPM 1870' NET HEAD

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

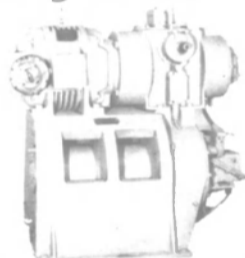
7220 RPM—311 HP. Steam pressure 580 PSIG—0°-100° superheat. Exhaust 15 lbs—typical serial #5437-CG-8-8-33

## DAVIT — WINCH

Mfg. by Skagit

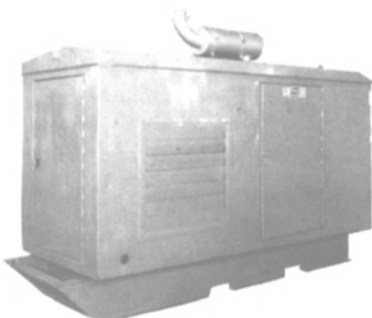
Rated 4000 lbs. @ 80 FPM

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

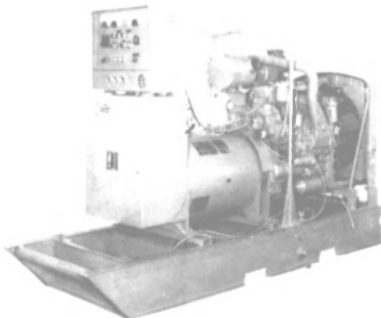


Motor: 13.5 HP — 440/3/60. Designed for ½" 6x37 wire rope. Divided drum with 2 spooling areas. Drum 8½ wide — 4" flange — 10" diameter. Complete with level wind. Also capable of manual operation by crank in case of motor failure. Hand brake & speed limiting brake are provided for holding & lowering boat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

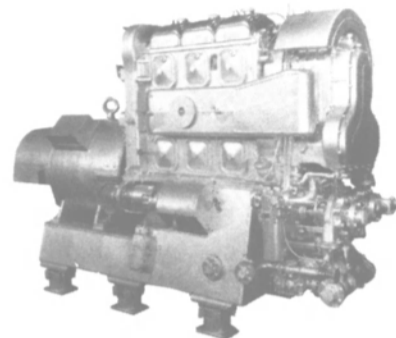


UNIT WITH CABINET REMOVED

100 KW 440/220/3/60 generator driven by GM 4-71-T radiator cooled turbo charged diesel. P.F. 0.80—for T-2, etc. 1800 RPM. With switchgear. Generator is 10 wire—all voltages possible.

WITH SWITCHGEAR / ALARMS / DISCONNECT

# 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

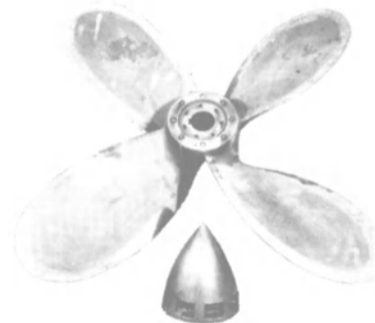
## 2 MAIN CF2V CONDENSATE PUMPS

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 4½¼". 14½" taper equal to 1" / foot on diameter. U.S. Navy reconditioned. Average weight 1760 lbs.

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250 Scott St. at McHenry — Baltimore

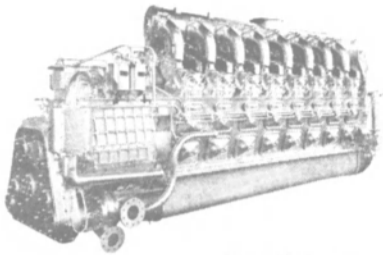


# THE BOSTON

313 E. BALTIMORE

Marine  
CABLE: BOSIRON—BALTIMORE

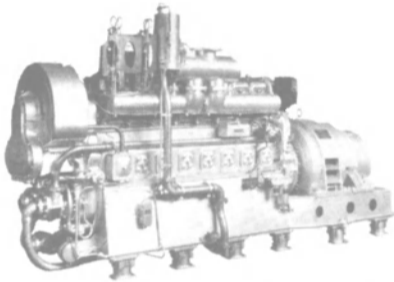
## G. M. 16-278A 1700 H. P. DIESEL ENGINES



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.

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# JN METALS CO.

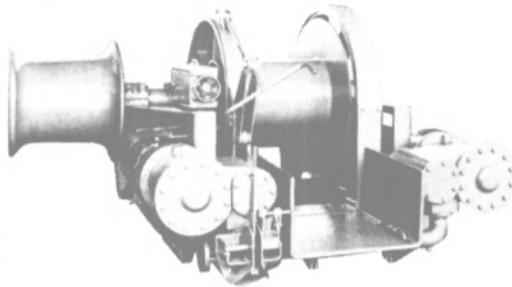
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### STEAM MOORING WINCHES 12" x 14" — AUTOMATIC TENSIONING with foot brake & declutchable gypsy head 20,000 LBS @ 100 FPM—FIRST LAYER



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".

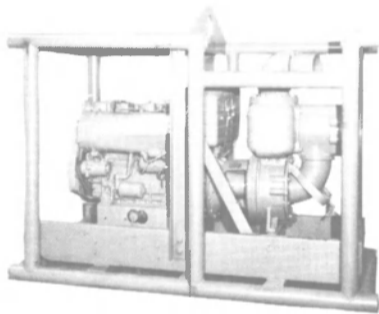
#### ALSO IN STOCK

12" x 14" Double Gypsy Unit

ALL UNITS CAN BE DEMONSTRATED RUNNING

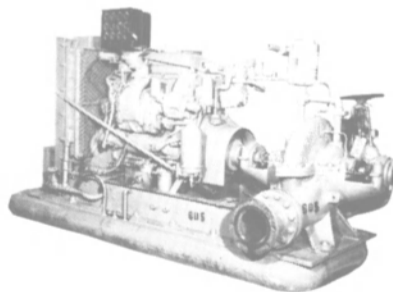
### MARLOW

#### 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.

### GARDNER-DENVER 6" X 5" BRONZE CENTRIFUGAL FIRE or JETTING PUMP



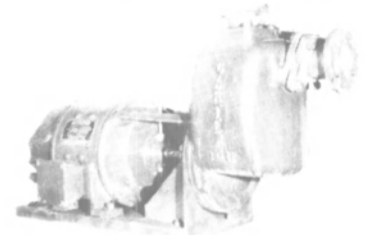
Driven by GM 3-71 diesel engine. PUMP: 1000 GPM @ 150 PSI/1500 GPM @ 100 PSI — 1750/2000 RPM. Maximum 175 PSI. Self-contained fuel tank in base. Automatic self-priming optional.

#### IMMEDIATE DELIVERY

## 2 3 / 4" STUD LINK CHAIN

10 Shots — with connecting links. ABS certificate. Practically New

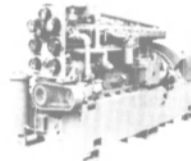
### CARTER BRONZE SELF-PRIMING BILGE & GEN. SERVICE PUMP



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

## 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
- AMPLIDYNE GENERATORS — NEW STYLE — LY-148



Container Feeder Service barge **McAllister Shuttle** can be loaded with 192 twenty-foot units. New feeder service will link Baltimore with Philadelphia and Norfolk.

## McAllister Begins New Container Feeder Service At Baltimore

The recent arrival of the 3,500-bhp tugboat **Grace McAllister** in the Port of Baltimore marked the inauguration of a new McAllister Container Feeder Service connecting the ports of Norfolk and Philadelphia with Baltimore.

Early this year the 116-year-old McAllister Brothers Towing and Transportation Company, headquartered in New York City, merged with the Baker-Whiteley Towing Company of Baltimore. The arrival of the **Grace McAllister** and the start of the new feeder service are part of McAllister's plans to expand into the nation's second largest container port.

"With the inauguration of a new Feeder Service route into the Port of Baltimore," stated **Anthony J. McAllister Jr.**, "and the addition of the **Grace McAllister**

to the Baker-Whiteley fleet, McAllister Brothers feels it is taking a step into a busy and thriving port—a firm step into the future for the Port of Baltimore."

The Container Feeder Service, a concept in marine transportation for the 1980s, was pioneered in the U.S. by McAllister Brothers in 1975. Figures prove its success. Since its inception, the McAllister Feeder Service has moved some 60,000 TEUs of cargo.

**E. Patrick Mullally**, operations manager for McAllister Feeder Service, sees it as representing for ocean carriers an appealing package, wedding convenience and economy with profitability. The shipper who arrives in Baltimore with only 10 containers bound for Philadelphia or Norfolk will find that when sending his containers on a McAllister barge he can still



The 3,500-bhp **Grace McAllister** will add to the Baker-Whiteley fleet of six tugs one of the most powerful and most maneuverable tugboats in the Port of Baltimore.

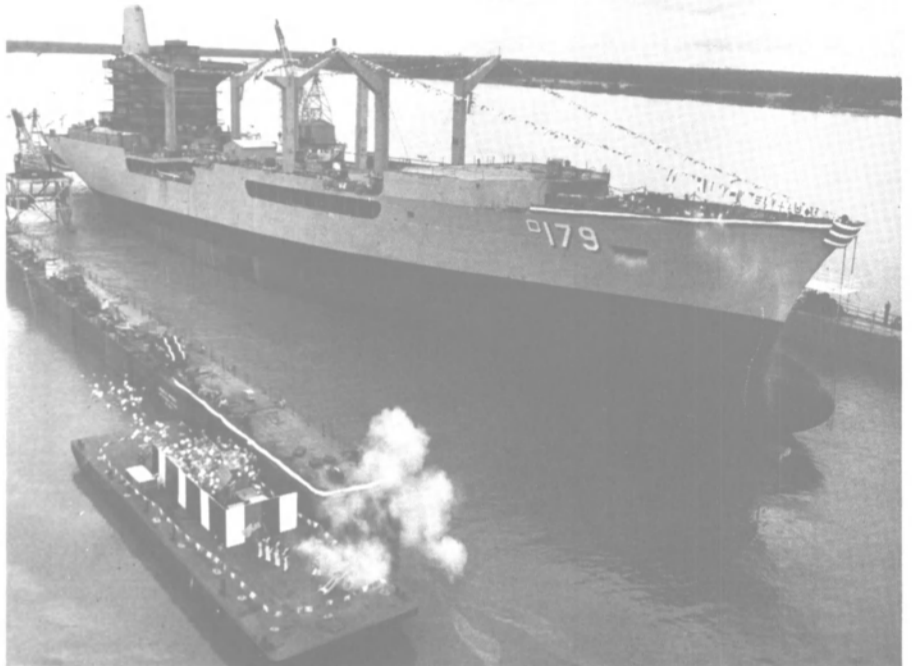
issue a waterborne bill of lading without bearing the excessive cost and time involved in making a direct call.

The container feeder barge **McAllister Shuttle** can be loaded with 192 twenty-foot containers lashed to her deck.

The **Grace McAllister** will add to the Baker-Whiteley fleet of six

tugs one of the most powerful and maneuverable tugboats in the Port of Baltimore. Whether docking ships, moving large barges, or working in the harbor the **Grace McAllister**—packing 40 percent extra thrust with her Kort nozzle—will keep pace with the current trend toward increasing sizes of containerships, tankers, and bulk carriers.

## Auxiliary Oiler For U.S. Navy Christened At Avondale Shipyards



"Remote control" christening for U.S. Navy AO **Merrimack** at Avondale Shipyards was performed from barge in foreground. Mrs. Charles H. Griffiths was sponsor.

Avondale Shipyards, Inc., a subsidiary of Ogden Corporation, recently christened the **USS Merrimack (AO-179)**, the third in a series of five auxiliary oilers being built for the U.S. Navy. These are the first of their type to be built since 1956; deliveries will begin this year and extend through 1982.

Mrs. **Charles H. Griffiths**, wife of the vice admiral who is Deputy Chief of Naval Operations (Submarine Warfare), served as sponsor of the ship. Other principals at the christening ceremony were **Albert L. Bossier Jr.**, president of Avondale Shipyards, who presided at the ceremony and delivered the welcome address; Vice Adm. **Charles H. Griffiths, USN**, who delivered the principal address; and Rear Adm. **Paul H. Engel, USN**, Deputy Commander-Plans, Programs, and Financial Management/Comptroller, NAVSEA, who also delivered remarks.

With a crew of 200 officers and enlisted personnel, the AO's mission is to deliver bulk DFM (Diesel Fuel Marine) and JP-5 from shore depots to AOE's and AOR's effecting delivery under way, to make underway delivery to combatants and support forces, and to deliver limited fleet freight, mail, and personnel.

The **Merrimack** has an overall length of 591 feet, beam of 88 feet, mean draft of 31.5 feet, and displacement of 26,110 tons. Powered by a fully automated, 24,000-

shp steam turbine and two boilers, she has a sustained sea speed of 20 knots.

