

TOW LINE

Winter 1967



ON THE COVER—



THE INCOMPARABLE PLEASURES of travel by sea have not diminished in recent years. Nostalgia aside, the fact is that modern passenger liners most ably reflect our ever rising standard of comfort and luxury ashore.

For those who remember the excellence of the Norddeutscher Lloyd passenger services of the early twentieth century, we offer this fine Brenet painting of their modern counterparts in service and accommodation — the *Bremen* and the *Europa*.

With these two outstanding ships plus the new *Hanseatic*, the North German Lloyd and the more recently formed German Atlantic Line have consolidated their trans-Atlantic and cruise passenger services.

The yacht-like 23,000-ton *Hamburg*, the first major German passenger liner to be constructed since 1938, is expected to join this threesome early in 1969.

Travel by sea will continue to be an incomparable pleasure for years to come.

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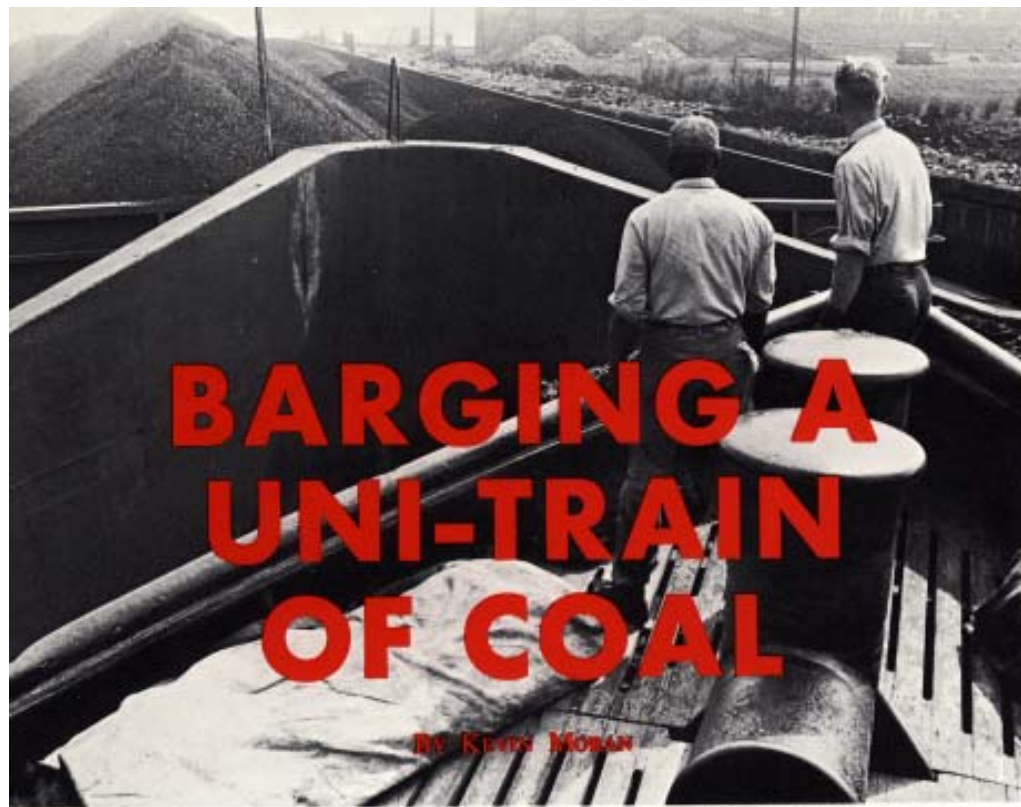


**POWER
EN ROUTE**

(See Next Page)

BARGING A UNI-TRAIN OF COAL

By Kevin Moran



DECKHANDS ANDY PAAL and Knut Johanson stood ready to board the C.L.&P.1 barge at South Amboy (1), putting the port side security line (2) and the starboard cable (3) aboard the *Carol Moran*. Knut at the windlass (4) tightens a pushing cable and Andy passes the starboard security line. With the *Carol* secure in the pushing notch (6) Mate Sy Vercelli backs down the heavily-loaded barge.

THE CAROL MORAN, Capt. Tom Sorensen in charge, picked up Jeff and me at Pier 1 around 11 A.M. on September 20th. The tug was scheduled to run to the loaded coal barge *CL&P II* at South Amboy and take her to the Norwalk, Conn. power station. (The operation calls for handling four identical barges loading at South Amboy or Jersey City and delivery at Norwalk or Montville, on the Thames River, Connecticut.) Jeff and I were there to cover the story, or at least part of it.

It was a fine September morning (a few days before the *Queen Mary* made her adieu) as we climbed aboard and headed down the Upper Bay to Constable Hook, the entrance to the Kills. It's appreciably shorter to go "inside" to Amboy, rather than out under the Verrazano Bridge and around into Raritan Bay. With a 290-foot, 7,000-ton barge, however, there are other considerations, as we shall find out.

We said hello to Capt. Sorensen and his Mate, Sy Vercelli, and were shortly called for chow, where we met some others. Except for the Chief Engineer and the Cook the crew of the *Nancy* had been shifted, with the barge assignment, to the *Carol*; a small detail perhaps, but it showed once again the thoroughness . . . and the headaches . . . of the Personnel Department. It made sense to have Chief Wes Lewis stay with the *Carol's* machinery, he knew her best; and it was equally prudent for the *Nancy's* pilothouse crew and hands to handle the barge, it was their regular work.

As the *Carol* proceeded into Kill Van Kull we were up in the pilothouse chatting with the mate, having our coffee, jackets off, Jeff fiddling with one of his cameras, a big buff-colored, gunwhales-down barge coming at us starboard-to-starboard. Sy said she was a big one, 68,000 barrels, the *Ethel H.*, a Hess job. She was a big one; I looked her up later: 305 feet long.

Our Port Richmond repair plant came into view. I didn't notice the *Nancy* at the time . . . it was only later that I learned she was "in" for the installation of what Eugene Moran III called a "centralized control system" . . . but I did see two *Patricia*-class

tugs tied up at pier-end looking big, bright and sassy. You don't realize just how huge these tugs are until you see them against a less-than-skyscraper-scale background.

We passed under the Bayonne Bridge, nothing ahead of us in that vast intersection with Newark Bay. Out of the corner of my eye I saw Sy's arm point off the starboard bow. "That's where my boy got it," he said quietly. He lowered his hand pointing to a spot in the brackish water. I felt my mouth tightening: for some reason I hadn't realized *this* man was the father spoken about at the time of the *Alva Cape* explosion who had lost his son on the *Esso Vermont*. I couldn't think of anything to say. Jeff was silent too. The tug swung past Shooters Island and was headed into Arthur Kill.

As we approached the coal dock with its barge lying bow into Raritan Bay the wind kicked some spray over the tug rail. Jeff got to work taking deckhand shots as we eased into the stern notch and secured the barge's wire cables to our after bits. I, the worrier type, asked Vercelli about the wind problem. He said that if the wind got any worse they would have to go inside, the same way the tug came, which they didn't like to do. As for taking the barge on hawser across the flats, the outside way, he said the narrow channel turns in Ward Point Bend made that difficult. I could see the importance of weather in the whole operation. Sy didn't seem unduly concerned, however. I suppose, after you've done something a few hundred times you had better not be "unduly worried".

Vercelli tried to get a weather report on the radio but about all they were offering at the moment was 12 miles per hour (miles! per hour), SE, in Central Park. Where we were it was on the verge of gusting easterly . . . more than enough to send fine, swirling clouds of coaldust around the tug housing.

I stepped out of the pilohouse and looked over the loading terminal. Marty Carroll (Assistant to the President, Moran Towing Corp.) had told me that each barge could take an entire train of coal cars. An in-and-out rail operation instead of piling up

(Continued on page 19)

IT WAS DUSK as the C.L.&P.1 pushed up the East River (7). Captain Sy Vercelli (8) joined Chief Engineer Wes Lewis and his assistant, John Joyce, in the galley for coffee (9). Chef Al Waage prepared dinner (10). Shortly after midnight Captain Tom Sorensen at the aft controls (11) neatly brought the empty C.L.&P.2 away from her berth at Norwalk for the return tow. Photo 12 shows the *Diana L. Moran* placing the C.L.&P.1 into her Norwalk berth on a daylight trip.



