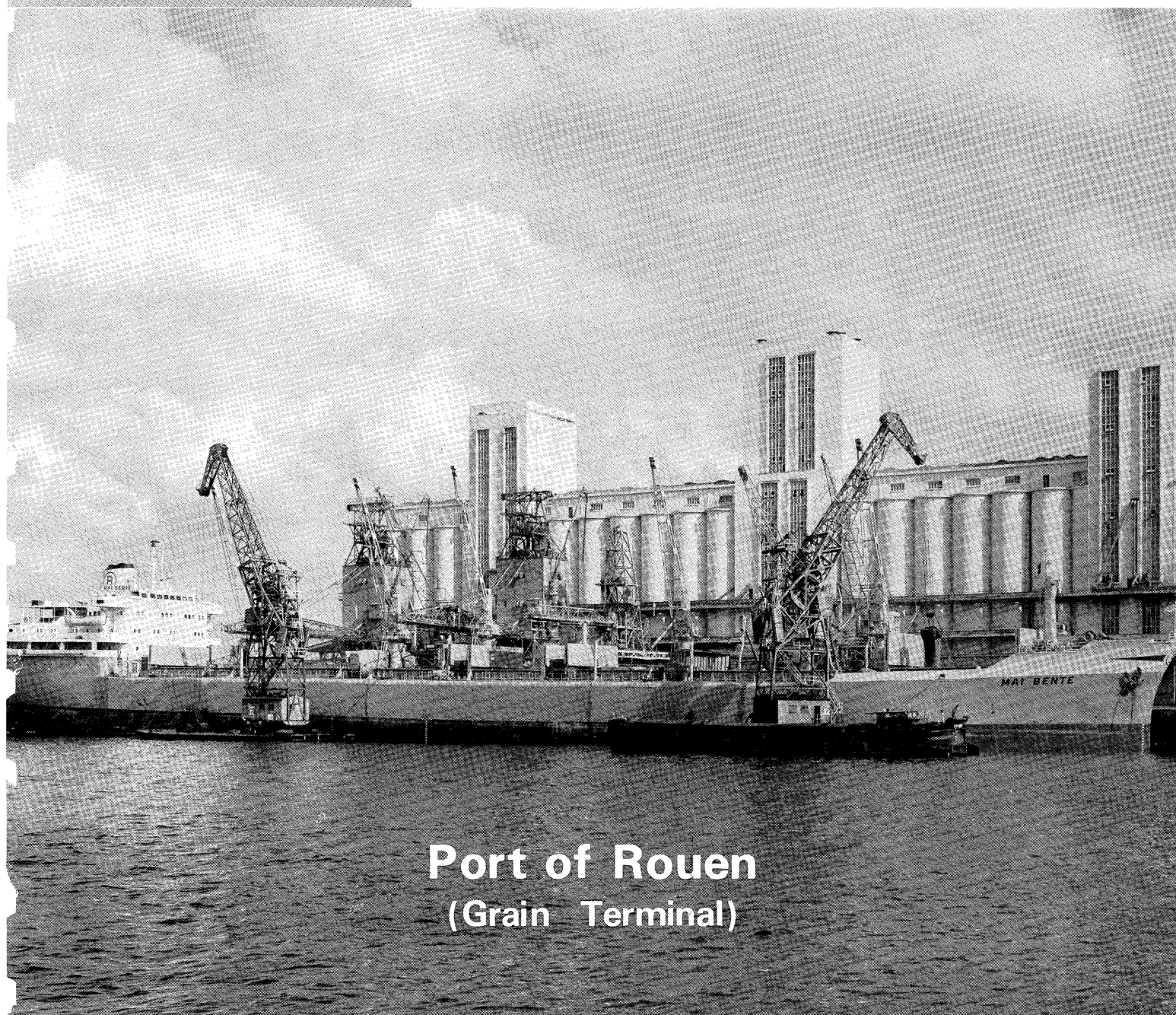


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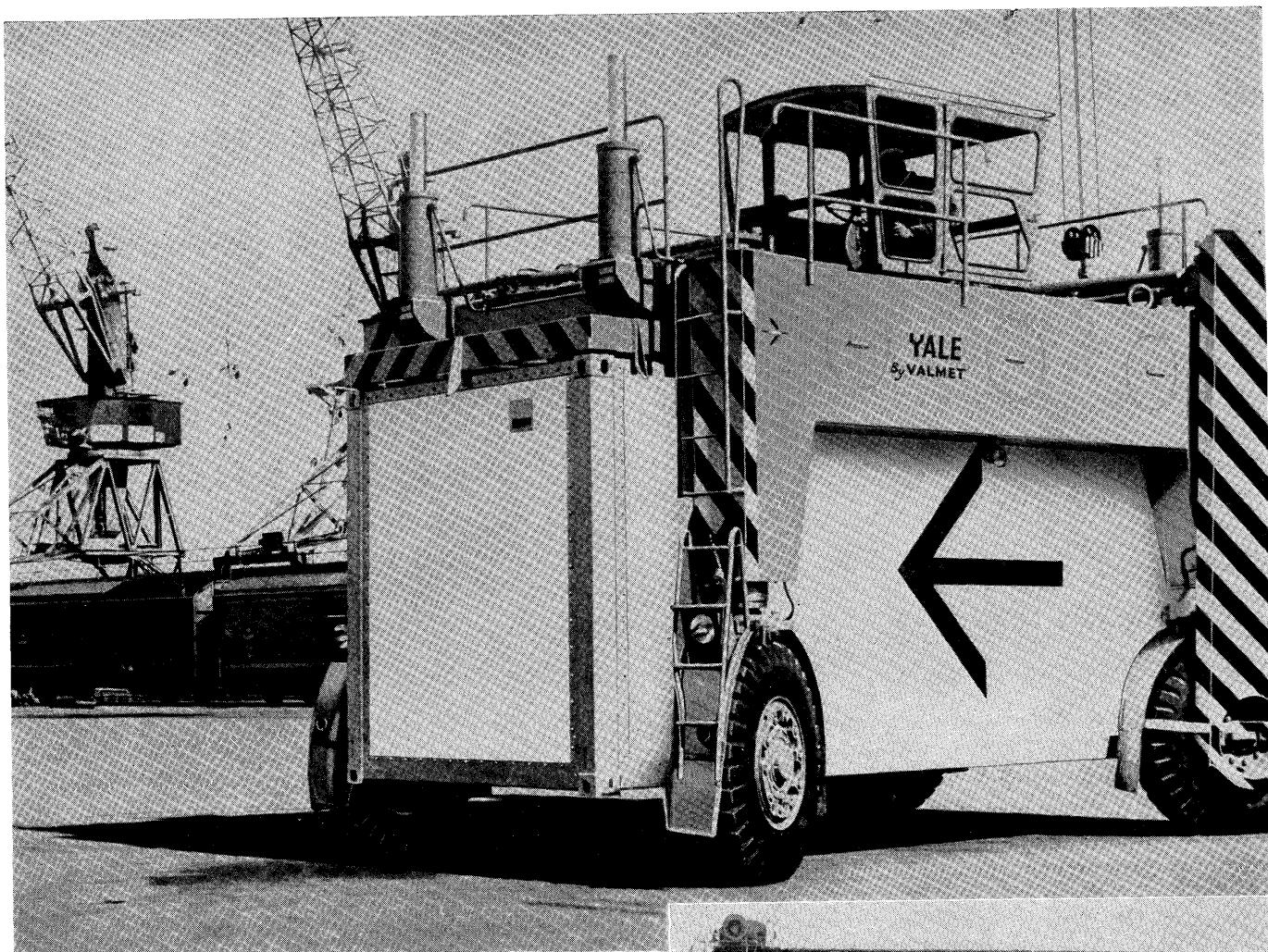
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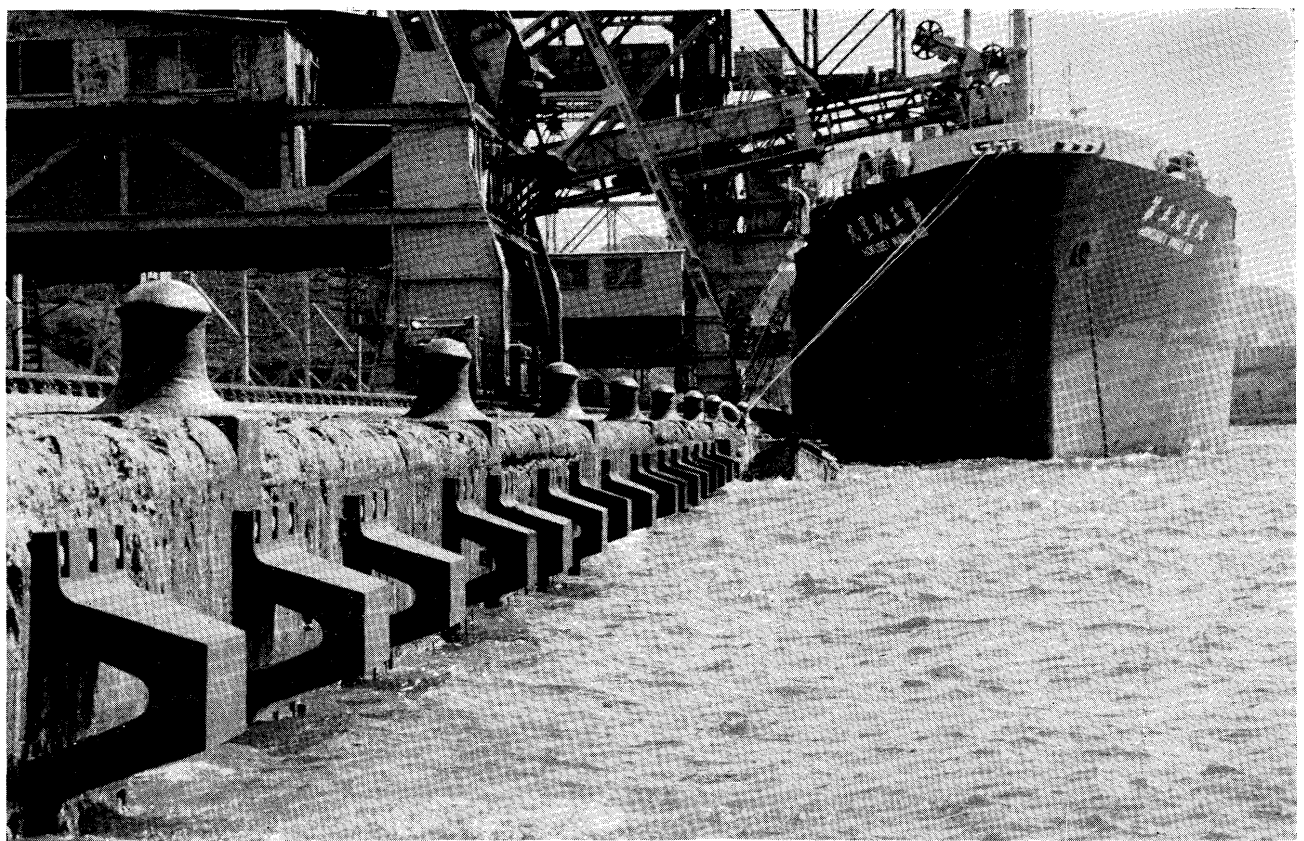
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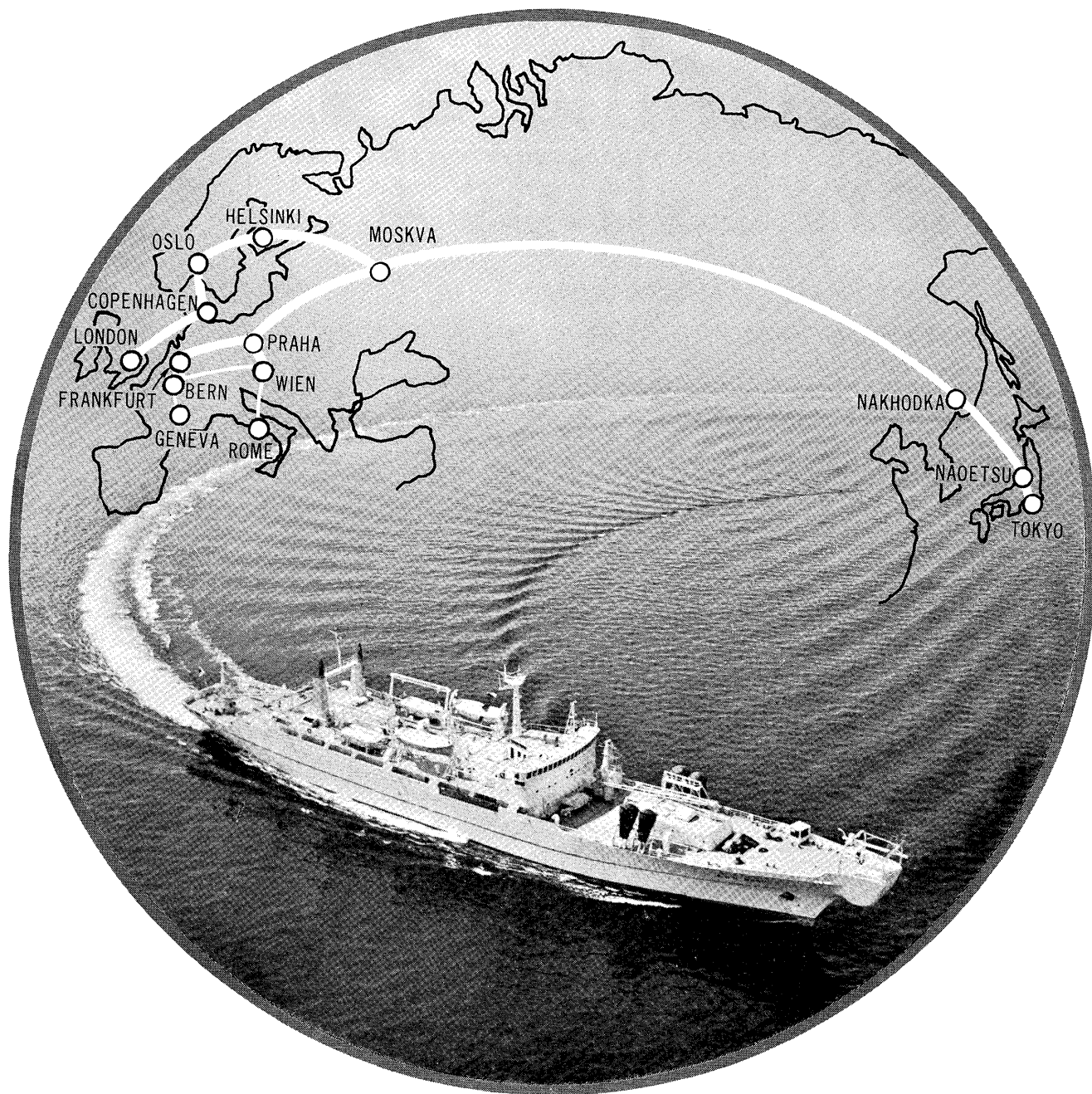
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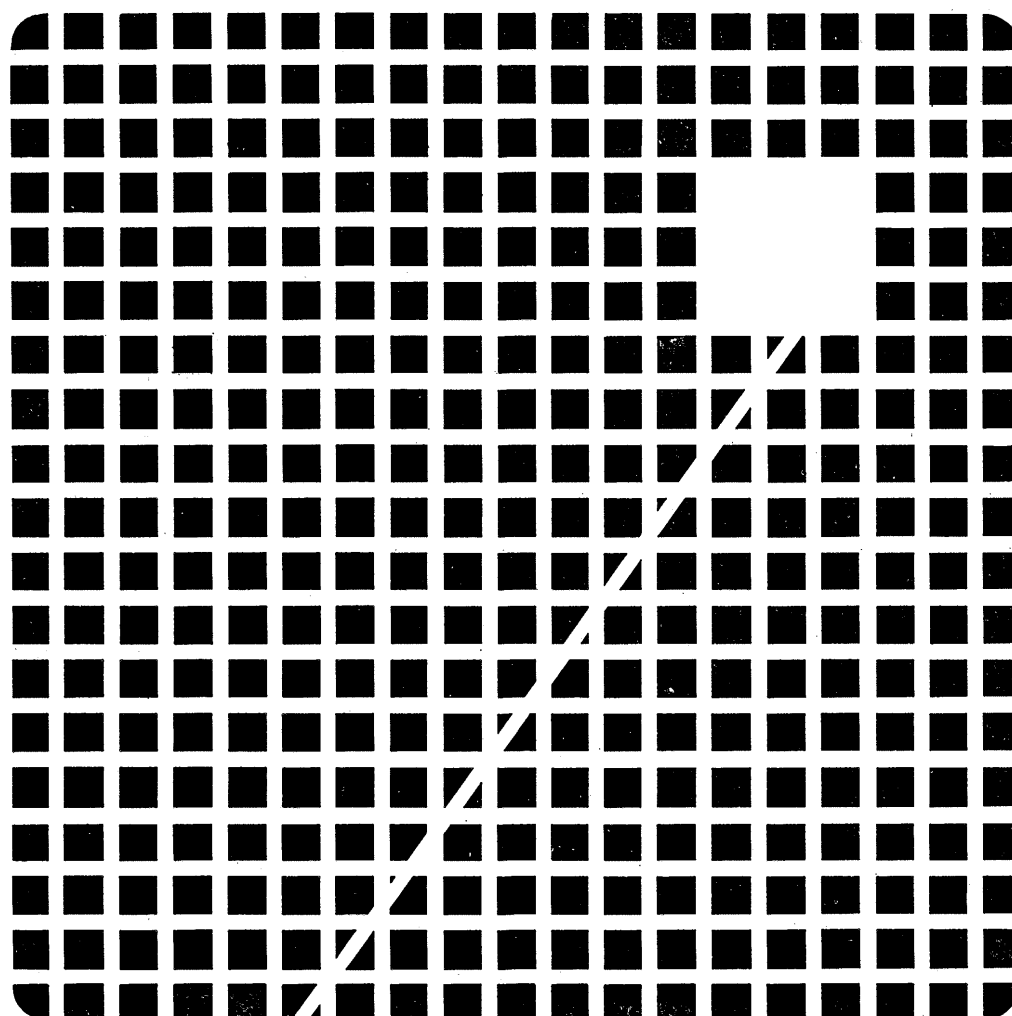
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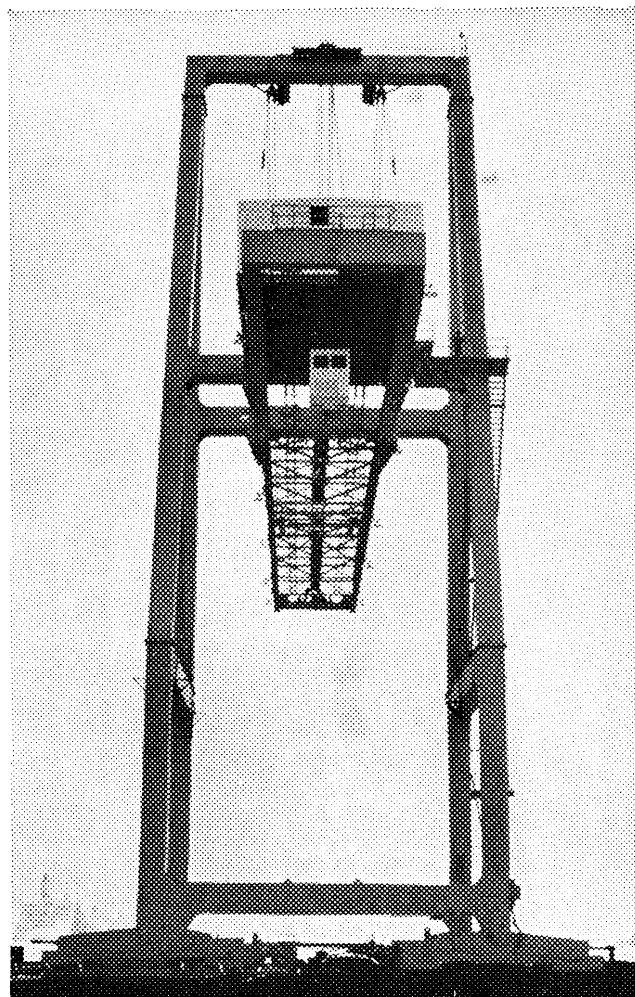
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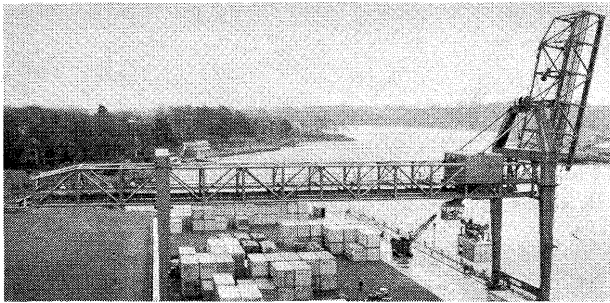
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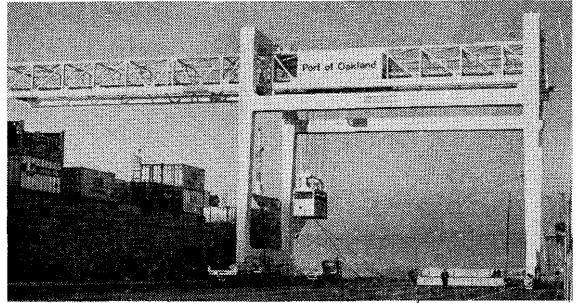
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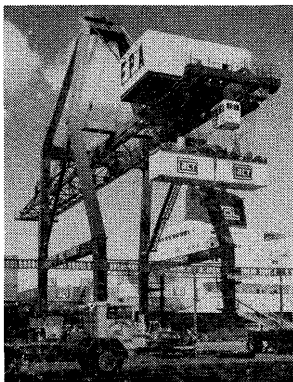
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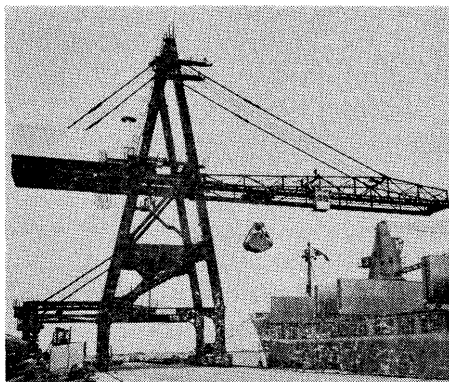
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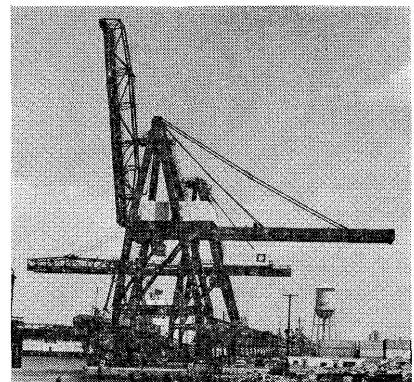
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# PORTS *and* HARBORS