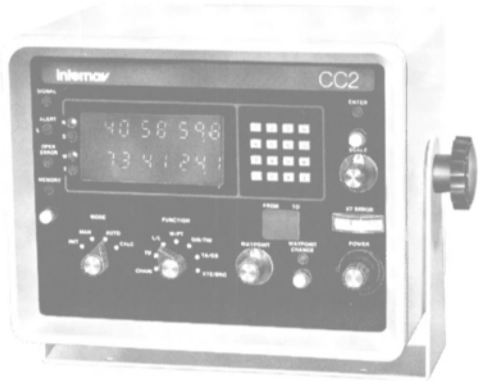
Liquid cargo transfer capability is provided by three "stream" double-hose (DFM/JP-5) stations to port and two single-hose stations to starboard. Piping for 7-inch hose for both DFM and JP-5 outlets is provided at all delivery stations. One 2½-inch JP-5 hose rig is provided at each after fueling station port and starboard for token transfer to small ships. Manpower requirements for fueling-at-sea evolutions have been reduced by automating the liquid cargo transfer system and by redesign of the liquid cargo transfer station for underway replenishment.

The capability to transfer fleet issue cargo, fleet freight, and personnel is provided for by the installation of one send/receive replenishment station on each side. Each replenishment kingpost is fitted with a five-ton boom for ship-to-shore/barge transfer of cargo, and with outriggers for non-stream ship-to-ship delivery.

A helicopter platform for day operations only is provided aft for VERTREP (vertical replenishment) of hard cargo and fleet freight, and for landing without service and maintenance facilities. A storeroom for hard cargo is provided on the 01 level forward permitting horizontal breakout to the replenishment stations and the VERTREP platform aft.

# Simrad. A trusted name at sea.

## The Navigation Computer that started it all... from Simrad, naturally.



Simrad's CC-2 Navigation Computer gives complete position, steering and piloting information in an easy-to-use system. It is still the only separately packaged Loran C navigation computer, and can accept input data from any Simrad Loran C receiver.

The CC-2 can repeat Loran C time-difference numbers, convert Loran C position to latitude/longitude, and will store up to nine "waypoints" or destinations. It continuously computes distance, time to destination and bearing from your present position to any

of the nine selected destinations or waypoints. It also computes speed over the ground, course made good and off-course "cross track error" for steering adjustments. Lat/Long position is read out to tenths of seconds (ten feet) and off-track deviations can be read out in hundredths of a nautical mile. The computer is so flexible, you can even use it to solve separate time/course/distance problems while it continues to update actual navigation data internally.

## New digital recording sounders meet IMCO requirements.

Simrad now offers two economical navigation recording echosounders that meet IMCO recommendations for merchant vessels. In addition to showing a well-defined bottom on recording paper, the systems have independent digital depth indicators and depth alarms. The Simrad ED-161 has four recording ranges from 0-25 to 550 fathoms. The ED-162 has 0-30, 0-75, and 0-150 foot recording ranges for navigating in shallower waters, plus a 0-1500 foot deep range. The optional IR 201 Remote Digital Analog Indicator displays depth in feet, meters and fathoms.



These systems are also designed as replacements for existing older systems. Due to Simrad's special engi-

neering, some vessels can be retrofitted from inside the hull without having to dry dock.

## Ship's radar from Simrad.

Ten and twenty KW radar models from Simrad are building a reputation for extra fine resolution that you can count on. It is natural to think about long range use, and they do have six ranges from  $\frac{1}{4}$  n.m. to 48 n.m., with an additional 30 to 78 n.m. setting on the 20 KW model. However, they really outperform competition at extremely close distances. At the  $\frac{1}{4}$  n.m. range, they provide the unusual resolution you need to pick out small boats and channel markers in a dense fog. And that's the most critical test for any radar. Choice of four or six foot antenna. Variable range marker (VRM) with digital readout, and early warning target alarm options are available. For smaller vessels, Simrad's ONX 6



(5KW) with choice of 3 or 4 foot slotted array antenna, and all electronic scope sweep, is recommended.

## Loran C means Simrad.

Throughout the world, skippers have learned to trust Simrad's Loran C reliability and accuracy... and to rely on Simrad's sales, installation and service network in more than 450 ports throughout the world.

Our "New Generation" LC-123 now has many more advanced features, including signal integration that sets a new standard in readout accuracy. With its "touch pad" keyboard, our new LC-112 provides high performance at an economical price. Both models have been designed and manufactured to meet or exceed all Minimum Performance Standards (MPS) of the Radio Technical Commission for Marine Services (RTCM), adopted 12/20/77, including Addendum #1 dated 7/19/79, as endorsed by the U.S. Coast Guard for use aboard vessels over 1600 gross tons when calling at ports in the Continental U.S. This is a legal requirement for ship operation in U.S. waters.



Simrad's Loran was recently tested against eleven other receivers by an independent testing laboratory under contract to the Canadian Department of Fisheries and Oceans. Since the LC-112 had not been introduced yet, it couldn't be included in the test. However, in long range tracking tests, three units were judged superior... Simrad's LC-123, Simrad's older LC-204 and another manufacturer's receiver that costs over \$2,000 more than an LC-123. Several competitors complimented Simrad by copying our LC-123, but evidently they still couldn't match Simrad's performance and reliability. Our ten years of experience in developing Loran C technology is important to you. A cheap loran could be costly.

# SIMRAD

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Trawler/combination fishing boat Storm Petrel has been delivered by MARCO Seattle to owner/skipper George Fulton. After extended trial period, the vessel will operate off Alaska.

## MARCO Christens Its First Refrigerated Seawater Trawler

Another first for MARCO Seattle was revealed recently with the christening of the fishing vessel Storm Petrel. She is a refrigerated seawater, trawler/combination boat, MARCO's first to be designed and engineered principally as a trawler. The new vessel has an overall length of 123 feet, beam of 31 feet, and depth of 14 feet. She was christened at Seattle's

Fishermen's Terminal by Mrs. Elva Schmidt, wife of the shipyard president.

According to MARCO president Peter G. Schmidt, the boat was designed by MARCO's Naval Architecture Department, under the direction of vice president Bruce O. Whittemore. Mr. Schmidt added, however, that much of the credit for the new design goes to George Fulton, the boat's owner/skipper. "The Storm Petrel reflects George's many years of experience in fisheries around the world, as well as his survey of trawlers working in the Atlantic," Mr. Schmidt said.

Propulsion power for the Storm Petrel comes from a turbocharged and aftercooled Caterpillar D399-TA diesel with a continuous rating of 1,125 bhp at 1,225 rpm, driving a 96-inch-diameter Coolidge stainless-steel propeller through Reintjes reduction/reversing gears, providing a normal service speed of 12 knots. Auxiliary power is provided by one Caterpillar and two Cummins diesel engines.

The vessel features a two-deck aluminum pilothouse above the raised deck. The bridge deck has a 360-degree field of vision, and contains an aft-facing hydraulic control console that includes trawl winch controls.

The new boat has a complete selection of electronics and other navigational aids, including two radars, two sonars, two depth sounders, Loran, and a variety of radios (see accompanying supplier list).

Much attention was given to net and fish handling space and equipment aboard the Storm Petrel, combining such features as the refrigerated seawater system designed by Stewart Roach, an

eight-well configuration with a total capacity of 8,800 cubic feet, an articulated stern ramp, and a combination of gear that includes the first pair of MARCO's new WT-303 trawl winches and a removable four-drum stern gantry.

The new hydraulic ramp arrangement, which encloses the boat's stern when not in use, was

developed by George Fulton. MARCO's new WT-303 winches deliver more power than current models, providing the ability to handle the loads of midwater trawling. They feature a transmission that allows the winch to maintain constant speed and power once 30 percent of the cable is on the drum.

## Ronald L. Stone Named To Maritime Aids Post

Assistant Secretary for Maritime Affairs Samuel B. Nemirow has announced the appointment of Ronald L. Stone to the newly created post of Deputy Assistant Administrator for Maritime Aids (Trade). Mr. Stone will serve as the Assistant Administrator for Maritime Aids' principal advisor on commercial trade, traffic, and all related Maritime Aid programs administered by the Maritime Administration. This position was created by a recent reorganization of the Office of the Assistant Administrator for Maritime Aids,

and complements the post of Deputy Assistant Administrator for Maritime Aids (Finance) now held by Gerard E. Neumann.

Prior to this appointment, Mr. Stone served four years as shipping and program control officer in the Office of the Deputy Assistant Secretary for Maritime Affairs.

A 1963 graduate of the California Maritime Academy, he began his career as a licensed deck officer with Chevron Shipping in California. In 1968, he joined the staff of MarAd's Western Region as a budget and management analyst. He transferred to Washington, D.C., in 1972 to assist in the agency's subsidy programs.



Red Jacket Mines' giant, self-unloading sand barge Codrington, built at Wall Shipyard, shown in New Orleans shortly before it left for the Caribbean.

## Wall Shipyard Completes Custom Sand Barge For RJM

The recent arrival of the giant sand barge Codrington to unload her first cargo at the Jarry Industrial Zone on Guadeloupe marked the beginning of a unique sand mining operation by Red Jacket Mines, Ltd. (RJM), headquartered in St. John's, Antigua.

A key link in the operation is the Codrington, a custom-designed sand barge constructed at the Wall Shipyard in New Orleans at a cost of more than one million dollars. The most innovative feature of the barge is the unloading

equipment; she is automated to be self-discharging at the rate of 500 tons per hour. The new unit is the first of a proposed fleet of special oceangoing barges for RJM.

Preparation for the project was a long and careful one, more than a year in the planning. RJM had already constructed a 1,000-foot loading dock on the south coast of Barbuda. The tiny island is the only site in the Caribbean that produces the particular kind of coral sand rated superior for use in construction.

### 'STORM PETREL' SUPPLIERS

Main engine: Caterpillar diesel model D399TA, turbocharged and aftercooled.

Reduction gear: Reintjes two-speed hydraulic reversing.

Propeller: Coolidge 96-inch-diameter, four-blade, stainless steel.

Steering: Wagner hydraulic, model T-19.

Auxiliary engines (3): Cummins models KT1150GC and NT855GC, both turbocharged; Caterpillar model 3304N.

Radars (2): Furuno FR1011 and FR701.

Depth recorders (2): Furuno FW-GT22 and FUG-22.

Net recorder: Furuno FNR-700.

Sonars (2): C-Tech "Omni"; Wesmar SS165-2400-FT.

Loran: North Star 6000 with SLC Nav-Pac.

Loran plotter: Epsco C-Plot II.

VHF radio: Raytheon 50A.

SSB radio: Northern N571, 150-watt.

Emergency radio: Northern N571, 100-watt.

Gyrocompass: Sperry SR-130.

Autopilot: Sperry 8T.

Intercom: Raytheon 350.

Wind speed indicator: Danforth-White.

Seawater circ. pumps (4): Crane/Deming.

Motors for above (4): Lincoln.

Chiller barrels (20): General Refrigeration.

Compressors (2): Carrier.

Telescoping crane: Slattery, 12-ton.

Stern ramp: MARCO hydraulic articulating.

Ramp winches (2): Gearmatic.

Winches (10): MARCO W3000 (3), WO600 (2), WO650 (3), WT303/40 (2).

Net reels (4): MARCO RT96S.

Motors for above (4): Hydrostar 525.

Bait chopper: Hansen.

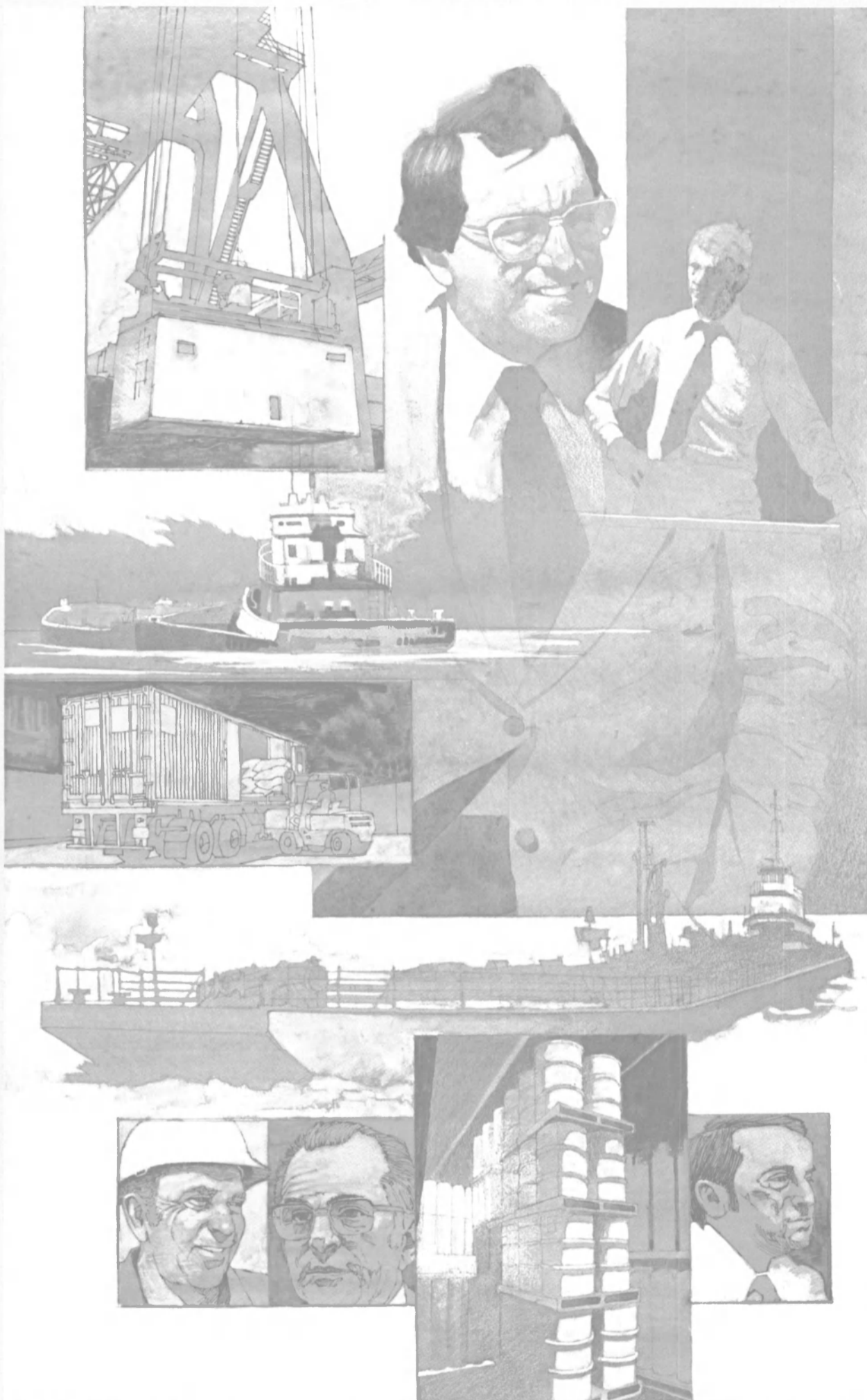


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Today this is where Coastal Dry Dock and Repair Corporation offers a unique combination of ship repair expertise and solid concrete and granite piers, docks and buildings.