The Story of a Pier and What It Can Teach About World Trade and the Port

BY FRANK O. BRAYNARD

PIERS A, B, AND C ARE BIG PIERS. They are in Hoboken, in the shadow of Stevens Institute of Technology's skyscraper college. Operated by the Port of New York Authority, these three huge piers are used by American Export Isbrandtsen Lines which serves the Mediterranean and Far East. It's an eyeopener to spend a morning in an area like this and see the real nuts-and bolts of world trade.

Some immediate impressions are:

- (1) The contrast between shipments of old wooden barrels and ultra-modern containers.
- (2) The anachronism of certain American exporters who persist in using English instead of the language of the country to which their export is going for all necessary shipping information on the crates involved.
- (3) The striking industrial growth of Israel, the relatively primitive standing of some other Mediterranean lands.
- (4) The importance of imports and exports to the hinterland of America.

Let's start with imports. We saw imports from Israel, Italy, Spain, India, France and Greece on Piers A, B and C.

From Israel there was a surprisingly wide variety of products, ranging from ordinary cotton and glassware to insulation board for use in American house construction.

From Italy there was a beautifully-made racing speedboat en route to some lucky buyer in Fond du Lac, Wisconsin. Only the highly-polished transom was visible under the wrapping, but from this hint it was clear that here was a highly refined and expensive toy. The boat was about 18 feet long and was labled "Molinari," a name that somehow rang a bell.

There were also crates of ceramics from Italy, and boxes of art works from Florence. (A friend wondered if they were wet.) They were marked "fragilissimo," a word that needed no English translation. Not far off were several very large crates bearing a roughly-drawn stencil of an accordion. No doubt what they contained.

Third Officer Albert Wilson, aboard the freighter *Exford*, tied up at Pier C, tipped us off to a most interesting Italian import that we did not see. Two

gondolas. Of course, they were from Venice. They were in the ship's forward hold, and were so tightly packed in with other cargo that we could not have seen much had we gone below. One was consigned to New York and the other to Baltimore.

From Spain we saw olives, wine with fruit juice added, cashew nuts and cashew kernels. The olives, which came in brine, stuffed, and green, were packed in ancient-looking wooden barrels, much the same as they were shipped in the days of Columbus. But the Spaniards were right on their toes in another way — the stenciled identification and shipping instructions were in English!

Great burlap-covered square cartons of tea and bales bringing cotton from India made mountains near the outer end of the pier. There were also masses of boxes whose identification markings we could not understand, hinting at the mysteries of the East.

Strange to say France was represented by only one item. It was mica. A Pennsylvania Railroad covered barge was moored at the pier's end, and two dirt-covered longshoremen were loading 100-pound bags of it aboard for transshipment somewhere.

The contrast between this work and the many labor-saving devices we saw in use was striking.

For example we spotted at the other end of Pier C mastodon-like "fork lift" trucks capable of carrying 30-ton containers. Such trucks stagger the imagination. They are yellow giants, and their twin lifting forks extend forward almost at ground level, and embrace the underpart of a container like outreaching arms. Then, at the pressure of a button, up they lift, container and all, up and up even to the level of the truck top. With the container in this seemingly-impossible position, the fork truck will then defy all laws of balance and move quickly

this way or that. There were also fork lifts for "little" loads of five tons or under, and for objects weighing up to 18 tons.

Greece was represented on the piers with uncrated cartons of glassware, whose cardboard coverings barely bore stenciled pictures of beautiful goblets. There was a double purpose to these stencils: to show which was "up" and to suggest gentle handling. There were also bales of cloth from the Aegean Mills in Athens.

Greece also produces olives. There were seven rows of barrels, 25 to 27 barrels to the row, awaiting shipment on to Chicago. Their Athenian producer was remarkably familiar with ways of the American market — not only did he use English in his shipping instructions, but his barrels were colored keyed. Blue-ended barrels contained "giant" or "colossal" olives in brine. Green-ended barrels brought stuffed olives modestly described as being "super colossal."

Range of Exports

Again Israel topped the list for diversification and variety. There was an odd looking contraption that can only be described as right off the Rube Goldberg drawing board. It was a combination condenser-evaporator bound for Haifa. It weighed 6,700 pounds and came from the Trane Company factory in La Crosse, Wisconsin. We were glad to notice a colored, clasped hands insignia of international goodwill through trade showing that it had come from the U. S. A. More companies should use this attractive stencil.

Three Brinks armored cars were also bound for Haifa. They were numbered A 67106, A 67107 and A 67109. We casually wondered where A 67108 had gotten lost. They were International "Loadstar" model trucks with special bodies made by Remke. The Brinks seal was stamped here and there, a pair of golden eagle wings supporting an ancient and well-strapped money chest.

Still another shipment to Israel gave us a fine illustration of why containers are producing the revolution they are in shipping the world over. Containers are great truck-body-type boxes. In many instances they are

truck bodies, trailer truck bodies that is. Not far from the Rube Goldberg machine and the armored cars we saw 10 open containers being loaded by hand. They were of the twenty-foot variety, great big boxes. They were being loaded with cartons of nylon made by DuPont. Each container could take 54 cartons, and each 250-pound carton held 16 spools. There was enough nylon here to circle the world. It was bound for a tire factory in Israel.

Containerization

We chatted with a DuPont man on the spot. He said that usually such shipments are loaded into containers at their plant. This batch of nylon came from the DuPont factory at Chattanooga, Tenn. He was enthusiastic about the philosophy of container shipments as opposed to the older method of shipment by lots of cartons.

"We practically never see insurance claims against us any more," he nodded.

"Containers mean we can deliver a good, clean carton, fresh out of the factory, without a smear or smudge not to mention a dent or break, and this is very important in the competitive picture we have today," he added.

The nylon spools have to be packed as carefully as if they were TV tubes, we learned. They are suspended in air within each carton by corrugated stuffing. Only two layers of cartons are permitted in each container, leaving considerable air space on top. It would be fatal to permit the nylon thread to be crushed or dislocated on the spool or jarred out of its even unrolling pattern, for the spools are used on fast moving machinery.

"Nylon is one of the world's most desired commodities," our DuPont friend pointed out with a confident grin.

"They make everything but food out of it nowadays."

The cost of labor on the pier is greater than the cost of carrying cargo across the ocean. By loading directly at the factory and unloading at the point of destination, much of the high cost of pier labor is bypassed. Under the old way the cargo had to be unloaded by hand from each truck upon arrival at the pier, moved along ship-side and then loaded into the ship.

Frequently it would have to be moved one or more times within the ship, and then the entire process would be repeated at the port of destination. All this is largely bypassed with containers, with one loading at the factory and one unloading at the consumer's door. There is another saving. With sealed containers thievery on the docks (pilferage) is cut to a minimum. In the long run, the container revolution will mean fewer but much larger ships.

One other thought struck us as we left the DuPont man and his emergency, rush shipment to Haifa. We realized that on the same pier on the same day we had seen Israeli nylon arriving at New York for an American buyer and American nylon leaving New York for an Israeli buyer. Marvelous business, world trade.

Best Foot Forward

The reach of American good will by exported machinery was illustrated in another shipment, one for East Pakistan. It was a green, fuel or water tank truck. A paper label pasted on the truck's cab door said it was going to be used for the Brahmaputra Flood Embankment project. It was an International Diesel # R. 190 truck with four-wheel drive. The back wheels each had twin tires, and there was a spare, all made by Firestone. We could just picture their tremendous rubber tread fighting along muddy river banks and grinding up and over dikes.

Another "best foot forward" export was the Mobil Trade Fair containers we saw stacked on Pier A. The American Export Isbrandtsen Lines have pioneered in this project. Each container displays the produce of different American manufacturers who ship on this company's ships. A "continuous belt" display has been working for several years, with each departing freighter taking a new container and leaving it at the first port of call, picking up the container left there by the previous ship and taking it to the next stop. Splendid idea!

