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# PORTS and HARBORS

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# Port of Naples



# Amsterdam-Rotterdam Conference IAPH May 1973

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(Photo shows the oil refinery of Mitsubishi Corporation at Hiroshima, Japan)





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> > IAPH Head Office Secretary General and Staff



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# PORTS and HARBORS

# Forum on Port Problems:

# Features of The Economic Function of Ports

# By Eng. Luis Moreira Lobo

Administrador-Delegado da Administracao-Geral do Porto de Lisboa

Reprinted from Oct./Nov./Dec. 1971-No. 197 Boletim do Porto de Lisboa

## 1. The economic function of ports

It may be considered that the role played by the maritime ports in the general economics comprises the following four different aspects: traffic centres, commercial centres, consumption centres and industry settlement centres.

The ports, as points of convergence of the maritime transport and the four ways of inner transportation—road, rail, water and even pipe-lines—are important traffic centres, not only on the point of view of the maritime traffic of goods, but also of the organization and operation of the other transport means.

The maritime port, owing to its outstanding position for goods transportation, has very favourable conditions to allow commercial operations and in addition its easy broad approaches stimulate the local economic initiatives.

However, it is to be pointed out that a perceptible change is now being noticed in the way how the port commercial activity has been effected, this resulting from the political and economic evolution occurred after the II World War as well as from the generalization of quick information media and the transport regularity and safety. So, the trade on coffee, cotton, tobacco, which was traditionally made by means of "exchanges", close to great ports, where buyers and sellers met, is now more and more controlled by the countries who hold the respective production.

Activities of every sort in the port cities originate population concentrations of such an amount that they constitute important consumption centres, so becoming naturely requested places for the settlement of industries required to the same consumption.

The industrial function of ports is nothing new; since long the naval construction and repair industry, the transforming industries related to the maritime fishing, the food industry supported by raw materials provided by sea, etc., look for settlement on the harbour area.

However, in the last decade, the port industrial function has changed in scale and the areas connected or to be connected with industrial settlement which in the past occupied some hundred of hectares in one port are now occupying several thousands of hectares.

Far from our mind to describe deeply, in this brief explanation, any of the aspects which, within the general economic scope, is included on the conception of the large maritime port of nowadays; we will only confine ourselves to point out some real features of the traffic function and the industrial function.

### 2. The port as a traffic centre

Among the functions to be performed by a maritime port it is, undoubtedly, the function transport the most important, in as much as the port constitutes firstly the link be-

tween the ocean space and the land space.

This is quite a simple statement but if we insist in analysing that basic port function, we will become aware of its complexity.

We believe to be of interest to reproduce a diogram (Table 1) from a work presented by Professor Thorburn to the Colloquy on "The future of the european ports", held in Bruges, in April 1970. In examining line 2 of that diagram, we immediately identify nine essential services which must be assured by a port, by starting with the safe approach of the ship from the sea towards the mooring berths and ending by the indispensable land communication ways to assure the easy flow of the goods while on land.

Line 4 indicates the gangs who effect the different services showed by line 2; and line 5 mentions the facilities and installations which must be assured by the port with the same purpose.

This relates to the direct connection of the port with the goods, and line 7 stands for the activities or functions as a whole, only indirectly relationed with goods themselves, but which are usually practised on ports varying the degree of importance with the port considered.

Thus, the port functions are now referred, one by one, but it is clear their interdependence, more and more emphasized by the progress in mechanization.

The organization of a port where only a certain kind of cargo is handled, like oil, ore, grain, etc., is naturally different from that of the ports which handle general cargo; in such cases it is common for the goods owner to be also the port operator. The port exploitation is so organized as an integrating part of the industry supported.

Mass transport from the interior of a continent to another's has always been a long and expensive task, because the course is divided into sections where different means of transport are used and each transport change involves cargo-breaking costs. The recent development with its strong trend towards the intermodal transportation is just aiming at the elimination of these cargobreakings.

Nowadays goods may be loaded into a container, somewhere in the interior of Europe, to be unloaded off the same container somewhere in the centre of the USA. As regards the maritime course, a container ship was used and she was loaded and unloaded at a rate 10/20 times higher than usually as for the continental ways, the roadway, the railway or the waterway were used according to the convenience; and the goods carried by a container did not suffer from a variety of transportation changes as it happens whenever the conventional transport is engaged.

The late coming into operation of lighters which the "mother-ships" collect or leave on the ports, going on their courses, made this trend still more outstanding. In fact such lighters can load goods at St. Louis, in the heart of the USA go down the Mississipi, enter the transporting ship, cross the Atlantic, leave the ship and go up the Rhine as far as the Ruhr. In this case it even happens that goods are handled without a maritime quay being utilized for either, loading or unloading.

On the Ro/Ro system, the truck or trailer, which is loaded somewhere in the interior of the country can go through the roadway and enter the ship by its own wheels; after the maritime route it leaves the ship, again by its own wheels, and goes directly to its destination where the goods are unloaded.

This trend, which is considered reverseless, for the cargo concentration in large unities-be it in containers, lighter or trailers-reduces the port importance as a compulsive place of transit and cargo breaking, with the corresponding operations of loading, unloading, parking and storage of goods. So, they essentially perform the function of cargo transfer, from the maritime to the land space. And for this function to be assured with the efficiency and quickness, which is more and more requested by the shipowners-because they want their ships to be cleared in the shortest delay the ports will have to go on making an important investment effort, not only to have suitable berthing means but also and specially, to offer very productive handling equipment, vast and well designed leveled grounds close to wharves, and roadway and railway connections where traffic is very easy.

Its now uncontroverted that containerization represents a deep change on the maritime transport of general cargo. The production reached on ship loading and unloading is remarkably higher than the one corresponding to the traditional system and, in consequence, the ship is able to sail for a much longer time. One has only to notice that:

- —a container crane, working in a container ship (e.g. the portainer type) can pandle 20/30 containers/hour, that is to say, 200/ 300 t/hour. In using three of those cranes, it will make 600/ 900 t/hour what means 10/15 times more the production reached with a conventional cargo ship.

What this means as wharf production and ship profit is easy to conclude.

Therefore the containerization is going on. The numbers respecting the port of Lisbon are the following (referred to containers up to 20 ft. and 40 ft.):

1969	3,074	unities	
1970	12,572	,,	
1971	22,000	,,	(forecast)

We are reasonably expecting a continuous increase in the container traffic, namely on the function "transit", which the port of Lisbon, owing to its geographical location, has very favourable conditions to carry out.

From this continuous stepping towards the cargo unitization, so making possible the fast ship clearance, it will naturally result un-



necessary a certain number of conventional terminals for general cargo, which will possibly be converted or even closed. This has already happened in the port of London, where the containerization increase, by greatly lessening of the conventional cargo, has led the Port of London Authority (P.L.A.) to settle, in 1970, a program, now under execution, for the extinction of some wharves. Therefore the Surrey Docks have already been closed since the beginning of 1971 and it is foreseen that the third part of the beginning of 1971 and it is foreseen that the third part of the 108 berthing posts of this type will be closed by the end of 1972.

The P.L.A. foresee under that same program and aiming at the improvement of their position as regards finance, to sell the land spaces which will become free by means of this classification of dispensable wharves.

## 3. The port as an industry settlement centre

It was the growth in the use of energetic products and raw materials proceeding from overseas that has specially activated the industry settlement by the water side.

One can say that the Western Europe economic development was closely connected with coal.

This together with iron ore mines were the industrial development basis in the last century, the coal reserve having not only determined the steelwork plants location but also constituted the essential source for energy supplying. In fact, nearly 82% of the energy being consumed in Western Europe, in 1950, was still supplied by solid fuels, falling nearly 14% to petroleum and only 4% to hydro-electricity. But in 1968 the situation was quite different, since the share pertaining to petroleum consumption. In this year 150 oil refineries, with a yearly capacity of 600 million tons, refined nearly 500 million tons of crudes.

And while the European economic device will not dispose, in a large scale, of energy proceeding from the natural gas and nuclear power stations-what is admitted will only happen in a generalized way in the two last decades of this centuryit will go on depending in a growing way on the Middle East and North Africa. Rotterdam and Antwerp, amongst the large european ports, were the first to afford attractive conditions for the close-to-the-water settlement, in a large scale, of transformation industries, so being possible for raw materials in bulk to be directly transferred from the ship to the industrial intallations and therefore be free from the charges corresponding to an intermediate transport.

The decision of the Europoort establishment in Rotterdam—in the prosecution of the municipality plan approved in 1957—involved the reclamation now of nearly 6,500 hectares (16,000 acres) of land, most for industrial purposes; at the same time, the necessary berthing infrastructures were created and the long channel giving access to the port was deepened and it was necessary to dredge more than 100 millions cubic metres of not ever easily removable material.

The remarkable industrial development in the port of Antwerp resulted from-besides the facilities and incentives granted by the port authority for the occupation of large areas by industry-several other circumstances, the following being outstanding: its favourable geographical position in relation to the Common Market; the efficient energy supply; the quantity and quality of industrial water reserves; the good conditions in which regards manpower both in quality and quantity; attractive residence conditions; quite a complete bank system; a well developed tertiary sector. Also the concentration effect was another very favourable factor since, as a rule, industry attracts industry.<sup>(1)</sup>

France, being traditionally a more



continental than maritime country, retarded to stimulate the appeal for the settlement of by-the-water industries which are strongly depending on raw materials transported by sea.

The French Economic and Social Board, after a long study of the problem of the French ports fitting to new needs upon the traffic and competition within the Common Market, commented, on a report of March 1968 that, excluding shipvards, the majority of industries close to the ports had settled on the very port area, near wharves only accidentally, and consequently they were suffering from the effects of the cargo breakings the unloaded goods had to be subject to. And they pointed out that in view of the pressing need of the French ports to compete with the neighbouring ports, it urged to accelerate the presence of the industries by the water side grounds.