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**Steel Fabrication**  
**Machinery Repairs**  
**Electrical**  
**Electronics &  
Ordnance**

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**AND REPAIR CO.**

## Rio Towing Asks Title XI On Chemical Barges To Cost \$9 Million

Rio Towing Company of Pearland, Texas, has applied to the Maritime Administration for a Title XI loan guarantee to aid in financing the construction of seven chemical barges.

Each of the 20,000-barrel, double-skin, chemical tank barges will measure 295 feet by 54 feet by 11 feet. Newpark Shipbuilding and Repairs, Inc., Houston, is the proposed builder. These barges, which are to be delivered between May and December 1980, are expected to be operated along the Gulf Coast on the Intracoastal Waterway and the inland rivers.

If approved, the requested Title XI guarantee would cover \$7,850,000, or up to 87½ percent of the actual cost of \$9,010,000.

## Admiral Edwards Receives Shephard Safety Award



William N. Johnston, ABS chairman and president (left), presents Halert C. Shephard Award to Rear Adm. Roderick Y. Edwards, U.S. Coast Guard (ret.). Award consists of a Steuben crystal eagle, a leather presentation book, and a citation.

Rear Adm. Roderick Y. Edwards, U.S. Coast Guard (ret.), is the recipient of the Halert C. Shephard Award for achievement in merchant marine safety.

The award is given either for a single outstanding contribution to merchant marine safety, or for dedication to and constructive participation in, activities associated with maritime safety over a period of time. The award was established by the American Institute of Merchant Shipping (AIMS) in honor of the late Rear Admiral Shephard, who served in the U.S. Coast Guard as Chief, Office of Merchant Marine Safety, and is administered by the American Bureau of Shipping (ABS).

William N. Johnston, chairman and president of ABS, presented the award to Admiral Edwards in a ceremony following the ABS annual meeting held at its international headquarters in New York City.

Mr. Johnston said: "The award honors a man who for over 40 years, while in both government and commercial service, used his interest and considerable knowledge to improve safety of life and

to protect property at sea. Rear Admiral Edwards's many accomplishments in this area have earned him a distinguished reputation among his colleagues in the marine industry."

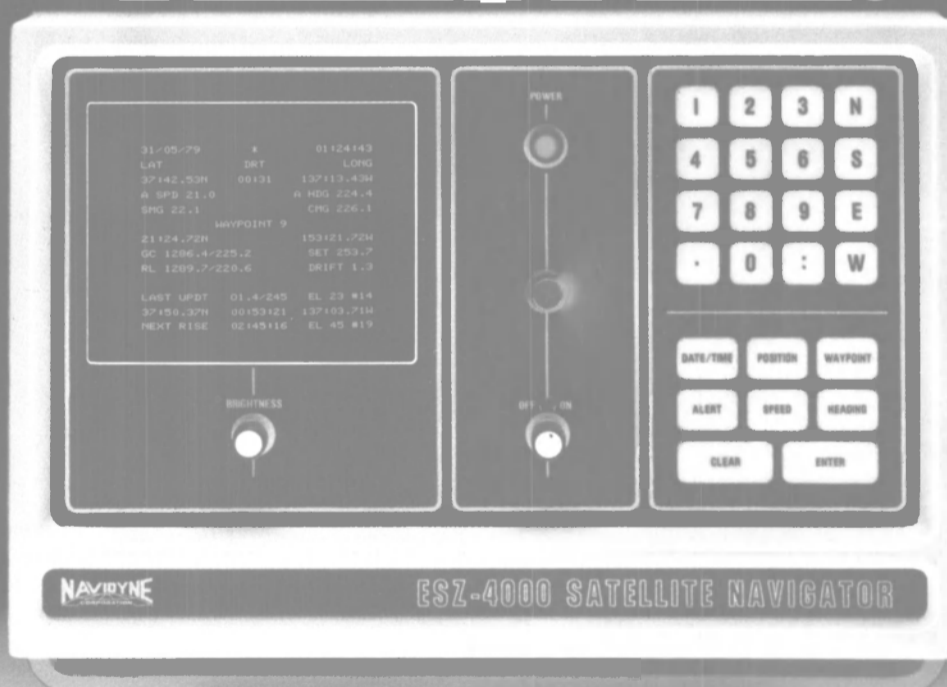
Admiral Edwards served in the U.S. Merchant Marine from 1927 to 1940, advancing from cadet to

master of oceangoing vessels. He was appointed a lieutenant in the Coast Guard in 1942 and served as a marine inspector in Philadelphia.

After retiring from the Coast Guard in 1971, Admiral Edwards served as president of the 1974 Safety of Life at Sea Conference

and as special consultant on the Coast Guard delegation that attended IMCO Council meetings. He was elected chairman of that council for four consecutive two-year terms. In November 1979, Admiral Edwards was elected president of the Assembly of IMCO for one two-year term.

# THE BEST SELLING SATELLITE NAVIGATOR TELLS ALL.



One of the main reasons that our ESZ-4000 is the world's fastest-selling satellite navigator is because it tells everything you want to know — without even being asked.

Every detail of where you are and where you're headed is constantly displayed. Including position, time, speed, heading, and course and distance to any one of nine prestored waypoints. And with the push of a single button, you can read the next ten satellite passes and the last six fixes.

### THE INSIDE STORY.

Automatic inputs from speed log and gyro are standard, not optional. And between satellite fixes, the ESZ-4000's computer updates your

ship's position every 10 seconds, using computed set and drift to make sure dead-reckoned position is as accurate as possible.

The more accurate the navigator, the more miles you'll save. The more time. And fuel. In fact, a large vessel may save the cost of the ESZ-4000 in the course of a single voyage.

No wonder Navidyne has sold more ESZ-4000s than any other single model on the market.

### WAIT, THERE'S MORE.

We haven't begun to talk about our

satellite navigator's unmatched reliability, three-year warranty, worldwide shipboard service, or that it's been type approved by the Norwegian Maritime

Directorate, the Deutsches Hydrographisches Institut (DHI), and meets all U.S. Coast Guard requirements.

So contact Navidyne Corporation, 11824 Fishing Point Drive, Newport News, VA 23606 USA. Telephone: (804) 874-4488. Telex: 82-3653 (NAVIDYNE NPNS).

And get the whole story on the way Navidyne is building the most advanced products in marine electronics today.



**\$57-Million Rebuilding Contract Awarded To Newport News Yard**

A contract to reconstruct and enlarge the damaged tanker Chevron Hawaii at a cost of \$57 million has been signed by Newport News Shipbuilding, a Tenneco company, and Arco Marine

Inc., an affiliate of Atlantic Richfield Company.

Damaged by an explosion last year near Houston, the 70,000-dwt vessel will be jumboized to 91,000 dwt and renamed. Arco Marine intends to operate the enlarged ship to carry crude oil from Panama to Arco refineries at Philadelphia and Houston. Redelivery is scheduled for December 1981.

**Donaldson Named To N.Y. Sales Staff Of Alcoa Steamship**

Guy D. Donaldson has been appointed sales representative for Alcoa Steamship Company, operating out of the New York office. He had been employed in Alcoa's Operating Department as a voyage planner coordinating

the scheduling of certain assigned vessels.

After graduation from the U.S. Merchant Marine Academy in 1975, and prior to employment with Alcoa, Mr. Donaldson worked as marine superintendent for Maher Terminals in Port Elizabeth, N.J. In his new position he will be responsible for general cargo sales in the New York metropolitan area, and will also handle special assignments in Alcoa's expanding bulk marketing program.

**\$168-Million Navy Award To Newport News For CVN Advance Procurement**

Newport News Shipbuilding, Newport News, Va., has been awarded a \$168,000,000 negotiated cost-plus-fixed-fee contract for long lead time material and related engineering services for a nuclear-powered aircraft carrier (CVN-71). The Naval Sea Systems Command is the contracting activity. (N00024-80-C-2126)

**F.T. Shaver Appointed Washington Director For Sun Ship**



F. Trent Shaver

Sun Ship, Inc., Chester, Pa., has appointed F. Trent Shaver to the newly created position of director of Washington Operations. He will be responsible for developing and maintaining contact with the U.S. Military, the U.S. Maritime Administration, and other key Washington-based groups involved in the procurement of new ships and the conversion or repair of existing ships. He will report to Richard Orth of Sun Ship's headquarters in Chester.

Prior to joining Sun Ship, Mr. Shaver was a senior research analyst with Presearch, Inc. in Arlington, Va. He had a distinguished Naval career, retiring at the rank of captain in 1977.

His Navy duty assignments included service with the Charleston Naval Shipyard, engineering officer on the USS Truckee, ship design coordinator with the Bureau of Ships, Ship Characteristics Board staff with the Chief of Naval Operations, senior naval advisor to Vietnamese Naval Shipyard, and deputy comptroller for the Naval Sea Systems Command.

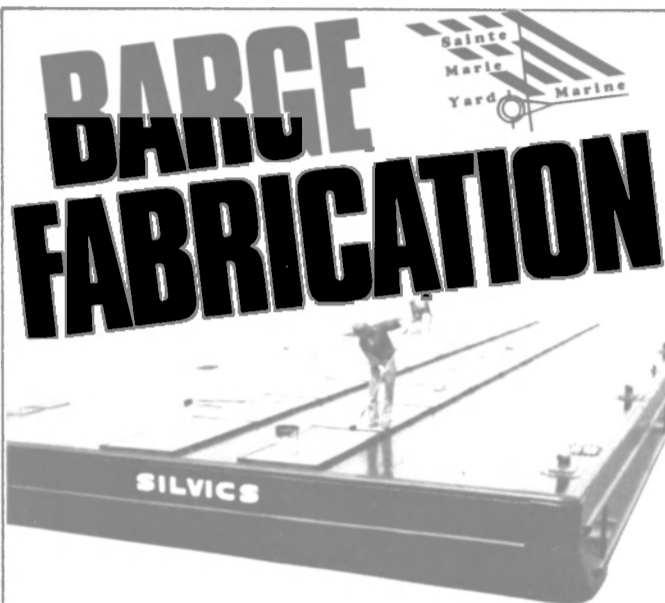
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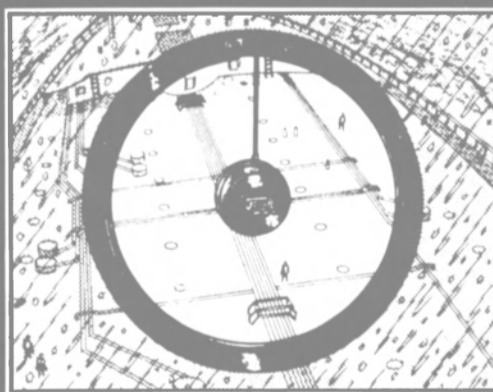
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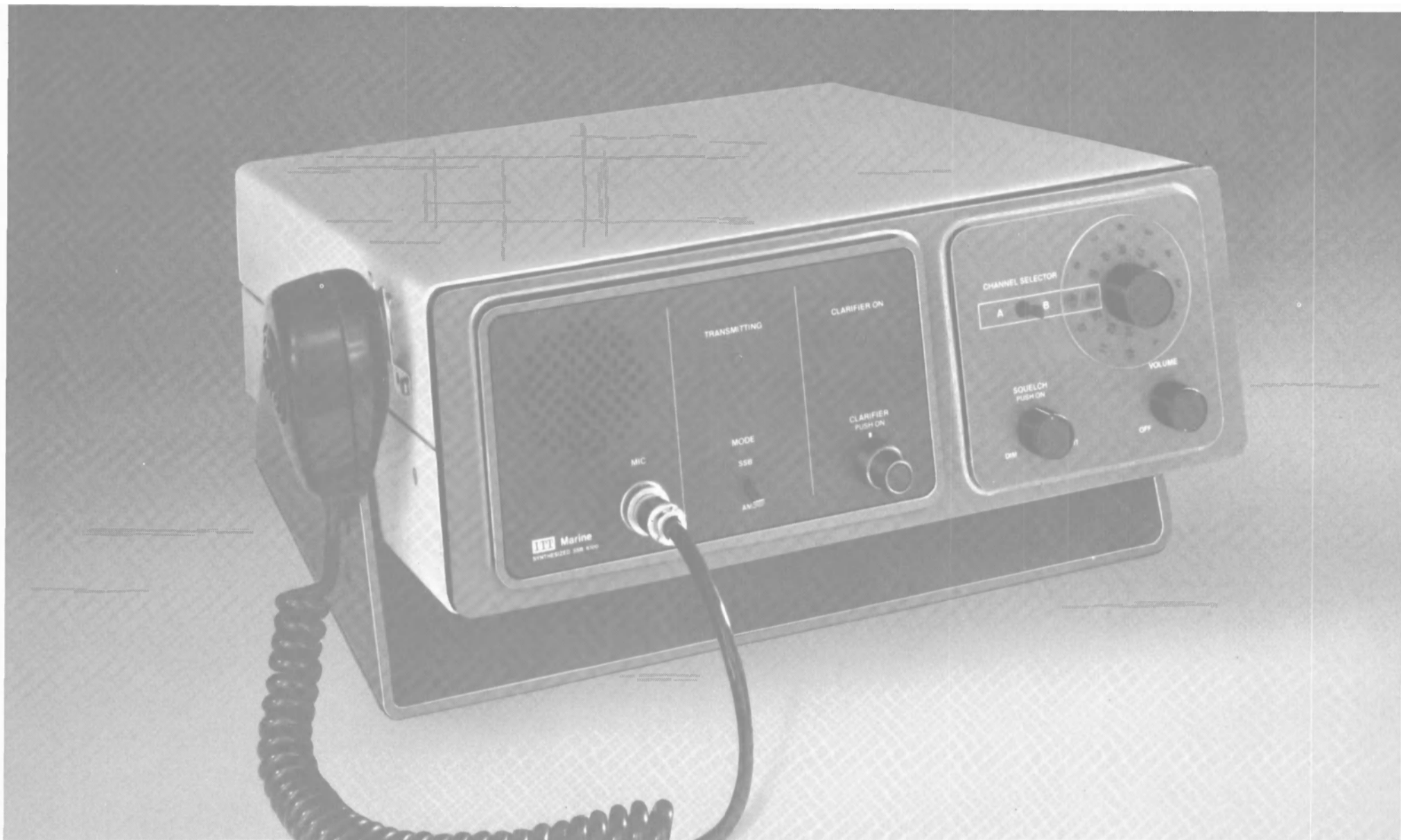
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ITT Marine's SSB 6100 delivers the performance of larger, more complex SSB's. Yet it's designed to fit the budgets of offshore private and commercial craft.