## Forum on Port Problems:



Mr. Thomas P. Guerin

Containers is the catchword of ocean transportation and, indeed, of all surface transportation today. This dramatic right turn in the process of loading shipping space, be it in ocean vessels, freight cars, trucks or whatever, is a convulsive revolution in the methods of stowage that in principle have not changed since the Phoenicians.

The drama inherent in the change and the vistas of more changes to come has brought about a tremendous chorus of prophecy. This total fabric of prophecy like all such ranges from the "it won't work" school to the somewhat exaggerated, almost science fiction concepts of "totally integrated" transportation systems using a few "load center" seaports. Somewhere within this cacophony lie the probabilities that will shape the future.

What are these probabilities?

The best starting point in the search for answers probably is found in the preambles to the Transportation Act and the Merchant Marine Act of the United States. The essence of these is that most legislation governing transportation is subordinated to and for the purpose of serving "the commerce of the U.S."

The philosophy expressed in

## *Containers Give Transportation New Catch Word*

**By Thomas P. Guerin**

General Manager  
Commission of Public Docks  
Portland, Oregon  
U. S. A.

these preambles recognizes two essentials, commerce on one hand and transportation on the other. Without commerce there is no need for transportation. Thus, it follows that transportation essentially is the servant of commerce and here we have the entire spirit of our national legislation in this field.

Philosophy recognizes another truth: that transportation must move the goods of commerce from place of production to market of sale and do so in the most economical fashion.

These practicalities of commerce and transportation are as true in our world trade as they are in our domestic commerce. They set up the framework within which the development and employment of containers will and, indeed, must take place.

So far the greatest impact of containers in world trade has been upon ocean shipping. The impact is obvious. The mechanical loading and discharging of the laden containers drastically reduces turnaround time of modern vessels with their huge capital investment and high operating expense.

There is another side to the coin. Thus far the provision of containers mainly is the responsibility of the steamship company. Therefore, an added and most substantial capital investment is necessary over and

above the investment in vessels. In addition, costly problems of routing containers once they leave the port actually constitute a barrier to full container employment.

The answer to this must come in the form of container companies that own or pool containers to be carried by any unit of transportation anywhere. This would be much like the giant freight car pool operated by U.S. railroads among themselves. Cars are freely interchangeable.

Barriers exist to this development. They are found in the lack of a through bill of lading, complexities of insurance involving separate liabilities among different modes carrying a through shipment, and others. Answers must be found.

Much is said about land bridges which in theory have the potential of changing historic traffic flow patterns. The most popular concepts are land bridges across the United States whereby U.S. railroads link Pacific and Atlantic ocean shipping to provide through service between Europe and the Orient. Another land bridge theory involves use of the Soviet trans Siberian railroad joining with ocean transport across the Sea of Japan to serve European destinations and Japan. Others have been talked of, such as one across Israel between the Gulf of Aqaba and the Mediterranean.

These may well come but the de-

(Continued on Next Page Bottom)

# *The Port of Stockholm*

## 1969

STOCKHOLM, the Capital of Sweden and the biggest city in the country, is centrally situated on the east coast of Sweden—an excellent position for commerce and navigation. The city lies between Lake Mälaren (the third largest in size of Swedish lakes) and the Baltic; an archipelago containing thousands of islands is between the city and the Baltic. Stockholm has a population of 761,100, while the Greater Stockholm Area has 1,294,300 inhabitants. The Port of Stockholm consists of some twenty separate harbour installations, of which the most important are situated on the Baltic side.

### 1. History

Stockholm during the 14th and 15th centuries was the trading centre of Sweden as well as the main place of trade for northern Sweden and the greater part of Finland. During the 17th century the importance of Stockholm as a port increased and it was favoured by a number of royal charters. Economic development during the 18th century also favoured Stockholm,

as iron became the most important commodity in Swedish trade and Stockholm merchants handled the greater part of the export of iron. Stockholm was the leading port for the Swedish export trade right up to the 19th century; its imports were also considerable and the values of exports and imports were about equal.

Economic development during the latter half of the 19th century, the arrival of the railways, the changes in iron and steel making, the growing importance of forest products as export items and several other factors have been instrumental in Stockholm losing its position as the foremost export port of Sweden. Through the expansion of industry in the capital during the latter part of the 19th century and the consequent marked increase of the number of inhabitants, the consumption of goods increased as well as the need for raw materials for industrial production. From originally being an export port, the Port of Stockholm thus changed its character and became one of the greatest ports dealing with imports into Sweden.

### 2. Port Traffic

Stockholm has considerably increased its maritime trade and es-

velopments will take time. Under present rates, European cargo can move more economically from Japan to Europe via the Panama Canal than via the land bridge concept.

How does this affect Portland?

The load center container port concept as it has been popularly presented does not now appear to stand up in the light of transportation common sense. Every great port area like Portland has local cargo that must be served. If one line does not do it, another will. There will be competition for that local cargo, which in turn will persuade the container ships to call.

The great land space requirements of containerization in turn lead to severe port congestion which in turn leads to higher costs to the ships, compelling the vessel to find other ports.

Over and above all is the basic truth that transportation must and will be the servant of commerce and that, just as water flows downhill, commerce naturally finds the downhill path of economy and efficiency. Portland has the location, the harbor facilities and the rails and the trucks and the barges that are the tools of distribution. Portland will prosper in the container age. (Portland Public Docks, Harbor News, August, 1969)

pecially during the present century when Sweden has begun to operate its own modern vessels on several sea lanes to various European and transoceanic ports. While as late as the end of the 19th century Sweden vessels were still mainly engaged in coastal traffic on the Baltic and the North Sea ports and transoceanic exports were transshipped via Hamburg, Hull and London, the Port of Stockholm today has some fifty shipping lines operating regular services to most of the coastal ports of Europe, North and South America, the Orient, East Asia, Australia and Africa. See appendix No. 1.

In 1968 the vessels handled totalled 14.6 million net registered tons, of which international traffic accounted for 11.2 million n.r.t. The number of vessels, arriving, departing and calling, totalled about 35,100, of which more than 8,200 were in international traffic.

Goods traffic in 1968 which almost reached the record figure of the year 1966 have totalled 6.7 million tons of which 6.2 million tons have been arriving and 0.5 million tons departing. As to the international goods traffic the imports have totalled 3.6 million tons and the exports 0.3 million tons. Against the corresponding figures for the year 1967 the result shows an increase which largely has reference to the imports which reached the highest figure to date.

Containerized shipping over the Port of Stockholm has yet only started on a small scale. The number of containers handled, however, has risen from about 1,500 in 1967 to more than 5,000 in 1968.

Despite their relatively small volume the goods exported represent a considerable value. To a large extent exports consist of machinery and other manufactured products. In the main, imports consist of commodities for the population of the Greater Stockholm Area as well as raw materials for the industries of this area. These industries mainly depend on the Port of Stockholm for their raw material imports. A considerable part of the commodities passing through the port goes to the capital's extensive wholesale trade,

which distributes them throughout large areas of central and northern Sweden.

The traffic over the Port of Stockholm also includes passenger and ferry traffic. The passenger traffic consists of certain local traffic for the Stockholm Archipelago and important international traffic mainly to and from Finland but also e.g. the U.S.S.R. Merely the Finland traffic in 1968 has amounted to 727,000 passengers which is somewhat higher than in the previous year. The Finland traffic also contains transportation of motor-cars. The number of arrived and departed motorcars has totalled 36,000 including 9,200 lorries by which 95,000 tons of goods have been carried. There is also train ferry service to Finland. The statistics for 1968 of this traffic account for 7,500 waggons and 70,000 tons of goods.

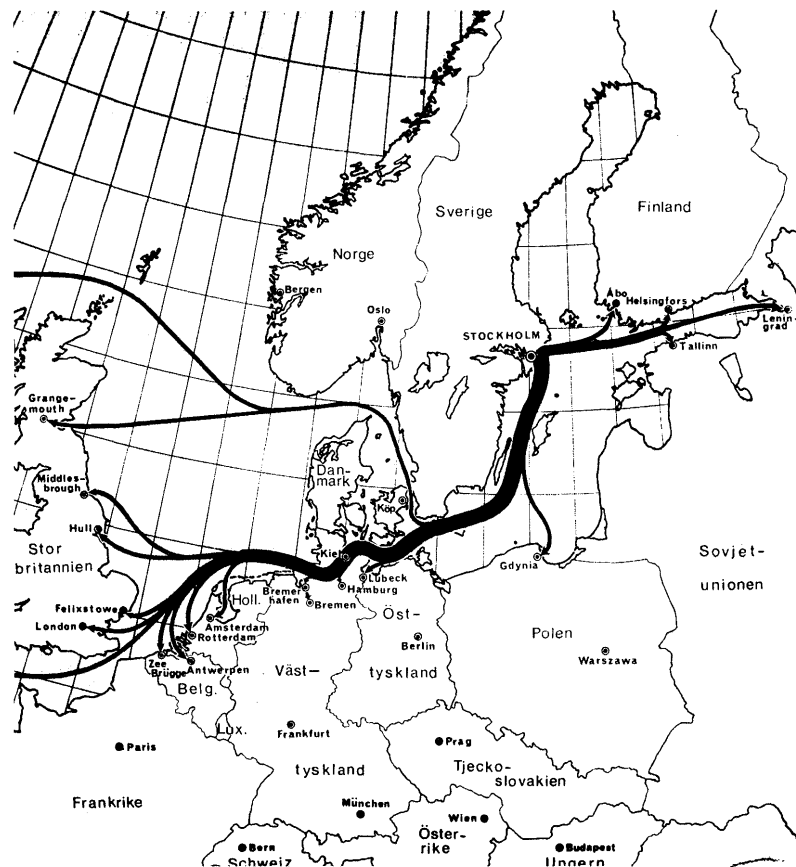
### 3. Harbour Installations

Today the Port of Stockholm consists of a number of separate harbour installations. The quays are totalling some 16 kilometres in length. About 6 kilometres of these quays are used for passenger and general cargo traffic, while the rest is mainly given over to bulk cargoes. Among the more important installations mention can be made of the following:

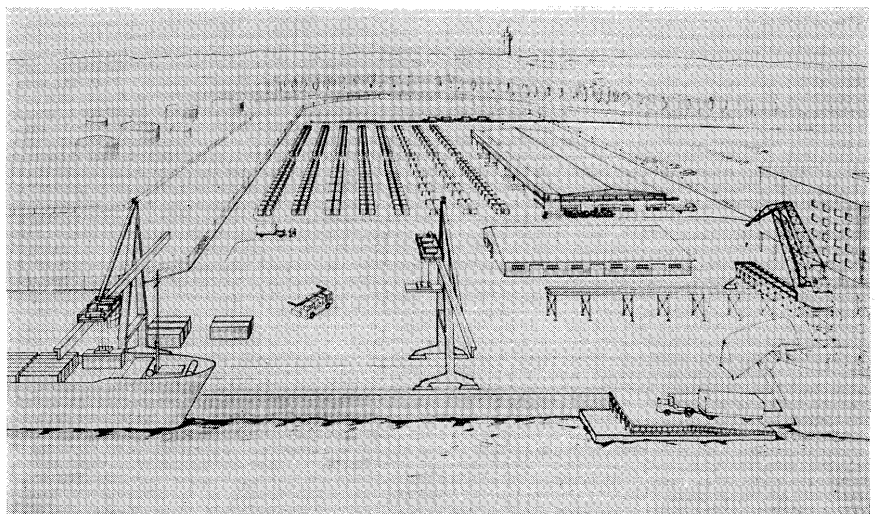
**Värtahamnen** (Värta Harbour) is the main harbour for bulk cargoes as coal, coke, grain, salt etc. It is also an important harbour for the increasing import of mineral oils, which in recent years has necessitated the preparation of new areas for oil installations. Further Värtahamnen is the new terminal for the ferry traffic to Finland. A berth for car ferries is in use since a few years and a berth for train ferries since March, 1967. The harbour has a length of quay totalling some 2,500 metres and a depth of water alongside of 5.2 to 10.9 metres.

**The Free Port** is the largest and best equipped harbour installation for general cargo in Stockholm. The quays which include a ramp for roll on/roll off traffic have a length of some 1,700 metres and the depth of water alongside 7.5 to 10.2 metres. The Free Port occupies a large area and contains con-

## Liner Services at Stockholm



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The rapid change in the system of transportation now being brought about by the change-over to unit cargo handling, by the concentration of ship arrivals to fewer ports, and by the growing exchange of trade between Sweden and the rest of Europe, is expected to produce a rapid increase in the amount of goods transported to and from the Stockholm region in containers and on flats.





**Skeppsbromhamnen, was the original harbour, now it's centre for passenger and general-cargo from and to Finland.**

siderable storage space in warehouses, sheds and silos. All warehouses and some sheds are heated. In the warehouses there are cool rooms and refrigerating chambers. The Free Port is mainly used for the storage of imported goods intended for the Greater Stockholm Area and extensive parts of central and northern Sweden. To a certain extent the Stockholm Free Port is also used as an entrepôt. The annual volume of goods passing through the Free Port is about 500,000 tons, mainly concerned with transoceanic or Mediterranean countries.

A new large warehouse has been opened in April, 1967 on the pier in the Free Port. This warehouse has two basements, mainly used for cool rooms and refrigerating chambers, and five above-ground floors intended for the handling of goods in connection with the loading and unloading of vessels as well as for long-term storage of goods. The warehouse has a total floor space of 42,000 sq. metres and is equipped

with loop hole doors and loading ramps, designed and positioned to facilitate the efficient handling of goods.

A special terminal for containers etc. has started in July, 1967 inside the Free Port. It is run by a private company for a fast line between Hamburg/Kiel and Stockholm. The vessels of this line are equipped with special cranes for handling containers and are also designed with car decks and stem doors for roll on/roll off traffic. The berth at the terminal includes a pontoon ramp for this purpose.

A new container terminal is now in progress and the first part of it will be brought into use during this year. The whole terminal which is expected to be completed by 1971 will comprise an area of 100,000 sq. metres. The first 120 metres stretch of quay now under construction will then be extended with a ramp for roll on/roll off traffic. The quay will be equipped with two cranes which each have a lifting capacity of 24 tons with a hook or 20 tons

with an automatic top spreader for containers. 40-foot containers can be handled by these cranes working together and then controlled from the cab of one of them. The terminal will also be provided with a large shed for packing and unloading containers.

**The Oil Harbour at Loudden**, the largest oil harbour in Stockholm, has extensive receiving facilities for tankers and a large storage area, in which seven different oil companies have their installations.

At the pier with a length of 260 metres and a depth of water alongside of 11.9 metres two fully loaded oil tankers of up to 35,000 dw. t. can tie up and discharge their cargoes at the same time. North and south of the pier there are eight smaller loading jetties along the shore with a length totalling 500 metres and a depth of water of 8.9 to 10.9 metres.

The harbour is provided with underground storage facilities for fuel oils and petrol blasted out of the rock beneath the above-ground storage tanks. The petrol in these underground cisterns is stored on what is called a water bed, which completely eliminates the losses by evaporation.

The harbour installation has rather recently been modernized by new railway tracks, new driveways as well as a tanker-lorry filling station used jointly by all the oil companies.

**Skeppsbromhamnen** (Skeppsbrom Harbour) has a quay 570 metres in length and depth of water alongside of 5.4 to 6.0 metres. This is the centre for passenger and general cargo transport to and from Finland. The traffic is very dense; in 1968 there were roughly 455,000 passengers and 16,000 motor-cars transported to and from this harbour.

**Stadsgårdshamnen** (Stadsgård Harbour), which has a length of quay totalling some 1,900 metres and a depth of water alongside of 5.5 to 9.5 metres, is situated right in the centre of Stockholm and has modern cranes and spacious storage facilities. The harbour is mainly used for regular European general cargo traffic. There is also a rather important passenger traffic particularly to and from Finland.

**Norra Hammarbyhamnen** (North Hammarby Harbour) is used for both general cargoes and bulk cargoes. It has a length of quay totalling some 1,700 metres and a depth of water alongside of 3.5 to 6.3 metres.

**Södra Hammarbyhamnen** (South Hammarby Harbour) has a length of quay totalling some 1,400 metres and a depth of water alongside of 3.9 to 6.3 metres, and is specially used by steel stockists and motor-car companies, including General Motors and Renault. Adjacent to the harbour is a large industrial area. A number of industries have established themselves here.