Next we stopped and examined a large wooden crate going from Michigan to India. It measured about 24 x 7 x 7 feet. Each side was made up of 46 pieces of inch-thick pine boxing. The crate was strapped together top and bottom by steel bands made by Signode, of Chicago. The address was

stamped in two-inch black stencil letters. From the Hanchett Mfg. Co., Big Rapids, Mich., to Fort Songad (Dist. Surat), via Bombay. It contained a knife grinding and saw sharpening machine.

World Trade Axis

Multiply this three-pier complex by several dozen and you can see why New York is the world's greatest port.

Each year 27,000 ships move in and out of the port. There are berths for 400 vessels, and if you stretched the improved waterfront out into one continuous line it would reach almost to Bermuda. Eleven railroad lines join with the shipping companies and airlines to link the port with the rest of America. Some 10,000 long-haul trucks serve the port each day. Nearly half a million people work in shipping and related professions. Their families total well over 3,000,000 people, meaning that — directly or indirectly — the port feeds one out of every four persons living in the port district.

These people are only the beginning, for one-tenth of all America's produce and production is sold abroad. This vast flood of exports represents the greatest movement of trade in the history of man. Growing and manufacturing these exports means work for 6,000,000 Americans, whose families include another 30,000,000. This means, if we figure it out in percentages, that one out of seven Americans is dependent upon overseas exports. Salt in those who handle, sell or use the correspondingly massive flow of imports from abroad and we have at least another 30,000,000 people whose living is supported at least in part by world commerce.

Did you know that the typical American automobile requires 300 parts from 56 foreign countries. Next time you ride in a car try to picture which parts come from where. The chances are that a goodly percentage came via the Port of New York.

Eighteen of the 37 most important materials that went into making your home's telephone came from abroad. It would probably be next to impossible to make either a car or a telephone if we used only the materials available in the United States. Certainly a good part of the telephone came via New York port.

It was certainly an interesting morning.

FROM

GREENLAND



JOAN Brings Power Barge Back From Greenland Base

AS ONE OF HER FIRST assignments the new *Joan Moran*, 4,300 hp, went to Greenland. She towed back the 338-foot floating power plant YFP-10. The 3,300-mile tow was made in 14 days at an average speed of 10 knots.

Captain Helge Monrad, the *Joan Moran's* master, was enthusiastic about the new tug.

"Everyone and everything on the tug worked well," he said, with a grin.

The run from New York to Thule was also made in excellent time. The *Joan Moran* left New York on August 4 and arrived at the Greenland port 11 days later.

There were small bergs and growlers, but the ice was not too bad, Captain Monrad added.

"One night we passed one that must have been 200 feet high, with a hole in the middle at about water's edge. They all seem to have holes in them somewhere."

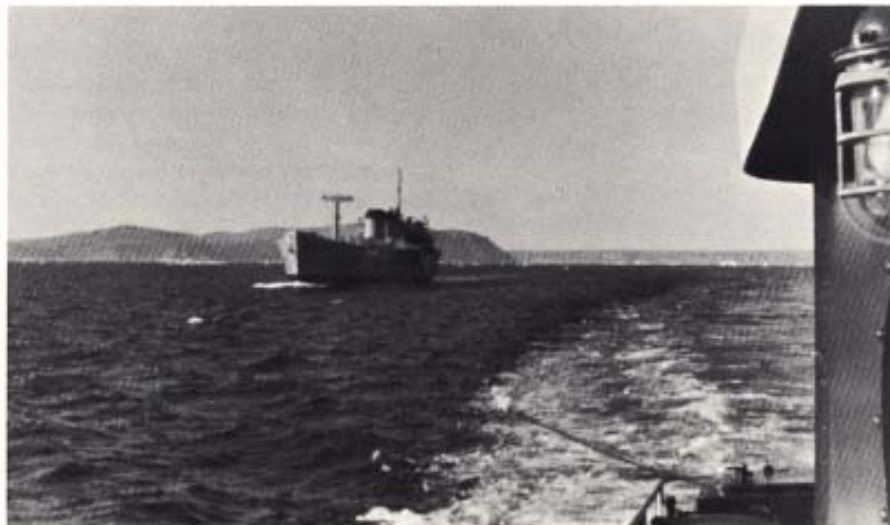
Navy planes helped the *Joan* find her way into Thule, guiding her through the ice flows from 400 miles off the coast.

The YFP was taken up to Greenland in 1959 by the *Edmond J. Moran* (see TOW LINE for December, 1959). Captain Alexander D. Stewart was in command on that voyage. A converted cargo ship, the YFP-10 is a 3,500-ton craft. She was designed to

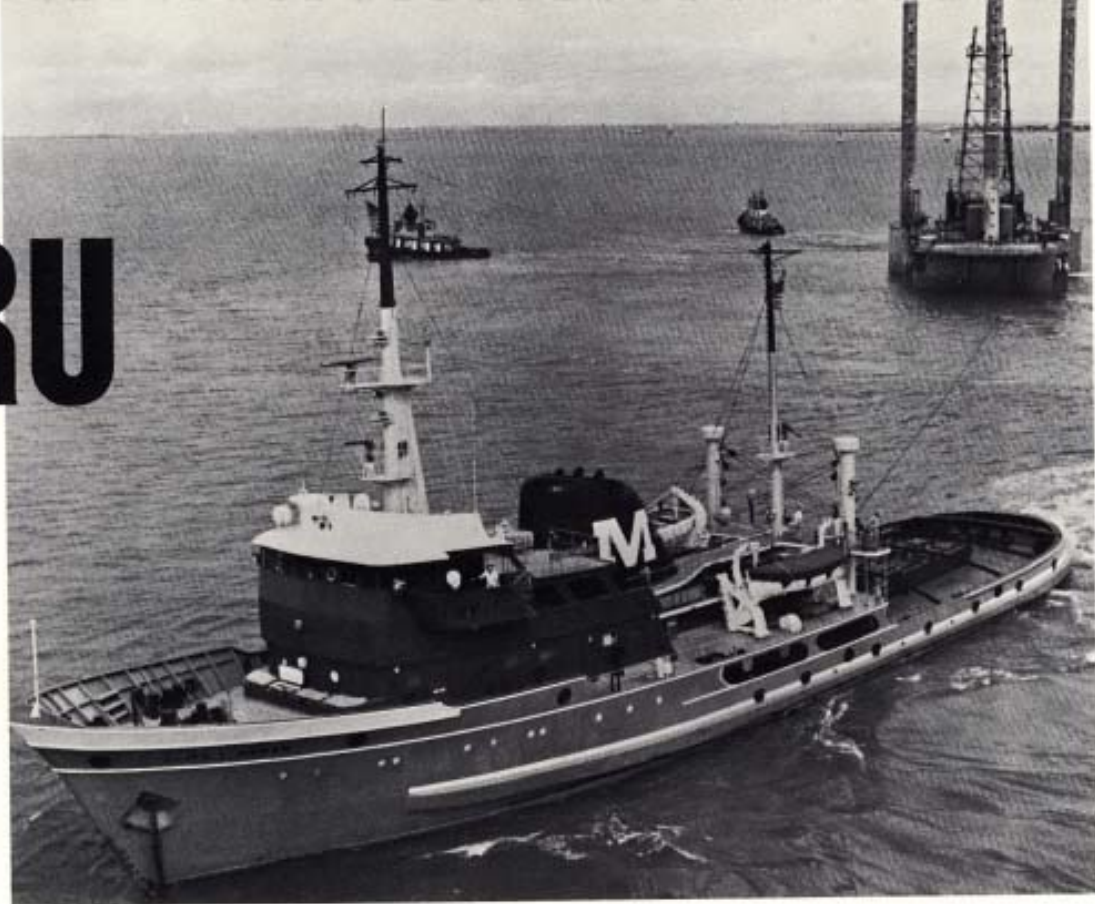
generate 36,750 kilowatts of electricity per hour, and has been serving the Air Force's Ballistic Missile Early Warning System installation at Thule.

Captain Monrad hailed the MSTs for their fine routing help on the tow home. He said they passed through some pack ice, and saw a few scattered growlers and larger bergs. The 14-day tow would have been even more of a record had not one of the riding crew on the power barge become ill. A seven-hour diversion put him ashore at Nova Scotia.

Moran has had long experience in Greenland waters.