### The performance you need

Twenty-four fully-synthesized channels in the 2-9 MHz range and a 100 watt PEP transmitter output put you in touch with ships or shores up to hundreds of miles beyond the line-of-sight range of your VHF radio. Simplex or semi-duplex, and in A3A, A3H or A3J modes.

### The features you need

SSB 6100 can be operated with a radiotelephone permit. To communicate, you simply select the desired channel; an automatic clarifier handles fine-tuning, and automatic gain control and transmitter level control do away with the nuisance of adjustments. All 24 channels are readily programmable\* for frequency,

simplex/semi-duplex service and mode—no crystals to wait for.

### The economy you need—to save money now, and keep on saving

Solid-state technology keeps the 6100's cost to a minimum. But SSB 6100 keeps on saving you money; it's designed to take years of small craft bouncing and vibration without costly repairs. Any repairs involve an easy change of printed circuit boards. Service is available from trained, licensed technicians at the many ITT Marine service centers.

### Available now at ITT Marine

Get the complete story on the affordable SSB today. Telephone one of the offices listed below, or write to: ITT Marine, Dept. 370, 2912 Wake Forest Road, Raleigh, NC 27611.

\*At any ITT Marine service location.

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 New Orleans: (504) 887-4200 • Houston: (713) 644-9246 • Beaumont: (713) 722-2444 • Corpus Christi: (512) 855-8498  
 Baton Rouge: (504) 293-5106 • Greenville: (601) 335-5282 • St. Louis: (618) 254-9593 • Paducah: (502) 898-3616

## Shell Literature Details Benefits Of MVI Lube Oils In Marine Diesels

Taking note of the growing worldwide shortage of suitable crudes from which to refine medium viscosity index (MVI) lube oils, Shell Oil Company has prepared new literature pointing out the historically proven benefits of MVI lube oils for medium-

speed diesel engines, and describing the company's efforts to help alleviate the MVI lube oil shortage for U.S. customers.

Acknowledging the fact that engine manufacturers now have lube oil standards for warranty and service requirements that permit the use of oils with viscosity indexes as high as 100 in recognition of the growing MVI oil shortage, Shell maintains that it should be able to continue to sup-

ply premium lube oils in the viscosity index range of 60-70 for the foreseeable future. The literature graphically illustrates operating benefits with engine tear-down photographs.

Free copies of the literature (request No. SOC: 201-80) may be obtained by writing to **William Merritt**, Manager Commercial Communications, Dept. MR, Shell Oil Company, One Shell Plaza, Houston, Texas 77001.

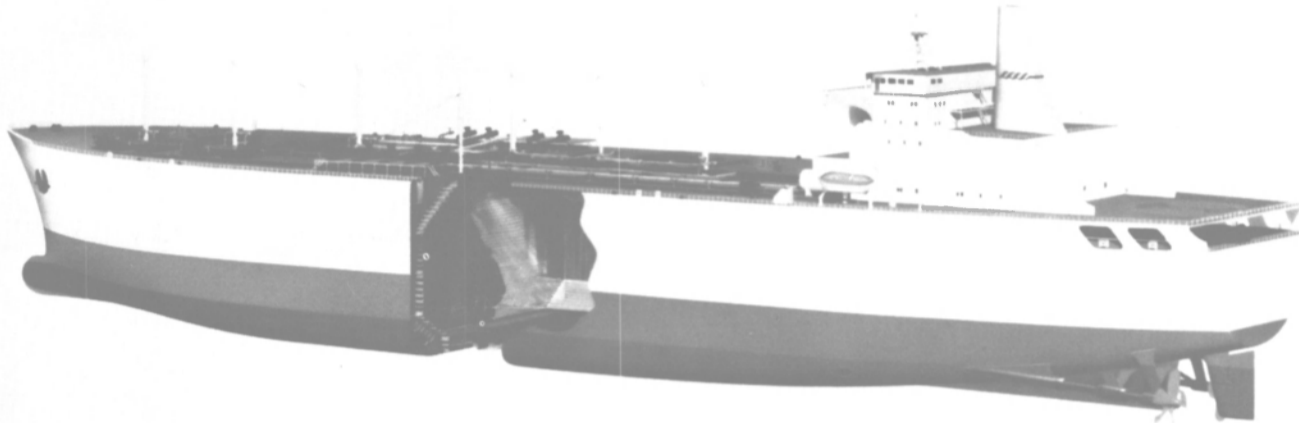
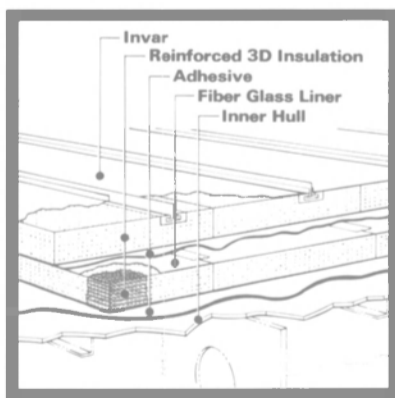


Illustration courtesy of Pacific LNG

## Two proven systems combine to bring a new level of excellence to LNG containment.

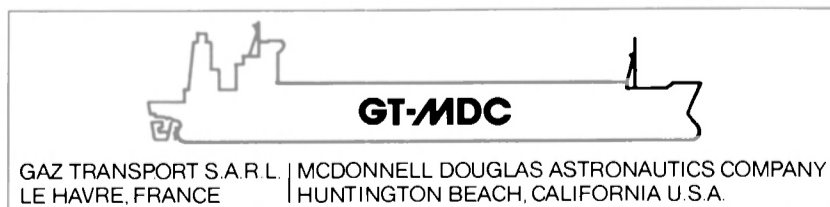
The combination of Gaz/Transport and McDonnell Douglas liquefied natural gas barriers into a single containment system now offers shippers a new high level of volumetric efficiency and excellence in hull protection—at a competitive price. Each partner contributed 15 years of experience in cryogenic containment to the project.

A proven system, the Invar metal primary barrier, has accumulated 1.7 million sea miles through 1978. The reinforced insulation used as a secondary barrier has been tested for a 20-year service life as a primary barrier.



The system is approved by the U.S. Coast Guard and classification societies worldwide. It has been selected by Sun Shipbuilding for two 130,000 cubic meter tankers for delivery to Pacific Marine Associates. To see what this remarkable system can

do for you, write for more information today. Contact McDonnell Douglas Astronautics Company, 5301 Bolsa Avenue, Huntington Beach, CA 92647. Phone: (714) 896-2372 Telex: 678426 MCDL-DGLS-HTBH, or Gaz/Transport, Naval Engineering, 50 Boulevard Haussmann, 75009, Paris, France. Phone: 285.19.00. Telex: SoFRAMA Paris 29063



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## William A. Rickel Elected President Of The Ansul Company

William A. Rickel has been named president and chief operating officer of The Ansul Company. He replaces **Terrell L. Ruhlman** who has become chairman and chief executive officer of Ansul, and president of Wormald Americas, Inc.



William A. Rickel

Ansul was purchased in 1979 by Wormald International Ltd., Sydney, Australia, a worldwide leader in fire suppression products and fire protection contracting. The combined companies have manufacturing facilities in 31 countries and marketing bases around the world. **Mr. Ruhlman**, as president of Wormald Americas, is responsible for all Wormald interests in the Western Hemisphere.

**Mr. Rickel** joined Ansul in 1966 as a salesman. He held various sales and marketing positions before being named vice president and general manager of Ansul's U.S. Fire Protection Group in 1975.

## New Garlock Bulletin Presents Wide Variety Of Sealing Devices

A wide variety of sealing products particularly suited for use on oilfield equipment employed by both onshore and offshore oil and natural gas drilling and production operations is described and illustrated in the 12-page bulletin #MP-906 just published by Garlock Inc. of Palmyra, N.Y.

Selected from the extensive Garlock line of hydraulic/pneumatic dynamic seals, compression packings, gasketing materials, oil seals, mechanical seals, and expansion joints, these products are arranged in categories that simplify comparison of the recommended styles.

Garlock Inc. maintains an office for oilfield product sales at 2225 Randol Mill Road, Suite 223, Arlington, Texas 76011.

For a free copy of bulletin #MP-906 write to **William V. Rhodes**, Garlock Inc., Mechanical Packing Division, 1666 Division Street, Palmyra, N.Y. 14522.

## Canadian And U.K. Companies Form Joint Venture

Federal Commerce and Navigation Ltd., which through its subsidiary, Federal Offshore Services of Dartmouth/Halifax, Nova Scotia, Canada, will join with one of Britain's largest offshore service companies, Seaforth Maritime Ltd. of Aberdeen, Scotland, to form Seaforth Fednav Inc.

Commenting on the plans of the new company, Fednav president Denis Murphy has indicated that, as well as conventional rig supply activities, opportunities would be sought in operations that require a higher technology. These would include diving support craft, offshore maintenance tasks, floating supply bases, and offshore personnel transportation.

Based in Dartmouth/Halifax, the new company, which is subject to approval by the Canadian Foreign Investment Review Agency, will provide a pooling of both expertise and vessels, and will have additional offices in St. John's, Calgary, and Houston.

The Seaforth Group has already received from the Canadian Minister of Transport permission to register a number of its vessels under Canadian flag, including two of its ice-classed vessels, Seaforth Jarl and Seaforth Highlander.

Federal Commerce and Navigation Ltd. is a subsidiary of the Montreal-based Fednav Limited, the largest international shipowning and chartering group based in Canada.

## Peter Popov Named International Affairs Officer For FMC

Peter Popov has been selected to serve as the Federal Maritime Commission's international affairs attorney. He will act as liaison between the FMC and maritime representatives of foreign governments, and will monitor the impact of foreign shipping laws and policies on the Commission's regulatory policies. He replaces Brien Kehoe, who is now serving as the FMC's general counsel.

Prior to his appointment, Mr. Popov worked for the general counsel of the Office of Federal Inspector for the Alaska Natural Gas Transportation System.

## New Control Valve Introduced By Leslie —Literature Available

Leslie Co. of Parsippany, N.J., recently introduced the Series '80—a completely new line of ANSI Class 150/300 diaphragm control valves. They are available in 1/2- to 4-inch sizes, with either cast iron, cast steel, or stainless-steel bodies, with threaded or ANSI flanged-end connections

that conform to standard ISA face-to-face dimensions.

These versatile, general-purpose valves are designed for use in steam, water, air, gas, and liquid applications. Size for size, they are said to provide more flow capacity than most competitive models, at lower initial cost. Reduced spare parts inventory and lower maintenance costs may be possible because of the complete

interchangeability of parts, and fast, easy removal in the field.