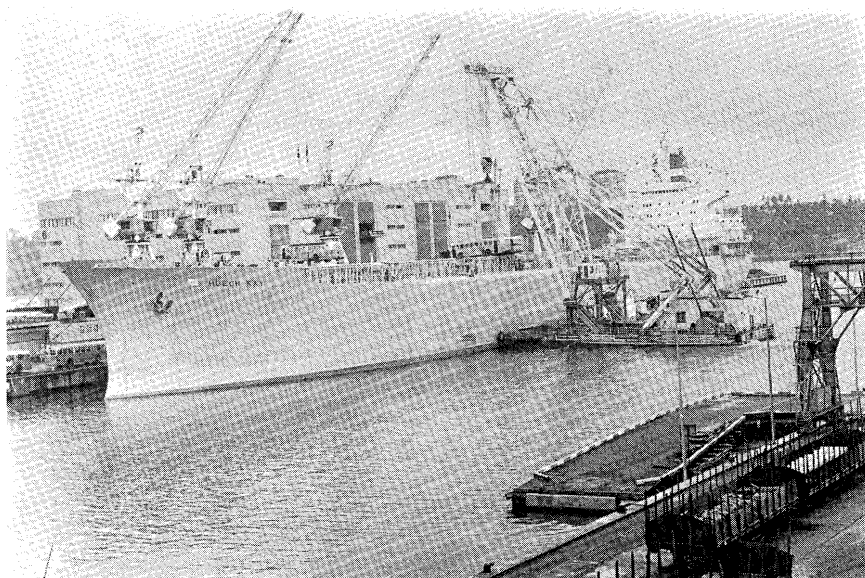
These two last mentioned harbours face each other on either side of **Hammarbyleden**, a seaway which gives the Baltic a direct connection with Lake Mälär at Stockholm. This seaway, constructed between 1917 and 1926 by the municipality, is 6,500 metres in length and has one lock, which can take vessels of up to 110 metres in length, 15 metres in width and with a draught of 5.4 metres at low water.

**Arstadalshamnen** (Arstadal Harbour) on Lake Mälär has a quay of some 500 metres in length and a depth of water alongside of 6.9 metres and is mainly used for the import of building materials. A certain part of the harbour is utilized for the receiving of bulk cargoes of wines and spirits. Special tankers from the Mediterranean countries are here discharged by pipelines to giant underground vats behind the quay in cavities blasted out of the solid rock. Through pipelines wines and spirit can also be pumped from railway tankers to the underground storage installation and vice versa. Connected with Arstadalshamnen there are private quays used for the import of iron and steel products.

**Quays for Swedish Coastal Traffic** and used for the transport of grain or cement or for the unloading of sand, stone, timber and other building materials are mainly lining the shores of Lake Mälär and Lake Hammarby. These quays have a length totalling some 2,500 metres and a depth of water alongside of about 4 metres.

#### 4. Technical Facilities etc.

The Port of Stockholm is well equipped for the mechanised handling of goods and has excellent



The Floating crane "Lodbrok" in front of the 42,000 sq.m. new-built "Magasin 6" in the Free-Port.

facilities to provide efficient service.

Today the Port has 129 modern cranes, including five floating cranes, at the disposal. The moveable cranes are all electrically operated and have an average lifting capacity of between 2.5 and 11.5 tons for general cargoes and between 5 and 10 tons where bulk cargoes are involved.

"Lodbrok", the largest of the floating cranes, is capable of lifting 260 tons with a 10-metres outreach beyond the edge of its pontoon. The outreach for 30 tons is 28 metres. This crane has its own propelling machinery, consisting of two diesel engines, which work together with the lifting mechanism; this saves considerable time in the handling of cargoes.

A large number of fork trucks, tractors etc. and some 65,000 loading pallets facilitate the handling of goods along the quays and in the warehouses and sheds.

The generally used containers over the Port of Stockholm can be handled with the equipments of the vessels or with the quay cranes. Regarding the above stated capacities of the quay cranes it might be remarked that it is possible to put two equivalent cranes together for joint lift. The capacity of e.g. two 10 tons cranes is in such a case 19 tons. When required the floating cranes will perform the service of heavy lifts. Among the equipment for con-

tainers in the port there are e.g. a new fork truck which can lift 18 tons and a new special transporter which can carry 20 ft. containers.

To date there is only one special terminal for containers. A terminal for containers and unitised loads by roll on/roll off and lift on/lift off traffic is now in progress and other terminals are planned.

Within the harbour area there are usually two or three railway tracks along the quays and additional tracks at the rear of the harbour area. These tracks are connected with the network of the Swedish State Railways. Stockholm has rapid and frequent transport connections and services with all important parts of Sweden for both passengers and goods.

Despite the hard Swedish winter the port and its approaches are never closed by ice. Open passage is ensured by the two municipally owned ice-breakers, the S/S Sankt Erik, which has 4,000 I.H.P., and the M/S Starkodder, which has 960 I.H.P.

The wireless communications in the port have been developed and now include installations for the port wireless service, wireless communications with cranes, a wireless telephone system for the port and a communal service for receiving sets in road vehicles. This makes possible a quick and reliable service for both vessels and for stevedores, customs officers and pilots. Con-



One of the refrigerated accommodations in the Free Port.

sequently these installations enable efficient and streamlined loading and unloading operations to be carried out in the port. The port wireless service, which is the latest of the above-mentioned communication equipments, works on the international maritime VHF band, the main transmitter being remotecontrolled from the office of the Harbour Board. Similar wireless equipment has been installed on the municipal ice-breaker, Sankt Erik. Furthermore the harbour pilots have been equipped with portable wireless transmitters. The port wireless installation has sufficient range to ensure direct contact from the main transmitter to vessels approaching the pilot stations at the outreaches of the port.

The Port provides fresh water,

electricity and telephone connections on most of the quays.

Some 30 tugboats, most of them in private ownership, are in service in the port.

The stevedoring work in the port is done by six private companies, five of which are engaged in this trade only to a limit extent. All the companies are united in a common organization, Föreningen Stockholms Hamnarbetskontor (Associated Stockholm Stevedoring Companies Office), which deals with matters affecting the stevedoring companies jointly in their relations with the stevedores. The Office takes care of the procurement of labour through the daily call-over, the payment of wages and similar tasks while the stevedoring companies are responsible for the actual

work of discharging and loading vessels etc.

## 5. The Stockholm City Harbour Board

The Port of Stockholm is owned by the City and has been administered since 1909 by the Stockholm City Harbour Board. The Board consists of a chairman, appointed by the City Council from among the City aldermen, and also six other members appointed for two years: one by the Swedish Government, one by the Stockholm Chamber of Commerce and four by the City Council.

The Harbour Board is responsible for the management of the municipal harbour system. According to current regulations the Board shall provide harbour installations with the appropriate facilities, equipment, material and the like, provide the necessary icebreaking facilities, receive the stipulated harbour dues, as well as issuing certain by-laws and determining port charges.

Stockholms Frihamnsaktiebolag, which is a municipally owned company, operates the Free Port. According to an agreement with the Harbour Board, this company has the right to use the Free Port and its buildings and installations. However, the necessary maintenance and construction work are the responsibility of the Harbour Board, although the maintenance of buildings is the duty of the company. Thus it can be said that the Free Port is administered by the Harbour Board as far as the installations are concerned, and by the company as far as operations are concerned.

For the purposes of the maintenance of the Free Port the Board of the company is assisted by a managing director.

Since October 1967 the Port Authority and the Free Port Company share a new office building and since October 1968 they have also the same director. By these means a closer collaboration has been made possible between the authority and the company regarding particularly financial and secretarial functions.

## 6. Port Charges

For services rendered to harbour users the Harbour Board is entitled to charge stipulated fees. The most important is the harbour dues regulating the fees which are to be



paid by vessels calling at the harbour and on goods passing through the port.

**Harbour dues:** Present rates, in force up to end of 1969.

For vessels:

1. **Foreign going:** Tramps, 42 öre per n.r.t. payable both inward and outward; corresponding dues for regular transocean traffic, 30 öre per ton on goods loaded and/or discharged; max. charge 24 öre, minimum charge 9 öre per n.r.t.; for other regular traffic 24 öre per n.r.t.
2. **Domestic traffic:** Tramps, 20 öre per n.r.t., payable both inward and outward; corresponding dues for regular traffic, 10 öre per n.r.t.
3. **Tourist vessels** of 400 n.r.t. or more pay 13 öre in foreign traffic and 6 öre in domestic traffic per n.r.t. both inward and outward.
4. **Vessels only calling** at the harbour area pay the dues for arrival.

For goods:

To be levied on all arriving goods; as to outgoing goods, however, only on those leaving for foreign places. The rate is specified for the majority of the various classes of goods, limited to max. 180 and 72 öre per 100 kg on goods arriving from foreign and home places respectively. Goods leaving for foreign places are charged a max. of 20 öre per 100 kg. On goods transshipped in the port under the supervision of the Customs Administration or for which a transshipment certificate is produced, dues are paid only one way. For goods arriving by water from foreign places and forwarded unexamined overland to places abroad there are dues up to a max. of 60 öre per 100 kg.

For coal, coke, salt and oil the dues

Boston — The historic Port of Boston is showing distinct signs of coming to life and displaying new and dynamic growth and development following a number of years of only token progress. Boston, which was once North America's busiest seaport in Colonial days, with clipper ships sailing to every corner of the globe, is not throwing off its lethargic growth overnight—but it does now have one outstanding advantage in its favor.

It has its first signed labor contract in 15 years.

It lasted 102 days, but when the longest strike on Boston's waterfront finally ended in early April, plans were already being made to assist the port in experiencing its greatest growth in decades.

Despite a continuing program of improvements and modernization by the Massachusetts Port Authority, the owner of many of the public

charges are as follows:

To stimulate the development of container traffic the Harbour Board has recently reduced the port charges for goods in containers provided that the goods are transported over a special terminal or otherwise that the containers are forwarded unopened over the port. For such goods the dues are reduced to 50 öre per 100 kg.—Also the crane dues have been reduced by a new standard rate for containers.

#### 7. Importance of the Port

The Port of Stockholm is of great importance for the entire economy of the Swedish capital; indeed it can be said that its trade directly

shipping facilities in the Port of Boston, a number of factors beyond the control of the MPA had combined to give the port an unfavorable reputation among domestic and overseas shippers and steamship operators. As a result, the number of sailings from the Port of Boston were declining every year, while tonnages were making only small annual increases.

Foremost among the adverse forces affecting the port was the effort by a number of steamship companies and conferences, particularly American flag lines operating with federal subsidies, to consolidate the numbers of their ports of call. This often eliminated Boston as a stopping point for their ships.

The Massachusetts Port Authority was only recently successful in thwarting efforts by several of these companies and conferences to absorb the additional overland ship-

depends on the port and its activities.

Today an always the wholesale trade of Stockholm is very extensive, especially the trade in metals, machines as well as textile wholesaling.

Stockholm and its environments form the largest industrial centre in Sweden. In the main the industries here are dependent on the Port of Stockholm for their supplies of raw material. Moreover, a very great part of their production is exported to the markets of the world via the Port of Stockholm.

In conclusion it can be said that the port activities themselves amount to a major industry, which provides work for a large number of people. Thus the numbers of workmen and officials, dockers, customs officers and railway workers employed within the port total some 3,000. In addition, stevedores, forwarding agents, brokers and shippers and the like are all active in the Port of Stockholm.

Stockholm 29. 4. 1969

Type of goods	Öre per 100kg			
	From foreign ports	From Swedish ports	To foreign ports	Transshipped
Coal and coke	9	9	5	9
Salt, rough, in lumps	8	4	10	4
Salt, other	18	8	10	8
Oil, fuel oil	20	20	14	10
petrol	55	55	14	10
petroleum	24	24	14	10

Special charges apply to the Free Port.

# Port of Boston Is Coming to Life Again

ping charges for transporting cargo to and from New York, rather than to and from Boston, thus removing even more business from the Hub. Although final action is still pending, a series of complaints to the Federal Maritime Administration in Washington and the U.S. Federal District Court in Boston finally forced withdrawal of these discriminatory tariffs.

Rumors also long persisted in shipping circles that Boston was a more expensive port than other North Atlantic gateways. This resulted in part from the continuing practice of the railroads serving Boston refusing to absorb carloading and unloading costs on import/export movements in Boston, while continuing to do so in other North Atlantic ports.

While steamship lines continued to drift away from Boston, efforts were being undertaken by the Massachusetts Port Authority to develop the Port of Boston as a more favorable port for commerce. All the piers under Massport ownership or lease are being constantly updated and adapted to truck requirements.

The Port of Boston did make an early entry into the field of containerization, only to have its efforts temporarily stalled by labor discord. A 27 1/2-ton capacity container crane was erected by Massport at its Castle Island Terminal in South Boston for exclusive lease by Sea-Land Service, Inc., in August 1966, only to have its initial operation thwarted by a jurisdictional dispute between the longshoremen and teamsters.

Although this dispute was settled several years ago, Boston is still awaiting arrival of the first Sea-Land container ship. With the recent settlement of the Longshoremen's strike, reports of a possible Sea-Land sailing from Boston have been revived.

Massport is actively moving ahead with plans to develop the Boston Public Container Terminal on 45 acres of land behind the Mystic Pier in Charlestown, purchased in the summer of 1968 from the Schiavone and Sons, Inc., salvage company. About \$5 million of Massport's recent \$62 million bond issue is to be devoted to the initial

development of this site.

When completed, the new Boston Public Container Terminal is expected to include 50-ton capacity container crane, marshalling yards for rail and highway vehicles, and auxiliary buildings.

Massport participated in the development and construction of a one million cubic foot freezer—Boston's first dockside cold storage facility—in commonwealth Pier in South Boston, which was opened in March 1969.

Promotion efforts by Massport, both with its Boston-based personnel and with its field offices in Brussels, Chicago, New York, Tokyo and Washington have resulted in a number of new shipping services calling in Boston. The Tokyo office has been particularly successful in having Far East steamship lines increase Boston sailing and cargoes.

But with the signing of the first significant modernization in the Hub's labor contracts since 1935 between the International Longshoremen's Association and the Boston shipping Association, it is hoped that Boston will be able to take on a stability of seaport operation which it has not seen in many years.

The new contract insures higher productivity per man per hour by (1) abolishing all artificial slingload requirements, (2) allowing pallets to be fully utilized, (3) allowing full utilization of containers (but retaining the 50-mile radius restriction) and allowing container ship to be worked around the clock, (4) reducing general cargo and specialty gangs to a size equal to those in the Port of New York, (5) elimination of the minimum manning requirement and giving management complete flexibility in the use of extra dock labor, (6) giving management more flexibility in the numbers and uses of clerks, (7) allowing management to order cargo delivered to storage areas no later than the day after a vessel's free time period, (8) permitting each stevedoring company to have control over the dispatch and placement of its own gangs, and (9) giving management the right to shift gangs from one ship to another, or from one hatch to another, thus greatly reducing time lost between operations.

Equally important are the contract provisions designed to prevent work stoppages and insure an adequate labor supply, by (1) prohibiting strikes, walkouts and lockouts, (2) establishing a grievance procedure ending in binding arbitration by a neutral third party, (3) the opening of the longshoremen's register to additional men who want to work on the waterfront, and (4) management participation in the hiring hall to insure that all available men are dispatched to the areas of the port where they are needed the most.

A good working labor-management relationship has been maintained on the piers, and the cargoes have been kept moving without congestion. Massport and shipping association officials are optimistic business will be on the up-swing as steamship lines realize the productivity gains.

Officials of both agencies point to the interest expressed by a number of steamship lines in entering Boston Harbor. With the firm footing of a workable labor contract, they are erasing the myths of the old Boston, and concentrating on bringing as much additional business as possible into the Port of Boston.

Symptomatic of this new-found optimism was the recent announcement of the shipping agency of Patterson, Wyld and Co. to establish a new, exclusively-Boston shipping line—the New England Express Line—to provide fortnightly service between the Hub and Rotterdam, Antwerp and LeHavre. The new service is specifically designed to remedy a long-standing deficiency in Port of Boston shipping of having relatively little eastbound (export) service available.

Other new services for the Hub are also being formed, indicating that Boston's peaceful harbor is really coming to life.

# 4 Vital Port Improvements Requested for New Jersey-New York Port

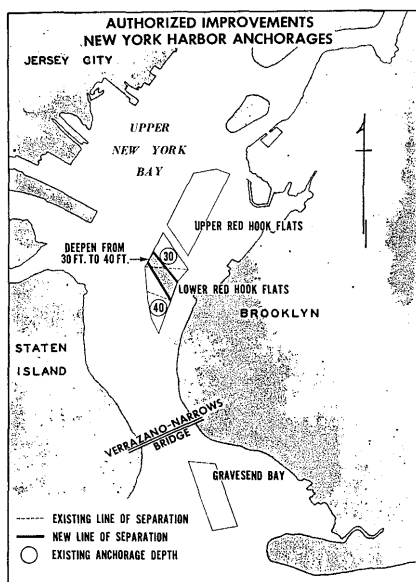
(News from The Port of New York Authority)

Washington, June 5 — The Port of New York Authority, in association with twenty-one other port, civic and maritime organizations in the metropolitan area, today urged the House Committee on Appropriations to provide \$8,625,000 for four vital harbor improvements in the New Jersey-New York Port. This is \$7,500,000 more than the \$1,125,000 recommended for these same projects in President Nixon's revised Annual Budget for Fiscal Year 1970.

The appropriations, called for by Port of New York interests, would provide \$5,000,000 for widening the Newark Bay Channel and \$3,500,000 to expand and deepen the Lower Red Hook Flats of the New York Harbor Anchorages in Upper New York Bay. Originally, the 1970 Fiscal Budget prepared by the Johnson Administration had included \$3,500,000 for the Newark Bay project and \$2,900,000 for the New York Harbor Anchorages, but these figures were cut to \$500,000 for each project in President Nixon's revised budget.

The remaining \$125,000 requested

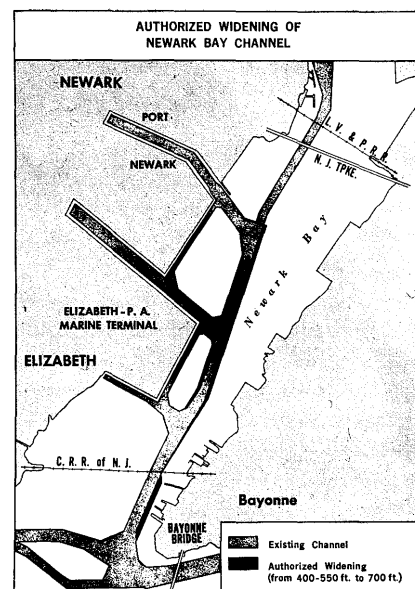
by the New York Port interests was for two review studies by the Corps of Engineers. They provide for \$75,000 for a study to reclaim the New York and New Jersey Meadows bordering the Arthur Kill and along Newark Bay, and \$50,000 for a study of the improvement of channels in the East River and Steinway Creek. Original budget allocations



for both of these studies were unchanged in President Nixon's revised budget.

Roger H. Gilman, the Port Authority's Director of Planning and Development, presented the joint testimony to the Subcommittee on Public Works. In commenting on the cuts made in the revised budget, Mr. Gilman declared "... the Newark Bay and Anchorage projects in the New York-New Jersey Harbor were reduced by 86 and 83 per cent, respectively, and thus received the brunt of the slash by absorbing \$5,400,000, or 39 per cent of the total cut in the revised budget for all seaports."

The cuts made in the Nixon Administration's revised budget left recommended appropriations of



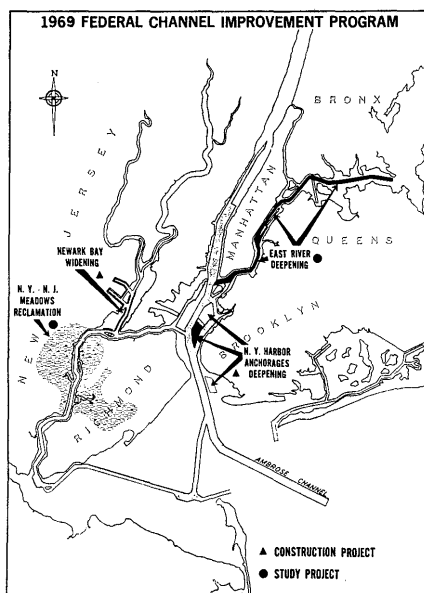
\$13,665,000 for eight out of seventeen of the nation's deepwater seaport projects unchanged, while subjecting the remaining nine projects to a total reduction of \$13,750,000.