AND TO PERU



***ALICE* Takes Drilling Rig From Houston to Talara**

THE OFFSHORE DRILLING platform *Stormdrill V* was towed from Galveston, Texas to Talara, Peru by the *Alice L. Moran*. The tow was made without incident.

The drilling platform is owned by the Storm Drilling Company of Corpus Christi, Texas, and is drilling for the Belco Petroleum Corporation off the Pacific Coast of South America.

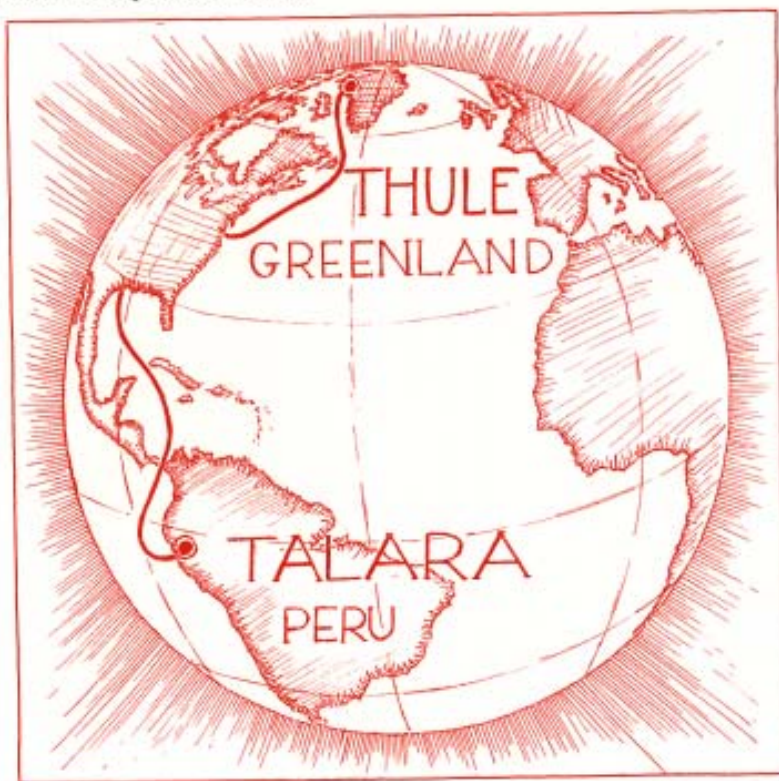
When in operation, the drilling platform will rest on a mat foundation supported by three tubular legs each 125 feet in length.

The tow was unusual in that the *Stormdrill V* has a large underbody, including a 12 foot mat foundation that is 230 feet long and 105 feet wide. While being towed this mat hung 10 feet below the drilling platform giving the rig a towing draft of 30 feet.

The *Alice L. Moran* is driven by diesel engines of 9,600 brake horsepower.

HOMEWARD — Bound for Philadelphia with the YFP-10 in tow, the 4,300-horsepower tug *Joan Moran* moves through floating ice off the edge of Greenland. The cold and icy scene to the left was taken by Captain Helge Monrad aboard the brand new Texas-built *Moran* tug.

OUTWARD — Bound for Talara, Peru, the 9,600-horsepower tug *Alice L. Moran* begins her tow from Galveston. She is delivering the *Stormdrill V*, which measures 230 feet in length and has a maximum width of 105 feet. The rig was especially designed to be able to pass through the Panama Canal.





IMPORTANT SHIPS — The *S. A. Nederburg* (above), new 20-knot South African Marine Corp. motorship, being welcomed as she makes her maiden arrival. Her dress ship pennants slap in the breeze as she approaches a haze-covered Battery skyline. Below is one of the year's most significant vessels, the *Atlantic Span*, of Atlantic Container Lines, making her harbor debut. The first of ten containerships on order by this consortium of European ship lines, the *Atlantic Span* is 646 feet long, has a tonnage of 14,000 gross and is driven by a 20,700 horsepower diesel engine. The six lines making up Atlantic Container Lines are: Cunard Line, Swedish Transatlantic Line, Holland-America Line, Wallenius Line, French Line and Swedish American Line.

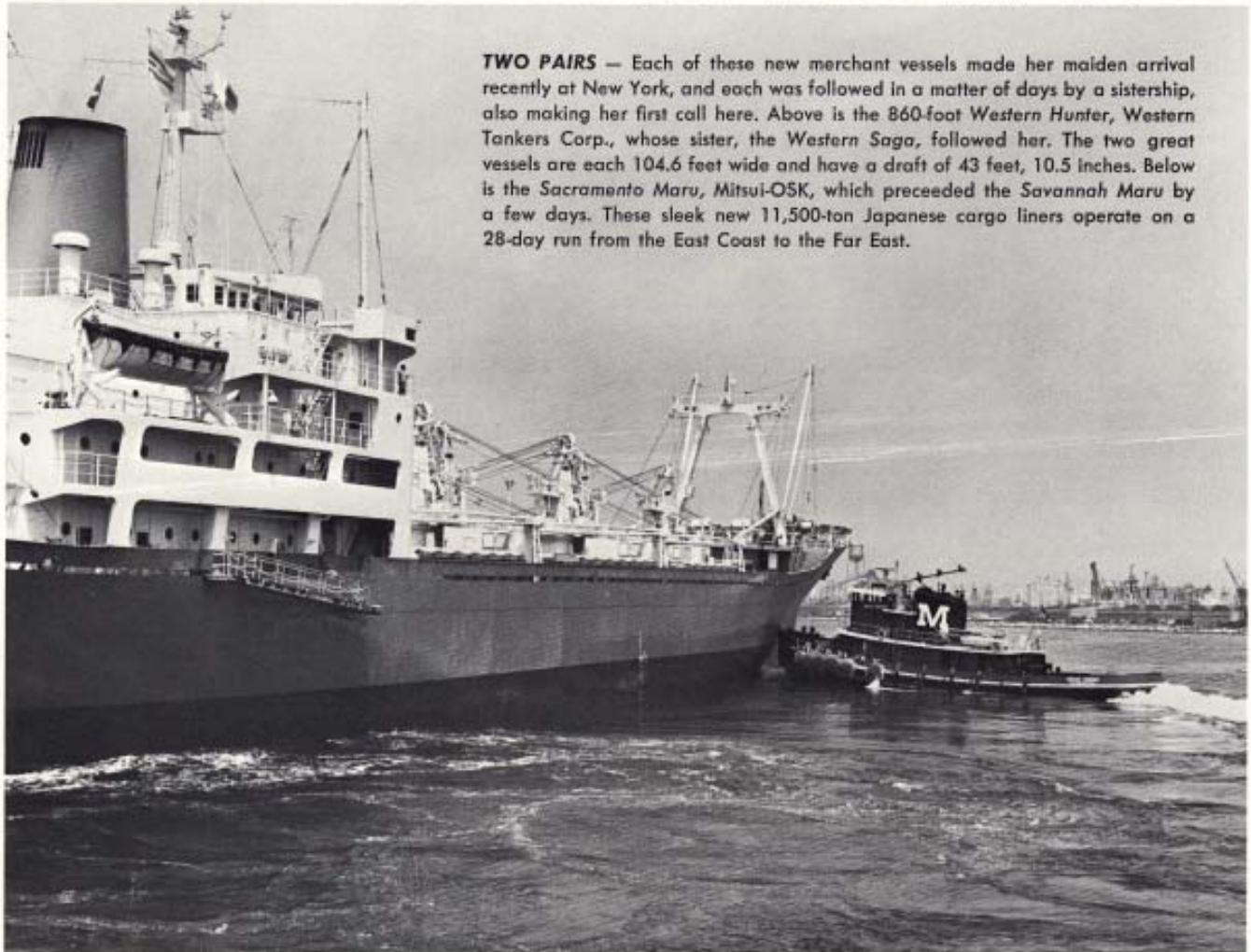




SHIPS IN THE NEWS



TWO PAIRS — Each of these new merchant vessels made her maiden arrival recently at New York, and each was followed in a matter of days by a sistership, also making her first call here. Above is the 860-foot *Western Hunter*, Western Tankers Corp., whose sister, the *Western Saga*, followed her. The two great vessels are each 104.6 feet wide and have a draft of 43 feet, 10.5 inches. Below is the *Sacramento Maru*, Mitsui-OSK, which preceded the *Savannah Maru* by a few days. These sleek new 11,500-ton Japanese cargo liners operate on a 28-day run from the East Coast to the Far East.