Tight shutoff and excellent throttling capabilities are provided by the full size or reduced trims. Trim and cage of 316 stainless steel are standard, with stainless-steel stellited trim available. For air or gas service valves, a resilient seat provides positive on-off control with zero leakage. Equal percentage and linear flow

characteristics are available in the entire size range. Modified linear (micro-taper) is available in sizes to 1 inch. An industrial-proven, self-energizing seal under the seat prevents leakage between seat and valve body.

For free literature and more information on the Series '80 line write to Walt Schweitzer, Dept. MR, Leslie Co., Parsippany, NJ 07054.

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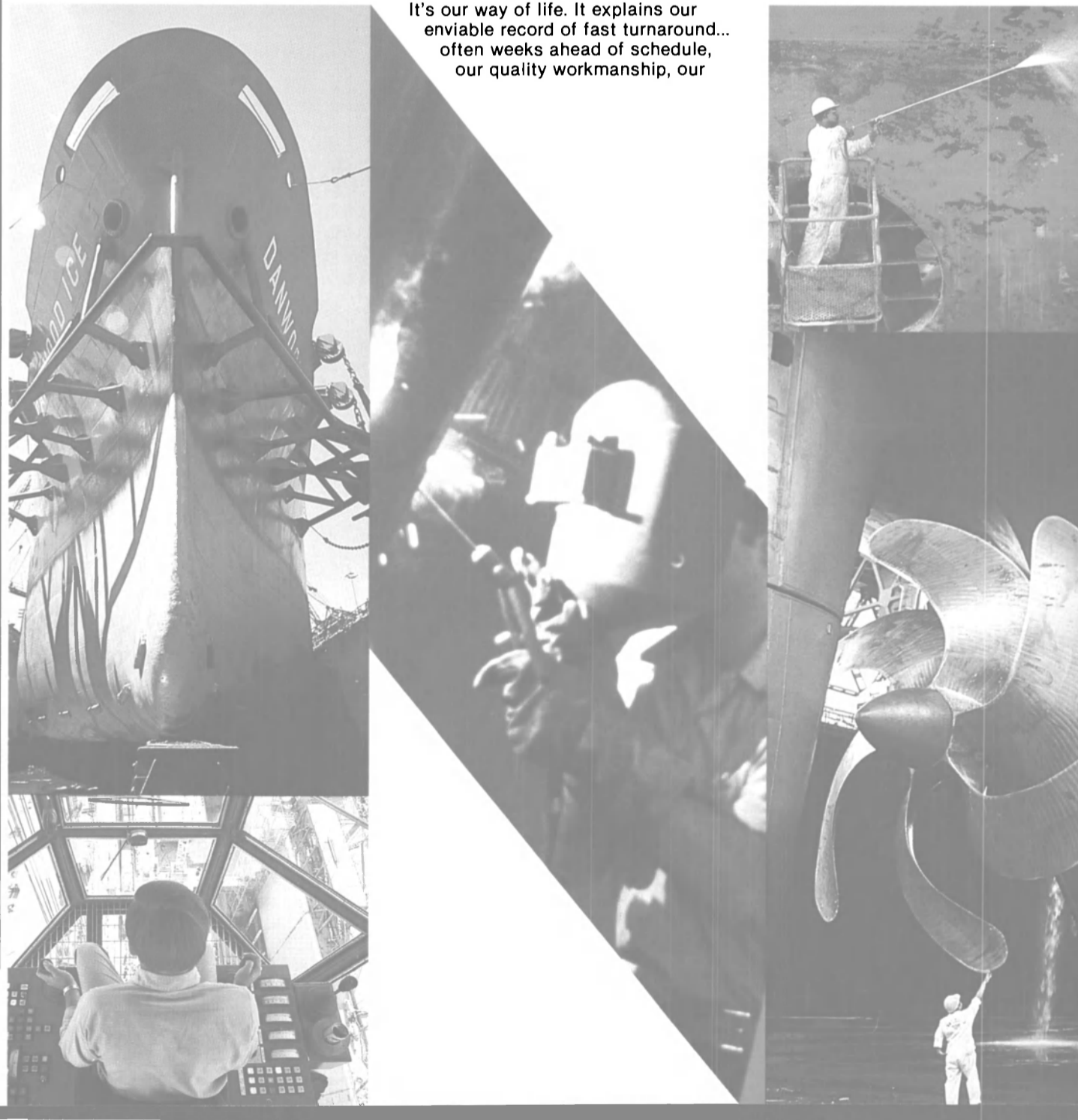
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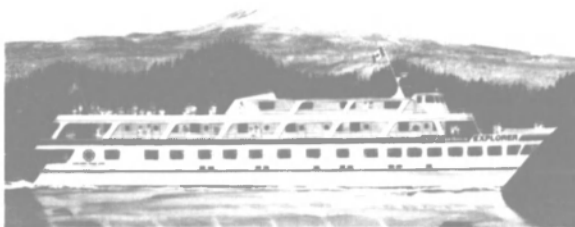
Newport News, Virginia 23607  
(804) 380-2000/Telex 82-3453  
TWX 710-880-0007



## Blount Marine To Build Mini-Liner For Explorer Cruises

Blount Marine Corporation of Warren, R.I., has announced the signing of a contract and the start of construction of a mini-cruise liner to be operated by Explorer Cruise Lines of Seattle. The vessel will cruise the waters of the Pacific Northwest.

To be named the Pacific Northwest Explorer, the vessel will feature four passenger decks and 41 staterooms, all with private facilities. It is fully air-conditioned, has a spacious lounge, a bar, and a large dining room that seats the full complement of passengers. There is generous deck space for sunning and viewing. A unique feature is a



Artist's conception of mini-liner Pacific Northwest Explorer, now under construction at Blount Marine Corporation for Explorer Cruise Lines of Seattle.

bow stair-ramp that allows passengers to go ashore in otherwise inaccessible areas, offering unusual opportunities to really explore.

Cruising at 12 knots, the vessel will be

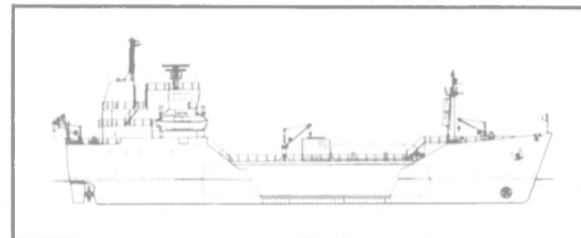
able to operate unrestricted between U.S. ports as well as on international voyages.

In addition to cruises starting at Seattle and covering the San Juan Islands and nearby Canada, cruises starting from Portland up the Columbia River, through Oregon, Washington, and into Idaho are being developed.

The 143-foot 6-inch by 28-foot by 7½-foot vessel is powered by two Deutz model BF-12M 716 diesels rated at 700 bhp each. Ship's power is furnished by two 80-kw generator sets. A completely equipped galley and tastefully equipped dining area makes the vessel a true floating hotel.

Delivery is scheduled for November 1980.

## Advanced Gas Carrier Launched By Moss Rosenberg



The 388-cubic-meter Northern Star, an advanced carrier designed to transport liquefied gases, was launched recently at the Moss, Norway, yard of Moss Rosenberg Verft AS. The ship was christened by Mrs. Martha Foght, wife of the managing director of Du Pont (U.K.) Limited, London, the vessel's owner.

Built to Lloyd's Register of Shipping classification +100A1 Liquefied Chlorine Carrier, the ship has an overall length of 64.50 meters, beam of 10.25 meters, depth of 4.50 meters, and draft of 3.20 meters (211.6 by 33.6 by 14.8 by 10.5 feet).

The ship has been built to rules and recommendations of IMCO Code for Construction and Equipment for Ships carrying liquefied gases in bulk, including all relevant amendments and special tentative requirements for chlorine.

The main engine is a Normo diesel type

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LDM-8 developing 1,375 bhp at 750 rpm. Speed at loaded draft is 11.3 knots. The engine is coupled to a Hjelset controllable-pitch propeller via a Volda/Liaaen reduction gear. Propeller speed is 294 rpm at 750 rpm on the engine. A transverse propeller is fitted in the bow, and the ship has an emergency diesel/electric plant that will provide a "take-home" speed of 7 knots.

The wheelhouse and cargo control room are designed as a gastight emergency survival compartment for the crew. It is equipped with comprehensive rescue and survival gear such as separate air and oxygen supply and a special first aid station.

A compartment for a chlorine absorption plant, including a tank for caustic soda, is arranged forward. The ship is built with one cargo hold containing one independent, cylindrical cargo tank with a capacity of 388 cubic meters. A cofferdam is installed between the cargo hold and engine room. The double bottom and side cofferdams extend from aft peak bulkhead to the forward end of the caustic soda tank.

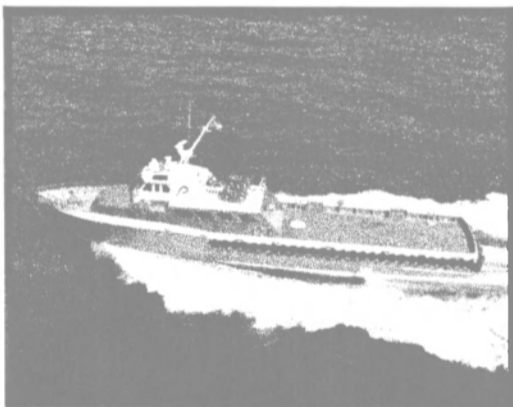
A crew of 10 is accommodated aft in fully air-conditioned quarters. There are single-berth cabins for all crew members, offering a high standard with particular attention to sound insulation.



**ANOTHER EARLY LAUNCH** — Flanked port and starboard by sister ships of the Oliver Hazard Perry (FFG-7) Class, U.S. Navy guided missile frigate **Flatley** (FFG-21) was launched recently by Bath Iron Works 19 weeks ahead of schedule. The launching marked a midpoint in the highest level of activity at BIW since World War II, when the yard built more destroyers than Japan did — 82 to 63. The Bath, Maine, shipyard has a peacetime record employment of about 6,000, an annual payroll of \$96 million, and a business backlog of approximately \$650 million.

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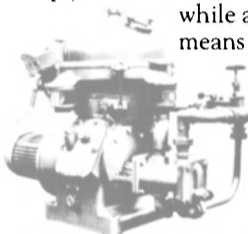
The De Laval® MAB centrifuge can keep your fuel and lube oil clean while at sea. Which means you decrease or even eliminate the need for lube oil changes. And you extend the life of bearings, cylinders, injectors... and keep your diesel engine in service longer.

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tinuously and efficiently. Units are compact, easy to install and maintain. Thousands are in use worldwide aboard small fishing boats, supply vessels, tugs, work boats, etc.

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**ALFA-LAVAL**



**PLM Investment Seeks Title XI For 40 Barges To Cost \$8.2 Million**

PLM Investment Management, Inc., a subsidiary of PLM, Inc., San Francisco, Calif., has applied for a Title XI guarantee to aid in financing the construction of 40 covered river hopper barges. The barges, which will measure

195 feet by 35 feet by 12 feet, will be operated on the Mississippi River and the Gulf Intracoastal Waterway.

If approved, the Title XI guarantee would cover \$7,199,000, or 87½ percent of the total actual cost of \$8,227,470. Equitable Shipyards, Inc., New Orleans, and Missouri Valley Shipyards, Inc., Leavenworth, Kan., are the proposed builders, with deliveries scheduled for mid-1980.

**More Offshore Orders For Gas Turbines Awarded To Rolls-Royce**

The application of Rolls-Royce gas turbines on offshore rigs in the North Sea continues to grow with the announcement of a multimillion-dollar order from Marathon Oil, U.K., for four gas turbine generating sets for the Brae Field Project.

With this new order, Rolls-Royce gas turbine business for offshore rigs now totals 90 engines representing two million horsepower, valued at more than \$220 million. North Sea operations account for 70 of these engines.

For the Brae Field Project, four Rolls-Royce Olympus-powered SK30M compact gas turbine generating sets, each producing 20,000 kw, are to be installed in 1982. Electrical power produced by the sets will be used during the development and production phases of the field when it comes on stream in 1983. Three of the four sets can supply the platform's total electrical needs.

The Olympus engines will be dual-fueled versions capable of operating on either liquid or gas, but for the majority of their operation will run on natural gas drawn direct from the Brae Field.

**Title XI Approved For \$3.4-Million Tug/Supply Boat For Marsea Marine**

The Maritime Administration has approved in principle an application by Marsea Marine Three, Inc. of New Orleans for a Title XI guarantee to aid in financing the construction of a 2,560-bhp tug/supply vessel.

Halter Marine's Lockport, La., yard is the builder of the 180-foot vessel, which is scheduled for delivery on October 15, 1980.

Estimated cost of the tug/supply craft is \$3,390,231, with the Title XI guarantee covering \$2,966,000 or 87½ percent.

Marsea Marine Three plans to operate the vessel in support of the petroleum industry's explorations for oil and gas in the Gulf of Mexico. The craft also could be employed on the U.S. East or West Coasts, the Caribbean, or other offshore oil regions of the world.