"In other words," Mr. Gilman stated, "two Port of New York navigation construction projects have been singled out to receive 39 per cent of the budget cut as it affects the nation's major deepwater seaport projects."

Mr. Gilman further noted that "in 1968, oceanborne foreign trade at the Port of New York generated more than \$940 million in Customs revenues, nearly one-third of all Customs Revenues for the entire nation. Our request for \$8,625,000 —less than one per cent of this amount—will further develop the waterways that help to provide these and possibly additional Customs revenues."

In his statement, Mr. Gilman pointed up the fact that the Newark Bay project authorized by the Congress in 1966, nonetheless remains unstarted due to expenditure restrictions. The Newark Bay project initially involves an urgently needed channel widening to 700 feet to accommodate increasing sizes and numbers of tankers, container ships and other vessels using the busy waters of Newark Bay and the Hackensack and Passaic Rivers. The Anchorages improvement authorized in 1965 was not started until last month because of economy

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# Gigantic Change Taking Place in World Trade Picture

## Port of Los Angeles

Los Angeles, Calif., July 14:— There is a gigantic new change taking place in world shipping today. Automated ships and cargo-handling, synthetic materials and plastics are a few of the more obvious changes. The days of wooden ships and iron men are at an end.

Cotton, wool and silk, once exclusive garment materials, are only the base for synthetic additives which improve the looks, quality and utility of today's clothing. Fruit juices and animal feeds have added vitamins and other nutrients.

Cargo slings and lift boards are giving way to big container boxes lifted on and off ships by huge landside cranes. Small cargo ships are giving way to giant super vessels.

The Port of Los Angeles, cargo capital of the west, is playing an important role in this new world trade picture. Its docks are hum-

ming with new activities in the never-ending race to find faster and better cargo-handling methods and equipment.

And with the change in trends has come a change in markets, notably a booming trade with Far East markets. United States Customs figures show imports into the Greater Los Angeles area last year totaled \$1,907,300,000 and exports \$1,523,100,000. Port of Los Angeles records showed 12,514,868 tons of total general cargo on the import side of the ledger and 13,497,680 tons in exports.

Japan was Los Angeles' best customer in 1968. The Japanese were first in six of the 10 major export commodities from the port, taking a total of 2,112,524 tons of cargo in the top 10 categories alone, or almost one-sixth of the total general cargo trade. In the remaining four of the top 10 commodities, second,

third, fourth and fifth on the best market list.

The United States Customs Department lists seven major marketing areas in the Far East—Japan, Hong Kong, the Philippines, Australia, Indonesia, Iran and India. Five other major oriental markets are listed as important to the Port of Los Angeles. They are Taiwan, South Korea, Kuwait, Malaysia and Singapore.

The Philippines are the second most important market for general cargo from the Port of Los Angeles. In 1968 the Philippines took more than 118,000 tons of cargo in the top 10 export items alone.

Other important markets in this category were Korea receiving 54,000 tons; Taiwan taking 33,000 tons; Australia with 23,000 tons and Hong Kong where 14,500 tons were delivered.

The top 10 imports of the Port of Los Angeles show Japan leading with 616,132 tons; followed by the Philippines with 107,775 tons; Taiwan with 33,771 tons; Australia with 21,846 tons and Korea with 11,407 tons.

Mere figures of inbound and outbound cargoes do not tell the true trade picture, however. The changing trends, reflected in changing procedures of the United States District Customs Office portrays more dramatically the story of the gigantic shift in world trade.

Automobile imports from the orient, unheard of a few years ago, have shown a gain of 135 per cent during the past year with the Japanese Toyota and a 66 per cent gain for the Datsun. Customs has named a special team to handle auto imports. Another special team has been established by Customs for food-stuffs, tobacco, live animals, coffee and frozen fish.

Antiques and art works require the services of a Customs team and another team checks Chinaware, optical goods, photography equipment, cigaret lighters and electric lamps.

Artificial flowers, plastics and synthetic products require checking teams of Customs experts. Until a comparatively short time ago, plastic dishes for instance were given the same Customs rating as Chinaware or earthenware, depending on

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cutbacks. Initially, it would provide two wider and deeper anchorage spaces for larger petroleum tankers.

Because of the importance of both construction projects, and past delays, Mr. Gilman urged that \$5 million be spent on the Newark Bay work and \$3.5 million for the Anchorages project in fiscal 1970. He added that the Army Engineers had indicated a capability for accomplishing this amount of work.

Mr. Gilman is scheduled to present the same testimony tomorrow (June 6) to the Senate Committee on Appropriations.

The organizations who joined the Port Authority in urging the adoption of these appropriations are:

### Maritime and Port Organizations

Board of Commissioners of Pilots of the State of New Jersey  
Harbor Carriers of the Port of New York  
Maritime Association of the Port of New York  
Moore-McCormack Lines, Inc.  
New York Port Promotion Association

New York Towboat Exchange  
Sea-Land Service, Inc.

United New Jersey Sandy Hook pilots' Benevolent Association  
United New York Sandy Hook Pilots' Benevolent Association  
United States Lines, Inc.

### Government Agencies

New Jersey Department of Conservation and Economic Development  
Union County Planning Board (N.J.)

### Chambers of Commerce

Bergen County Chamber of Commerce  
Brooklyn Chamber of Commerce  
Chamber of Commerce of the Borough of Queens  
Commerce & Industry Association of New York  
Jersey City Chamber of Commerce  
New York Board of Trade  
New York Chamber of Commerce  
Staten Island Chamber of Commerce  
West Side Association of Commerce in the City of New York  
(Please see maps)

# Water Barge Stories

Water is frequently hauled by barge to ships calling at the Port of Los Angeles. The authors review developments at Guantanamo, water bunkering operations at Los Angeles Harbor and give some examples of fresh water rates.

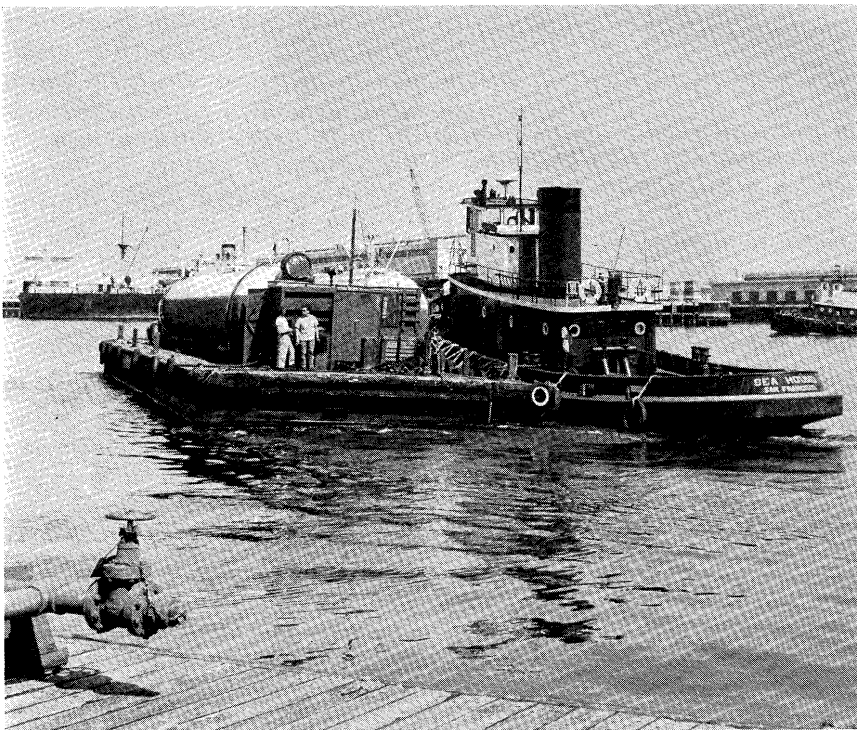
by Seymour Barfield, R.S.<sup>1</sup> and W.W. Tisdale<sup>2</sup>

<sup>1</sup> Seymour Barfield, R.S., Senior Sanitarian, Los Angeles County Health Department, Harbor District, San Pedro, California.

<sup>2</sup> W. White Tisdale, Sanitation Specialist, P.H.S., Quarantine Station, San Pedro, California.

## 1. Operation Water Barge

For many years the U.S. Naval base at Guantanamo in Cuba was provided with its fresh water from



The tugboat "Sea Hound" maneuvers the water barge "Mono Number 2" in the Main Channel at the Port of Los Angeles. (Photo by Seymour Barfield).

the thickness of the product.

Back in 1955, Customs agents report only two shipping companies were handling metal lines through Los Angeles Harbor. Today eight shipping firms are engaged almost exclusively in the metal trade and two others handle many shipments.

Tractor engines, motorcycles and nuts and bolts require one of the 19 special teams which have been set up by United States Customs in the Los Angeles Harbor area to

handle the changing cargo trends.

In 1938 Customs records show that 10 teams handled a total of 23,000 invoices for the year. Last year, one team working electronics imports alone, handled 23,000 invoices and many of the 19 teams dealing with port cargoes today will average 1,000 invoices per month.

So today, new type ships are carrying new type cargoes in new containers, handled by new methods to meet the world's increasing demands.

a station on the Yateras River four miles from the base. The water was supplied by a private company in Cuba. When the Castro regime took over the company, it continued to sell the water to the U.S. base at a charge of \$168,000 a year.

Later on February 6, 1954, the government of Cuba completely halted this supply of fresh water to Guantanamo Bay naval base and it became necessary for the navy to deliver water to the base by tanker and water barges, a laborious and costly process.

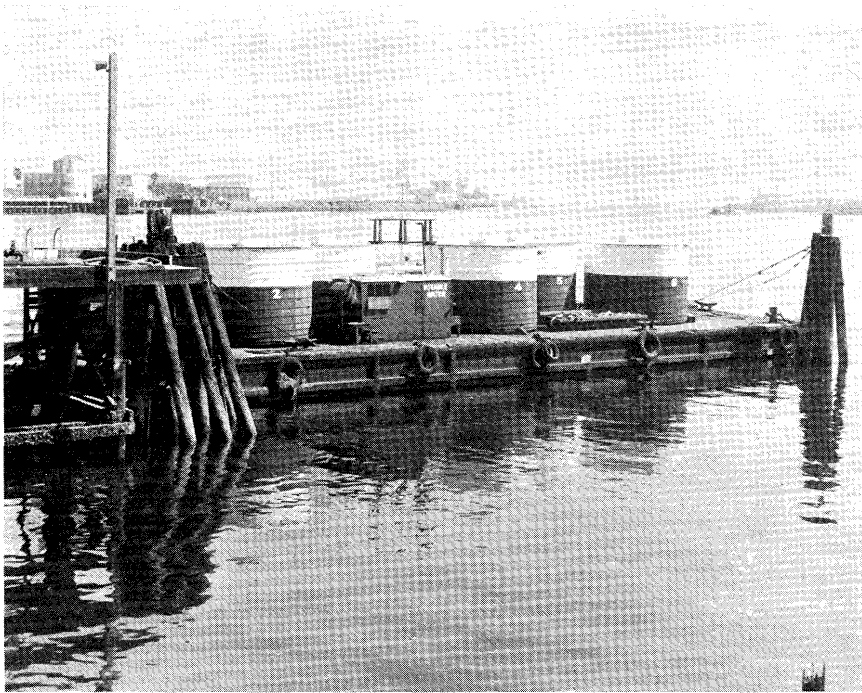
Two barges carrying 635,000 gallons of fresh water from Ocho Rios, Jamaica, about 160 miles from Guantanamo, operated "a shuttle" of water deliveries by barge. They were able to make deliveries every three days.

At the same time, relays of a fleet of ten huge water tankships, with capacities averaging three million gallons, operated out of Port Everglades, Florida, provided water at a cost of \$700 per 100,000 gallons. The port, part of Fort Lauderdale, Florida, signed a contract in 1961, to fill tankers with all the water needed at Guantanamo.

In addition, fresh water was converted from sea water by an evaporation process aboard the 6,600-ton barge Abaton, anchored in Guantanamo Bay. The process provided an additional daily supply at a cost of \$240 for 100,000 gallons. The Abaton is the only barge of its kind in the entire U.S. fleet.

To make the U.S. Navy base more self-sufficient and not dependent upon tanker shipment a four-million dollar contract was signed with the Westinghouse Electric Corporation for a salt-water conversion plant capable of producing one-million gallons of fresh water per day. The estimated cost was ten million dollars for the permanent water desalting plant and the associated equipment for converting sea water into fresh water.

By the end of February of 1964 plans were also proceeding to build a new catchment basin to collect rain water, along with an underground reservoir to hold four million gallons in reserve. On March 4, 1964, when Prime Minister Fidel Castro offered to turn on the water supply he received a negative re-



"Bay City Barge Number 62," originally a San Francisco freight barge, now carries six circular 40-ton redwood stave tanks with a capacity of 240 short tons of water at the Port of Los Angeles. (Photo by Seymour Barfield).

sponse from the U.S. Government. By August, 1964, Guantanamo was self-sufficient in terms of its needs for potable water.

## 2. Number of Water Barges in U.S.

The delivery of water by barge is not unique to this special cold war problem. The Public Health Service "Official Interstate Carrier Classification List" identifies between 15 and 20 water barges being used within the United States. Most of these are being used on inland waterways and rivers such as the Mississippi.

## 3. Port of Los Angeles

Within the Ports of Long Beach and Los Angeles potable water is delivered to vessels inside the Los Angeles and Long Beach breakwaters by one water barge operated by the San Pedro Tugboat Company.

Bay City Barge Number 62, originally a San Francisco freight barge, carries six circular 40-ton redwood stave tanks with a delivery capacity of 226 short tons (54,240 gallons). The tanks (all are interconnected) are mounted on the

barge decks.

Recently, a second water barge sank. She was the Mono Number 2, formerly a San Diego Naval water barge. She was equipped with steel tanks with a total capacity of 240 short tons (57,600 gallons) of water.

## 4. Water Delivery Charges

In Los Angeles, water is delivered by barge to ships bunkering at anchor within the harbor and also to vessels tied up at berths, when it is desired to deliver large volumes of water in a minimum period of time. The current industry charge is \$1.50 per short ton (240 gallons) with a minimum charge of \$120 plus an additional \$50 towing charge to and from the vessel. This amounts to approximately \$175 for 20,000 gallons. In contrast, Los Angeles citizens pay about \$4.55 for this amount of water.

Current charge for fresh water delivered to vessels at wharves is .30 cents per 1,000 gallons including wharfage, with a minimum charge of .75 cents. This amounts to \$6.00 for 20,000 gallons. The water is provided by the Los Angeles De-

partment of Water and Power.

Barges deliver water to vessels through special hoses from the barge tanks and by use of gasoline powered centrifugal pumps.

## 5. Operation at the U.S. Naval Station, Los Angeles

The U.S. Navy's water barge service crafts YW 90 and YW 123 were assigned to the U.S. Naval Base, Los Angeles. They are designed and built for the specific purpose of transporting and discharging potable water to the Fleet Operating Forces while in port. Each is a seaworthy craft 174 feet in length with a beam of 33 feet. The main propulsion plant is a diesel engine developing 560 horsepower. It drives the fully loaded barge through the water at speeds up to 10 knots. Cruising range is 3,300 miles. Two diesel driven auxiliary generators supply electricity for lighting and power. Spaces are heated by a steam boiler. Cargo is handled by two pumps, each rated at a maximum delivery capacity of 600 gallons per minute.

The barge cargo section of each craft consists of eight steel tanks, each with a capacity of 37,525 gallons. Water taken abroad is chlorinated at an original concentration of 2 parts per million.

When these water barges were first assigned to the Naval facility they were used primarily to service Naval vessels at anchor within the harbor. More recently, they have been engaged in logistic support for the off-shore Channel Islands of San Clemente, San Nicolas, Santa Rosa and Anacapa. During 1963 each barge averaged total deliveries of 18 million gallons of potable water with every indication pointing toward greater use in the future.

Readers seeking additional information on the subject of boats or barges which carry potable water for loading into other boats or vessels are referred to the Public Health Service publication "Handbook on Sanitation of Vessel Watering Points," and also the standards of the American Water Works Association as they refer to protective coatings.



# Port of New York

## Foreign Trade in 1968

(News from The Port of New York Authority)

New York, June 3—The volume of oceanborne foreign trade moving through the New York-New Jersey Port climbed to 56,891,307 long tons in 1968, the largest volume handled in the bi-state port's history. Last year's tonnage represented a 6.3 per cent increase over the 1967 volume of 53,539,097 long tons. It was valued at \$14.1 billion, a 10.2 per cent gain over the 1967 valuation of \$12.8 billion.

Airborne exports and imports also reached a new high during 1968 with 245,449 tons, valued at \$4.04 billion, moving through the Port of New York's air cargo facilities. This was an increase of 31.4 per cent over the 186,824 tons handled in 1967, and 21 per cent over the \$3.34 billion worth of airborne foreign trade that year.

The 1968 tonnage figures, made public today by James C. Kellogg, III, Chairman of The Port of New York Authority, were compiled and analyzed by the bi-state agency from basic data of the Bureau of the Census, U.S. Department of Commerce. Mr. Kellogg noted that last year's record tonnages reflect the results of the dynamic promotion programs and modern cargo-handling facilities designed to enable the port to retain its leading position in world commerce.

The large increase of airborne foreign trade through the port last year continued the rapid upward trend that began in 1960 when 32,376 long tons were flown into or out of the Port District, Mr. Kellogg pointed out. In the six years since 1962, when airborne exports and imports were first reported separately from oceanborne foreign trade, the total of airborne foreign trade through the bi-state port has nearly quintupled.

"The Port Authority will continue its all-out efforts to maintain the movement of high volumes of international trade through the Port District," Mr. Kellogg said. "A ma-

jor part of these efforts is the construction of The World Trade Center which will provide the shipping community with new opportunities for worldwide business. The Center also will encourage foreign trade by making it more efficient to process the paperwork associated with that commerce."

Chairman Kellogg noted that the Port Authority's unparalleled containership terminals in Elizabeth and Port Newark, New Jersey, had been a prime factor in the oceanborne general cargo tonnage volume achieved in 1968, the largest since World War II. The continued development of these facilities along with the modern marine terminals in Brooklyn and Hoboken enabled the bi-state port to maintain its

leading position in the face of strong competition from Atlantic, Gulf and Great Lakes ports.

### Oceanborne Foreign Trade

Oceanborne general cargo moving through the Port of New York rose 7.8 per cent to 16,368,775 long tons, the highest general cargo volume in 27 years. A decline of 4.3 per cent in oceanborne general cargo exports to 5,784,721 long tons was more than offset by a 15.8 per cent increase in imports to 10,584,054 long tons.

General cargo consists of high-value commodities, much of it packaged, which produce the most revenue for the port's export and import firms, international banking facilities, insurance companies, and waterfront labor. Petroleum, grains, ores, and other bulk cargoes produce less port revenue because they can be handled in mass quantities with a minimum of port service.

A total of 40,522,532 long tons of bulk cargo moved through the Port District in 1968 compared to

(Continued on Next Page Bottom)

TABLE I  
Port of New York Oceanborne Foreign Trade (1959-1968)  
(Thousands of long tons)

Year	General Cargo	Total Cargo (bulk & general)
1959	13,092	42,473
1960	13,737	41,215
1961	12,994	38,733
1962	13,902	41,890
1963	13,499	43,917
1964	13,838	45,616
1965	13,988	50,729
1966	15,436	54,557
1967	15,184	53,539
1968	16,369	56,891

TABLE II  
Port of New York Airborne Foreign Trade (1960-1968)  
(In long tons)

Year	Exports*	Imports*	Total
1960	—	—	32,376
1961	—	—	39,902
1962	28,047	21,793	49,840
1963	35,748	25,965	61,713
1964	53,432	30,923	84,346
1965	95,076	50,392	142,465
1966	105,499	57,840	163,339
1967	119,819	67,005	186,824
1968	148,508	96,941	245,449

\*Airborne exports and imports were not reported separately until 1962.