Really, since then its has started the strong movement which led the ports of Dunkerque, Le Harve and Marseille-Fos to invest large amounts on the reclamation and preparation of port industrial areas which have some thousands of hectares in each of these ports and which are penetrated by deep bays allowing big ships to go as far as the surroundings of the large industrial unities.

Table 2 conveys an idea of the port industrial area which is being built up at Fos-nearly 40 Kilometres towards West of Marseille.

It was in 1963 that the French Government decided to establish, at Fos, a port and an industrial area capable, by means of their ampleness and equipment, of competing with the North Europe ports. It is an area which will include, in a first phase, 6,000 hectares and is situated just close to the gulf of Fos, in the Mediterranean Sea, near waters where a great deepness was obtained by means of important dredging works. Now, ships up to 250,000 dwt. can berth there, but the construction phase corresponding to ships up to 300,000 dwt. will only be effected later on, when considered necessary.

Three large docks are being open along the shore, the dredged material being used in the levelling of the ground for industrial occupation.

Great possibilities of hydro-electric energy; wide penetrating and con-

# World's Largest Ore Port— Tubarao—Under Construction

<section-header>

necting ways; copious water reserves; the existence of research centres; a first class intellectual and cultural standard; many delightful places; 300 sunny days in a year are some other mentioned arguments as a reason for the judicious choice of Fos for the settlement of a large industrial port complex.

Lately, the industrial function became one of the most important sector of activity in the up-to-date large ports which can offer ample close-tothe-water areas and assure the approach of big ships.

They really offer besides that, the inherent advantages pertaining to strongly equiped zones with land transport means, airports, banks and commerce, all of them being developed by the maritime flow.

Just as René Pollier has remarked on a recent issue of the "Journal de la Marine Marchande": ports in such conditions have a double capacity of attraction: physical and practical, that can never be offered by regions whose single argument is the space.

<sup>(1)</sup> The importance of this mutual attraction is referred in the following words from a recent Note of the Committee of the European Communities, about options in port policy : «Les activités portuaires de transport d'ordre commercial obéissent à une sorte de loi de la concentration.

> Les processus suivis par les uns et par les autres débouchent sur une concentration démographique qui entraîne le dévelopment d'un lieu favorable à l'implantation industrielle.

De proche en proche, les activités appellent d'autres activités, comme par une sorte de pouvoir magnétique d'attraction jouant au profit des nantis aux dépens de ceux que ne le sont pas. C'est ainsi que certains ports d'importance mondiale prennent de plus en plus d'ampleur tandis que les ports de moindre importance accumulent du retard et que se forment des zones de dénuement. The Port of Tubarao, operated by CVRD (Compania Vale Do Rio Doce) is one of the world's premier iron ore ports. Shipments have reached 28 million tons per year. At the completion of the current construction, Tubarao will become the largest iron ore port in the world, with an annual capacity in excess of 50 million tons.

The current expansion program is Phase I of a Master Plan, developed by Soros Associates to expand Tubarao's annual capacity up to 80 million tons. This port capacity will provide full utilization of the double tracking of the railroad now underway and enable further development of the substantial high-grade ore resources of the Itabira region.

At present, ore trains are unloaded by two twin rotary dumpers with indexer. Ships are loaded at a finger pier equipped with 2 slewing-type traveling loaders. The first loader has a capacity of 6,000 tons per hour, the second 8,000 tons per hour. The finger pier is protected by a breakwater and has a water depth of 16 meters at Mean Low Water. The following additional port facilities are under construction:

Land reclamation for current and future ore yard expansion.

New 2 million ton ore yard.

- New 16,000 T.P.H. sampling plant.
- New ore loading berth for 250,000 DWT ore carriers.
- New approach channel and turning basin for 250,000 DWT ore carriers.

The new ore yard will be fed by a traveling slewing stacker with a reach of 55 meters. The minimum stacking rate is 16,000 tons per hour, however, the system is designed to operate at rates up to 19,000 tons per hour when handling ore grades of higher density. Reclaiming will be by 2 bucketwheels with 50 meter booms, each rated at 8,000 tons per hour. The bucketwheels are equipped with surge bins and feeders, to achieve a better and more uniform production.

The new loading berth will utilize two slewing-bridge shiploaders, the largest units of this type. Each of these has a minimum capacity of 16,000 T.P.H., but is designed to operate at rates up to 22,000 T.P.H. with heavier material.



Aerial view of port operations and new ore berth under construction.



Sea dike and reclamation for new ore yard area is part of the Phase I program.

The shiploading system has advanced design features of efficiency and flexibility, as listed below:

Interruption-free operation — by switching the material flow from one loader to the other when it is necessary to load a different hold of the ship.

Loading two holds of the ship simultaneously, at a combined total rate of 16,000 T.P.H.

Future expansion to load two

holds at a combined total rate of 32,000 T.P.H., with the addition of a second 16,000 T.P.H. conveyor system and the corresponding ore yard expansion.

The current construction incorporates all marine foundations and structures needed to carry-out this future expansion with no interference in operations.

All marine works, such as the approach channel, turning basign and the new berth were planned for 350,-000 DWT class vessels in the future. The Phase I installation accommodates 250,000 DWT vessels. The approach channel is dredged to -23.5 m, the turning basin to -16 m and the new berth to -26 m at MLW. Altogether, some 13 million cubic meters are dredged as part of the Phase I program.

The new marine berth consists of 4 breasting dolphins, 4 mooring dolphins and supports for the conveyor system and for the turntables and curved rails of the shiploaders.

All marine structures rest on steel pipe piles driven into the seabottom. The diameter of the piles supporting the curved rail beams is 100 cm. The rest of the structures are supported on 60 cm. diameters piles.

The breasting dolphins consist of groups of flexible piles whose elastic deflection makes it possible to absorb the impact of large ships. The outer dolphins have 6 piles, the inner dolphins 4 piles of 130 cm. diameter. The wall thickness of these steel pipe piles tapers from 40 mm to 16 mm.

- The following is a list of contractors and suppliers on the project:
- Dredging: Joint Venture Bauer— Gregg.
- Conveyors, Stacker, Bucketwheels, Shiploaders: Ishikawajima-Harima Industries
- Sampling equipment: Gallagher Belting: Good Year and Yokohama Rubber.
- Civil works and erection: Christiani & Nielsen

CVRD's Development Division is in charge of the planning, engineering and construction of the Tubarao Expansion.

Soros Associates were the consulting engineers for the Master Plan as well as for the Phase I project now under construction.



Approach conveyor foundations and curved tracks for slewing-shiploaders are nearly completed at the new ore berth.



Two specially equipped pile driving barges are utilized in the construction.

# The Elizabeth-Port Authority Marine Terminal—A Decade of Progress

The Port Authority of New York and New Jersey

1,000-acre The Elizabeth-Port Authority Marine Terminal, the world's largest and most modern containership facility --- America's Container Capital-is celebrating its tenth anniversary this month: the terminal opened for business in August 1962. Sea-Land Service's S.S. Elizabethport was the first vessels to call at the seaport, thus heralding a new era in shipping transport. During its first full year of operation in 1963, the terminal handled 1,504,-021 tons of cargo on 242 vessels and employed 730 people who earned \$4,015,000.

Over the last ten years, tonnage at Elizabeth has increased over 300 per cent and employment has quadrupled. In 1971, the terminal handled 6,449,000 tons of cargo on 979 vessels, and in the first six months of 1972 alone, 3,974,000 tons of cargo moved through the seaport showing an even greater increase in activity at the terminal. At present, the Elizabeth facilities provide employment for more than 3,000 people who earn \$23,126,000 annually. In addition, an average of 800 people earn \$6,900,000 a year on construction jobs alone at the new facility.

Development of the Elizabeth terminal is moving ahead at a rapid pace to keep up with the steady demand for containership space in the bi-state port. Today, eleven container cranes service seven fully equipped container berths totaling 10,015 linear feet of space at Elizabeth, while an additional nine berths are under construction. In addition, there are twelve huge cargo distribution buildings with over a million square feet of space, six cargo terminal buildings and 27 other service buildings. To date the Port Authority investment in this great seaport amounts to over \$143,000,000.

When completed in 1973, the Elizabeth facilities will have 17,334

linear feet of berthing space supported by 793 acres of transit and open storage area and distribution building space. At that time the terminal is expected to handle 12,000,000 tons of cargo a year, of which about 95 per cent will be containerized. The completed seaport will then represent an investment by the Port Authority of \$205,000,000.

### Adjacent to Port Newark

The Elizabeth terminal is immediately adjacent to 789-acre Port Newark, where an additional 2,000 feet of containership berthing space is provided on the Elizabeth Channel along with more than 20,000 linear feet of breakbulk berthing space. The Port Newark-Elizabeth complex, with its unmatched facilities and services, last year handled a total of 10,306,000 tons of cargo. During the first six months of 1972 alone, 5,487,000 tons of cargo moved through the two terminals.

### Containerization

The containerization of cargo is the most important advance in ocean transport since steam replaced sails. The saving in terms of time and money due to containerization has been immeasurable. General cargo, which had traditionally been shipped in separately packaged lots requiring a considerable amount of manual labor at each loading and unloading, can now be shipped in large vanlike containers that can be transferred easily to and from ships by highly mechanized routines. This process brings with its significant economies for export-import shippers and is of immense benefit to shipowners in securing fast ship turnaround time. Intermodal shipping in containerson trucks, rails, ships and bargesis a technology that has arrived.



Site of Elizabeth marine terminal in 1956 (foreground), prior to Port Authority development. Note rivulet, Bound Creek, flowing through meadowland (center of photo) separating Elizabeth and Port Newark. The Bound Creek area was dredged to create Elizabeth Channel, 9,000 feet long, 35 feet deep and 800 feet wide.



← Aerial view of Elizabeth-Port Authority Marine Terminal in August 1962 when it opened for business. Sea-Land Service containership S.S. Elizabethport was the first vessel to call at the new facility. Port Newark is at left, with Newark Bay and City of Bayonne visible in background.