THE POWER BEHIND THE PUSH

Development of the GM 645 Series Diesel Engine

by THOMAS B. DILWORTH, *Director of Engineering and Research, Electro-Motive Division, General Motors Corp.*

(EDITOR'S NOTE: With the completion of Moran's most recent big tug-building program we felt the following article would be of interest to those technical-minded TOW LINE readers and historians who would like to trace the development of the most modern diesel engine in use in tugs today.)

THE GENERAL MOTORS 645 SERIES diesel engines and the predecessor 567 series, widely used in workboats around the world, were developed in the late 1930s to provide a prime mover of high horsepower in relation to size and weight coupled with great durability and ease of maintenance.

The first 567 series engine, so named due to the cubic inch displacement of the cylinder, was introduced by GM's Electro-Motive Division in 1938. It was preceded by the 201-A engines, a two-cycle diesel engine first designed for application in a U. S. Navy submarine.

The 567 was designed from scratch to meet a concept of a two-cycle uniflow scavenging diesel engine which would adhere to certain dimensional parameters where standards could be maintained in tooling, manufacturing and maintenance.

By staying within these parameters, great concentration could be placed on constant refining and development of parts and components. New parts, to the maximum extent possible, have been designed to be interchangeable with those of older models. This practice has permitted the older engines in service to be upgraded at times of major overhaul, thus extending their service life and protecting an original investment.

Strict adherence to these engineering design principles, inaugurated in the 567 series, has enabled the design engineers to more than double the power output of the engine without increasing its overall physical dimension. This development has opened up a wide range of new markets for the engine, including ocean vessels and workboats of ever-increasing capacity.

The Moran Towing & Transportation Company received some of the first production engines of this 567 series. Two eight-cylinder models, coupled with an electric transmission, powered their *William J. Moran* and *Thomas E. Moran* which went into service in 1938. With identical power systems each tug had a shaft horsepower of 1,000.

12-Cylinder Model

The following year two more Moran tugs appeared, this time equipped with

single 12-cylinder engines. The *Sheila Moran*, which went into service on April 27, 1939, and the *Peter Moran*

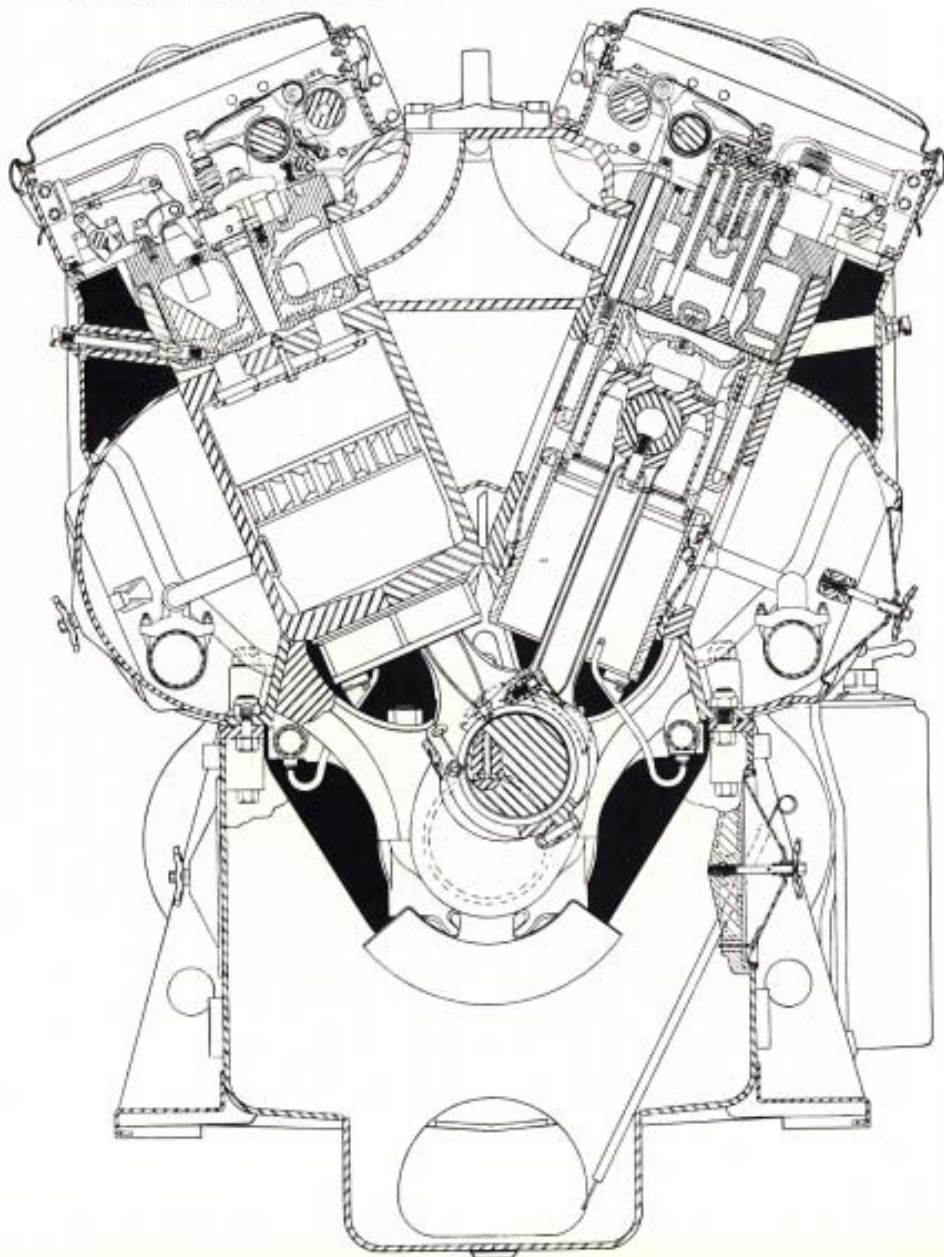
each have a shaft horsepower of 750.

The original 567 series concept started with a fabricated steel crankcase and forged crankshaft with hardened journals. This would insure long life in the basic engine structure and provide a compact unit capable of withstanding high dynamic and thermal stress. All working parts have been subjected to continual research, taking advantage of the newest materials, manufacturing methods, lubrication techniques and other technological advances.

The first engines produced in the 567 series operated at 750 revolutions per minute and were considered high speed engines. Today the 645 series operate at 900 r.p.m. and just barely qualify as medium speed engines. Medium speed engines turn up to 1,200 r.p.m. and more, while truly high speed diesels may turn up to 3,000 r.p.m.

(Continued on page 16)

THE PUSH — A drawing of 645E Series Diesel Engine by General Motors



RECOMMENDED READING

THE GLORY THAT WAS, by Roger Williams McAdam. Published by the author in cooperation with the Fall River Area Chamber of Commerce, 1967. Price: \$1.90 (retail); \$2.00 if mailed.

FOR YEARS the Department of Marine & Aviation used Pier 14, North River, for storing pilings and equipment. Now it is used by our company to tie up our tugs at night. But not too long ago it was the New York terminal for one of America's famous steamship lines — the Fall River Line. Roger McAdam (48 Hillcrest Rd., Kearny, N. J. 07032) has just published a fine little booklet about this noted firm. Jam packed with good pictures, fascinating facts and interesting reprints of Fall River memorabilia, it is indeed a welcome condensation of this company's history. Mr. McAdam, author of four full-sized books on the Fall River Line, is to be commended for making such a readable summary available.

EARLY AMERICAN STEAMERS, Volume V, by Erik Heyl. Published by the author at 136 West Oakwood Place, Buffalo, N. Y. 14214, 1967. Price: \$16.00.