# *Helsingborg Port Opens The SCANIA-TERMINAL for Increasing Container Traffic*

**By Mr. S. Ullman**

General Manager Helsingborg

Helsingborg, July 22, 1969:—For several years now Helsingborg has had southern Sweden's largest volume of traffic. The flow of goods has been increasing steadily during the last few years.

An investigation of quantities handled by the port during the year 1968 indicates that the Port of Helsingborg is the natural centre for container traffic for the whole of the

the 38,355,098 long tons in 1967. This represents a gain of 6 per cent. **Airborne Foreign Trade**

Exports through the port's air cargo facilities in 1968 amounted to 148,508 long tons, an increase of 23.9 per cent over the 119,819 long tons in 1967. Major export commodities included office machinery, electrical machinery, scientific instruments, aircraft and parts, electrical motors and generators, steel tubes and printed matter.

Airborne imports totaled 96,941 long tons, 44.7 per cent higher than the 67,005 long tons handled in 1967. Principal inbound commodities were clothing, office machinery, footwear, telecommunications apparatus, woven fabrics, and textile and leather machinery.

Virtually all of the airborne foreign trade was handled at John F. Kennedy International Airport, the Port District's gateway for international air trade and travel. The export and import air cargo reported comprised commercial shipments only. Cargo such as furniture, personal effects of diplomatic and military personnel, pets, race horses and government property were not included. Shipments to or from United States territories such as Puerto Rico also were not classified as exports and imports.

(Please see attached statistical tables)

southern part of the country. This new development requires improved harbour equipment. The Port of Helsingborg has therefore provided these necessary resources. The new SCANIA—TERMINAL will now soon be ready for use. The inauguration takes place August 11, and will be carried out by Mr. Gösta Netzen, the governor of the country, in the presence of the press, Radio and Television, shipping people, and representatives for business and industry. The SCANIA—TERMINAL is situated in the Southern Harbour. ASEA, the well-known Swedish electrical engineering firm, has delivered a container crane with a lifting capacity of up to 45 tons. It works over a loading quay with 5 lanes, of which 3 are railway tracks. The terminal incorporates a container distribution centre with space for customing, warehousing, and general handling of cargoes. Initially the "stripping" and "stuffing" capacity will be at least 30,000 containers per year. When the final build up has been reached the working area will be totally around 100,000 square yards, and the port capacity will be many times greater. A ferry ramp for roll on/roll off traffic is already in use. The SCANIA—TERMINAL can take and clear all types of container-loading ships. The depth of the harbour is 26–38 feet.

**Quay berths in reserve—the shortest possible time in port**

Beside the SCANIA—TERMINAL there are three other quay berths for container traffic, of which two are situated in the Southern Harbour and one in the Northern Harbour. All of them have crane capacity for handling containers, which gives the Port of Helsingborg

an unusually large reserve capacity for container traffic.

**Helsingborg a meeting place for two major European routes**

The SCANIA—TERMINAL will also serve as a land terminal for road-bound container traffic. Road connections are the best any harbour can offer: the motor road E6 is linked by a side road which leads directly to the Southern Harbour, and has immediate connection also to the E4. In addition, the terminal is used by the State Railways as a container station for both domestic and foreign traffic.

**The Helsingborg system—unique, economical handling of cargoes**

The handling of cargoes at the SCANIA—TERMINAL will be carried out by a specialist terminal operating organization, Helsingborgs Hamngods AB, working in very close collaboration with a local stevedore company. This form of organisation gives uniform and effective management of work and makes maximum use of all resources.

Helsingborgs Hamngods AB is responsible for all handling of cargoes, and is able to work together with customs authorities in a new time-saving way. An agreement has been reached—the only one of its kind in Sweden so far—between Helsingborgs Hamngods AB and the customs authorities. The latter assesses cargoes whilst the Hamngods AB is responsible for taking charge and delivering them. The goods may also be stored in bonded warehouses prior to duty being paid. All the shipping lines as well as all other users take full advantage of the Helsingborg system, a flexible form of collaboration which reduces handling costs and other charges to an absolute minimum.

**Increasing regular container-traffic with England and the continent**

The first regular container line was established in the autumn of 1968 by Svea Line Syd AB, connecting Southern Sweden with England. Barely six months later traffic was increased to two regular sailings weekly the whole year round. In addition, regular traffic will start in July 1969 on the line Helsingborg—Felixstowe—Rotterdam—Helsingborg, in both directions and with two sailings weekly.

(Continued on Next Page Bottom)

# ***U.N. International Seminar on Coastal Shipping, Feeder and Ferry Services***

**in Solstrand, Norway, September 1969  
(Aide-Memoire)**

## **Purpose and Background**

This Seminar will be orientated to an examination and instruction in matters related to coastal shipping, feeder and ferry services and related industries. Major emphasis will be placed on the potential and function of integrated coastal shipping, feeder and ferry services in a co-ordinated regional or national transport network. The Seminar will cover the economic, technical and institutional aspects oriented for the benefit of senior officials from developing countries who have a responsible role in the planning and implementation of programmes for the development of transport and its associated infrastructure in their respective countries. It will take the form of lectures, group discussions, including case studies. Inspection and study tours of selected facilities and services will be included in the programme.

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The SCANIA—TERMINAL also serves Atlantic Container Lines, Transatlantic, Bore Line and Walenius and even other lines.

## **Industrial concentration close to the SCANIA—TERMINAL**

The increasing concentration of industry in Southern Sweden with extensive import and export has largely created this need for container traffic via the Port of Helsingborg. Butter, bacon, wood and industrial items are only some of the products that are regularly shipped. The colossal car and train ferry traffic with Denmark and the continent, the greatly increasing parcels traffic, and the many reliable shipping agents in the area gives the Port of Helsingborg its well deserved title "Southern Sweden's transport centre".

## **Date and Duration**

This Seminar will be held between 1-21 September 1969.

## **Place**

Host facilities will be provided by the Government of Norway and the Seminar will be based in Solstrand, near Bergen, Norway.

## **Working Languages**

English, French and Spanish will be the working languages of the Seminar. Arrangements will be made for simultaneous interpretation, and lectures and discussion papers will be issued in one of the three working languages, including a summary of the papers in English, French and Spanish.

## **Participation**

The United Nations will sponsor one participant from up to thirty developing countries. A limited number of additional participants from these and other such countries may be accepted provided that their respective governments assume financial and legal responsibility for their attendance. The nominations should be submitted to the Resident/Regional Representative of the United Nations Development Programme not later than 9 June 1969.

It is envisaged that Governments will be asked to nominate up to three candidates for participation. The United Nations will select only one participant from any one country. Wives or dependents are not encouraged to accompany any participant during the period of the Seminar.

Nominees for this Seminar should be senior government or management officials selected by their governments from the appropriate ministry or other source having responsibility for the planning and implementation of programmes for

the development of transport and its associated infrastructure or its operation. Their educational background and position should be sufficient to enable them to fully participate in the proceedings.

The participants will be regarded as attending the session in their individual capacities, and not as representatives of their governments. Only candidates who are prepared and able to attend the Seminar for its full duration will be considered. Since the number of governments invited to nominate candidates is significantly larger than the number of places for participants, consideration of nominations can be ensured only by submission of candidature before 9 June 1969.

## **Technical Report to be Presented to the Seminar by Selected Participants**

Each candidate selected by the United Nations to attend the Seminar is expected to prepare a study of no more than ten pages in either English, French or Spanish on Coastal Shipping, Feeder and Ferry Services in their own countries, outlining the same time problems and difficulties encountered, which may be discussed as case studies. A brief outline of the plan to be followed by participants in the preparation of their technical report will be forwarded to participants when invitations are sent.

## **Observers**

Depending upon the availability of space, once the requirements of the developing countries, as outlined above, have been met, observers from developed countries, appropriate inter-governmental and non-governmental organizations having consultative status with the United Nations may also be invited. The United Nations will not accept any financial, legal or other responsibilities whatsoever for persons attending as observers.

## **Lecturers**

Lecturers will be provided jointly by the United Nations and the Host authorities. Some United Nations Specialized Agencies and prominent individuals in the field of transport will be invited to present papers on various aspects of this Seminar.

## **Organization**

The Seminar will have a duration of three weeks, wherein the first two weeks will be devoted to class-

room lectures presentation of papers and group discussions; the last week to study and inspection tours of selected facilities and services in Norway.

The working day during the first two weeks will be divided into two three-to-four-hour periods, one before and one after lunch. Each period may contain one or more sessions. Certain evening sessions may be necessary for general discussions and study periods.

The lecture and discussion papers for the Seminar will be distributed when participants register on arrival at Solstrand. Participants will be expected to study them in their own time prior to their actual presentation during the Seminar.

A substantial portion of the Seminar time will be devoted to questions and discussions on the topics of the various papers. There will be a moderator and panel of experts to assist in conducting the discussion period following the presentation of discussion papers. Specific cases or problems will be studied.

All participants from developing countries will be expected to make specific contributions to these discussion periods in connexion with any agenda item. Participants are particularly invited to relate the various aspects of the problems and situations prevailing in their respective countries. Observers, depending on their respective areas of competence, may be called upon by the moderator to comment on any specific topic arising during the discussion period.

#### **Financial arrangements**

The United Nations will provide each selected participant with:

- a) round-trip economy class air transportation between airport of departure in home country and Bergen, Norway;
- b) a small cash allowance for incidental expense for the duration of the Seminar (1-21 September 1969).

The Host Authorities will provide each selected participant with hotel rooms and meals.

The Governments nominating participants will be required to bear the following expenses:

- a) All expenses in the home

# *Orbiter Probe*

## **IAPH News :**

### *President Swanson Is Back in Melbourne*

Mr. N. L. Fidge, Private Secretary to Mr. V. G. Swanson, has furnished us with the following information:

Further to the report which appeared in the July issue of "Ports and Harbors", Mr. V. G. Swanson, President of the International Association of Ports and Harbors (Chairman of the Melbourne Harbor Trust) has, following his return to Melbourne, advised of the success of the Ninth Conference of the International Cargo Handling Co-

ordination Association held in Gothenburg, Sweden, from the 2nd to the 5th June and the Twenty-second International Navigation Congress of the Permanent International Association of Navigation Congresses which was held in Paris from the 15th to the 22nd June, both of which Conferences Mr. Swanson attended as President of the International Association of Ports and Harbors.

He has advised that at both Conferences a wide representation of maritime interests was in attendance and from the range of subjects which were under discussion he is convinced of the necessity of the IAPH maintaining the close association which has been established with both PIANC and ICHCA.

During his visit to Gothenburg he took the opportunity of discussing with Mr. A. Johnson, President of ICHCA, Doctor J. Ph. Backx, Chairman of the International Committee of ICHCA, Lt. Colonel Charles Earle, Secretary-General of ICHCA; and Mr. G. I. Smith, Director of The United Nations Information Centre and The United Nations Development Program in London, the areas of operation in which the IAPH and ICHCA might liaise.

En route to these two Conferences Mr. Swanson took the opportunity of visiting the Port of Naples in Italy and whilst in Germany of visiting the Ports of Hamburg, Bremen and Bremerhaven; and in The Netherlands the Ports of Amsterdam and Rotterdam. In each of the ports visited he was most cordially received and in both Amsterdam and Rotterdam had the pleasure of being received by the respective Burgo-

country—incidental to travel abroad, including expenditures with passports, visas, medical examination, inoculations and other sub-miscellaneous items and internal travel to and from airport of departure and arrival in the home country.

- b) Salary and related allowances for the participants during the period of the course.

The United Nations will not assume responsibility for the following expenditures:

- a) Travel or any costs incurred by dependents who might accompany the participants;
- b) Costs incurred by participants with respect to travel insurance, accident insurance, medical bills or hospitalization fees in connexion with their attending the course;
- c) Compensations in the event of death or disability of participants in connexion with their attending the course.
- d) Loss and/or damage to personal property of participants while attending the course.



## Announcement

**The Port of Le Havre is seeking a second-hand floating dock of about 200 m. serviceable length. Offers with details of technical characteristics, date of construction and price required, to be addressed to: PORT AUTONOME DU HAVRE—B.P. 1413-76-LE HAVRE (France).**

*Advertisement*

masters of these Cities.

During his call on the Burgomasters, Mr. Swanson discussed the joint invitation which has been extended by Amsterdam and Rotterdam for the Eighth Biennial Conference of the International Association of Ports and Harbors in 1973 to be held in The Netherlands and facilities were also made available for him to inspect a most impressive Conference Centre which has been constructed by the City of Rotterdam.

Following the ICHCA Conference he took the opportunity of having discussions with Lord Simon in London concerning various matters associated with the IAPH.

On his way home to Australia after the PIANC Conference, Mr. Swanson had a few days stopover in San Francisco, during which time he had discussions with Mr. Ben E. Nutter, Executive Director and Chief Engineer of the Port of Oakland (Chairman of the IAPH Committee on Containerisation).

Mr. Swanson has advised that wherever he called on his visit overseas he found a lively interest in the activities of the IAPH and the Association's growing influence in maritime affairs was also very evident.

### Travelers

Mr. Harold B. Robins, Public Relations Officer, Melbourne Harbor Trust, and Mrs. Robins, were in Japan on vacation for several days in August. While in Japan, the couple met Mr. Toru Akiyama, Secretary General, and visited the

ports of Tokyo, Yokohama, Osaka and Kobe, besides doing the sights of Kyoto.

### Colonel H. W. Quinn

Pittsburgh, Pa., August 26:—Colonel Howard W. Quinn, Member of the first Board of Directors of the International Association of

### Help Wanted at UNCTAD

A vacancy exists in the Secretariat of UNCTAD for an economist to work on the economic issues involved in the development of ports in developing countries. The duty station is Geneva, but frequent missions may be expected. The man appointed is likely to be a graduate in Economics and to have several years experience working in a port (or airport) on either general administration or development plans. He will join a team headed by a systems analyst and including an engineer and an economic geographer; the whole team works under the overall supervision of a senior economist. Salary in accordance with age and experience on official UN scales. The appointment may be for a fixed term of two years or on a probationary basis with the possibility of a career appointment. Fluency in English is essential. French or Spanish highly desirable.

For further particulars and application form please write to Office of Personnel, UNCTAD, Palais des Nations, Geneva.

Ports and Harbors is representing the Swindell-Dressler Company, Pittsburgh, Pennsylvania, 15222, in connection with continental United States and overseas engineering and development projects for Ports, Harbors, and Marine Terminal Operations. He may be contacted through the Company offices (telephone: 412-391-4814) or at his suburban Washington, D.C. residence-office: 1707 Tarrytown Avenue, Crofton, Maryland, 21113, telephone: 301-932-7670. (Swindell-Dressler Company, A Division of Pullman Incorporated, News Release)

### New Fender System

A new type of fendering has been developed to protect dock sides and mooring dolphins from damage as ships come alongside.

Based on the absorption of energy as a mild steel torsion bar deforms plastically, the design of the Cambridge fender, as it is called, makes it uniquely capable of cushioning the impact of the biggest tankers and bulk carriers in service or contemplated.

No other type of fender has the energy absorption capacity to cater for the impacts liable to occur when ships of 100,000 tons or more are berthed.

Cambridge fenders are designed individually to provide the energy absorption characteristics demanded by any particular situation.

Developed by the Cambridge Fender and Engineering Co., Ltd., of London, formed for the purpose

as a subsidiary of John Shelbourne & Co. Ltd., civil engineering contractors, the new fender is based on the principles of plastic deformation of metals which have been the subject of research under Sir John Baker at the Cambridge University Engineering Laboratories for many years, and Sir John and his colleague P. W. Turner are directors of the company, together with C. P. Shelbourne, chairman, and H. C. Shelbourne. The family business now entitled John Shelbourne & Co., Ltd. this year celebrates its 150th anniversary. (Shipping and Trade News, August 21)

### Re-invitation of Tenders

Ottawa, July 17 1969:—The St. Lawrence Seaway Authority announced today that it had been decided to re-invite tenders for the construction of a Road-Rail Tunnel at Townline Road—Welland, Ontario. This project is part of the work of realigning the Welland Canal from Port Robinson to Ramey's Bend.

The Authority said that, subsequent to the opening of tenders on May 13th, the low tenderer explained that they had made a substantial error in their tendered price for common excavation. They therefore were not prepared to execute the contract on the basis of their tender as submitted and wished to have it withdrawn. In view of the fact that the other tenders are substantially in excess of the estimates of its consultants, the Authority has decided to re-invite bids.

The re-invitation will be by public advertisement and will be on the basis of modifications to the specifications. The failure to obtain an acceptable tender in the first instance has delayed the beginning of construction of the largest single structure in the project to the extent that the completion date for the Welland By-Pass must be rescheduled from 1972 to 1973. (The St. Lawrence Seaway Authority)

### Port Developments In Kingston, Jamaica

Kingston, Jamaica, is situated conveniently for all shipping crossing the Caribbean, whether on North/South or East/West routes.

It is one of the finest natural harbours in the world, of easy access and sheltered from the elements on all sides. It will soon boast a port unrivalled in the area for efficiency and modern installations and services.

The new development now under construction by Kingston Wharves Ltd. is on 56 acres of reclaimed land at the western end of the harbour.

The first stage is scheduled for completion early in 1966 and will consist of 3 wharves each 600 ft. in length and the second phase, to be completed in 1970 will consist of 4 additional wharves giving a continuous sea wall of 4,200 feet.

The Quay wall is of steel piling with cathodic protection and the upper portion will be concrete faced and protected with tubular rubber fenders.

with tubular rubber tenders.

Bunkering lines, fresh, water, telephone, electricity and fire mains are available at quayside.

Spacious transit sheds lie alongside each berth, each being 384 ft. long and 140 ft. wide with ten 15 ft. doors on to the 55 ft. wharf apron for rapid cargo acceptance and fifteen similar doors leading to the covered raised truck loading bays at the rear.

65 ft. wide roadways will service the area.

Ancillary installations within the complex include cold storage, repackaging and processing, bulk cargo storage and handling facilities, bunkering installations, truck park, administrative offices and passenger facilities.

The total investment involved will exceed £5,000,000.

The channel leading to the quays of the new development is 1,500 ft. wide and 35 ft. deep. Maximum speed of current is 1½ knots. Tidal variations are 10—16 inches. The quays of the new development are aligned with the prevailing east south east wind which averages 20 knots.

A full range of bunkers including blended fuels will be supplied by Shell at the new wharves which will allow vessels requiring bunkers to be serviced whilst continuing to load or discharge cargoes, the rate of delivery being up to 300 tons per

hour dependent upon number of vessels bunkering at any one time. Fresh water also available is of excellent quality and purity.

A Port Authority to investigate and set rates is to be established by the Government which together with the private wharfwomen and operators will ensure that suitable wharfage rates, reduced free storage time, port security and Customs procedures are brought into line with the major ports of the world. At present arrangements are also being concluded within the Joint Industrial Council for the Port of Kingston to modernize the systems of cargo handling with regard to both workers and equipment to ensure efficient and fast dispatch of vessels servicing the port. (Kingston Wharves Ltd.)

### Dock Pilferage

Washington, D.C.: — Senators were told July 23 that inadequate search and frisk laws are contributing to growing cargo thefts and dock pilferage.

Arthur A. De Santis of New York City, a spokesman for U.S. businessmen interested in international trade, said the biggest single problem in the enforcement field probably lies in the inadequacy of search-and-frisk authority.