## The Elizabeth Story

From marshland to modern marine terminal, the Elizabeth story is a dramatic example of how the provision of these incomparable facilities has given the New Jersey-New York Port a ten-year headstart on the container revolution and contributed to the economic growth of the region as one of the nation's greatest industrial and commercial areas.

The project had its start early in 1956, at the dawn of the container age, when the Commissioners of the Port Authority authorized the purchase of 700 acres of swamp land on Newark Bay and the planning and construction of the first container seaport anywhere in the world. Work on the transformation of this unproductive meadowland began in 1958; the new deep-sea port commenced service just four years later.

## New Channel

The first step in the dramatic project was the dredging, beginning in 1958, of some 13,000,000 cubic yards of material at a cost of \$4,500,000 to create the new Elizabeth Channel, which is 9,000 feet long and from 600 to 800 feet wide. Nearly two-thirds of the earth excavated in this massives dredging operation provided fill for the new terminal site. In addition, another 13,000,000 cubic yards of sand was obtained from off-shore locations.

To transform Elizabeth's primeval sea of cattails and salt grass into a seaport, sand is hydraulically pumped on the swampy meadowland to provide a working platform. Later, additional sand, or "surcharge fill,' is

← Aerial view of containerships at dockside at the Elizabeth terminal. In 1971, the terminal handled 6,449,000 tons of cargo and provided employment for 3,000 people who earned \$23,126,-000. heaped throughout the terminal site and left in place for varying periods to consolidate the underlying compressible soil layers. The fill is then removed so that actual construction can begin on firm ground. Surcharge fill is constantly being moved from one location to another since it can be used repeatedly as required.

The Elizabeth terminal is built with quays and spacious paved open areas, both vital to containership operations. The quay permits a continuous flow of trailers to shipside in an "assembly line" fashion, reducing loading time to a minimum. The paved areas enable the oceangoing trailers to be parked near the vessel berth, eliminating delays in transferring them from more distant points. The berths provided in Elizabeth vary from 750 feet to over 1.000 feet in length. They are supported by as much land as is required for containers, usually about 50 acres per berth.

### **Roadways and Rail Tracks**

To provide the same freedom of movement on the streets of the seaport, roadways are as much as 100 feet wide and an additional 50 to 72 feet is allocated as a truck backup area for those buildings with loading docks. Roadways of the terminal are supplemented by direct rail connections and sidings to the distribution buildings and other terminal structures. The Elizabeth-Port Authority Marine Terminal is served by the Central Railroad of New Jersey, the Erie-Lackawanna Railroad, the Lehigh Valley Railroad and the Penn Central.

Immediately adjacent to the seaport are the Penn Central International Container Terminal at Port Newark, and the Central Railroad of New Jersey container yard —Portside Terminal—in Elizabeth, opened in June. These vital, new rail container-trailer transfer yards, provide direct connections to midwest rail transportation and save shippers using the New York-New Jersey Port time and money while speeding the movement of intermodal cargo to and from shipside.

### **Cargo Distribution Buildings**

Modern cargo distribution buildings at the Elizabeth marine terminal complement its other cargo handling facilities. Efficiently located in rela-



Typical activity of container operations at the Elizabeth terminal. Here is one of the new Associated Container Transportation (ACT) containerships, among the largest refrigerated container vessels afloat, on maiden voyage from Australia and New Zealand.



Aerial view of the Elizabeth-Port Authority Marine Terminal today. The unusable marshland of the site in 1956 prior to Port Authority development has been transformed into 1,000 acres of the most modern containership facilities in the world.

tion to the deep-water berths and the seaport's rail and road system, these buildings provide distribution space in units of 13,000 square feet to 208,000 square feet. Twelve cargo distribution buildings have been completed, providing 1.175.000 square feet of building space. Waterborne commodities such as chinaware, electrical appliances, coffee, cocoa, dates, rice, imported canned foods, household goods and books are handled from these great structures. There ultimately will be over 4,000,000 square feet of distribution building space. Many of the structures have been designed for temperature control. Insulated throughout, they are especially adaptable for use by exporters and importers of food items which might be damaged by extreme temperatures.

### **Current Construction**

Major work under way at the Elizabeth terminal includes construction of a 232-acre Sea-Land Service container terminal that will supplement Sea-Land's existing 132-acre terminal and accommodate the needs of new SL-7 super-containerships. These 33-knot vessels, 942 feet long and 105 feet wide, will be able to carry up to 27,000 tons of containerized cargo. Sea-Land's new facility will provide 4.519 feet of berthing space, 40-foot-depth berths, a turning basin and wider access channels to the berths.

Already in operation and in final stages of construction is the 152-acre container facility of Maher Terminals Inc. with 2,400 feet of berthing space along Newark Bay.

Also under development are two tracts of land leased by the Port Authority from the Central Railroad of New Jersey as annexes to the Elizabeth terminal. The first of the two areas, leased last fall, is 127 acres and is presently being covered with sand fill to compress and stabilize it. It will later be paved as open storage area and new distribution buildings will be constructed. The second area, of 119 acres, was leased last month and will also be developed as storage and distribution areas.

### **Containership Services**

Sea-Land Service, Inc. provides regular containership service to Puerto Rico, the Mediterranean, Northern Europe, the Far East and

# Inauguration of Integrated Port Communications System for Southampton

# **British Transport Docks Board**

Europe's most advanced harbour surveillance and shipping information system is to be officially inaugurated at Southampton on Friday morning (July 7) when Mr. Ronald F. Pugh, chairman of the Southampton Local Board of the British Transport Docks Board, opens the new Port Signal and Radar Station at Dock Head (No. 37 Berth) overlooking Southampton Water.

Employing advanced computerassisted radar equipment installed by Decca Radar Limited and a maritime VHF network by Marconi Communications Systems Limited, a G.E.C.-Marconi Electronics company, the new Southampton Port Communications System provides radar and VHF radio coverage of the port

U.S. ports from its Elizabeth terminal.

Atlantic Container Line, Ltd. offers regular service to North European ports from its facility at Elizabeth. This line is a consortium of six of the world's leading steamship companies—Holland America, Swedish American, Swedish Transatlantic, Wallenius, French Line and Cunard Line.

United States Lines, Pace Line and Hapag-Lloyd Container Lines provide containership services on worldwide routes from the International Terminal Operating Company's facility at Elizabeth.

Zim Container Service to worldwide ports and Orient Overseas Container Line on Far East routes, operate from the Maher Terminal.

Caribbean Trailer Express Line offers weekly roll-on, roll-off and container services to the Caribbean from the Pittston Terminal facility at Elizabeth. area over the twenty or so miles from the container berths at the Western Docks Extension to the Nab Tower in the Solent.

The system has been set up by the Docks Board in consultation with the Corporation of Trinity House, shipping interests, and technical specialists, and will permit close operational links with both the Trinity House Southampton Pilots and H.M. Coastguard.

The Pilot Station, which has operated for many years at Hythe, has been transferred to the new Port Signal and Radar Station as the pilots considered that a closer liaison with the Docks Board would be beneficial in view of the expansion which is taking place in the port. It is expected that all pilotage operations for the Solent area will be operated from this station in the future.

The project has been carried out under the direction of Mr. D. J. Doughty, the Docks Board's Chief Docks Engineer at Southampton. Consultants for the building were E. W. H. Gifford and Partners, in conjunction with the architect Mr. Ronald Sims and quantity surveyors, Northcroft, Neighbour and Nicholson, the team responsible for the design of the adjacent Queen Elizabeth II Terminal.

### RADAR INSTALLATIONS

Decca Radar have equipped two unmanned radar stations—at Hythe and Calshot—from which data is transmitted by microwave link to six 16 in. displays in the operations room at the Port Signal and Radar Station.

At Calshot the radar station has been incorporated into a new Coastguard Station, with an 8 m. scanner mounted above the concrete building at a height of 30 m. A second 8 m. scanner has been installed at Hythe above a steel lattice tower of the same height as at Calshot. Remote control of the both stations is effected by microwave link to the Port Signal and Radar Station.

The six displays installed by Decca in the operations room are console mounted and all are able to receive data from either unmanned station, two normally being fed from Hythe and four from Calshot. All the main electronic units have been duplicated for maximum system availability.

The Decca Computer Assisted Measurement System has been provided for all six displays, and the newly-developed Deccaspot facility is available on all pictures received from Calshot. The former system uses a small Honeywell computer to enable rapid and accurate measurements to be made of any point, such as a ship's position, relative to any other point on the display. Deccaspot, a method employing a series of bright spots on the display to depict with great accuracy any permanent feature required, is used to delineate the centre of the navigation channel from Southampton Docks down into the Solent to the Portsmouth Forts in the east and East Lepe in the west.

# VHF RADIO NETWORK

Marconi's G.E.C. Mobile Radio Division have installed a transmitting station for the VHF radio network at Dock House in the Eastern Docks and a separate receiving station some five miles away at Titchfield, in order to minimise interference between channels. Links with the Port Signal and Radar Station are by land line from Dock House and by UHF radio bearer from the receiving station.

In the operations room, controls for the VHF R/T are installed both in the radar consoles and at the central desk, enabling the operator at a display to be in continuous radio communication with an approaching ship.

# PORT SIGNAL AND RADAR STATION

The new Port Signal and Radar Station has been constructed at No. 37 Berth by A. J. Dunning & Sons



(Weyhill) Limited. The six-storey building, surmounted by a mast 64 metres high carrying microwave aerials, daylight signals, and signal lights, is the operational control centre for the harbour surveillance and communications system, and provides accommodation and offies for the Trinity House pilots and staff and the Dock and Harbour Master and his staff. Additional accommodation on the operations (top) floor for the Chief Operations Officer and the Duty Pilot facilitates close consultation between them.