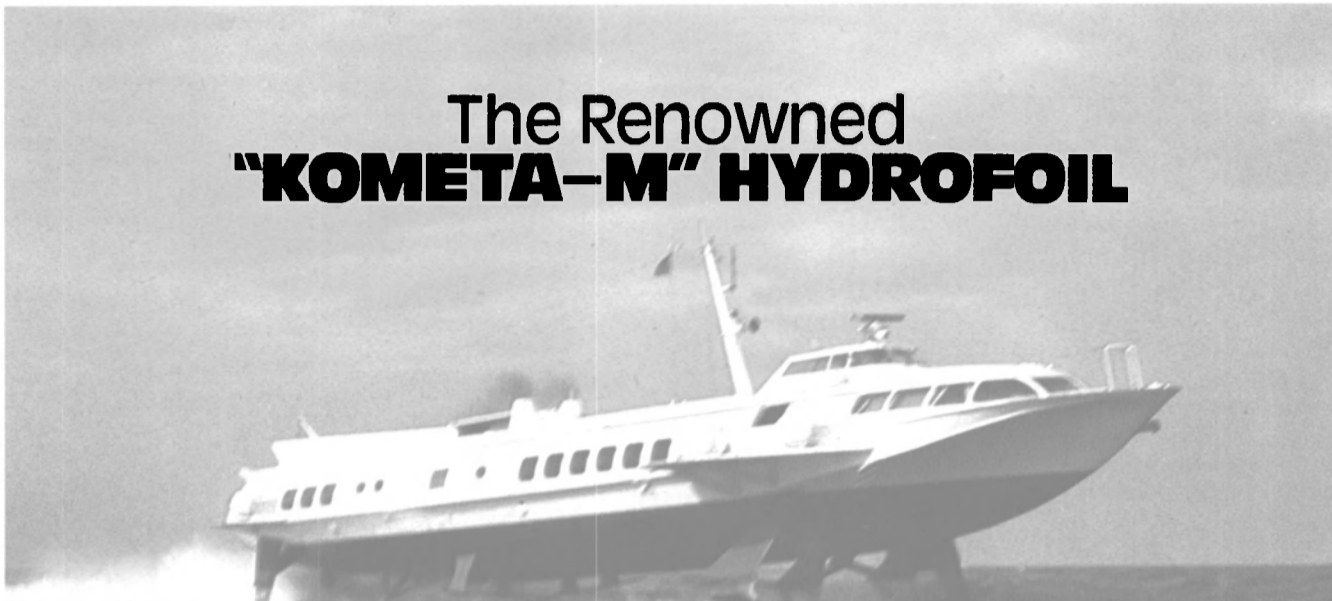
**Simrad Introduces New Digital Depth Indicator —Literature Available**

Simrad announces the new Skipper DI 202 digital depth indicator to complement the Skipper 603 and 802 echosounders. Its large, easy-to-read LED readouts have adjustable illumination for varying light conditions.

The DI 202 is said to be an ideal remote display, being compact, easy to install, and low in power consumption. The refined circuitry protects against false echos and gives a warning for unreliable readings. Range is switchable in feet, meters, or fathoms.

For further information on the DI 202 write to Gil Nelson, Dept. MR, Simrad, Inc., One Labriola Court, Armonk, NY 10504.

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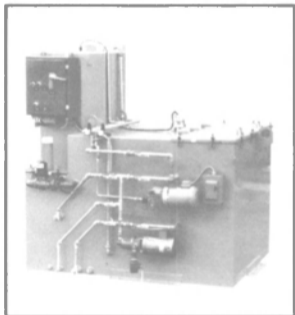
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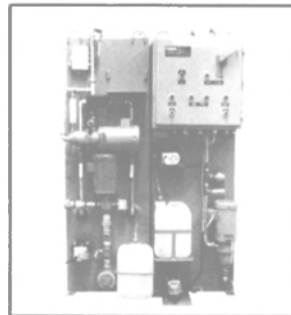
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### Modular Systems Gets Contract From Exxon For Rudder Systems

Modular Systems, division of Warren Pumps/Houdaille of Rockaway, N.J., has been awarded a contract for 49 rudder arresting systems by Exxon International Company. Each system consists of a skid-mounted pump, driver, directional, and relief valves completely piped and tested.

These systems are a result of Regulation 13 of IMCO 325 (IX) MSC XLI/9.

### Neville Jordan To Manage Magnavox London Operation

Neville Jordan has been named manager of Magnavox International Operations Ltd., succeeding M.J. Simmons who returns to the United States following a six-year assignment, to assume new duties with Magnavox Advanced Products and Systems Company, Torrance, Calif., the parent company.

Mr. Jordan was formerly managing director of Marine Safety Ltd., Wellington, New Zealand, a company he co-founded. He was for seven years previously a marketing manager for IBM Systems, and before that he was for five years an engineer with the New Zealand Department of Civil Aviation where he specialized in traffic control systems.

Mr. Jordan will be responsible for the marketing of Magnavox satellite navigation, point positioning and land survey, and Marisat communications user equipment in Eastern and Western Europe, the Middle East, Africa, and the Indian Subcontinent.

Concurrently, Magnavox International has relocated its London offices to Slough, England, near London Heathrow Airport. The new address is 470 London Road, Slough SL3 8QY Berks, England; telephone 073 46947, telex 847583.

### New Phoenix Dispenser Protects Welding Rods— Literature Available

Put up to 36 dry, flux-coated welding electrodes in the new Phoenix thermal electrode dispenser (TED) and they'll stay dry for 24 hours or more. Made of DuPont Zytel ST, super-tough nylon resin, DryRod TED is rugged, compact, and lightweight so it can be worn around the welder's waist, ready for action. It dispenses electrodes one at a time with the flick of the ejector rod. And it reduces waste and hazards due to accidentally dropped electrodes.

Hydrogen embrittlement, cracking, and porosity caused by hydrogen released when water is dissociated by heat are major welding problems. DryRod TED

increases the time electrodes can be carried on the job by protecting them against moisture, so welders can produce consistently higher quality welds throughout the shift.

For free literature and further details on the DryRod TED write to Don Warren, Dept. MR, Phoenix Products Company, 4715 North 27th Street, Milwaukee, Wisc. 53209.

### Hannah Marine Seeks Title XI On Barges To Cost \$16 Million

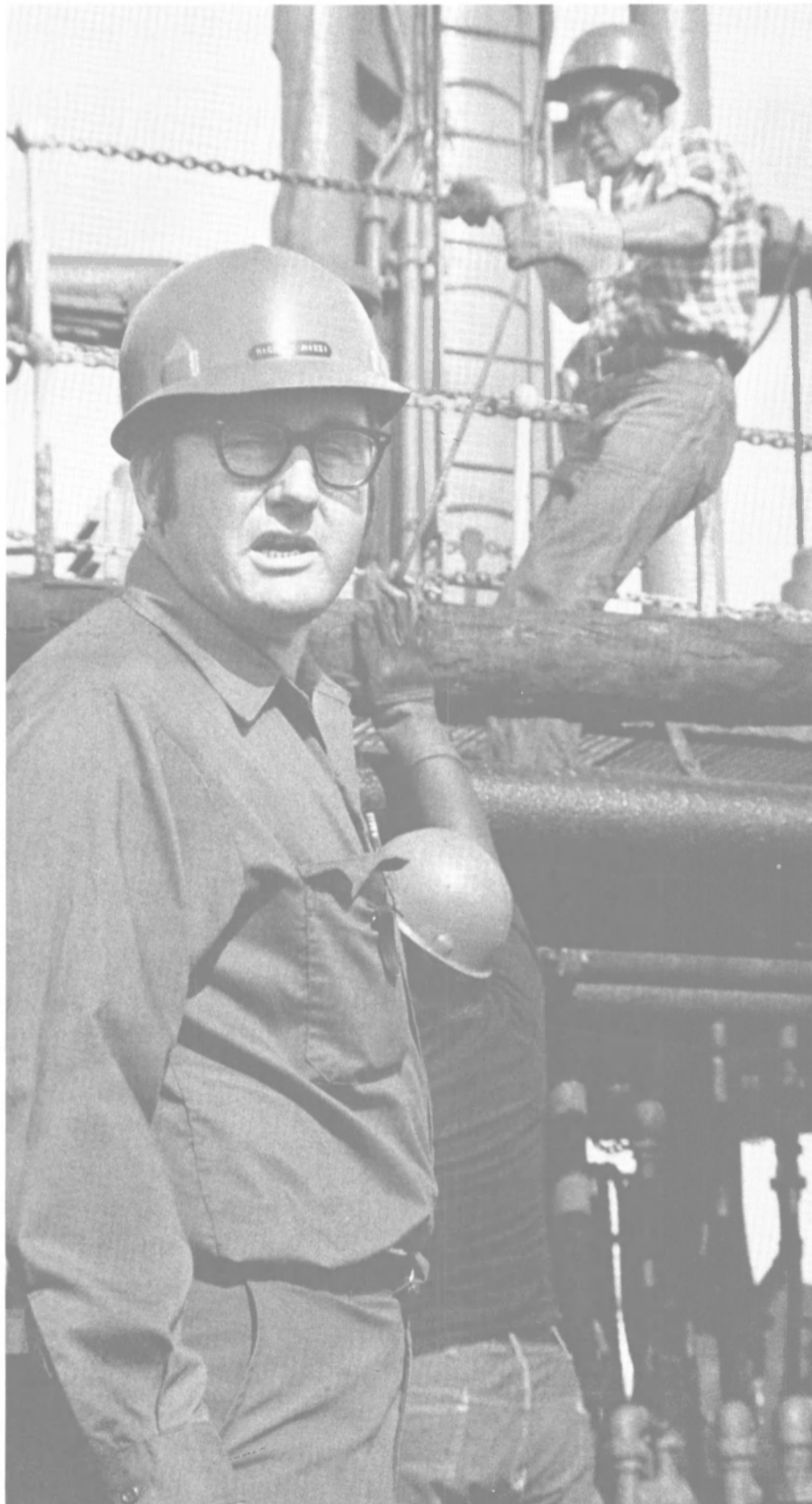
The Maritime Administration has received an application from Hannah Marine Corporation of Lemont, Ill., for a Title XI loan guarantee to aid in financing of four liquid cargo barges. One would have a capacity of 63,000

barrels, one of 40,000 barrels, and two of 30,000 barrels each.

The barges would operate on the Great Lakes and the Gulf of Mexico. Hannah Marine did not specify a builder, but plans for delivery of the barges in 1981.

If approved, the guarantee would be for \$13,844,000, or up to 87½ percent of the actual total cost of \$16 million.

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74 Trinity Place, Suite 1800  
New York, N.Y. 10006  
Tel. (212) 432-0350

## \$9-Million Contract Awarded By Navy To Surface Engineering

Surface Engineering Company, San Francisco, has been awarded a \$9,263,136 fixed-price contract for the regularly scheduled overhaul of the combat store ship USS San Jose (AFS-7). The Supervisor of Shipbuilding, Conversion and Repair, USN, San Francisco, Calif., is the contracting activity. (N62798-70-C-0009)

## Literature Available On Peabody Holmes Limited Inert Gas Systems

A new brochure, Publication 84, describing the inert gas systems for tankers designed and manufactured by Peabody Holmes Ltd. of the U.K. is available from the company's exclusive U.S. representative, Atco Marine Corporation of Brooklyn, N.Y.

During recent years standards

and regulations concerning safety at sea have become increasingly more stringent. Marine inert gas systems supplied by Peabody Holmes conform to the current requirements of a number of international bodies and associations including the American Bureau of Shipping, Det norske Veritas, Lloyd's Register of Shipping, the Inter-Governmental Maritime Consultative Organization, and the U.K. Department of Trade and Industry.

The technology embodied in the Peabody inert gas system is based on extensive practical experience gained during 40 years of plant design for industrial pollution control. The heart of the Peabody marine system is the impingement plate scrubber designed to give exceptionally high efficiencies for the removal of particulate matter and sulphur compounds.

This brochure contains a flow diagram showing the relationship between all components in the system, and an isometric drawing of the inert gas scrubber.

For a free copy of Peabody's Publication 84, write to **George C. Grimbilas**, Dept. MR, Atco Marine Corporation, 603 Dean Street, Brooklyn, N.Y. 11238.

## FMC Awarded Contract At \$7.4 Million For LVT Conversion Program

FMC Corporation, San Jose Ordnance Plant, San Jose, Calif., has been awarded a \$7,394,376 cost-plus-fixed-fee contract for long lead time parts, components, material, special tooling, and test equipment for the U.S. Marine Corps LVT7A1 conversion program. The Naval Sea Systems Command is the contracting activity. (N00024-80-C-2029)

## A.W. Huge Promoted To Comptroller At Bethlehem Sparrows Point Yard



Arthur W. Huge

Arthur W. Huge has been promoted to shipyard comptroller of Bethlehem Steel Corporation's Sparrows Point, Md., yard. The announcement was made by **Dirck W. Armitage**, assistant comptroller in charge of the corporation's operations accounting. Mr. Huge is succeeding **Kenneth K. George** who has been promoted to operations comptroller, shipbuilding, at corporate headquarters in Bethlehem, Pa.

Mr. Huge joined Bethlehem in 1967 as a member of the Loop course in management training and was assigned to the Sparrows Point yard. He assisted the construction and project engineers until 1971 when he was promoted to assistant superintendent, plant engineering. He served in that position until 1978 except for a two-year period in facility planning. He was promoted to the yard's accounting department as chief of profitability and cost analysis, his most recent position, in August 1978.