"Both local and federal search and seizure laws have been circumscribed with so many safeguards that their use is seriously impeded," De Santis said. He is the executive secretary of the Italy-America Chamber of Commerce.

He testified on the problem at a hearing of the Senate Small Business Committee.

De Santis said federal agencies should place more men on the waterfront, guard goods in foreign trade, and devise new methods of apprehending criminals on and beyond the dock.

He said closer cooperation is required with state authorities in tracking down stolen goods, the thieves and their organizations. (Shipping and Trade News)

### Diverted to Buffalo

Buffalo, N.Y.:—A shipment of Buffalo milled subsidy flour which had been assigned to a coastal

port for export was instead routed through the Port of Buffalo. The change in plans brought to 8.2 million pounds the total scheduled for both milling and export here under Agricultural Stabilization & Conservation Service June allotments.

The request for the change in route came from Rep. Thaddeus Dulski who protested the coastal routing. In his protest, the Congressman said the government could ship the International Milling allotment directly overseas from the Buffalo Port Terminal more cheaply than by rail to the east coast and from there by ship.

Previously this year, an 8.8 million-pound shipment was allocated to Buffalo. (Port of Buffalo Progress Bulletin)

### Frozen Meat

Duluth, Minn., August 21:—Exports of frozen meat and poultry through the Port of Duluth are anticipated as the result of the opening of a \$600,000 public dry and refrigerated storage warehouse on the Duluth waterfront.

Mid-Continent Warehouse Co., Duluth, completed construction of its new waterfront facility in late August.

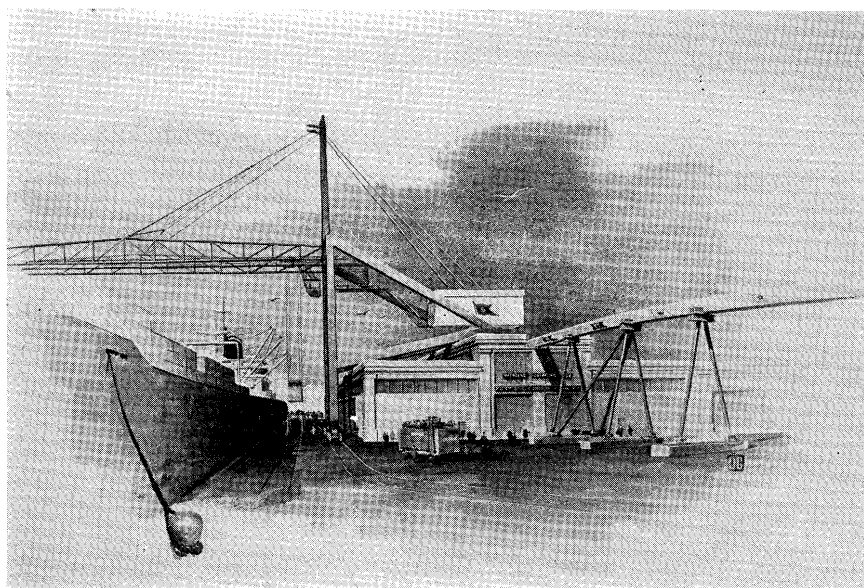
Marshall Chabot, Mid-Continent president, said location of the warehouse makes it "a natural" for meat and poultry exports from a broad Upper Midwest area served by the Port of Duluth. The port, at the western end of the St. Lawrence Seaway-Great Lakes system, serves a hinterland comprised of Minnesota, western Wisconsin, North and South Dakota, Iowa, Nebraska and parts of Montana and Wyoming. (Seaway Port Authority of Duluth)

### Port of Everett

Everett, Wash.:—The Board of Port Commissioners for the Port of Everett announces the appointment of Richard A. Andersen to the position of Port Manager effective June 16, 1969.

Mr. Andersen has had an extensive career in Marketing and Marine Operations and will be an asset to shippers interested in working with an emerging distribution Port capable of full containerization, break bulk cargoes and national warehousing. (The Port of Everett)

## Unique Container Crane at L.A.



Unique 33-ton container crane to be installed at the Port of Los Angeles will ride with its rear legs on top of an existing warehouse building at Overseas Shipping Company's facility. In addition to containers, a grab bucket attachment will enable the crane to unload bulk products. Note curve in tracks in artist's rendering, allowing gantry structure to negotiate a turn on the wharf.

### Queen Elizabeth

Hollywood - Fort Lauderdale:—New owners of the Elizabeth, formerly the Queen Elizabeth, have taken over and informed the Port Everglades Authority they expect to announce extensive plans for converting the former world's largest passenger ship into a convention center and tourist attraction.

The 83,000-ton liner, here since last December at a temporary berth in the harbor, was sold by Cunard to The Queen Ltd., a Pennsylvania corporation. Robert Cosden is president of the company.

An amended lease for 135 acres of Port land was signed by the principals. Dredging of the Intra-coastal Waterway to a depth of 36 feet for a distance of one mile will begin shortly and the Elizabeth will be moved to her permanent location by June 30, 1970. (Port Everglades News)

### Expansion at Houston

Houston, Texas:—Phase I of a multi-million dollar expansion and improvement program for handling containers will get started at the

Port of Houston within the next 30 days, J. P. Turner, executive director, said.

Houston was the pioneer container port in the United States, having received its first shipload of containers in May, 1956.

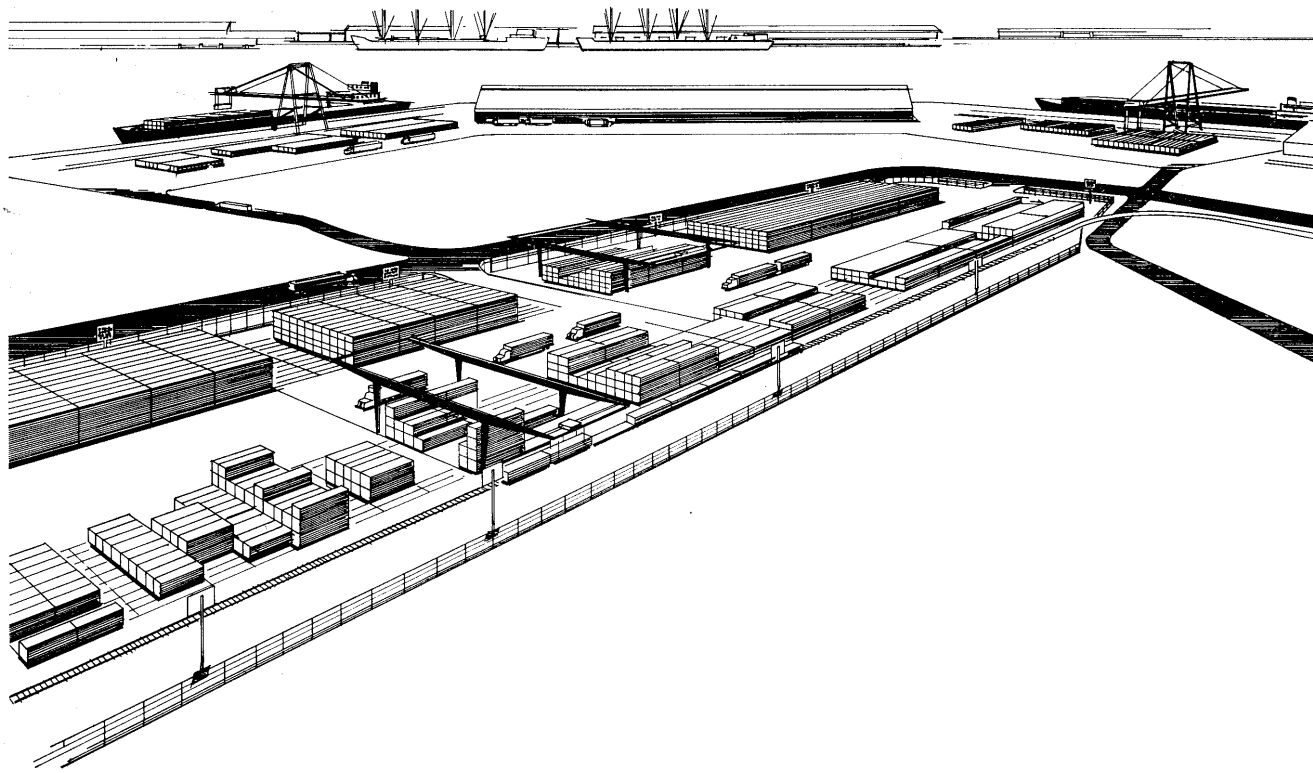
Coastwise trade was the first to take advantage of truck-size containers loaded on board ship for economy of movement between the East Coast and the Gulf Coast. This has been so successful much foreign commerce is now going in containers and the demand for containers is growing every week, said Mr. Turner.

The first phase of the expansion program will be to provide a 16 acre container marshalling yard immediately to the rear of Wharves 26 and 29, two of the six modern open-type wharves designed to handle containers at the Port of Houston.

Bids will be opened on June 16 for the paving, fencing and lighting of the marshalling yard. This will be followed by the installation of a bridge crane to shift containers in the yard.

A number of container crane are

## Houston's Planned Container Marshalling Yard



already in operation, however plans are being studied for the installation of two giant gantry container cranes on wharves 26 and 29 to speed up the loading and unloading of container ships. These wharves offer an unobstructed expanse 600 feet long and 200 feet wide.

Mr. Turner said that Phase I would carry a price tag of \$750,000. This will be the first of several marshalling yards and other associated facilities for the efficient handling of containers.

The Port of Houston is one of the major container ports in the United States, handling approximately 15,000 containers per year.

Most of the containers are hauled to and from the port on trucks and the new container yard will be in the shadow of a gigantic high-level bridge that will span the Ship Channel to become part of Interstate Highway 610. Foundation and approach work has been started for the bridge, which is expected to be completed in 1971.

Sea-Land Service, the pioneer container ship operator, uses a huge 27-ton Paceco container crane for

its coast-wise and Puerto Rico container service. In addition, the port has a 50-ton electric gantry and a 35-ton electric gantry as well as four 82 ton mobile cranes, all used for handling containers.

In addition to the first marshalling yard, the Port has approximately 150 acres of land in back of the wharves which may be used for container storage and servicing.

### Appointment for Emergency

Los Angeles, Calif.:—Bernard J. Caughlin, general manager of the Port of Los Angeles, has been designated by the Maritime Administration of the Department of Commerce as the port official to be responsible for the operation of all seaports in Southern California under their jurisdiction during declared wartime emergency situations.

The appointment, as Federal Area Port Controller, is in addition to his present assignment as Federal Local Port Controller for Los Angeles Harbor.

Federal regulations require that

these posts be filled by a member of the National Defense Executive Reserve, which is a group of select national business executives who will augment the management of federal agencies in time of war. Caughlin has been a member of the Executive Reserve since 1966. (Port of Los Angeles News Release)

### New Harbor Commissioners

Los Angeles, Calif.:—Prominent Los Angeles civic leader and businessman, Robert A. Day, who has served the City as a commissioner for nearly a dozen years, today (Wednesday, July 30) was named president of the Board of Harbor Commissioners by his fellow members at their annual election meeting.

Elected vice president was Frank C. Sullivan, Los Angeles public relations executive and a member of the Harbor Commission since October 1968.

Day, the past vice president and director of Superior Oil Company and a former member of the Board of Counsellors of the University



of Southern California School of Medicine, is a guarantor of the Los Angeles Civic Light Opera Association and is a native-born Los Angeles citizen.

He was a member of the Los Angeles Fire Commission from 1954 to 1961 and again from 1965 to 1967. He was appointed to the Harbor Commission by Mayor Sam Yorty on July 5, 1967 and was elected the Board's vice president July 24, 1968.

Last year Day was appointed by the Governor to the Southern California World Trade Center Authority.

Sullivan was appointed to the Board of Harbor Commissioners on October 18, 1968. He is a former vice president of System Public Relations, Pacific Lighting Service Company, and former public relations director for the California Public Utilities Commission and the Southern California Gas Company, where he was named vice president in 1962.

A native of Portland, Oregon, he has lectured on public relations in the leading universities of California. He is also a past president of the Los Angeles Chapter of the Public Relations Society of America.

Sullivan is the president of the Braille Institute of America, Inc., in Los Angeles and president of Fremont Place Association. (Port of Los Angeles)

## Executive Director Named

New Orleans, La., August 12:—Robert R. Barkerding, Sr., has been named executive director and general manager for the port of New Orleans. He has resigned as president of the Board of Commissioners of the port and will resign his post as executive vice-president of Texas Transport and Terminal Co. Inc., in order to assume the new position on October 1.

Dr. Joseph S. D'Antoni, vice-president of the Board of Commissioners, nominated Barkerding at a Board meeting August 7. The nomination was unanimously approved by other Board members Richard B. Montgomery, Eads Poitevent and J. Melton Garrett.

The Board has informed seven local civic and trade organizations

of the vacancy caused by Barkerding's resignation. These organizations will present to the governor of Louisiana a list of nominees from which he will select a new Board member.

In accepting the appointment, Barkerding announced a reshaping of port staff involving promotions and new duties for several key personnel.

Serving with Barkerding as an executive committee will be Associate Port Director William H. Lewis and Associate Port Director E. S. Reed. Lewis will be in charge of special projects, long range planning, legislative matters and industrial promotion. Reed will act as general administrator of the port and head a four-man committee of deputy port directors. Lewis and Reed were formerly acting port directors and were deputy directors for the late Port Director W. J. Amoss.

Captain Henry G. Joffray will be deputy port director in charge of terminals and cargo handling. He was formerly director of marine terminals, wharves and docks.

James W. Martin will be deputy port director for sales and trade development. His former title was director of trade development.

Henry Rauber will be deputy port director for administration. He was formerly director of personnel.

The position of deputy port director for planning and engineering has not yet been filled, and Lewis is to act in this capacity until the position is filled.

Also to be established in the near future is a port industry and commerce section, a new division to fall under Lewis's jurisdiction.

The Board has been in search of a new director since the death of Amoss in April, 1968. It has interviewed many applicants for the directorship during the past year, according to Dr. D'Antoni. He stated that the Board has been looking for a man experienced in shipping and port operations in general and in the port of New Orleans in particular.

Barkerding, he said, meets every one of the Board's criteria. In addition, Barkerding recently directed a successful statewide campaign to

obtain new State financial support for port capital improvements.

"We plan to run a hard-hitting, hard-nosed operation," said Barkerding, "and to some extent we may be on the hard-headed side when it comes to refusing to believe that certain business cannot flow through this port.

"...there is no doubt in my mind and experience that this port is potentially the equal of or better than any port anywhere in the world. Its inherent advantages have not been exploited, and this we set out to do.

"...hold on to your hats—because we're really going to move out." (Port of New Orleans Press Release)

## For Single Agency

Norfolk, Va.:—Governor Mills E. Godwin Jr. recently appointed an 11-man commission to study the feasibility of organizing a single agency to promote and develop the state's port industry.

Under the present organization, the Virginia State Ports Authority is the state-sponsored agency charged with these responsibilities but the cities of Norfolk, Portsmouth, Newport News and Richmond each have their own port agencies for the promotion and development of individual city-operated terminals.

Promotion of Virginia's maritime trade "needs to be coordinated and reorganized," Governor Godwin said in disclosing the appointment.

He said he had no criticism of the local port authorities but believed "a better program might be evolved through a single state agency."

The commission appointed by Governor Godwin is a composite of businessmen and state legislators.

Governor Godwin has requested the commission to have its findings ready for presentation before the 1970 General Assembly next January. (Virginia State Ports Authority Sailing Schedule, August)

## New Chairman

Portland, Ore.:—Edward J. Whelan, president of the Oregon AFL-CIO, has been appointed to fill the unexpired term of John M. Fulton

on the Portland Commission of Public Docks.

Fulton was named by Oregon Governor Tom McCall to head the newly created Oregon Department of Transportation. He was Commission chairman when he resigned to accept the new post. He was appointed to the Commission in 1966.

Whelan, 43, served in the Oregon Legislature from 1959-1965. He has been president of the Oregon AFL-CIO since December, 1965 and is up for re-election to the labor post in September.

The World War II Air Corps veteran served in the Portland Fire Bureau from 1948-1958. He was with the Multnomah County Central Labor Council from 1958-1965 and was a legislative representative for the State Firefighters Council.

He attended the University of Portland and Northwestern College of Law. He is married and has two sons in college and a daughter in high school.

Commission vice chairman Robert J. Rickett, President, Graphic Arts Center, moves up to chairman. New Vice Chairman is Capt. Homer Shaver, President of Shaver Transportation company and five times Chairman of the Dock Commission. He was appointed to the Commission in 1946. Only two other commissioners have had longer tenure. (Portland Public Docks, Harbor News, August, 1969)

### **On-the-job Trainee**

Portland, Ore., August 1:—Yukio Nishida, Tokyo, arrived in Portland, Oregon, Thursday (July 31) for six month training with the Commission of Public Docks.

A civil engineer with a Masters degree from Kyoto University, Nishida works for the Japanese Ministry of Transport and will be assigned to the Commission's engineering department.

With the Japanese Transport Ministry, Nishida has spent two years in port planning and two years in port construction. Currently he is assigned to the Construction Section, Bureau for Ports and Harbors.

The 29-year-old Nishida will be trained in all facets of water front

engineering.

Nishida is part of an annual Commission program bringing Japanese transportation officials to Portland for several months of on-the-job training. (Portland Public Docks News Release)

### **Extra 10-Day Grace**

San Diego, Calif., July 28:—San Diego Unified Port Director Don L. Nay has hailed a new ruling which enables the Port of San Diego to grant an additional 10-day extension beyond the normal 10-day grace period to both government owned and sponsored shipments, as well as to commercial cargo shipments.

The Federal Maritime Commission (FMC) granted the Port of San Diego the authority for the additional free time extensions in a two-part decision on July 24, 1969. According to the ruling, at the request of the Government the Port may grant 10 additional days of free time for commodities shipped for the federal government accounts. It also permits the Port to grant 10 more days for assembly and bagging of commercial-bulk-outbound cargo in single consignments of 10,000 tons or more.

The FMC decision extended an earlier recommendation made by FMC Examiner John Marshall, who in February issued a recommendation that the Port be allowed to grant 10 non-penalty days of assembly time for government accounts but which failed to make any recommendation on commercial cargo. Port Attorney Aaron Reese did not at that time seek such a recommendation for commercial freight.

Nay lauded the new ruling by saying, "We're extremely gratified that the FMC has recognized the Port's efforts to explore new developments in foreign commerce, particularly in the export field." He referred to the bulk bagging facility at 10th Avenue Marine Terminal which prepares large shipments of fertilizer for export to Southeast Asia countries. This facility is the first large bagging operation of its kind on the West Coast, and already has brought the Port of San Diego substantial revenues.

The bagging plant is operated by

Freight Handlers, Inc., a subsidiary of Crescent Wharf & Warehouse Co. Captain Richard Maul, manager of the parent firm, says the ruling makes the future outlook very promising. "Now we'll be able to tell our customers we can meet their schedules."

At a hearing last year, Maul testified that unavoidable delays in order deliveries from prime sources and the limited capacity of the 1,000-ton a day facility often made it impossible to bag and assemble large cargos within the 10-day free time period. The bagging capacity of the plant also required that large amounts of overtime be paid to employees.

Neither Maul nor the Port Director complained that the FMC ruling would apply only to commercial shipments in lots of 10,000 tons or more. Reese had sought the request for additional time be applied to shipments in lots of 3,000 tons or more.

The FMC decision stated that contrary to objection by other ports in the proceeding, the assembly time is not a "promotional give-away program" designed to provide San Diego with a competitive edge over other ports.

"San Diego's position in this proceeding represents efforts to meet specific operational needs... in order to assure the continued movement through the Port of a specific and limited type of cargo for which special transportation requirements exist." It stated that the 10-day period would not impair Port operations, nor would the space used by Freight Handlers, Inc. be needed for other purposes.