### **Background Note:**

On the 7th January, 1958, the former Southampton Harbour Board inaugurated Southampton's first Port Operations and Information Service, incorporating Harbour Surveillance Radar and Port VHF Radio/Telephone systems, with a control centre located at Calshot Castle overlooking the entrance to Southampton Water.

In 1965 it was planned to replace this existing signal station at Calshot by a modern, more sophisticated installation, and as, at the same time, the British Transport Docks Board was considering the replacement of its signal station at 37 Berth in the Eastern Docks, discussion of their respective plans took place between the two authorities in the light of the impending amalgamation of the former Southampton Harbour Board with the British Transport Docks Board. Consequently it was decided to establish a new integrated radar and VHF radio system covering the whole port and its approaches, with remote unmanned stations, transmitting radar information by microwave links to displays in a new building to be constructed at No. 37 Berth. At the same time Trinity House was investigating sites for a new pilot station for the Southampton Pilots and discussions took place with a view to integrating the services provided for port users.

The object of the new port communications system was to be twofold, firstly to further improve the co-ordination of movement of vessels entering and leaving the Port, and secondly to increase the degree of assistance available to individual vessels navigating in reduced visibility or other difficult circumstances.

# Regulations to Control Noise from Boats

# The Maritime Services Board of N.S.W.

Sydney, 11th August:—New regulations have been promulgated by the Maritime Services Board making it an offence to continue to use a vessel which is emitting a noise in excess of a level determined by the Board.

This was stated in Sydney to-day by the President of the Maritime Services Board, Mr. W. H. Brotherson, who said that noise has been a difficult matter associated with the operation of boats in the waters of the State, particularly noise from high powered craft, and this had caused considerable annoyance to the community in general.

Mr. Brotherson pointed out that, on and from 1st October, 1972, any person using a vessel with an engine which emitted a noise in excess of 85 decibels at 100 ft. in the waters of Sydney Harbour, Botany Bay, Broken Bay and their tributaries, would be subject to the issue of a stop order by an officer of the Board. Further areas of the State will be encompassed after the system is advanced in the main waterways mentioned.

He said the Board is in the process of equipping its officers with portable decibel counters to be used for the purpose.

Having been issued with a stop order, it would be an offence for the owner to use his vessel until such time as the cause of the noise had been rectified and the stop order had been withdrawn by the Board.

Mr. Brotherson said that rights of appeal are allowed to persons issued with a stop order in accordance with procedures set out in the regulations.

An essential aspect of the regulations requires that vessels be fitted with an efficient silencing device and a person who has fitted a cut-out or by-pass to allow of the silencing device being neutralized is subject to prosecution.

# Extract from "Water Traffic Regulations—N.S.W."

Abatement of Noise of Vessels

(1) Every vessel on any enclosed water which is propelled by mechanical power shall have securely fixed to its engine an efficient silencing device so constructed and maintained that all the exhaust from such engine shall be discharged through such device.

(2) No vessel on any enclosed water which is propelled by mechanical power shall be provided with any cut-out or other device whatsoever which is capable of producing an open exhaust from the engine of the vessel.

(3) If any vessel propelled by mechanical power is on any enclosed water and—

- (a) a silencing device complying with the requirements of subclause (1) of this regulation is not securely fixed to the engine of such vessel; or
- (b) such vessel is provided with a cut-out or other device in contravention of subclause (2) of this regulation,

both the owner and the master of such vessel shall be guilty of an offence against this regulation.

(4) Subclause (3) of this regulation shall not apply to a vessel used in special circumstances on any enclosed water in accordance with a permission granted by the Board, in writing and signed by the Secretary of the Board, and in conformity with every condition stated in such permission.

# Division 5.—Nuisance from Vessels and Floating Objects and Apparatus INTERPRETATION

In this Division—

- "Engine" includes the whole of the machinery involved in the use and operation of a vessel.
- "Expert investigator" means a person appointed under this Division

to investigate whether a notice given under the Division should continue in force.

"Expert tribunal" means a tribunal appointed under this Division to investigate whether a notice given under the Division should continue in force.

# SIRENS, FOG HORNS ETC.

If any siren, whistle, hooter, fog horn or bell is sounded by or from a vessel, except for the purposes of navigation the master of the vessel shall be guilty of an offence against these Regulations.

# NOISE FROM ENGINES OF VESSELS

(1) Where an officer of the Board considers that action should be taken to reduce the noise emitted by the engine of a vessel which is being used on any enclosed water, that officer may give a notice to the master of that vessel addressed to the owner thereof prohibiting the use of the vessel on any enclosed water from the time specified in the notice (being an hour of the day on which the notice is given) until an officer of the Board shall have certified that the noise emitted by that engine in the condition it then is, is not in his opinion excessive.

(2) Where the master of a vessel in respect of which a notice is given under this Regulation is not the owner of the vessel, the master shall—

- (a) observe the prohibition imposed by the terms of the notice relating to the use of the vessel; and
- (b) without delay, deliver the notice to the owner of the vessel.

### ENGINE NOISE—EXPERT IN-VESTIGATORS

(1) An owner of a vessel in respect of which a notice under Regulation 55 of these Regulations has been given may, instead of obtaining a certificate of the nature required by the notice, request by a letter addressed to the Board that an expect investigator investigate as to whether the notice should continue in force.

(2) Upon the receipt of a request as referred to in clause (1) of this

(Continued on Page 21)

PORTS and HARBORS

# Seiko... a timely choice.

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Seiko watches. A choice of designs for every moment. And for every mood. But today a watch has to have more than a pretty face. And in some cases it must do more than just give the correct time. If you're the type of individual who expects more than time from the timepiece you wear, Seiko is the watch for you. Because Seiko has a watch for you that will go 70 meters beneath the sea. A watch that has an alarm to keep you on time. A woman's bracelet watch that's pure elegant jewelry.

We even have a watch so you can measure distance. Seiko watches. A timely choice.





# (Continued from Page 18)

Regulation the Board shall cause the investigation to be made by an expert investigator who shall be either an engineer surveyor appointed under the Navigation Act, 1901, or any other person authorised by the Board to act as an expert investigator for the purposes of this Regulation.

(3) An investigation by an expert investigator shall, if carried out—

- (a) at the head office of the Board or at any other place where an expert investigator is at the time carrying out other duties —be without payment of any fee; or
- (b) by special arrangement as to place and time—be subject to payment of a fee of \$50.

### ENGINE NOISE—EXPERT TRI-BUNAL

(1) Where an expert investigator, upon investigation, decides that the notice given in respect of a vessel under Regulation 55 of these Regulations should continue in force, the owner of the vessel may, by a letter addressed to the Board accompanied by a fee of \$100, request that an expert tribunal investigate as to whether the notice should continue in force.

(2) Upon the receipt of a request as referred to in clause (1) of this Regulation, the Board shall cause an investigation to be made by an expert tribunal which shall consist of—

- (a) two persons nominated by the Board of whom—
  - (i) one shall have expert qualifications in the evaluation of noise emitted by engines or machinery and shall not be an officer or servant of the Board; and
  - (ii) one shall be a person appointed as an engineer surveyor under the Navigation Act, 1901; and
- (b) one person nominated by the owner of the vessel.

(3) An investigation under this Regulation shall be carried out at such place and at such time as the expert tribunal thinks proper.

### ENGINE NOISE—CERTIFICATE OF WORK PERFORMED

(1) Where any investigation in respect of a vessel under Regula-

New Swedish Hoisting System Works Wonders in Crane Erecting

Västerås, Sweden, October 18:— The West German shipyard Bremer Vulkan has now got its gantry crane in position over the dry dock at Bremen-Vegesack.

tion 56 or 57 of these Regulations is to be made, the owner of the vessel shall when the vessel is made available for the investigation furnish the investigator or the tribunal, as the case may be, with a certificate signed by him certifying particulars as to—

- (a) whether or not any alterations have been made to the engine of the vessel since the time the notice was given in respect of the vessel; and
- (b) the nature of such alterations (if any).

(2) Where an expert investigator or tribunal upon investigation decides that a notice given in respect of a vessel under Regulation 55 of these Regulations should not continue in force the investigator of tribunal may, having regard to the certificate furnished pursuant to this Regulation, recommend to the Board that, in the case of the expert investigator, the fee paid in respect of the investigation by the expert investigator, or, in the case of the expert tribunal, the fees paid in respect of both the investigation by the expert investigator and the expert tribunal, be refunded in whole or in part.

(3) The Board may, notwithstanding clause (2) of this Regulation, refund any fee paid for an investigation by an expert investigator or an expert tribunal under this Division in any case it considers proper.

### ENGINE NOISE—OFFENCE

(1) If any vessel in respect of which a notice given under Regulation 55 of these Regulations is used on any enclosed water when the notice is in force, the owner of the vessel shall be guilty of an ofUsing a new method, developed by Kramo Montage AB, Västerås, Sweden, the whole crane construction could be hoisted into position in one piece—it weighed 1.630 ton.

fence against these Regulations.

(2) Clause (1) of this Regulation does not apply to and in respect of—

- (a) the use in the course of a business of any vessel '(other than a vessel hired out for the purpose of pleasure) to—
  - (i) for a period of 14 days after the day a notice referred to in clause 55 of these Regulations has been given in respect of that vessel;
  - (ii) where a request for an investigation by an expert investigator has been made within that period of 14 days—until that investigation is concluded; and
  - (iii) where a request for an investigation by an expert tribunal has been made within a period of 14 days from the day an investigation by an expert investigator has been concluded—until that investigation is concluded; or
- (b) the use, in any case, of a vessel by, or in the presence of, an officer of the Board who has been requested to give a certificate that the noise emitted by the engine of the vessel is not, in his opinion, excessive, an expert investigator making an investigation under Regulation 56 of these Regulations or any member of an expert tribunal making an investigation under Regulation 57 of these Regulations or the use of any vessel in the course of a voyage to and from the place where such investigation is to be made.







look after the equipment necessary to place the gantry crane in position 70 m above the ground.