A LABOR OF LOVE, this volume and the preceding four are fine illustrations of a historian who wishes to share his research with others. Much like the publishing effort of John C. Emerson, Jr., some years ago, when he put out his two-volume series on steamboats in Virginia, the Erik

Heyl series touches on a vast subject area that is usually skimmed over or even neglected by standard historical studies. Volume V is a continuation of Mr. Heyl's previous works, with no particular rule governing the new references. Some 114 vessels are covered, including a number of once-famous trans-Atlantic liners. As Mr. Heyl's pattern of research extends, he is moving into the field of larger and somewhat more modern steamers. The five volumes cover vessels built during the nation's first hundred years. Each ship is described in detail, with full dimensions given and a line drawing. A chief merit of the entire effort is the fact that all the drawings are done to the same scale. The sketches are particularly fascinating as they do so much to bring to life these old craft, many whose silhouettes strike us as extremely odd today.

VETERAN STEAMERS, written and published by W. H. Spies, Boserupvej 418, Humlebaek, Denmark, 1965. Price: \$8.00.

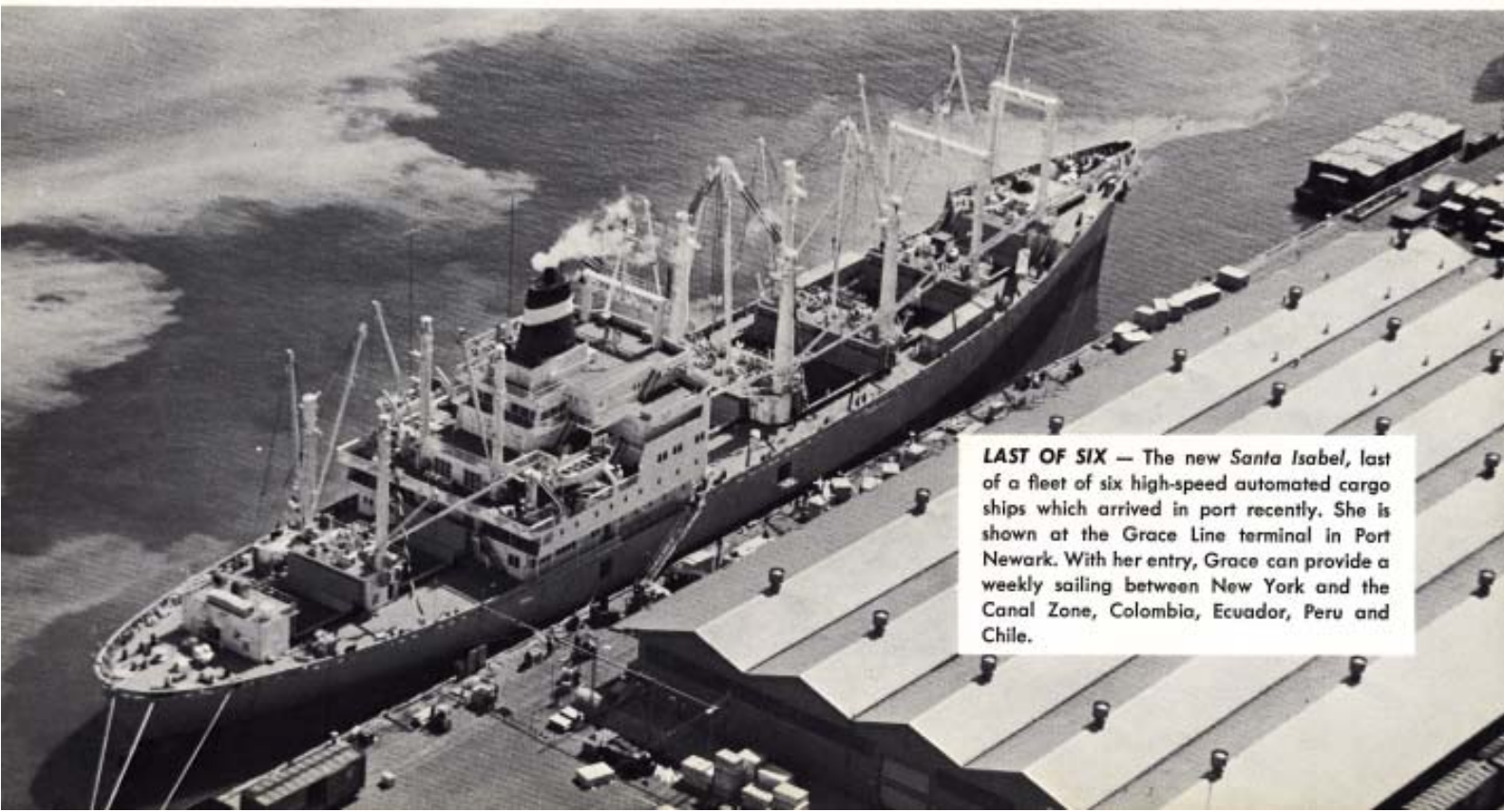
A WONDERFUL LITTLE BOOK, and most encouraging to the lover of old steamers, this work is an exciting and attractively-put out record of how a number of famous steamers in Europe, the United States and Australia have been saved from the scrapper's torch and preserved for posterity. There are six American vessels included. Each ship covered is illustrated with one or more photographs or drawings. The author uses his preface to call on "fellow enthusiasts the world over" to participate in an effective veteran steamship preservation project. The American distributor is the Sportshef, P. O. Box 634, New Rochelle, N. Y., 10802.

COASTING CAPTAIN, Journals of Captain Leonard S. Tawes, 1868-1922, edited by Robert H. Burgess. Published 1967 by the Mariners Museum, Newport News, Va. Price: \$8.50.

COASTAL SCHOONERS were an important part of Moran's business in the days covered by this journal. They swarmed up and down the Atlantic coast making history. Their history, all too often, has been unrecorded, or, at least, unpublished. The Mariners Museum and editor Burgess are to be congratulated for bringing this important and warm document to the public's eye. Bob Burgess is an authority on coastwise and Chesapeake Bay shipping.

THE H. W. McCURDY MARINE HISTORY OF THE PACIFIC NORTH-WEST, edited by Gordon Newell. Published by Superior Pub. Co., Seattle, Wash., 1966. No price.

THIS GREAT VOLUME can not be bought in ordinary bookstores. It was published under a grant from historian H. W. McCurdy. Only those who were enlisted in advance as "founder subscribers" can get copies. The work is an elegant and expensive volume, a true collector's piece as well as a work of very real historical value. Its oversize format is crowded with pictures of ships and ship people, and loaded with masses of information. The book treats the maritime history of the area in a chronological way, beginning with 1895 and going up to 1965. A monumental index adds to its worth to the historian. It is a companion volume to the 500-page work by E. W. Wright published in 1895 by Lewis and Dryden, which is devoted to the same area's maritime history up until 1895.



LAST OF SIX — The new *Santa Isabel*, last of a fleet of six high-speed automated cargo ships which arrived in port recently. She is shown at the Grace Line terminal in Port Newark. With her entry, Grace can provide a weekly sailing between New York and the Canal Zone, Colombia, Ecuador, Peru and Chile.

The Seamen's Church Institute



Old and New



NEW CHURCH INSTITUTE — The Seamen's Church Institute is getting a new home. Their old building (top left) erected in 1913, has long been a South Street landmark. Their new lighthouse-like tower (top right) is a striking addition to the Battery skyline. The *Queen Elizabeth* is passing up to her pier in the bottom view from the roof of the old institute.



G. M. 645 SERIES

(Continued from page 13)

Used in LST's

Volume marine applications of the 567 series engines began with the use of thousands of them in LST's during World War II. The 567 line included six, eight, twelve and sixteen cylinder sizes — all 'V'-type with 45 degrees angle between the banks of cylinders.

Scavenging air for the normally aspirated line of engines is supplied by positive displacement Roots-type blowers with helical three-lobed rotors. These blowers force air through ports in the lower cylinder wall and the exhaust is released through four poppet-type valves in the cylinder head, thus providing uniflow scavenging.

In the program of continual research and development, the 567 series went through five major model designations: 567, 567-A, -B, -C and -D. There a major step was taken with the first successful turbocharging of a two-cycle diesel engine of such high horsepower.

In the Moran service the pre-war models were followed by introduction of the 567-C engine with the installation of a 16-cylinder 'C' in the *Nancy Moran* in 1958. This single-screw tug has a total shaft horsepower of 1,600, more than double that of the *Sheila* and *Peter*.