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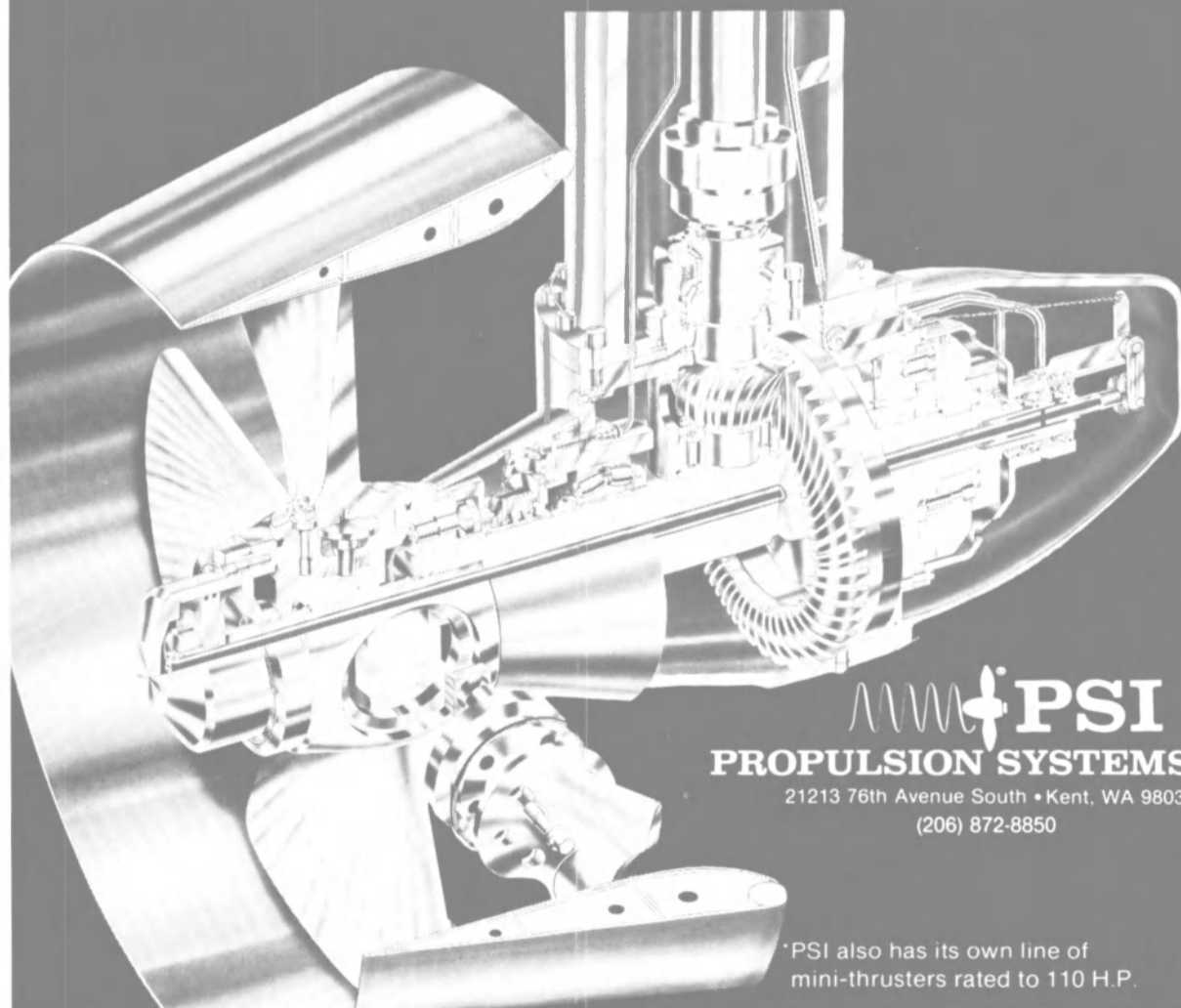
The basic unit consists of the well proven PSI/LIAAEN, E type, CP propeller mated to a robust, oil filled gear box which contains spiral bevel gearing and bearings, oil distribution arrangement and propeller pitch feed-back mechanism.

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Output of these new thrusters ranges from 800 HP to 6,000 HP continuous service.

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**W.A. Snell Appointed  
To Marketing Staff  
At J.J. Henry Company**

William A. Snell has joined the J.J. Henry Co., Inc., naval architects and marine engineers, as assistant marketing manager for the commercial sector, and will be based in the Moorestown, N.J. office. He will report to David F. McMullen, assistant vice president, and will be involved in all aspects of marketing to shipbuilders, ship repair facilities, and industry, with special emphasis on new business ventures.



William A. Snell

A graduate of the U.S. Merchant Marine Academy, Mr. Snell sailed in both merchant marine and Navy ships before coming ashore to attend law school. Prior to joining J.J. Henry, he acquired 20 years' experience in industrial sales and technical assistance to the shipbuilding industry with the Nelson Stud Welding Division of TRW, Inc., and most recently, as national sales manager for the KSM Welding Systems Division of Omark Industries.

**Senator Daniel Inouye  
Named 1980 Recipient  
Of AOTOS Award**

U.S. Senator Daniel K. Inouye, Democrat of Hawaii, Chairman of the Senate Sub-Committee on Merchant Marine and Tourism and architect of the Senate's Ocean Shipping Act of 1980, has been named the 1980 recipient of the Admiral of the Ocean Sea (AOTOS) Award.

The award, for distinguished service to the American Maritime Industry and given annually by United Seamen's Service, following a nationwide poll, will be presented at a gala dinner and dance September 26, 1980, at the New York Hilton.

On behalf of the AOTOS Award Committee, Shannon Wall, president of the National Maritime Union and chairman of the Committee, announced the Senator's selection at National Maritime Day ceremonies in New York on May 22. Senator Inouye is the 12th recipient.

The Senator was born in Hawaii. He has served in elective office since 1954, and when Hawaii gained statehood became its first Congressman.

Besides serving his country as

an elected official, the Senator has a distinguished record of military service as well. In 1943, when the 442nd Special Regimental Combat Team was formed composed entirely of Americans of Japanese descent, he left his medical studies at the University of Hawaii to join this regiment which was to become famous in the annals of the U.S. Army.

**Houtech Asks Title XI  
On Two Drilling Rigs  
To Cost \$26 Million**

Houtech Limited I of Houston has applied to the Maritime Administration for a Title XI guarantee to aid in financing construction of two offshore jackup drilling rigs.

Both rigs are intended for op-

eration in the Gulf of Mexico. The applicant has named Bethlehem Steel's Beaumont, Texas, yard as the proposed builder of both rigs. Houtech expects delivery in September or October 1981.

If approved, the Title XI guarantee would be for \$19 million, or up to 75 percent of the actual cost of \$26 million.

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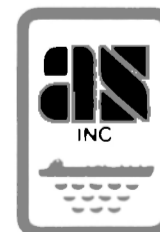
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## Calendar Of Coming Events

**KORMARINE '80** July 28-Aug. 4

*International Shipbuilding, Marine Equipment, Ports & Harbors Exhibition organized by Industrial and Trade Fairs Ltd. (ITFL).*

Exhibition Centre, Seoul, Republic of Korea. Contact **Tony May**, sales manager, ITFL, Radcliffe House, Blenheim Court, Solihull, West Midlands B91 2BG, England; telex 337073.

**NORFISHING '80** Aug. 11-17

*International Fisheries Fair organized by the Norwegian Directorate of Fisheries in collaboration with the Norwegian Fair Organization.*

Nidaro Hall, Trondheim, Norway. Contact **Mrs. Else-Marie Gehrken**, information consultant, Norwegian Fair Organization, P.O. Box 130, Skoyen, Oslo 2, Norway; telex 18748.

**Offshore North Sea 1980** Aug. 26-29

*International Technology Conference and Exhibition sponsored by the Norwegian Petroleum Society.*

Siddishallen Exhibition Centre, Stavanger, Norway. Contact Offshore North Sea 1980, P.O. Box 410, 4001 Stavanger, Norway; telex 33250.

**International Symposium on Ocean Engineering & Ship Handling** Sept. 17-18

*Sponsored and organized by the Swedish Maritime Research Centre.*

Gothenburg Convention Bureau, Parkgatan 2, S-41138 Gothenburg, Sweden.

**Shipboard Energy Conservation '80** Sept. 22-23

*Symposium sponsored by The Society of Naval Architects and Marine Engineers and presented by the New York Metropolitan Section.*

Waldorf-Astoria Hotel, New York City. Contact **John C. Daidola**, c/o M. Rosenblatt & Son, Inc., 350 Broadway, New York, N.Y. 10013; (212) 431-6900.

**Ship Operations Symposium** Sept. 23-25

*Sponsored by the Maritime Association of the Port of New York, and others.*

Downtown Athletic Club, New York City. Contact the sponsor at 80 Broad Street, 34th Floor, New York, N.Y. 10004; (212) 425-5704.

**Exhibition & Congress: Ship, Machinery, Marine Technology Int'l** Sept. 23-27

*Organized by Hamburg Messe and Congress GmbH.*

Fair Grounds Exhibition Centre, Hamburg, West Germany. Contact the organizers at Tungiusstrabe 18, Messehaus Postfach 302360, Hamburg 36, West Germany; telex 0212609.

**International Oil Pollution Prevention Exhibition & Conference** Sept. 23-27

*Organized by Hamburg Messe and Congress GmbH.*

Fair Grounds Exhibition Centre, Hamburg, West Germany. Contact **Millard F. Smith**, c/o Slickbar, Inc., 250 Pequot Avenue, Southport, Conn. 06490; (203) 255-2601.