Only 4 men are required to

ed, the gantry crane goes with it.

When the main beam is rais-

 $\leftarrow$  In each mast combination there are five 100 ton hydraulic climbing jacks on steel rods. The total hoisting capacity is 2,000 ton. The greatest length of the main beam was 117 m. An operation which would have taken months using conventional methods was performed in 7 working days. The crane had then been lifted to a height of 70 m.

Responsible for this achievement are a number of technicians, site foremen and a new Swedish hoisting method. The technique has been tested previously, for instance on several container cranes which were, however, considerably less in total weight. In theory there is no limit to the weight which can be liftedbe it a nuclear reactor, stator, bridge or roof for a hangar.

The principle of the Kramo Rigging System is based on erecting assembly masts like trellises provided with hydraulic jacks climbing along rods. The jacks climb smoothly and steadily up in synchronized cooperation with each other, thus lifting the load. The expandable mast sections can be fitted together to the desired height and by varying the number of jacks the necessary hoisting capacity is obtained.

The hoisting rate in this case was 1.5 m an hour, which is about 5 times quicker than with conventional hydraulic blocking up methods. This is therefore an important factor in calculations. The method also enables suppliers of heavy units to complete manufacture at the factory—there is no need to send out qualified erection engineers to assemble the parts later on the site involving troublesome and expensive adjustments as is often the case.

The method is easy to use for indoor assembly work. It may also permit savings since, for example, the framework of the building need not be so strong and the building need not be provided with heavy overhead cranes. Any operations going on elsewhere on the premises are not disturbed since the equipment for the hoisting operation is easy to handle and transport.

The Bremer Vulkan gantry crane is primarily intended for fitting together mammoth tankers—work on the first one could be started half a year earlier than calculated thanks to the fact that the crane was ready for use so quickly. The Kramo Rigging system from Sweden played a considerable part in this. (Kramo Montage AB)

PORTS and HARBORS

**Port of Naples** (See front cover also. Courtesy Ente Autonomo del Porto di Napoli



Port of Naples-Dry Dock Basin



Port of Naples---"Wash-Sea" Boat

Port of Naples-Containers Area

# The Eighth Conference, Amsterdam/Rotterdam



# Much interest expressed in 8th IAPH Conference

There has been much early interest in the 8th IAPH meeting scheduled for the second week in May, 1973. The contemporaryand worldwide-themes of the weeklong meeting have aroused the interest of dozens of non-IAPH members, who, of course, are welcome to attend the meetings.

To give you an idea: one of the (5) working sessions deals with preventive measures against air and water pollution and this topic which affects ports all around the world, has stirred much interest.

Another working session is to be devoted to the problems of ports in the developing nations and this theme, too, has created interest from unexpected quarters.

Many of the 350 regular IAPH members from 60 countries are expected to attend the conference and non-members can obtain further information by writing to the conference secretariat:

Organisatie Bureau Amsterdam,

Europaplein 14 (post office box 7205)

Amsterdam, the Netherlands Telex: 13499 (Raico) Telegrams: ORBU Amsterdam

# Town planning in The Netherlands

The Netherlands is the most densely populated country in the world with just over 13 million people living in a land area of 12,950 square miles; thus making for an average of over 1,000 people per square mile.

Moreover, more than half the country's population live in the "randstad" an area which lies roughly in the triangle formed by Utrecht in the East, Amsterdam to the North, Rotterdam to the South and North Sea to the West.

As a result modern methods of town planning have been developed out of necessity in the Netherlands and city planners from all over the world regularly visit Dutch cities to see what the Dutch have done with the problem of over-population-a problem which is affecting countries everywhere.

Two outstanding examples of town planning are to be found in



PORTS and HARBORS

Rotterdam and Amsterdam, host cities of the IAPH Congress to be held from May 6th through 13th, 1973. In Rotterdam, where much of the city center was destroyed in World War II, the Lijnbaan shopping center, developed in the early 1950's, is the prototype of many traffic-free pedestrian shopping malls around the world.

In Amsterdam, a series of garden suburbs, such as Slotermeer, Buitenveldert and the latest, Bijlmermeer, have been developed in the past two decades to handle increasing population needs. These carefully-planned suburbs combine apartments, houses, shops, schools, offices and plenty of "green space" and water which provides a sense of freedom to the inhabitants.

Several Dutch Universities offer courses in town planning, but perhaps the most important is at the Technical University at Delft—an ancient town in the very heart of the "randstad". Here architects from all over the world come to study—and most important, to see how successful modern town planning actually works.

# Join The Conference

Amsterdam: — The International Association of Ports and Harbors (IAPH) is to hold its next conference in the Netherlands from May 6 through 12, 1973.

The 8th biennial IAPH Conference will be hosted by the Ports of Amsterdam and Rotterdam. Membership of the IAPH includes officials from port authorities all over the world. Total membership is put at about 350 from 60 countries.

Many of these members plus some non-members are expected to attend the conference to discuss the present problems and future developments in port management.

The conference will include five working sessions to be held at Amsterdam's RAI Congress Centre, when the following topics will be discussed:

- 1. Coordination in the planning of links between ports and the hinterland to facilitate movement of intermodal transportation.
- 2. Preventive measures against air and water pollution in port areas.
- 3. Problems of developing ports and means of assistance avail-



able.

- 4. Potential of cargo distribution by barge carriers.
- 5. Scope of operational responsibility of the port authority.

Aside from working sessions, there are a number of other programs planned for the conference. On Wednesday, May 9th, all delegates and their wives will pay an extensive visit to the port area of Rotterdam-Europoort.

The social program will include an official reception at the Rijksmuseum, Amsterdam, the official President's dinner, an evening of dinner and dance in Rotterdam and the New President's Inauguration party.

An attractive program will be organized for the ladies.

In addition, a post-conference tour to Belgium, with visits to the Port of Antwerp, Bruges and Ghent, will be arranged by the Antwerp Port Management.

More details of the conference will be published in the program distributed to IAPH members interested in this conference, can obtain this program or any further information from the Conference Secretariat:

Organisatie Bureau Amsterdam N.V.

Europaplein 14 (Post Office Box 7205)

- Amsterdam, the Netherlands.
- Telephone: (020) 44 08 07/Telegrams: ORBU Amsterdam/ Telex: 13499 (Raico)

For your information: The 11th

Congress of the International Cargo Handling Coordination Association is scheduled to be held at the Congress Centre in Hamburg, Germany from May 14 through 17, 1973.

# Diamond cutting in Amsterdam

Amsterdam is probably the most famous diamond center in the world and each year tens of millions of dollars worth of diamonds are polished—and sold—by Amsterdam artisans.

The city boasts more than a score of diamond cutting and polishing firms—most of which are open to the public—and seeing the craftsman at work has become a major tourist attraction in a city which attracts one and a half million tourists a year.

The craft in Amsterdam dates back to the beginning of the 17th Century when diamond cutters and polishers fled Antwerp during the 80 Years War when Spanish invaders captured most of what is now Belgium and the Southern part of Holland, creating what was known, briefly, as the Spanish Netherlands.

Amsterdam itself remained independent and the art of diamond polishing flourished in the Dutch Capital. Today Amsterdam polishers are known throughout the world for their craftsmanship and a diamond bought in Amsterdam carries what is almost a built-in certificate of approval.

# The 8th conference of the International **Association of Ports and Harbors** will be in Amsterdam and Rotterdam. **Coming**?





A globe-spanning network, flights straight to Amsterdam. Lots of thoughtful extras-including a booking office right at the congress centre, where you need it. For KLM's the airline with the difference. The airline that cares, start to finish, in the air and on the ground.





# KLM's the airline for you.

We have a home country perfect for conventions, too: Plenty of scope for sightseeing and after-hours fun. Great congress centres in Amsterdam, Rotterdam, The Hague and Utrecht. It's a country that welcomes strangers—that has reserved a special welcome at Amsterdam's RAI and in the' Port of Rotterdam for Port and Harbor's people, May 6-12 next year. Will we be flying you there?





# World's Largest Tanker Launched

### (News from IHI)

Tokyo:—The world's largest vessel, a 477,000 dwt tanker for Globtik Tankers Ltd. of the U.K., was launched at the Kure Shipyard's No. 3 building dock of IHI (Ishikawajima-Harima Heavy Industries Co., Ltd.) on October 14.

Those attending the launching ceremony included Mr. R. N. Tikkoo, Chairman of Globtik Tankers Ltd., her owner, Mr. G. Tsuboi, President of Tokyo Tanker Co., Ltd., her charterer, and Mr. R. Taguchi, President of IHI, the builder.

During the course of the ceremony, Mrs. Tikkoo christened the ship the Globtik Tokyo and cut the launching cord.

The Globtik Tokyo measures 379 meters in overall length, 62 meters in breadth, 36 meters in depth and 28 meters in draft. Compared with the 372,000 dwt Nisseki Maru of Tokyo Tanker Co., the world's largest tanker now in service, the Globtik Tokyo is larger by 32 meters in overall length, 7.5 meters in breadth, one meter in depth and 0.96 meters in draft. Powered by a 45,-000 shp IHI turbine, she will cruise at a service speed of 15 knots. The keel of the ship, which was ordered from IHI by Globtik Tankers Ltd. in April 1970, was laid in April this year. After the launching, she will be fitted out and completed in February 1973. On delivery to her owner, the Globtik Tokyo will be chartered to Tokyo Tanker Co. to carry crude oil from the Persian Gulf to Nippon Oil Group's central terminal station (CTS) at Kiire in Kagoshima Prefecture, southern Japan. The construction cost of the Globtik Tokyo is approx. 15,000 million yen.

IHI has booked two more similar ships, one for the Globtik group, and the other for joint owners, Tokyo Tanker Co. and TIS Shipping Co. They are to be chartered to Tokyo Tanker Co. for hauling crude oil from the Persian Gulf to the CTS at Kiire.