According to the decision, there has been no proof that any cargo has been diverted from any other West Coast port as a result of the new industry at San Diego. However, although not mentioned in the FMC decision, the action is expected to place San Diego in a better bargaining position for bulk cargo which would ordinarily be shipped through Gulf ports. (Port of San Diego News Release)

### **Seattle's Free Port**

Seattle, Wash.:—A portion of the Port's Terminal 20 on Harbor Island

is literally "No-Man's Land," at least as far as the U.S. Customs goes. This is Foreign-Trade Zone No. 5 operated by the Port of Seattle since 1949 under regulations of the Foreign-Trade Zones Board, U.S. Department of Commerce.

This "free port" is free to the extent that importers and exporters do not pay customs duty until their goods have physically exited the Zone and therefore "entered" the United States. Should an importer, for example, bring in an item on which he would like his special label, possibly for advertising purposes, he can hire local workers to enter the Zone, set up shop on the spot and make the addition. He can also have them repack the items into smaller units and use decorative wrapping, thus catering to the needs of his purchasers. When the goods finally emerge from the Zone, probably with a definite sale, the import-owner then, and only then, pays his customs duty. He is spared the problem of feeling the bite of the duty before his sale is made, which helps him offset the duty charge.

He can add to his product beyond the labeling or wrapping by adding American made products, such as watch bands, to imported watches, or by adding American floats to imported netting for fishermen.

One of the most active operations going on at the Port of Seattle's Zone now is the conversion of Volkswagen trucks into recreational campers. Riviera Motors imports the sturdy trucks, puts them into the Zone and hires local craftsmen to modify the bare panel trucks into fully equipped camping units, using American made products such as insulation, paneling, windows, stoves, cabinets, beds, etc. The team is now so efficient that six workmen (including one young lady) can turn out eight campers in a day. When the camper rolls out of the Zone's "assembly line," duty is assessed at a lower rate than it would have been on the commercial truck. The other advantages are the customizing of a foreign vehicle to American tastes—it's easier to specify and get delivery of local American appurtenances that it would be to get the approximate equivalent from Ger-

many.

And the marriage of German vehicle and American side products is a good one—foreign trade is stimulated and American labor and products are utilized.

The Zone serves as an inexpensive depository for goods which sell but once a year, such as Christmas ornaments or Easter bunnies. There's nothing so useless as jingle bells the day after Christmas. Importers can bring in their articles in July, to avoid the Christmas rush, store them briefly, repackage if necessary, ship them throughout the U.S. and all with time to spare and without the worry of storms at sea delaying the timely items. If the articles are to be reshipped to Canada, for example, no U.S. duty has to be paid because the goods have "never entered the U.S.," customs-wise that it. This way, an enormous amount may be ordered, to affect a price saving, brought to one discharge point and then split up for reshipment.

What does a Zone handle? Anything that will fit in the space provided. Trucks we've mentioned, delicate ornaments, toys, tractors, ginger, pearls, diesels, rugs, cameras, salmon, wigs, Sauna baths, microscopes, jet engines and transistor radios—all and more have made their way through the Zone in the 19 years the Port has operated it. In fiscal 1967 alone, 92 firms were served in the Zone and they involved more than 55 different commodities from 20 countries.

San Francisco has the only other West Coast Zone. There are only seven in the U.S. so the Port of Seattle occupies a unique position among larger ports. Coupled with the fact that Seattle is the closest to the Orient by virtue of the Great Circle Route, the Zone adds much to the Port of Seattle's claim as the "Gateway to the Orient." (Washington State Foreign Trade Trends, June, 1968)

## Foreign Trade Zones

Washington, D.C.:—The American Association of Port Authorities oppose any move by the Federal government to abolish the nation's Foreign Trade Zones. In warning the government that U.S. port oper-

ators resist such a move, Paul A. Amundsen, executive director of The American Association of Port Authorities said:

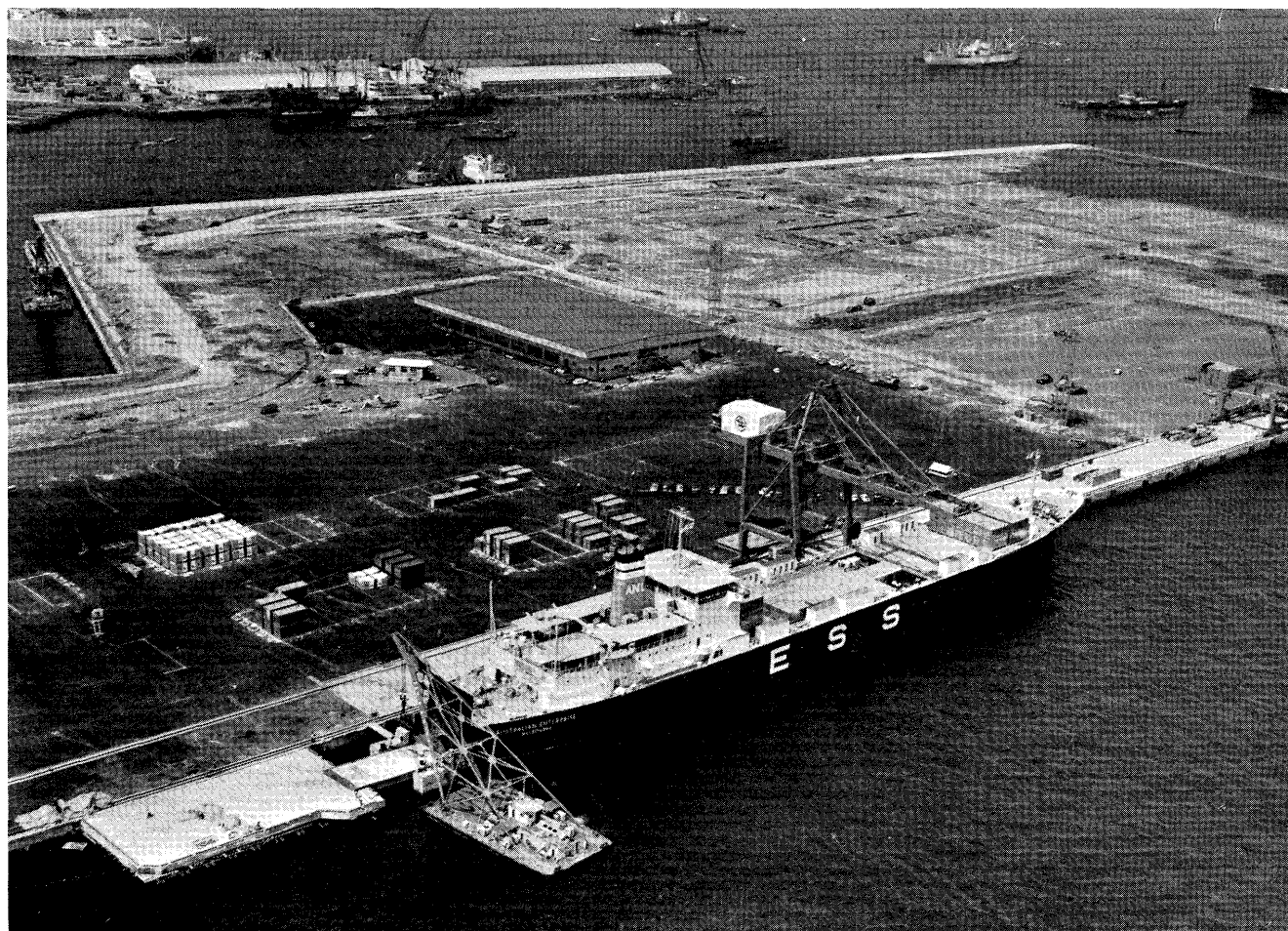
"The vigorous opposition to abolish Foreign Trade Zones also extends to the tentative proposal to do away with the right of drawbacks on all imports or, if it is retained, to limit drawback allowances...."

Continuing, Mr. Amundsen said: "Ports are the gateways for our nation's oceanborne foreign trade and the American Association of Port Authorities represents 70 of them located in 30 states bordering on the four coastlines of this country. We believe that a free world market and free transfer of international purchasing power are best suited to an expansive international commercial activity. We also believe in all measures designed to increase not restrict the volume of trade. Drawbacks definitely qualify as a helpful and inexpensive measure to make international business more attractive and more profitable. When our exports need all the boost they can get, let us remove obstacles not aids."

Drawbacks represent the most satisfactory arrangements when they export products containing imported materials on which duties have been paid. Drawbacks obviate the necessity to get involved with legal, administrative and customs arrangements that govern foreign trade zones. Still, there are probably just as many companies who find manufacturing at foreign trade zones more advantageous from the standpoint of cost reduction or sales expansion. This can be accomplished when companies make consistent use of dutiable or quota restricted foreign materials.

This dichotomy would seem to indicate, according to Mr. Amundsen, that "the fairly widespread use of drawbacks show not only that such activities are advantageous for many companies, but also that there may be some unrealized potential for manufacturing at foreign trade zones." This would further indicate that the international businessman has a choice between one or the

## *First E.S.S. Ship at Yokohama*



"Australian Enterprise", the first ship of the E.S.S. (Eastern Searoad Service) a joint operation of Australian National Line, Flinders Shipping Co. Pty. Ltd. and Kawasaki Kisen Kaisha, Ltd., is pictured at Yokohama, of Keihin (Tokyo Bay) Port Development Authority on August 30, 1969. "Australian Enterprise", a vehicle deck containership of 11,000 dwt., a roll-on/off container/auto carrier, owned by Australian National Line, left Japan on September 1 from Osaka on her maiden sailing for Sydney. On board were 460 20' containers, 145 passenger automobiles, plus 50 empty containers, a volume substantially surpassing expectations. (Photo courtesy Kawasaki Kisen Kaisha, Ltd.)

other and that there is interdependency between foreign trade zones and drawbacks operations. Mr. Amundsen posed a very potent question when he asked "why remove this promotional aid to exports and thus reduce the businessman's working tools when it entails little if any cost to the government?" (Shipping Digest, August 25)

### **American Memorial Day**

Sydney, May 28:—American Servicemen who visited Sydney dur-

ing the Second World War will be remembered in a ceremony at a memorial situated 30th May, 1969.

This was announced today by the President of the Maritime Services Board, Mr. W. H. Brotherson, who said that the ceremony is held each year on 30th May, American Memorial Day, which is regarded as being a day of remembrance in America for ex-service personnel.

The memorial commemorates the first landing of American Armed Forces at the Port of Sydney on

28th March, 1942, and the fact that 1,000,000 U.S. personnel and 5,000,000 tons of U.S. war materials were transported through the Port of Sydney and were handled by the N.S.W. Government Railways during the Second World War.

Glebe Island was the principal site of U.S. Army Operations in the port of Sydney which was a major base for Allied operations in the South West Pacific Area.

At the ceremony wreaths will be laid on the Memorial by the Hon.



J. L. Waddy, O.B.E., D.F.C., M.L.A., Assistant Minister representing the Premier, Mr. J. L. O'Sullivan, the American Consul General in Sydney, Mr. W. H. Brotherson, the President of the Maritime Services Board, Mr. N. McCusker, C.B.E., Commissioner for Railways, Major General M. F. Brogan, C.B.E., of the Army, representatives of the Navy and Air Force and representatives of American organisations in Sydney.

The ceremony is usually attended by a number of prominent American Citizens resident in Sydney and it is also open to members of the public. (The Maritime Services Board of N.S.W.)

### Biggest Bulk Carrier

Tokyo, July 10:—The World's largest bulk carrier was launched July 5 at the Kure Shipyard of IHI (Ishikawajima-Harima Heavy Industries Co., Ltd.) for National Bulk Carriers, Inc. (NBC) of the United States.

The 157,000 DWT bulk carrier is 302 meters long, 43.3 meters wide, 24.1 meters deep and 17.4 meters in designed draft at full load. She will have a 27,500 BHP GE-made turbine giving a service speed of 15.5 knots. She was ordered from IHI by NBC in February 1968 and her construction was started on February 23 this year. After completion, scheduled for the end of October this year, she will be engaged in carrying industrial salt from Mexico to Japan.

### C'ship Berths

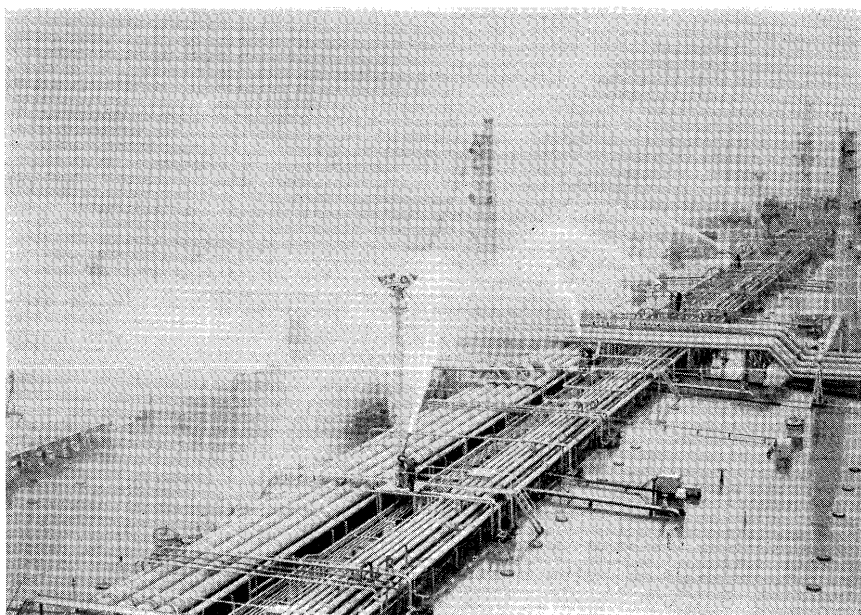
Tokyo:—The containership berths to be built by the Keihin (Tokyo Bay) and the Hanshin (Osaka Bay) Port Development Authorities (KPDA and HPDA) will be redesigned to have a length of 300 meters, 50 meters longer than the originally designed 250 meters, at the request of some renters of these facilities.

This became certain when the Containerization Committee of the Shipping and Shipbuilding Rationalization Council (SSRC) recently voted in favor of the redesigning "in line with the decided trend toward

## Biggest Bulk Carrier



## Imaginary Fire Aboard Tanker



As the size of oil tankers increases, so prevention of fires aboard becomes increasingly important. On July 9 fire fighting practice aboard the mammoth tanker "Japan Marguerite" was conducted at sea off Negishi, Yokohama. The 209,167-DWT tanker, now being finished at IHI Yokohama Shipyard with completion scheduled for July 21, has been ordered by the Japan Line, Ltd. The future crew took part in the practice, in which an imaginary fire amidship was fought with the aid of the fireboat "Hiryu" of the Maritime Safety Agency.

larger and larger containerships."

Both the KPDA and the HPDA are expected to introduce necessary changes into their original design for a combined total of 22 such berths they are to build at Tokyo, Yokohama, Osaka and Kobe ports as soon as the SSRC submits its recommendation on this matter to Transport Minister Ken Harada.

The SSRC committee on containerization problems had been studying the redesigning on behalf of the Transport Ministry.

Some renters-designate of the first 11 of the 22 berths are pressing the ministry for this change because many of their containerships now on the drawing board or under construction will be too long for the designed 250-meter-long berths.

Among them are all of the Big Six of Japan's shipping industry (NYK, Mitsui OSK Lines, Kawasaki Kisen Kaisha, Japan Line, Yamashita-Shinnihon Steamship and Showa Kaiun) and Sea-Land Service, Inc. of the United States.

One problem involved in the redesigning is that the Port Island Pier of Kobe with a total length of 1,500 meters is too short to have six 300-meter-long berths, as originally planned.

At least one of the six berths will have to be built elsewhere in the port, according to the HPDA in charge of this containership pier.

This will probably make it necessary for the HPDA to redesign one of its conventional cargoliner berths to be built at a nearby public pier as a containership berth. (Shipping and Trade News)

## UNIDO in Korea

Seoul, July 14:—The U.N. Industrial Development Organization (UNIDO) favors the Port of Yosu on the southern coast as the site for the projected free trade zone, Construction Ministry officials said.

The officials said that a preliminary survey conducted last March by a UNIDO team jointly with the Federation of Korean Industries on the project revealed that the port city is the most suitable site for the

# 2-Stage Downriver Navigation at Port of Rouen

Since 1961 the increase in the Port of Rouen's maritime traffic shows a steady tendency towards a balance of inbound and outbound fixtures. 1968 even saw exportations exceed importations.

The headway in exportation relates essentially to grain cargoes (Rouen being the leading grain port of France), fertilizers and chemical products, refined petroleum products and general merchandise.

This perspective is testimony to the multiplicity of the port's installations and the exporting role of Rouen's maritime situation.

In order to meet this evolution the port authorities were brought, with the assistance of the river pilots, to instigate a special technique of downriver navigation.

## 1. Reminder of the general conditions of navigation on the Seine and in the estuary.

The table of annex 1 gives the overall permissible upriver and industrial complex.

They said the nation's second largest industrial estate will embrace 150 large industries including an oil refinery, a chemical fertilizer plant, a cement plant and an electric power plant.

The Korean Government has decided in principle to set up the coastal free trade zone in a stepped up efforts to induce increased amount of foreign investment and to promote exports.

To that effect, the government decided to form a government-civil committee which will handle the projected establishment of the free trade zone within this year.

Economic Planning Minister Hak Yol Kim said the government will provide a site of 240 acres for the complex and will lease the complex to foreign investors and Koreans at low rates. (Shipping and Trade News)

downriver draughts together with the progress anticipated ensuing from present improvement workings in hand.

1.1 Upriver as far as Rouen—The upbound vessel drawing more than 5 metres enters the estuary channel at the hour of high water Le Havre. Proceeding at a speed roughly equal to that of the tidal front, the vessel's position throughout its passage corresponds to that of local high water and in consequence the maximum depth of water during the entire upriver journey.

The magnitude of tides being proportional to their coefficients, the permissible upbound draughts are equally proportional to the coefficient of the tide; for this reason upbound draughts make allowance for maximums and minimums; maximums corresponding to spring tides and minimums to neap tides.

1.2 Downriver on direct tides (no midway anchoring)—The upriver vessel accompanies the flood tidal front whereas the downriver bound vessel, in contrast, proceeds towards it. The outbound vessel making a direct tide (i.e. without hovering-to at anchorage) has to pass over the estuary, at high water; in so doing it will encounter local low water at about the halfway point of the journey. This explains why the permissible draughts applicable to outbound vessels are less than those applicable for inbound vessels and do not depend on the tidal coefficient (excepting at Port Jérôme which is not subject to a low tide to pass the estuary).

## 2. The two-stage downriver technique.

This technique calls for vessels leaving Rouen some hours earlier (in particular from Grand-Couronne or from the Moulineaux waiting berth) than is the case when making a direct tide, and to inter-

### Annex 1

#### General previsions up and down river

in metres

Permissible draughts	1969		1972	
	A) by day	B) by night	A) by day	B) by night
I-UPRIVER at any point of the maritime Seine as far as Rouen				
1. minimum	8, 10		9, 40	
2. 50% of tides	9, 30	7, 65**	10, 60	9, 10*
3. maximum	10, 30		11, 60	
II-DOWNRIVER				
a) from Rouen (120 kms)				
1. by direct tide	8, 20	7, 15**	8, 55	8, 00
2. by double tide	up to 9, 20		up to 10, 50	
b) from Port-Jérôme (30 kms)				
1. minimum	8, 00		9, 40	
2. 50% of tides	9, 10		10, 40	
3. maximum	10, 10		10, 40	

\* Only applies to Rouen. Nighttime upriver previsions at Port-Jérôme are the same as those authorized in daytime.

\*\* Exceptions to this figure may be obtainable on application to the Seine Pilotage.