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Marine

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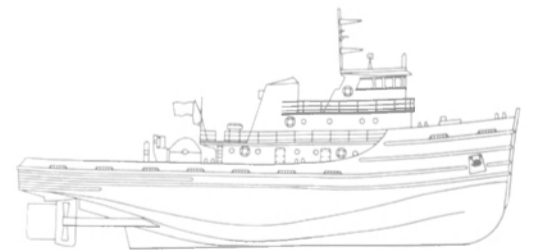
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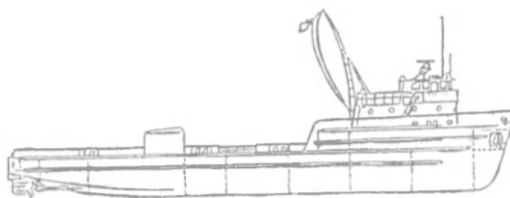
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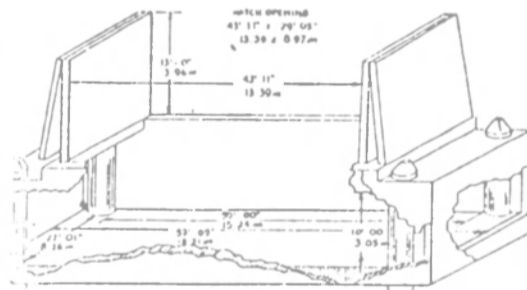
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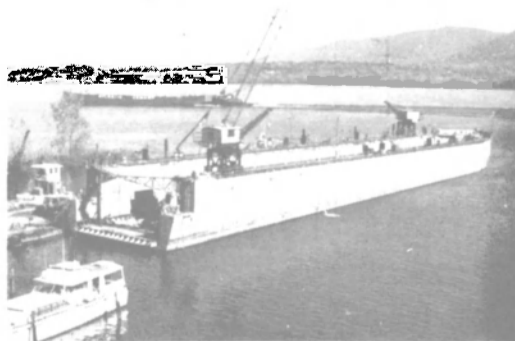
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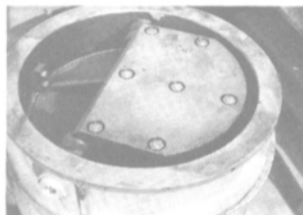
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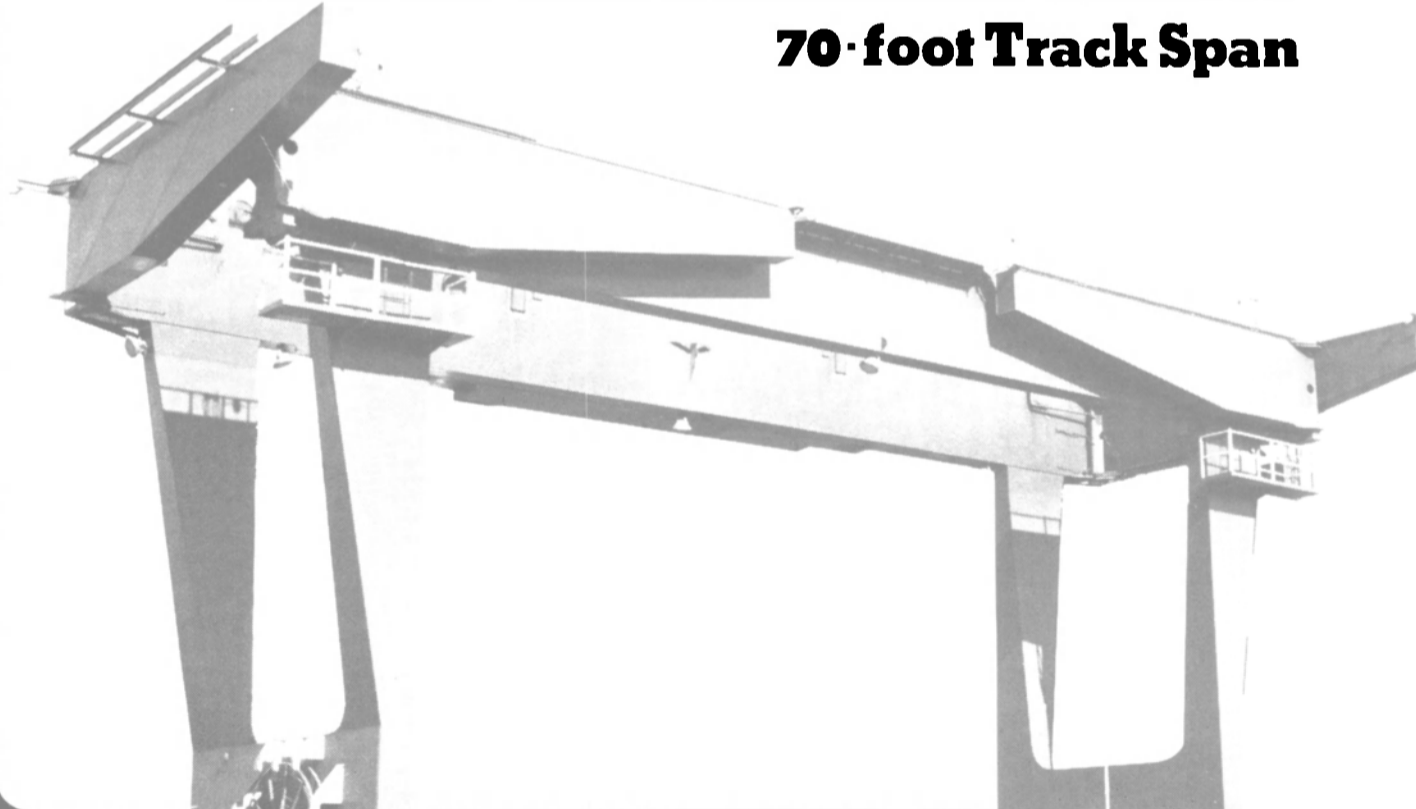
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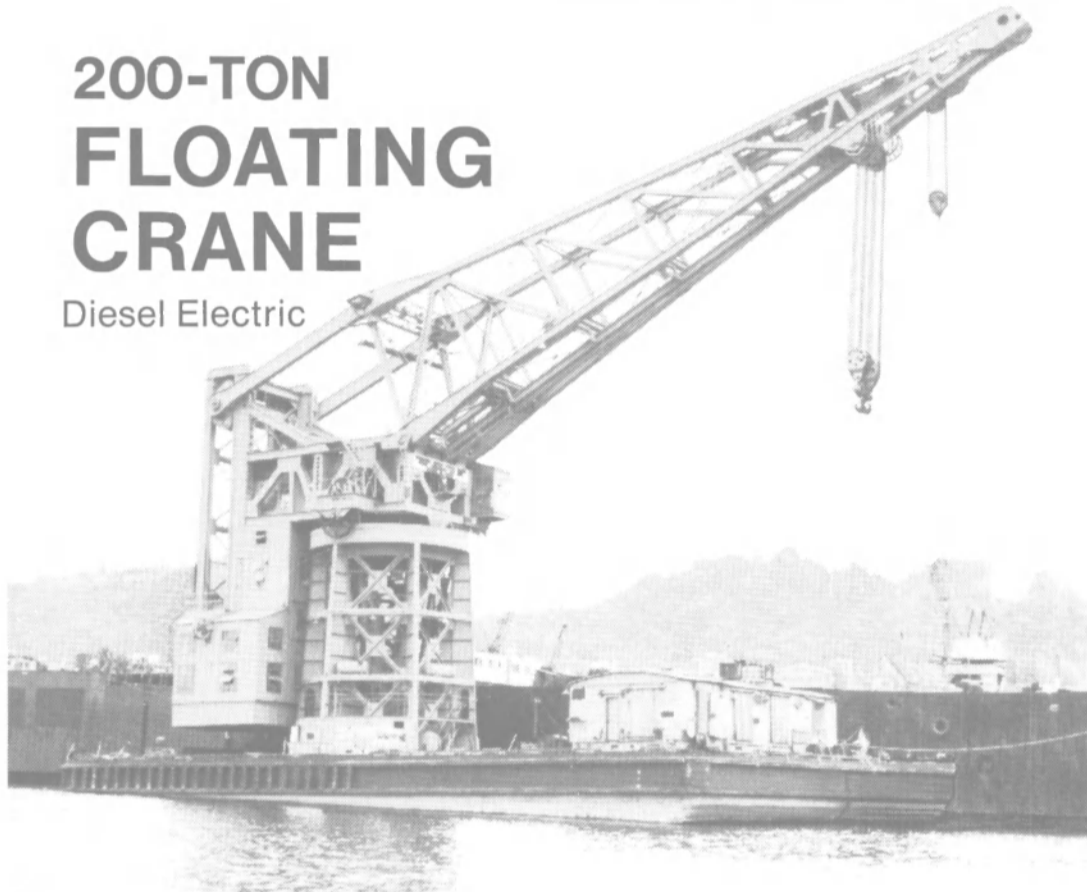
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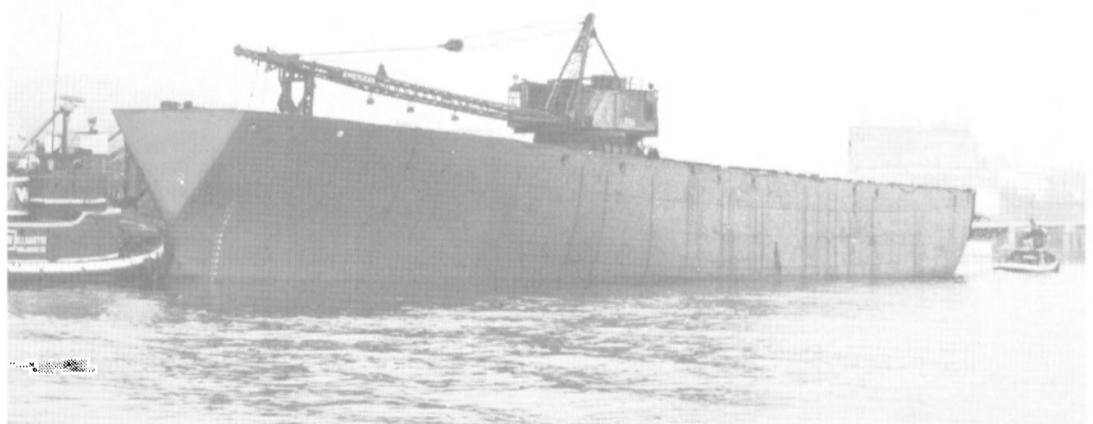
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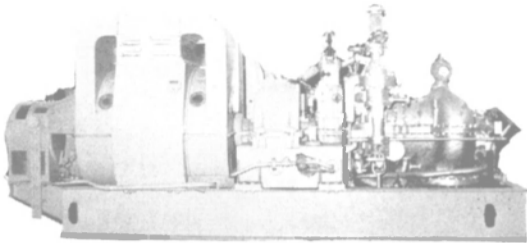
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**UNITED STATES MARSHAL'S SALE.** In the United States District Court for the Western District of Louisiana, Monroe Division. The Merchants National Bank of Mobile, Plaintiff, vs. the Dredge GENERAL G. L. GILLESPIE, ET AL. etc., Defendants. Louisiana Land and Water, Inc., Boat, River and Canal, Inc., Production Aggregate and Gravel, Inc., Sealane Aggregates of Alabama, Inc., and Berme Bierman, Counterplaintiffs, vs. The Merchants National Bank of Mobile, Radcliff Materials, Inc., Southern Industries Corporation, Dravo Corporation, Dravo Leasing Company, Ken L. Lott, Melvin Coxwell, Dudley Dawson, and Ball-Co Contractors, Inc., Counterdefendants: Civil Action Nos. 79-0986, 79-0987, 79-0988, 79-0989, 79-0990, 79-0991, 79-0992, 79-0993, 79-0726 (Consolidated Cases)

By virtue of Order of Interlocutory Sale issued out of the United States District Court for the Western District of Louisiana, signed April 25, 1980, notice is hereby given that I will sell at public auction on the front steps of the Federal Building, 201 Jackson Street, Monroe, Louisiana, at 12:00 o'clock Noon on the 30th day of June, 1980, without benefit of appraisal, the Barge ARLINGTON, the Dredge GENERAL G. L. GILLESPIE, the M/V YSD 69, the Barge YNG 23, the Tug WARREN HOUGHLAND, the Barge ADDSCO 606, the Tug MAI, the Dredge WINDHAM, and the M/V YSD 33, their engines, hulls, tackle and apparel. Prospective bidders may, upon application to the Marshal and at such times and in such manner as he may direct, board the said vessels for the purpose of inspection thereof, provided that same shall be at the sole expense and risk of any said person or his representative, at said sale the ARLINGTON will be offered and sold separately from the other vessels; the other vessels will be offered for sale alternatively—first, separately and individually, and second, collectively as a unit—and the sale of the other said vessels shall be made on the basis of that one of said alternatives that will produce the greatest aggregate amount; each sale shall be to the highest bidder, who will be required to deliver to the Marshal at said sale earnest money, in cash or certified check, amounting to not less than ten per cent (10%) of the bid price, the balance thereof to be paid in cash or certified check before confirmation of the sale; said earnest money shall be forfeited in the event of the default of the bidder. If, within three (3) days, no written objection is filed, the sale shall be confirmed as of course, provided that no sale shall be confirmed until the buyer(s) shall have performed the terms of the purchase. In the event no objection to the sale shall have been made, the cost of keeping the property pending confirmation shall be paid out of the proceeds of the sale, except that if the confirmation is delayed by failure of the buyer(s) to pay any balance which is due on the price, the cost of keeping the property shall be borne by the buyer(s) after the three (3) day period shall have elapsed. In the event an objection to the sale(s) is filed, the objector shall be required to deposit with the Marshal at the time of making such objection, an amount equal to ten per cent (10%) of the bid price for each vessel as to which objection is made for application on the cost of keeping the property pending the determination of the controversy by the Court; in default of the making of such deposit, the objection shall stand overruled without affirmative action by the Court. If the objection is overruled, the cost of keeping the property during its pendency shall be borne by the objector; confirmation of the sale of each vessel to which objection is not made as herein provided shall stand, notwithstanding the making of such objection(s) as to other vessel(s). All of the above pursuant to Order rendered May 7, 1980 in the United States District Court for the Western District of Louisiana. Emmett G. Wyche, United States Marshal, Western District of Louisiana, Shreveport, Louisiana

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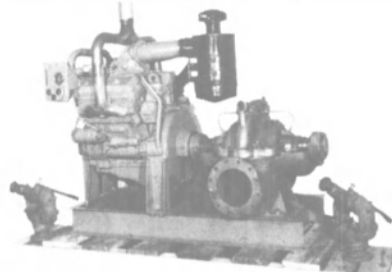


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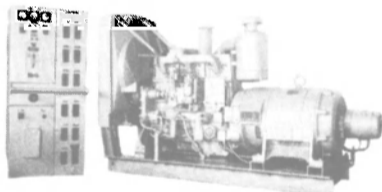
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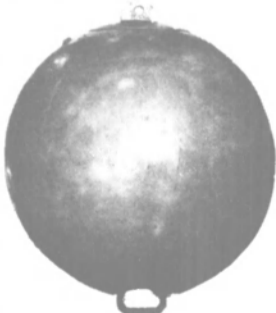


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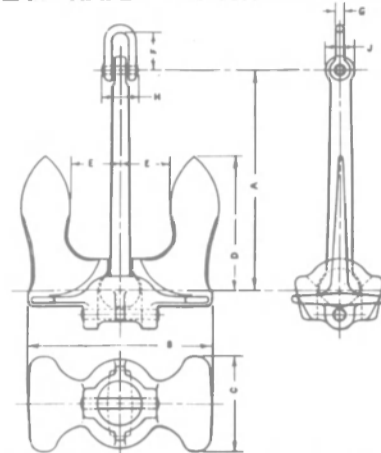
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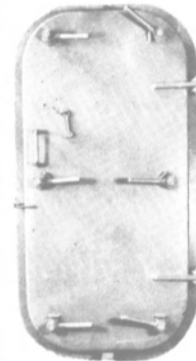
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**Steel Dogs**



6-Dog right and left hand hinged doors with frames. Constructed of 1/4" steel plate and meet Coast Guard regulations for above deck as well as below deck use. All dogs are bronze bushed.

**SIZE**

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

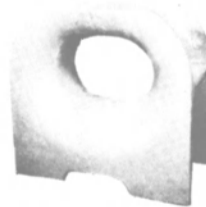
EACH DOOR

**IMMEDIATE DELIVERY**

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 PANAMA CHOCKS**

(MEET PANAMA REGULATIONS)

14" X 10" CLEAR OPENING



With extended legs for welding to deck. 14" Wide on base—length 28"—height 27¼". IMMEDIATE DELIVERY FROM STOCK.

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