In the design of the world's largest tanker, IHI made all-out efforts both to enhance the safety factors and also to prevent water pollution.

Features of the Globtik Tokyo are:

(1) Anti-explosive inert gas system An inert gas system developed by



IHI has been adopted for prevention of explosions in the vessel's cargo oil tanks, full or empty, reducing the oxygen density of the air inside the tanks to keep them safe from explosion. The exhaust gas of the vessel's boiler is used as inert gas after it has been cooled and cleaned by sea-water, since the gas is too hot and contains sulphurous acid gas when it comes straight from the boiler exhaust.

(2) Fixed tank cleaning device

In addition to 21 cargo oil tanks and 2 ballast tanks, the vessel is provided with 2 slop tanks for separating oil from water. Fixed automatic cleaning equipment has been adopted for all cargo oil tanks of the vessel. After cleaning, the slop is collected into the slop tanks and separated into oil and water. Clean water only is discharged from the vessel, and the oil is retained in the tanks until unloaded together with the cargo crude oil in port. The possibility of water pollution being caused by the ship is thus ruled out. (3) Slow speed meter for safe operation

In view of the vessel's enormous tonnage of 477,000 dwt, a slow speed meter is provided with the ship for use in place of the pilot's intuition, to measure the ship's fine movements in all directions caused by wind or waves during siding, anchoring, leaving or passing through narrow water passages, in order to prevent the vessel from grounding or colliding against the quay.

(4) Anti-collision device

The ship has two radar units, one of which is equipped with an anticollision device which automatically warns the crew of any approaching vessel or obstacles. This device proves effective on dark nights, in stormy weather, in fog, or in rain.

(5) Reduced maintenance of the ship

Epoxy paints have been used extensively throughout the ship. Two coats of coal tar epoxy paint have been applied to all inside surfaces of the clean ballast tanks, preventing the steel material from corroding. (6) Elevator system

An elevator system is provided for the crew to go down from the living quarters to the main pump room located 36 meters below.

(7) Navy navigational satellite sys-

PORTS and HARBORS

tem (N.N.S.S.)

The N.N.S.S. provided with the ship makes possible accurate determination of the ship's position. The system receives signal waves sent from tansit satellites revolving around the earth's polar orbit. (9) TELEX surface

(8) TELEX system

A telex system has been installed to provide efficient ship-to-land communications.

(9) Engine control from the bridge The main engine can be remotecontrolled from the wheel house in the bridge of the ship.

Principal particulars of the Globtik Tokyo are:

Length, o.a.:	abt. 379.0 m
Length, b.p.:	$360.0~\mathrm{m}$
Breadth, moulded:	62.0 m
Depth, moulded:	36.0 m
Draft:	28.0 m
Gross tonnage:	235,000 tons
Deadweight tonnage:	477,000 tons
Main engine:	- -
- 45.000 shp	IHI turbing

45,000 shp IHI turbine Service speed: 15.0 knots Cargo holding capacity: 581,000 cubic meters

Complement: 50 (max.) Completion scheduled:

February, 1973

5.

# **Comparisons in Size**

- 1. The overall length of the Globtik Tokyo is 379 meters: She is 32 meters longer than the Nisseki Maru, the world's largest tanker now in service, 78.5 meters longer than the Eiffel Tower, or 137 meters longer than the Tower Bridge (242 meters), London.
- 2. The tanker has two funnels, each being 24 meters in height and 5 meters in diameter. The height from the ship's bottom to the top of the funnels is 70 meters, equivalent to that of a 20-story building. The height from the bottom to the wheel house is 57 meters, equivalent to that of a 17-story building.
- 3. The total upper deck area (about 20,668 m<sup>2</sup>) is sufficient to construct two and a half soccer fields or 79 tennis courts.
- 4. The quantity of crude oil to be carried on a single voyage is about 580,000 kiloliters, equivalent to about 3,115,000 cans of oil (net contents: 18 liters). If the 3,115,000 cans were piled



one on top of another, the total height would be 2,969 times that of Mt. Fuji (3,776 meters). The total length of cargo oil

- pipes with diameters from 800 to 1,000 mm is about 2,000 meters. If other pipes such as sea-water, fresh water and steam pipes are included, the total length comes to about 20,000 meters.
- 6. The propeller, a five blade type, is 9.25 meters in diameter and weights 67 tons.
- 7. The rudder is 14 meters in height, 12.5 meters in width, and 250 tons in weight. Its total area (168 m<sup>2</sup>) is sufficient

to accommodate 47 small-sized cars.

- Two anchors are places at the stem, each being 29 tons. The total length of the two chains is 770 meters.
- 9. The total length of welds is 1,100,000 meters.
- The total amount of paint used is about 400 tons. (The paint required for 1 m<sup>2</sup> is 0.25 kg.)
- 11. Maximum number of crew members is 50, including 13 for the deck section, 16 for the engine section, 6 for office section, and 15 for owner's cabin, pilot room and spare room.





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-Assistant Secretary General, ICHCA

# **IAPH 8th Conference**

-Amsterdam/Rotterdam 7-12th May, 1973

Conference Chairman: Ir. J. den Toom, Managing Director, Port of Amsterdam Conference site: International Congress Hall, RAI, Amsterdam

Working sessions will be held on the following five topics:

- 1. Coordination in the planning of links between ports and the hinterland to facilitate movement of intermodal transportation.
- 2. Preventive measures against air and water pollution in port areas.
- 3. Problems of developing ports and means of assistance available.
- 4. Potential of cargo distribution by barge carriers.
- 5. Scope of operational responsibility of the port authority.

# **ICHCA** 11th Conference

# -Hamburg 14-17th May, 1973

Conference will be opened by Senator Kern and the Keynote Paper will be presented by Herr Konsal Dietz.

Conference site:

Conference theme:

Congress Centrum, Hamburg "The International Transport Chain-where are the weak links?"

# **Orbiter Probe**

# **IAPH News:**

# **New Member**

Regular Member

- Bureau of Public Works, Philippines Bonifacio Drive, Port Area Manila, Philippines
- (Mr. Carlos L. Castillo, Assistant Director)
- was approved on September 25, 1972 by the Secretary General.

# Travelers

• On Monday, October 9, 1972, four gentlemen from Belgium called at the IAPH Head Office. They were Mr. Fernand Suykens, Deputy General Manager, Port of Antwerp, Messrs. Fernand Traen and Olivier Vanneste, both Directors of the Bruges-Zeebrugge Port Authority (M.B.Z.), and Mr. Louis Vande Kerckhove, Commercial Manager of the Bruges-Zeebrugge Port Authority (M.B.Z.). Two IAPH Deputy Secretaries General Dr. Hajime Sato and Mr. K. Yokoyama received them.

These gentlemen were leaders of the Study Team of the Belgian National Road Transport Federation comprizing 40-odd members. At the introductory meeting of the Team sponsored by the World Trade Center of Japan held in the W. T. C. Club from 2:00 p.m. that day, Mr. Suykens explained how eager were the Team members to invite Japanese shipping lines, cargoes and investments to Belgium through the Belgian ports of Antwerp, Bruges and Zeebrugge.

On Monday, October 16 evening, a cocktails was held by Mr. R. Van Roy of the Belgian Embassy within the Embassy compounds where the Team members received many guests from shipping, trading and manufacturing companies.

• Mr. Bruce Procope, Chairman, Port Authority of Trinidad & Tobago, Port of Spain, and Mr. Pollard J. Moore, Managing Director, Trinidad & Tobago Port Contractors Ltd., Port of Spain, called at the IAPH Head Office on Monday, October 23 morning at 9.30 o'clock and were received by Mr. Katsuya Yokoyama, Deputy Secretary General. The visitors were invited by Mr. Yokoyama to a lunch that day at Rikyu Fanten Restaurant in the World Trade Center Building.

Mr. Yokoyama also took the two gentlemen to the Bureau of Shipping, Ministry of Transport, and to the International Container Terminal Co., Ltd. at the Ohi Container Terminal of the Keihin (Tokyo Bay) Port Development Authority. On Tuesday, Mr. Yokoyama took them to the offices of Mitsui-OSK Line, NYK Line and K Line.

• The Senate of Bremen and Bremen Port Operating Company held a reception in Hotel Okura (Asuka Room), Tokyo on Monday, October 30 evening at 6.00 o'clock. At the receiving line were Mr. Hans Koschnick, Mayor of Bremen, Senator Karl Willms, Dr. Walter Franke, Bremen Citizen's SPD Party, Mr. Gerhard Beier, President, Dr. Rolf Fastenau, Board member, and Dr. Guenter Boldt, Secretary, of Bremen Port Operating Company, and Mr. S. Tsuyama, Japan Representative of Ports of Bremen/Bremerhaven.

Mr. Koschnick addressed the guests, thanking for the cooperation of Japanese shipping and trading circles and stressing the advantages of Bremen and Bremerhaven. Mr. Koschnick, in his capacity as the Federal Upper House Speaker, stood in for the German President Heinemann, in his illness, to accompany the Emperor and Empress of Japan during their trip in Germany last fall. Mr. Koschnick was expected to be received in audience during his stay in Japan this time.

• Mr. John A. Black, Director of Maplin, Port of London Authority, gave a dinner in honor of Mr. Toru Akiyama, IAPH Secretary General, in Imperial Hotel, Bamboo Room, Tokyo on October 30 evening. Mr. Katsuya Yokoyama, IAPH Deputy Secretary General, and Mr. M.

(Continued on Next Page Bottom)

# Helen Bentley, U.S. FMC Chairman, Speaking at ICHCA Hamburg

Helen Delich Bentley, Chairman of the US Federal Maritime Commission is to be one of the speakers on opening day at the Eleventh ICHCA Biennial Conference in Hamburg from 14th to 17th May, 1973. A former journalist and maritime editor of the Baltimore Sun, from 1953 until she joined the FMC in 1969, Mrs. Bentley has received numerous awards for her writings and promotional activities in the field of transportation from various organizations including the North Atlantic Ports Association, San Francisco Port Commission, Maritime Port Council and the American Merchant Marine Institute.