Big Step Forward

The first turbocharged 567 series engines in the modern Moran fleet were

installed in the four-engined, twin-screw, ocean tug *Alice L. Moran* in 1966. Powered with these 16-cylinder, 567-D5 engines, this tug has a shaft horsepower of 9,600.

Another significant step in engine development came with the increased bore of the cylinder liner $\frac{3}{8}$ of an inch. The former cylinder bore of $8\frac{1}{2}$ inches in the 567 became $9\frac{1}{8}$ inches and its displacement increased from 567 cu. inches to 645. This dictated the change in model designation from 567 to the present 645-E series.

The original design concept, with its guide lines of improved reliability, durability, standardization and maximum interchangeability of working parts, has continually placed the engine on new plateaus, offering the marine industry the greatest horsepower range in E. M. D. history.

The eight, twelve, and sixteen cylinder normally aspirated (Roots blown) engines in the 645 series provide 850 to 1,900 shaft horsepower, respectively, and the twelve, sixteen and twenty cylinder turbocharged 645 engines fill the upper end of the power range — from 2,100 to 3,500 s.h.p., respectively. Thus, six engines offer a maximum range of horsepower to provide the economy and efficiency necessary for today's successful marine operations.

Dramatic Illustration

The tremendous increase in horsepower in the same over-all-size engine is dramatically illustrated by the *Eugenia Moran* and the *Grace Moran*, which went into service early this year. Both are equipped with the 16-

cylinder 645-E5 engines. Each has a horsepower of 3,160, almost double that of the *Nancy Moran*. It is also interesting to note that on a cost per horsepower basis the newer engines were less than those of the *Nancy Moran*.

The *Doris Moran*-class of 1967, including the *Teresa*, *Joan*, *Doris* and *Elizabeth*, are equipped with the 16-cylinder 645-E2 engine. Each has a horsepower of 4,290.

Horsepower Vs Weight

Intensive engineering development has also provided a significant reduction in weight in the same size package. Where the 1942 LST engine weighed 29 lbs. per horsepower, and the 567-D turbocharged engine weighed 16.5 lbs. per horsepower, the present 16-cylinder 645-E marine turbocharged engine weighs a mere 12.5 lbs. per horsepower.

In the area of control, a great advancement has been made in recent years with the development of a pneumatic slip clutch, newly developed controls for the clutch, and improved engine governors. These three improvements provide controlled slip for propeller speeds below those at engine idling speeds, giving the tugboat operator smooth starting action, closely controlled slip for precise moving of the vessel, and quick response — features available heretofore only in a Diesel-electric.

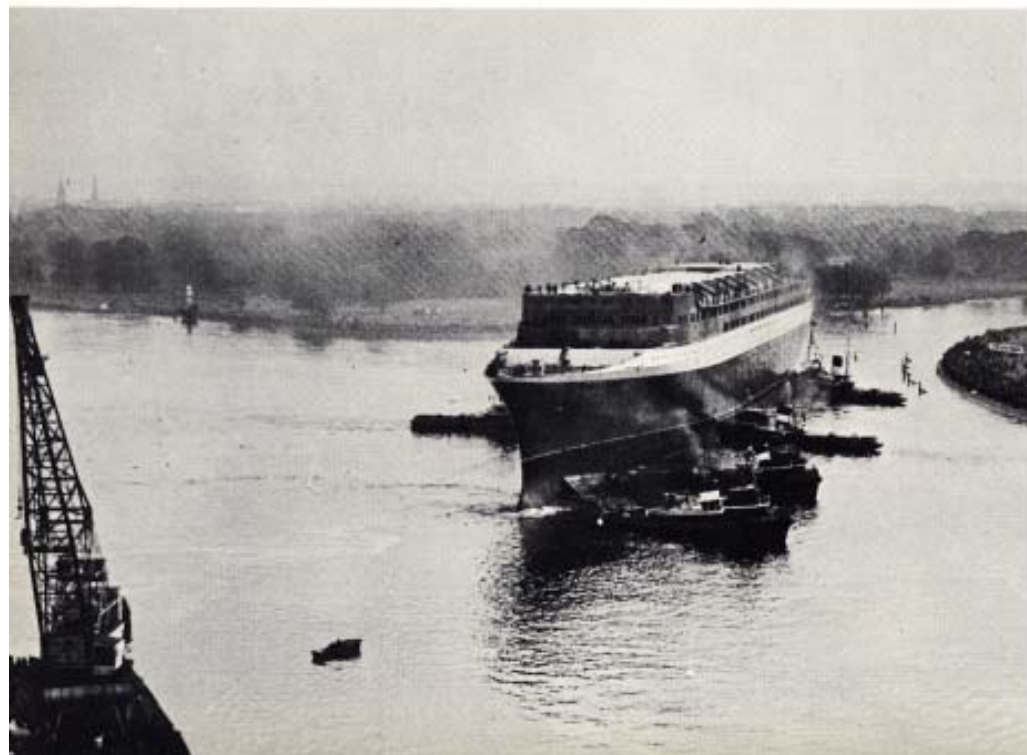
These features together provide a gain of 10 to 12 percent in operating efficiency over the comparable Diesel-electric through elimination of the electrical losses. Thus, where the operator would lose 14 percent in efficiency with the electric transmission, he now loses only 2 to 2½ percent, enabling him to use within 2 percent of the maximum developed horsepower.

A further advantage is offered by reduction in capital investment — at least 40 percent less in the mechanically driven propulsion machinery as opposed to Diesel-electric.

Meanwhile, today's service life of wearing parts is five to six times longer than that of earlier predecessors and, through continuing development, still increasing. The basic two-cycle cylinder size provided for smaller pieces which could be manufactured, installed and serviced easier and quicker, and without the aid of extensive handling and lifting equipment.

Complete power-pack assemblies — cylinder liner, head, piston and connecting rods — can be kept as spare assemblies aboard ship and easily installed at sea. Such assemblies, installed as a unit, contribute to greater operating efficiency and reduce maintenance costs by greatly reducing time at major overhaul periods.

THE NEW QUEEN — Cunard's 55,000 gross ton superliner *Queen Elizabeth II*, moments after her launch on the Clyde. Due in New York on her maiden voyage early in 1969, this great ship will usher in a new age in cruising luxury.



HISTORIC — The dramatic painting at the right is by Norman Wilkinson. It is entitled "I will not abandon you," and these are the words being signalled from the U. S. Lines' President Roosevelt to the sinking freighter *Antionoe*. The painting has been reproduced by Don Maskell, of San Francisco, and is available in large print form in color for \$5. With it will be sent an account of this historic rescue carried by a recent issue of the U. S. Naval Institute Proceedings. Mr. Maskell can be reached through the Maritime Exchange, Pier 35, San Francisco.



YACHT RACER — The full-scale replica of the famous racing yacht *America*, shown passing Moran headquarters. Built by the F. & M. Schaefer Brewing Co. at the cost of \$500,000, this fine-lined schooner was designed by Sparkman & Stephens. The Moran balconies are on the 25th floor of the tall building rising just above the *America's* jib. Courtesy Charles Fennar World Photographic Service

A RATHER RARE night photograph of a rather rare sight: Swedish American Line's two big ones together in New York. The picture was taken August 15th; the next day the *Gripsholm* left for Sweden, and the following day the *Kungsholm* (here north of Pier 97, identified by her more conical stacks) was undocked for her Carribean cruise.





HE WAS BORN in 1933, and with his background he just had to be a mariner — and he is.

His grandfather on his father's side was a Sandy Hook pilot. His father was head of the Sandy Hook Pilot Association of New York. His mother's family owned a ferryboat line. One of his most noted forebear's is Cornelius Vanderbilt.

In case you have not guessed — he is Daniel Vanderbilt Jones, Jr., our Assistant Marine Superintendent and aid to Captain Leonard Goodwin, Vice President of Operations.

Dan went to sea at the age of 17. He served as an ordinary seaman aboard the *Esso Patterson*, *Esso Bermuda* and the *Red Canyon*, of the Standard Oil Company of New Jersey.

In his free time and on week ends he was a life guard at various Staten Island beaches, and this experience stood him in good stead during his military service. He joined the army and was promptly named lifeguard at Fort Meade, Maryland, a spot he filled for two years. He also won the Second Army swimming championship.