### Annex 3

#### List of vessels having proceeded downriver on two tides since the inauguration of the technique

Name of vessel	Owners	Dwt	Length	Cargo	Draught on leaving Rouen	Date
1. Armelle	Ste. d'Avances Cale S.A.	10.433	134m	9600 T (grain)	8.70	10.5.68
2. Banario	Bana Nav. Co. Ltd. "K" Line	16.399	148m	14700 T (grain)	9.00	21.9.68
3. Penquer	Cie. Havraise & Nantaise Peninsulaire	21.382	156m	14925 T (grain)	8.95	2.2.69
4. Carolia	Union Navale	14.046	160m	12970 T (grain)	8.60	3.2.69
5. Toubkal	Co. Marocaine de Navigation	12.545	181m	11700 T (grain)	8.90	7.2.69
6. Archon Cherubin	Sancheroubin Cia Maritima	9.272	139m	10478 T (grain)	8.95	19.2.69
7. Kosmatella	Shell London	18.000	170m	16970 T (tanker)	9.00	4.3.69
8. Sabinia	Union Navale & Soc. Navale Caennaise	17.500	156m	14300 T (grain)	9.00	3.3.69
9. Inca Roca	Corporation Peruana de Vapores	13.500	157m	5013 T (2 holds grain + generals)	8.50	8.3.69
10. Orfeo	Soc. Ligure di Armamento SPA de NAVA	19.600	173m	17321 T (grain)	8.85	30.3.69
11. Brimnes	A/S Christian Jebsens rederil	15.030	152m	14455 T (grain)	9.00	3.5.69
12. Mai Bente	Skips A/S Kim	31.450	195m	24000 T (grain)	9.20	13.5.69
13. Port Launary	P.H.F. Van Ommeren France.	20.350	175m	17500 T (tanker)	8.70	27.5.69

rupt the passage at moorage about half way down river in the region of Villequier. At this point a deep stretch of the river enables vessels

to await local low water whilst riding at offshore anchor buoys. The vessel then continues its passage a little after low water so that it

crosses over the estuary at roughly high water Le Havre; as is the case for direct tide passages. The vessel can thus improve its draught by 1

**Annex 2**  
**Permissible draughts for outbound double-tides**  
**(anchoring at mooring buoys at Villequier)**

Months of May and June 1969  
(monthly sheet issued by the Seine Pilotage)

The following indications are predictions. Actual practical draughts are ascertained in each case by the Pilotage Service.

These indications apply to vessels making a speed of more than 12 knots, equipped with radar effective on the river and leaving Moulineaux or Grand-Couronne.

Admissible length : 203 metres.

Dates	May 1969		June 1969	
	Sailing abt.	draught	Sailing abt.	draught
1st	9.45hrs	9.15mts	11.15hrs	9.20mts
2	10.15	9.15	12.00	9.05
3	11.00	9.15	12.45	8.95
4	11.45	9.15	13.30	8.90
5	12.30	9.10	14.30	9.65
6	13.15	8.80	15.15	8.60
7	14.00	8.65	16.15	8.65
8	14.45	8.60	4.45	8.65
9	16.00	8.65	6.00	8.70
10	4.45	8.65	7.00	8.75
11	6.00	8.90	8.00	8.80
12	7.15	9.10	9.00	8.90
13	8.15	9.15	9.45	8.80
14	9.00	9.15	10.30	8.80
15	9.45	9.15	11.15	8.60
16	10.30	9.15	12.00	8.45
17	11.00	8.90	12.30	8.30
18	11.45	8.80	13.00	8.30
19	12.15	8.60	13.45	8.35
20	12.45	8.45	14.15	8.35
21	13.15	8.30	14.45	8.40
22	—	—	15.30	8.45
23	—	—	16.15	8.55
24	15.30	8.35	4.45	8.55
25	{ 4.00 16.30	{ 8.35 8.55	5.45	8.70
26	5.15	8.60	6.45	8.90
27	6.15	8.90	7.45	9.15
28	7.15	9.15	9.00	9.20
29	8.00	9.15	10.00	9.20
30	9.00	9.15	11.00	9.20
31	9.45	9.15		

metre or more in comparison to normal conditions.

2.2 The outbound double-tide technique is only possible for those vessels making more than 12 knots and equipped with radar effective for river navigation.

In the initial stages of this technique vessels were required to swing on reaching Villequier. The placing of mooring buoys has now obviated this manoeuvre. Consequently the

provisional limit to the length of vessels likely to employ the double tide technique has also been alleviated.

Rouen-based tugs assure the security of mooring manoeuvres at Villequier.

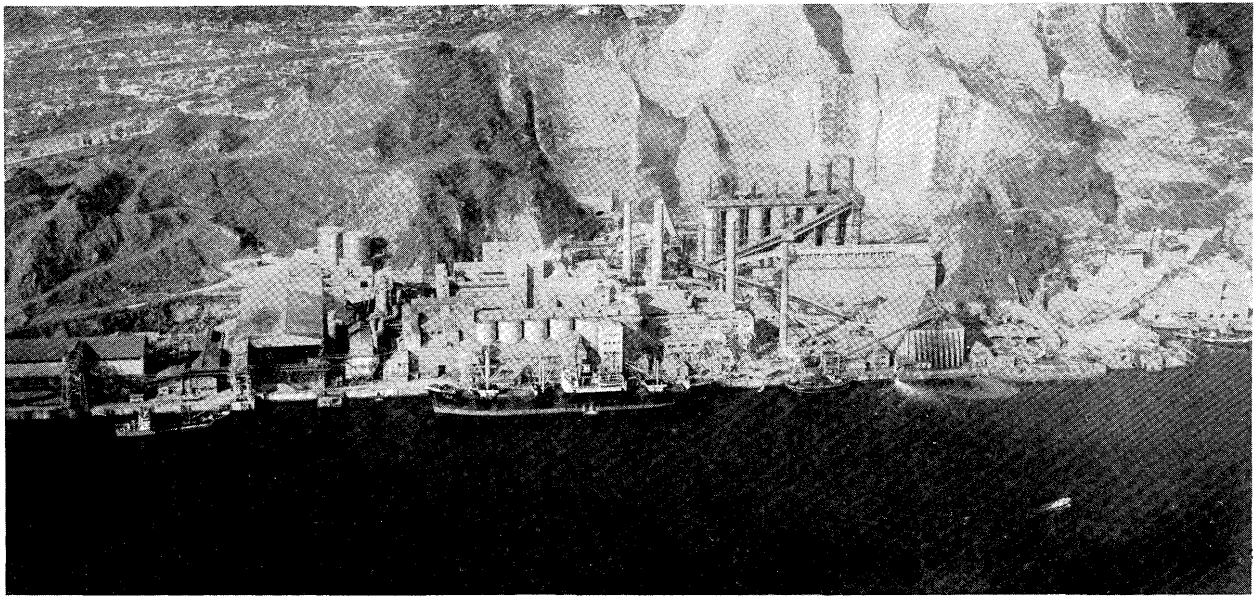
Each month the Seine Pilotage publishes a sheet giving day to day permissible draughts for outbound double-tides (see annex 2 showing those of May and June 1969). This

sheet assures the junction with the conditions of direct downriver tides which are 8.20 metres.

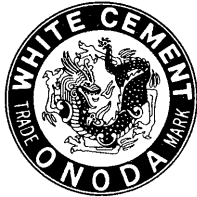
2.3. Instituted in 1968 this technique has now become commonplace since 1st January 1969. Up to the 15th 1969 twelve vessels have already employed this method. Cargo tonnages outbound from Rouen have increased rapidly (see annex 3).

Exterior Relations Department.





*Dragon Brand*



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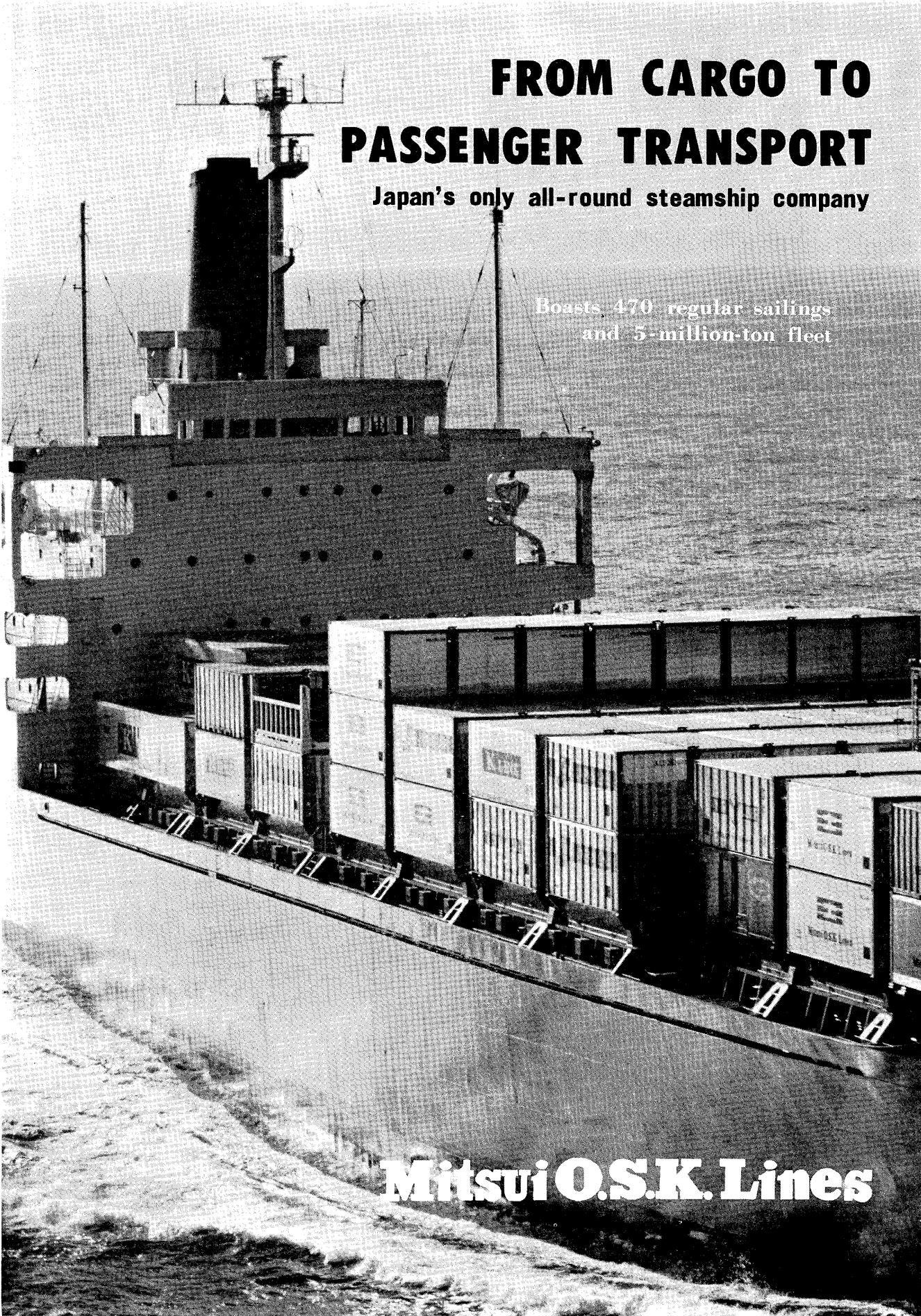
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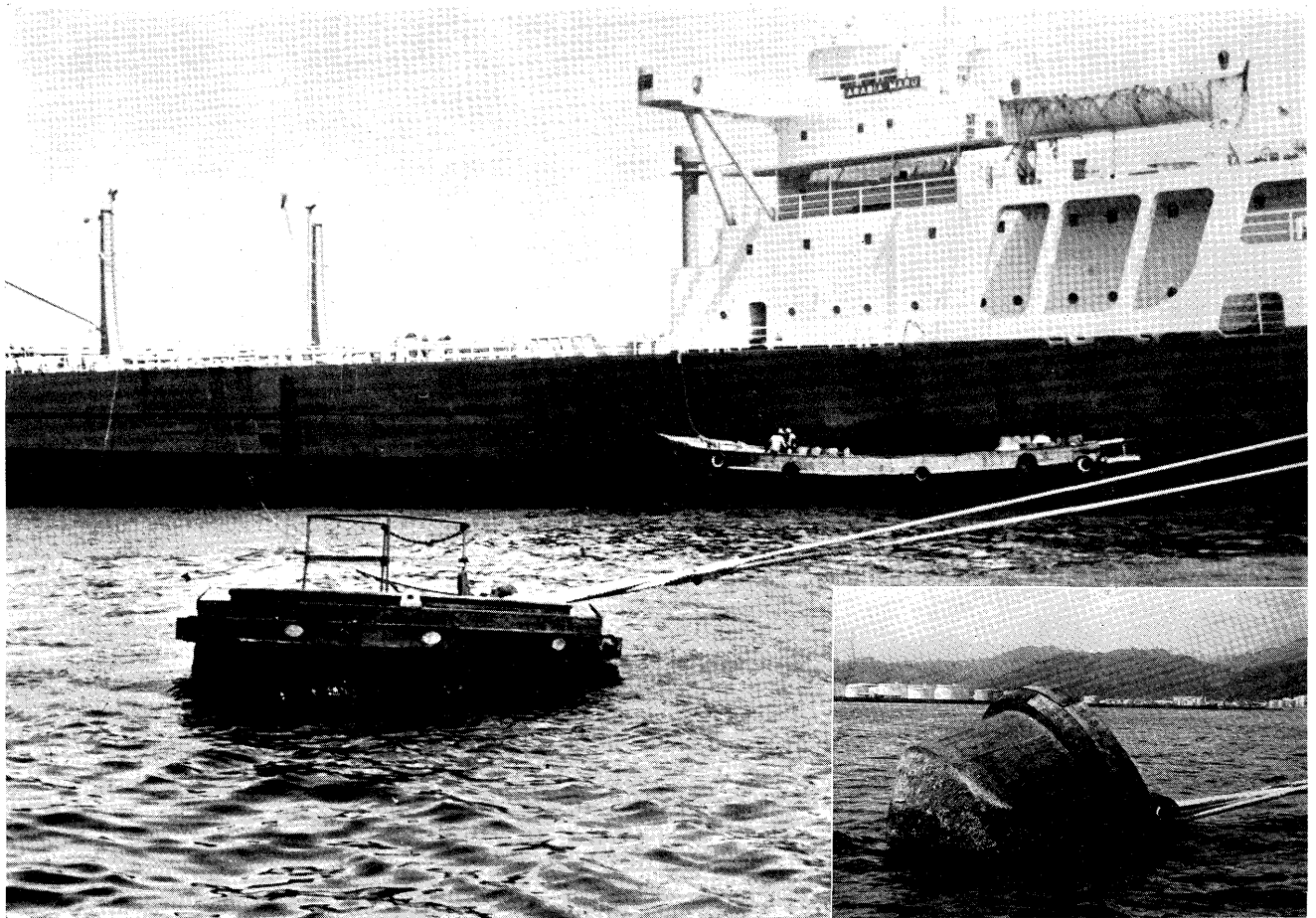
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**PEG-TOP BUOY (inclining)**

While ordinary mooring buoys bob and weave, exposing their underside when pulled by a large vessel, our patented Non-inclining Buoys always keep an even keel regardless of the size of the tanker to which it is tied. This is because of an ingenious device in the buoy-head. The buoy is equipped with a movable arm and hinge anchored at the center of gravity of the buoy. To this arm is attached a base chain which assumes the proper radius the ship & moored rope require.

Thus the chain inclines in place of the buoy, keeping the buoy always even since the buoy always faces in the direc-

tion of the pulling force. Non-inclining buoys are designed, manufactured and installed by Hamanaka.

Hamanaka has been privileged to construct the Tokuyama Seaberth (Idemitsu Refinery) in 1966, consisting of seven Non-inclining buoys. Each month these buoys moor the world's largest tanker, "Idemitsu Maru".

Since 1951, we have successfully installed more than 360 buoys. Our experience in submarine pipeline construction is vast. We most respectfully request the opportunity to be of service in submarine oil pipeline and seaberth construction, and stand ready to offer practical suggestions at any time.



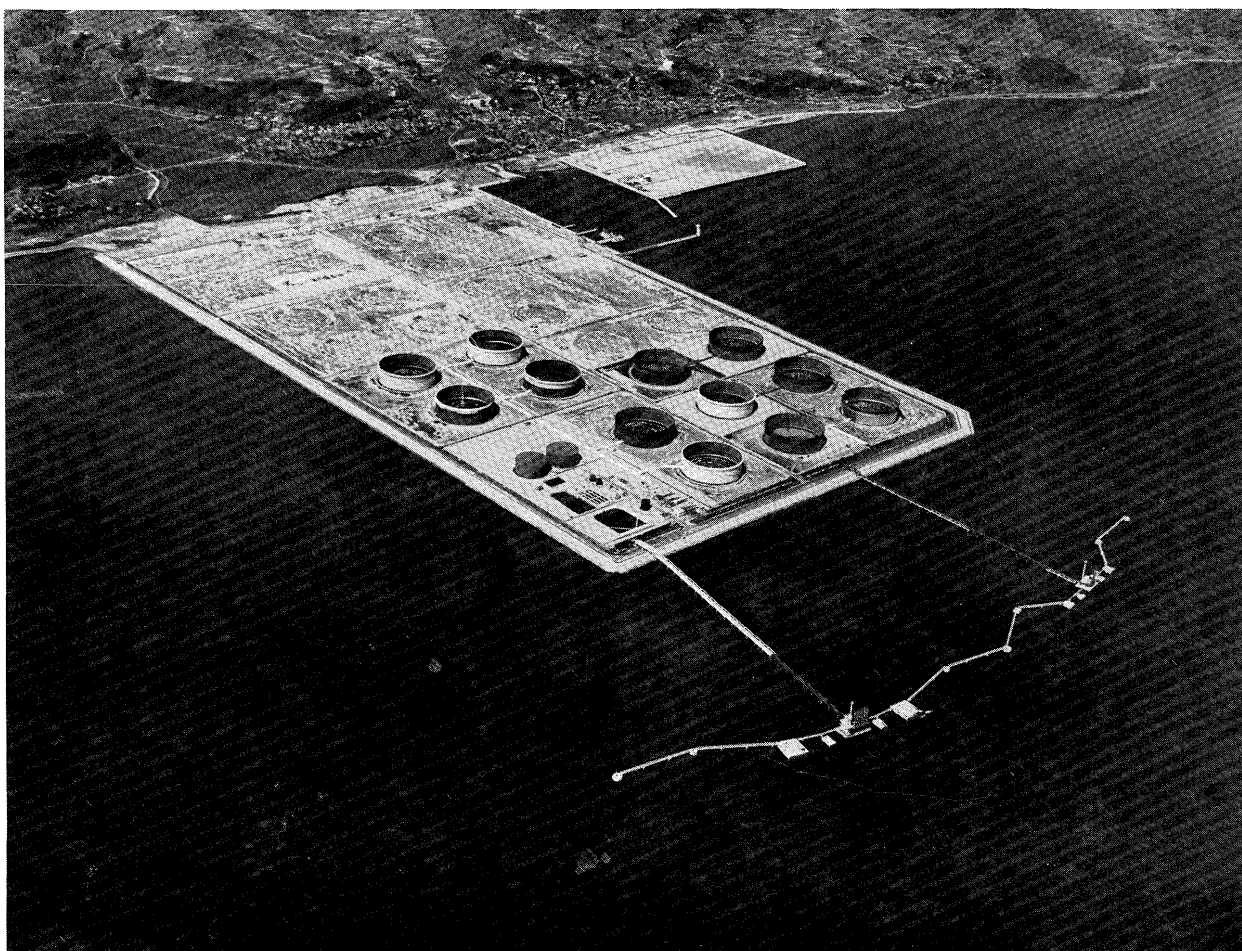
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