Theme for the ICHCA Conference is "The International Transport Chain-Where are the weak links?" and its purpose is to discuss problems affecting specific areas of transport. Presentations will be made by leading world personalities, actively engaged in commercial operations of Shipping, Ports, Inland Transport and Air Freight.

The Conference is to take place in the new Congress Centrum, which opens early next year and will be one of Europe's most sophisticated conference centres. (ICHCA Press Information)

### NPC Book :

# Further Growth in Britain's Container Traffic

London, 16th October:—Container and roll-on goods traffic through British ports increased last year by a further 2.4 million tons, according to statistics published by the National Ports Council.\* The total tonnage on such services in 1971 was 19 million tons; over 10 million tons of this was on specialized 'lift-on' container services, and most of the remainder was 'roll-on' traffic.

By the end of 1971 British ports had 106 container and roll-on berths in operation, 21 being equipped with gantry cranes, 34 with other types of lift-on equipment, and 51 roll-on berths.

The average annual throughput of all unit load berths was 173,787 tons. Eight berths each had an annual throughput in excess of  $\frac{1}{2}$  million tons.

London was Britain's leading container port, with a tonnage of 2.4 million (compared with 1.6 millions in 1970). Over 2.1 million tons of this was on specialized lift-on services, with 220,000 tons on roll-on services.

Second busiest container port was Liverpool, with 1.6 million tons, over 1.2 million tons of this being lift-on traffic.

Dover came third, with 1.5 million tons, all of this on roll-on ferry services. Also with 1.5 million tons was Felixstowe, with 600,000 tons of lifton traffic and nearly 900,000 tons

\* Container and Roll-on Port Statistics, Great Britain, 1972. Published by the National Ports Council, Commonwealth House, 1-19, New Oxford Street, London WC1A 1DZ. Price £2.50.

Kinouchi, Director of Planning Department, The Keihin (Tokyo Bay) Port Development Authority and two IAPH Under Secretaries were also invited. The occasion was arranged by Mr. Goro Hasegawa, PLA Representative in Japan. on roll-on services.

For reasons of commercial confidentiality, figures for many ports with substantial unit-load traffic are not shown separately, but other ports for which individual totals are given are: Preston, 1.4 million tons (1.2 million tons of this being lifton); Southampton, 1.1 million tons (with a fifty-fifty split between rollon and lift-on); Hull, 1.0 million tons (of which 860,000 tons was roll-on); and Tees and Hartlepools, 344,000 tons.

A further increase in accompanied car traffic was recorded, continuing the trend noted last year—movements in and out of British ports in 1971 totalled 2,013,645, compared with 1,857,849 in 1970. Nearly half of this total — 927,175 — passed through Dover. The total also includes hovercraft services through Dover and Ramsgate totalling 178,-444 vehicles in and out—a fifty per cent increase on 1970.

This new issue of the Council's unit-load statistics contains 38 tables, including details by type of units, overseas countries of origin and destination, and port or port group. There are separate tables with details of accompanied car traffic and import/export vehicles. Details of berth throughputs and transhipment movements in the North American trade, which were previously published in a separate document, are also included.

# Welland By-Pass Channel

Ottawa: — Construction work along the new \$188 million Welland By-Pass Channel is continuing ahead of schedule with the opening to coincide with the start of the navigation season in the Welland Canal early in April.

The East Main Street Tunnel was opened to road traffic on June 13. The highway portion of the Townline Tunnel was opened on July 13 and train traffic should be passing through it by February 1973.

Railroad and highway relocations are progressing on schedule. Highway overpasses, constructed to carry road traffic over the re-routed railway lines are all completed and in service, except for the Wilhelm Road overpass and County Road 68 crossing.

Contracts associated with buried utilities crossing the new channel were completed by the end of July. The utility crossings consisted of water and sewage lines, gas mains and telephone cables.

Channel excavation is now in its final stages with over 90% of the



Dotted lines to the East of the existing canal shows the 8.5-mile channel By-Pass of the City of Welland,

earth removed for a total of 61.3 million cubic yards. Total excavation is estimated at 65 million cubic yards. Of the work involved in the 42 major contracts for earthworks and structures 87% has now been completed.

Flooding of sections of the new channel started late in August and will continue through February as various construction plugs now carrying road rail crossings are removed.

The end of the 1972 navigation season—scheduled for December 15 —will signal the last transit of vessels through the narrow 192 footwide winding section of the existing canal which bisects the City of Welland.

In April 1973, mariners will be presented with a 350 foot-wide channel, unobstructed by bridges and running  $8\frac{1}{2}$  miles in a relatively straight line from Port Robinson to Ramey's Bend.

The new channel is expected to shave one hour off the round-trip time and alleviate traffic congestion caused by the old canal and lift bridges. (The St. Lawrence Seaway Authority Monthly Traffic Review, Vol. 4 No. 5)

# Prepare for growth

Toronto:—Unless Great Lakes ports expand their facilities they may find themselves unprepared for the great influx of foreign ships, warned E. V. Fesler a consultant with the St. Lawrence Seaway Development Corporation.

"Toronto is one of the few Lakes ports prepared to handle the ships that are getting larger each year," he said.

Earlier Fesler had addressed members of the International Association of Great Lakes Ports at their quarterly meeting in Chicago.

He predicted that Seaway cargo will increase greatly in the coming years and added: "We had better be ready for it."

Fesler explained that cargo moving through the Montreal-Lake Ontario section of the St. Lawrence Seaway has been rising on the average of a million tons per year and that the increase last year in overseas tonnage alone was 5 million tons.

In 1967 the average size of an

ocean vessel in the Seaway was 345 feet. Last year it increased to 375 feet and by 1985 the composite length will be 525 feet.

The biggest salties making regular calls into the Port of Toronto at the present time are just over 709 feet.

Fesler said there are about 19,000 commercial carriers in the present ocean fleet and that the majority of them are of the older variety.

"When these ships are replaced by larger and newer vessels," he said, "those ships that are replaced will come into the Great Lakes to find new sources of business."

The older freighters with low capital investment and almost zero amortization will be able to charge less for the movement of cargo and still come out with a healthy profit, he said.

"There will come a time," Fesler said, "when we will see the fleet of salties in the Seaway outnumbering the lake freighters."

As far as the Port of Toronto is concerned the predicted increase of overseas cargo is already taking place. Last year the general cargo moving through the terminal areas of the port increased by 17 per cent.

Last month the marine terminals handled 52 per cent more overseas cargo than for the same period last year, making it the busiest August in the port's history.

Comparing the same monthly performance with 1969, which had been the record year, the tonnage figures show a 17 per cent increase. The August figure was free of any influence by the strike at Quebec ports.

The future of the port looks bright.

The Shipping Federation of Canada has a key paragraph in a policy paper reviewing the economic problems of navigating the Great Lakes which reads: "The economic goal should be for the full use of season shipping over all the Great Lakes with the diversion to rail and road transport out of navigation season and thus ensure throughout each year a well spread balance of international freight over all modes of transportation."

A senior Canadian Transport Commission official said earlier this year at a containerization seminar that the six Canadian container ports now in operation can co-exist on an economically viable basis. Toronto was one of the ports named.

Minister of Transport Don Jamieson, in opening the Container Show in Toronto last April, said it was the policy of the government to take all steps to encourage the movement of containers through the St. Lawrence Seaway to the Great Lakes ports.

J. A. Crichton, manager of the Shipping Federation of Canada, said there is much cargo that isn't suited to containers as well as the general package cargo destined to and from overseas ports unable to handle container vessels.

"There are also combination vessels designed to carry both container and non-container cargo at present serving Lakes ports and there is no reason to expect that the 'container revolution' will affect these services," he said.

Seaway authorities are presently taking a long, hard look at the system and are drawing up plans to have the waterway work to its potential. Also being considered are concepts designed to increase the total capacity. (Port of Toronto News, September)

# "The Baltimore Era"

Baltimore, Md., October 20:— Spearheading a drive to make the port of Baltimore an even more important East Coast gateway than it already is, Joseph L. Stanton, Maryland Port Administrator, announced the arrival of a new age in port accommodations and services in the United States.

Mr. Stanton said the years immediately ahead will be known as the "Baltimore Era." He spoke October 12, 1972 before a gathering of nearly 200 shippers, steamship operators and traffic managers at the Whitehall Club on homegrounds of Baltimore's principal competitor port, New York.

At the reception hosted by the Maryland Port Administration, an agency of the Maryland Department of Transportation, he said, "Baltimore is THE port on the Atlantic Coast. The Baltimore Era is here!"

The MPA executive's principal discussion centered around the realization that the day of domination by one port traditionally called the major gateway for the flow of goods moving through the Atlantic Coast of the U.S. is over—Baltimore is the major port to reckon with in terms of shipping to the U.S. Midwest.

"There is no port service Baltimore cannot offer on an equal basis with any other East Coast port," Mr. Stanton said.

He cited Baltimore's advantages over other East Coast ports as including its location, its facilities and its lowest cost.

"There is no fact, no statistic, no argument, no counterpoint that can change or deny Baltimore's location," the Port Administrator noted. Baltimore is as much as 200 miles closer to the Midwest than other Atlantic Coast ports, the most important industrial and freight concentration in the world. This section of the U.S. represents almost onethird of the population of the country and has almost one-half of America's industrial production.

Additionally, Mr. Stanton pointed out that despite equalization rates and continuing efforts to overcome geographical disadvantages on the part of other ports, "Baltimore is closer and Baltimore is cheaper." He underscored the fact that a 30car container train moving between Baltimore and Chicago loaded with 60 containers cost a shipper about \$2,220 less than to New York.