Back to Esso for another brief stint and then to Moran, where Dan saw service as a deck hand with Captains Willie Ericksen, Dan Bodino, John Kennelly and others. Captain Frank Hughes, now president of our associated company, the Curtis Bay Towing Company, helped him get the job and we're glad he did.

He served on the *Margot Moran*, the *Sheila Moran* and others and then came ashore as a dispatcher. Poor eyesight, by the way, kept him from following in his father's footsteps as a pilot.

Dan enjoyed the "constant pressure" of being a dispatcher. He served nights at first, then had day tours and finally "went lay-out man." He was on the desk the night the *Andrea Doria* was struck.

In February this past year he moved from harbor dispatching to fleet oper-



Dan Jones

ations working with John Tedaldi and Captain Goodwin.

His new assignment is exciting and always both different and demanding.

"She's going to Okinawa tomorrow . . . get her gear ready . . ." is a typical project for the day.

I've learned all about the importance of "de-rat certificates", Dan noted. And he is a whiz at what's needed on a long voyage in the way of hawsers, navigating equipment, charts, cables and towing equipment.

At home Dan is also a man of the sea. His front yard boasts a 200 pound anchor. His wife Lynn and three children, Donna Patricia, Lori-Anne and Daniel 3rd love nothing more than to go down to the boats with Dad when he works Saturday — or Sunday. The D. V. Jones' live in Eltingville, Staten Island.

Boating (and golf) are Dan's hobbies. He loves to draw boats, and is very good at it, although lately his talents have been used in poster work for his church, PTA and other community efforts.

The ferry service his mother's family owned, DeNyse's Launch, operated launches between Staten Island and 39th Street, Brooklyn. His great, great grandfather, the pilot, died on the pilotboat *Enchantress* during the blizzard of '88.

The sea is in Dan's blood and he loves it. He is fortunate in having been able to fulfill many of his ambi-

tions early in his life, but there is one still to be achieved.

"Do you know that beautiful old ship model in a bottle on display at Vincent's Restaurant on Pearl Street," he said with a smile.

"I want that . . . and I'll get it some day. My great grandfather made it."

THE LATE CAPTAIN TONY HUSEBY was called upon to help with the Jones Beach musical production of "Show Boat." He actually appeared with the show as Captain of the showboat. And, so it was quite natural when the latest musical out at that famous Long Island beach ran into a maritime problem that they should turn to Moran, and a whale of a tale hangs on their call.

The musical was "Arabian Nights", and the star of the show was a great whale. The show, as those who have seen it know, is performed on a stage set in a small artificial lake just behind the ocean beach. It is given nightly before a packed stadium seating thousands. The whale was a monstrous structure powered by six hidden outboard engines. The driver sat inside the head and tried to steer the submerged float on which the whale was built. Twice in a row the whale didn't leave on time and poor Sinbad was left in a whale of a fix.

Captain Bill Morch, who lives near Jones Beach, was recommended by Dispatcher Dan Grandone when the SOS came in from the State Parks Commission. Always willing to oblige, Captain Bill sharpened his harpoon and set out bravely. Watching one show he observed the difficulties involved in maneuvering the hulking show stopper, noting the shallow water and sharp turns necessary when coming out from behind the island-stage.

Then he climbed into the whale. He saw through a slit in the snout. In no time he had everything under control, the whale immediately recognizing the trained hand and skill of his pilot. Captain Bill was able to advise the regular operator on how to apply the power and generally what to do.

"It was nothing," Bill said later.

The whale behaved admirably throughout the remainder of the summer season. Nice work Captain Bill, Dan — and thanks John Grady for tipping us off about the yarn.

POWER EN ROUTE...

(Continued from page 5)

individual gondolas in the yard. And, of course, the barges are much bigger than the ones the power company was using before 1966 when Moran started on the operation. The mobile crane now standing idle could lift the cars bodily and dump their load into the barge. Admirable.

After awhile I saw our deckhands go forward onto the barge to let go her lines and the tug started backing full astern. The tug-barge unit did an almost 360° turn to get headed into the Cutoff. In the distance the Outerbridge Crossing hove into sight directly framing for a moment our big, black "bow". It was some time after 2 P.M.

Back in the pilothouse Sy was pointing out a sailboat on our port bow that didn't seem to know where she was going. After a couple inconclusive tacks it headed back toward Ferry Point where there was still a sizeable cluster of pleasure boats. Sy gave a little talk on the hazards of putting 6,000 tons of coal through an overnight regatta on Long Island Sound. I couldn't help thinking of the other side of the problem: a guy-and-girl in a half-anchored rental surprised, in the middle of the night, by some deep-purring, horizon-blotting black object... "there we were minding our own business..." "Sometimes they flash a light on their sails," Sy admitted, "and that helps." I made a completely useless note of this tactic.

We rounded fixed buoy #1 and swept eastward into Ward Point Bend. Nothing ahead but kicked-up bay. At least the coal wasn't blowing any worse. Sy took a minute off the wheel to try to get tuned in to the BC weather station on the inevitably venerable Hallicrafter set. Much static.

Around 3 o'clock Capt. Sorensen came into the wheel-house with a celluloid-bound instruction sheet for the new Decca radar console. Myself adding some carefully hedged advice, we got the thing going after awhile. Everybody agreed it brought in a terrific picture: you could almost count the waves on its shortest ¼-mile range. This would help in the sail-



SCHOLARSHIP AWARD — Captain Larry Foley, Chairman of the Reynolds Pilots Scholarship Committee, presents to Cadet Joseph Angelo, a first-year classman at the United States Merchant Marine Academy at Kings Point, a check for one thousand dollars to cover expenses at the academy. Captain Arthur Biagi, standing on the right, is another member of the committee. Cadet Angelo is the second recipient of the annual award established last year by the pilots employed by Moran who are also members of Local 333, United Marine Division, National Maritime Union, AFL-CIO. Captain Joseph O'Hare, President of the Local, awarded a like scholarship to Cadet Pedder A. Kristiansen on behalf of the union.

boat situation, or more importantly, in picking up the entrance buoys at Norwalk.

The tug was now in Red Bank Reach passing the bleak, high-bluffed Mt. Loretto Orphanage. (I had driven past its big iron gates on Hylan Boulevard once; from the water it reminded me of my own equally chilly prep school on Narragansett Bay. No offense to the good sisters.) We were soon broaching Princess Bay in which a half-dozen identical, red-painted for-hire fishing boats, looking oddly war surplus, rode at anchor.

At buoy #16 we pulled out of the channel and made directly for Old Orchard Light. The wind seemed to be dying if anything. The tug's bow, which had been kicking against the barge's stern-cut to some infinitely sophisticated Cuban rhythm, now set in snugly delivering all our power. No more coaldust. In a little while we would be back in familiar waters, as far as I went. I went down to our cabin to look over some mail I had brought from the office.

Around 11:30 P.M. we were passing Greens Ledge Lighthouse off Roton Point, Conn. Capt. Sorensen eased the *Carol* down even further. The tide hadn't quite reached its peak, there being only some two or three feet of clearance in the entrance channel at loaded barge depth and

high tide. We crept past Tavern Island, playing the tug's searchlight over the former home of Billy Rose. The channel buoys glowed reassuringly on each silent sweep of the radar. We started in, the Captain spinning the wheel to one side and then the other in order to direct the heading of the huge, slow-moving barge. The power plant glowed brightly on the end of Manresa Island. Not a sound, not a person moving over the bright green lawn below the ten-story-high main building. As the *CL&P I's* bow cleared the end of the breakwater her sister barge, lying bow in, came into view. Foot by foot our loaded barge slid by the light one and then cut in to the vacant space ahead along the dock. Johanson handed one of the barge's stern lines to Paal who had climbed ashore.

We were underway with the *CL&P II* some fifteen minutes later taking her alongside in a head-and-tail carry. When we got outside the channel Capt. Sorensen went back to the after controls as we let go our lines and the barge swung out on hawser. We were bound for the company's other loading terminal in Jersey City.

Back in New York harbor we saw the *Queen Mary* arrive looking very ghostly in the pre-dawn haze, a few minutes after we had tied up the *CL&P II*.