In terms of facilities, Mr. Stanton stressed the complete reversal of Baltimore from an old railroaddominated port of a few years ago to a modern superport where "the finest container and breakbulk facilities on the East Coast are in operation." He revealed that more than \$250 million has been earmarked for the continuation of Baltimore's marine industrial development in the 1970s and 80s.

The head of the MPA also noted that Baltimore banking is now able to compete with the huge financial institutions of New York and that "every major steamship line" now calls at Baltimore, particularly those handling containers.

In closing, Mr. Stanton said that Baltimore and some of her sister ports on the Atlantic had been characterized as "out ports" in past years, but this is no longer true as far as it relates to the Maryland port. "Baltimore is no longer an out port—The Baltimore Era is here!" (News from Maryland Port Administration)

# **Competent manager**

Buffalo, N.Y .: - Since its inception five years ago, the Niagara Frontier Transportation Authority has been administering the Buffalo Port Terminal and the Seaway Piers located on Fuhrmann Blvd. During this time, the property has been renovated, improved and developed into a first rate facility. A fair share of the credit for this effort should be given to John F. Finnegan Jr., NFTA marine operations manager. Mr. Finnegan is assisted by a crew of about 40 people, all of whom are capable of working several different trades and willing to tackle more than one job to keep the sprawling 558,000 square feet of floor space shipshape. Housed within the Port Terminal are a number of important industries which use the space for everything from attractive offices to thousands of square feet of storage area.

To keep all tenants happy, Mr. Finnegan uses a daily work sheet that that details a repair job; the men, equipment and material needed, the job priority and time estimate on the man hours necessary to complete the work. Then, whether it's plumbing, welding or electrical work, he can call on his force to do the job well.

Watchmen are on duty at all hours, with a three-wheeler available to make the rounds of the extensive property and Mr. Finnegan prides himself on one of the tightest security arrangements possible.

The A & P occupies 170,000 square feet of the storage area and the dollar volume of their warehoused commodities runs into the millions. Lisk-Savory Corp., manufacturer of a varied line of construction machinery and tools for aircraft, occupies 90,000 sq. ft. of space at Terminal A including an area for offices and a computer service division. Rich Products Company, a specialist in frozen food, also, is a major occupant. In a tank room below street level, Rich stores huge vats of corn oil that requires a 180-

degree temperature. Other going industries utilizing this vast terminal structure include Lincoln National Bank and Marine Midland-Western for the storage and subsequent sale of repossessed automobiles; Pacific Transportation for the housing of as many as 100 pieces of trucking equipment; Compo Enterprises and Goldston Inc. for the storage of trailers and trucks and Campbell Elevator which leases space for the storage of elevator equipment and parts. Buffalo Overseas Terminal which handles a major portion of general cargo with respect to ocean shipping has leased Terminal B and also has a segment of Terminal A for the storage of commodities that have been imported and are awaiting distribution.

Located at Seaway Piers, is the Mid-Continent Coal & Coke Corporation with its \$150,000 coke screening facility. Mid-Continent leases the space from the NFTA and stockpiles the refined material along the Finger Pier where it awaits export. Further south at the Seaway are stockpiles of salt, foundry sand, potash and construction materials that are used by local industry. Mr. Finnegan also supervises the Small Boat Harbor with 231 occupied berths, a restaurant and marine store.

A veteran marine construction diver and contractor, as well as a Coast Guard licensed Captain, Mr. Finnegan has brought a wealth of waterfront knowledge to the operational aspects of the Port of Buffalo. (Niagara Frontier Transportation Authority Newsletter, September)

# For longer shipping season

Buffalo, N.Y.:—A winter navigation board, made up of senior field representatives from federal agencies in the Great Lakes area have formulated a ten-point program designed to test the feasibility of extending winter shipping. Features of the program are as follows:

- 1. An improved ice and weather forecasting network to give ship captains faster information.
- 2. Expanded ice observations with special attention to shore ero-

### (Continued on Page 36)

# Port of Acajutla, El Salvador (Courtesy Comision Ejecutiva) Portuaria Autonoma



Aerial view of Port of Acajutla piers and installations.



Unloading of paper rolls.



Belt conveyor system for grain products.

(Continued from Page 34)

sion by ice as vessels move through narrow channels.

- 3. Test of improved aids to navigation, including buoys, radar and laser beams.
- 4. Tests of cold weather survival gear for crewmen.
- 5. Tests to establish design criteria for structures that must withstand severe ice pressures.
- 6. Tests of a gated ice boom that would permit vessel transists without releasing a large rush of ice in a frozen river.
- 7. Measures in the St. Mary's River to provide winter transportation for residents of Michigan islands.
- 8. Continuing tests of air bubble systems to reduce ice formation.
- 9. Identification of economic costs of the program.
- 10. Environmental evaluation of the program with special emphasis on the effects on shore property.

Such details as sites for the bubblers, survival tests and the like are still to be determined by the board. (Niagara Frontier Transportation Authority Newsletter, September)

# High lake levels

Buffalo, N.Y .: --- Because of the unusually high lake levels this year, bulk cargo operations of Great Lakes steamship fleets are being given a slight boost. The high lake levels have allowed freighters to carry more tons per shipment of heavy cargoes such as iron ore and stone. Lake Ontario's level is a foot higher than normal and the highest since 1956. Lakes Michigan and Huron are also a foot above normal, and Lake Erie is  $1\frac{1}{2}$  feet higher, according to the Army Corps of Engineers. The Corps said runoff from heavy snowfalls in the upper Midwest last winter are largely responsible for the existing levels. (Niagara Frontier Transportation Authority Newsletter, September)

# Soil and water tests

Los Angeles, Calif., October 11: —The Los Angeles Board of Harbor Commissioners today (October 11) agreed to have the University of Southern California test soil and

# "Proposition 20" Opposed By Port of Los Angeles

Robert G. Robinson, Director Public Relations Division Port of Los Angeles

Los Angeles, Calif., September 29:—The Port of Los Angeles could possibly be prohibited from developing much of its properties to meet new advances of the steamship industry if Proposition 20 is passed in November's general election.

The Los Angeles Board of Harbor Commissioners, noting its record of support for environmental improvement in the Port and pointing to the dramatic improvement in the Harbor's water quality in the past few years, opposes Proposition 20.

water samples from the Port's main channels for future environmental reference.

Under the contract, U.S.C. would test for trace metals, heavy metals and chlorinated pesticides. Harbor Department personnel will collect corings and water samples within the Port while the University staff will duplicate the collection in designated areas outside the breakwater.

The proposed study is expected to provide the environmental information covering possible variations in the existence of trace metals, heavy metals and chlorinated pesticides that may be present from inside the harbor to outside the breakwater and over the mainland shelf in specific areas to be approved.

The information obtained will be compared with standards established by public agencies.

U.S.C., with its Allan Hancock Foundation, has in the past worked on projects at the Port of Los Angeles. Most recently the Hancock foundation helped measure water currents in the Harbor, which included monitoring the movements of floats.

Cost to the Harbor Department for the testing will be approximately \$60,000. (Port of Los Angeles) At the request of the commissioners, Assistant City Attorney Nowland C. Hong investigated what effects the Coastal Zone Environment Act could have on the Port if it were passed, and he concluded that delays in Harbor projects ranging from two years up to indefinite periods are foreseeable.

Hong indicated that under the provisions of the proposed Act, new state and regional commissioners are to be established, and these boards must approve any major construction not only in presently undeveloped coastal areas but also in developed commercial harbors.

Appeals from adverse decisions by the regional commissions could result in costly delays. Additionally, challenges by outside parties could also cause postponement of Harbor development projects even though challengers may not possess any special qualifications or knowledge of the developed or undeveloped area.

Hong's report noted that several terms in the initiative lack clear definition. He indicated that nothing defines what "adversely" affects water quality nor what constitutes "sound conservation principles," among others.

The initiative measure specifies that the new state and regional boards be composed of persons with conservationist credentials but makes no demand that the board members be knowledgeable in affairs of commercial harbors even though these boards would effectively control the development of large ports like Los Angeles and Long Beach.

Hong's analysis cites as an example the plans for dredging the Port of Los Angeles Main Channel. The Board of Harbor Commissioners has affirmed a desire to dredge, and the U.S. Corps of Engineers has completed a review of reports that indicated the dredging is the most suitable plan for improvement of Los Angeles Harbor.

Under present safeguards, an environmental impact analysis and statement, setting forth positive as well as negative aspects of the proposed projects for complete evaluation, and hydraulic modeling work must be completed and studied by parties familiar with commercial harbors and water circulation problems before construction permits can be approved.

Yet under the initiative measure, persons possibly without any knowledge of harbors and shoreline protection and development would have final jurisdiction over major harbor construction.

While emphasizing that dredging at the Port of Los Angeles is a federal government project by the Corps of Engineers, L.L. Whiteneck, chief harbor engineer, summed up, "Major Harbor developments would be included under the jurisdiction of this proposed measure, and passage of the act could seriously retard Harbor development."

The Board of Harbor Commissioners, stressing that it favors environmental improvement, emphasized the results of such efforts at the Port of Los Angeles. However, enactment of Proposition 20, while attempting to match elsewhere the results already achieved at Los Angeles Harbor, might well cripple its ability to keep pace with the advances in the steamship industry.

# **Greater DAS terminal**

Los Angeles, Calif., October 11: —The Los Angeles Board of Harbor Commissioners today (October 11) approved plans for the improvement of 16 acres of undeveloped West Basin property, the first step towards doubling the present Distribution and Auto Service terminal at the Port of Los Angeles.

The improved property, along with about nine acres already developed, will be used for automobile washing and storage.

Improvements at the expanded West Basin site will include excavation, grading and topping with a rock surface; installing new security lighting; and relocating old and con"Sea-Land Galloway" on Maiden Voyage Arrives at Elizabeth Marine Terminal



A war the State of the second

structing new fencing.

The present 23-acre Distribution and Auto Service terminal has the capacity of preparing 7,000 cars per month for "show room" condition. In addition to local distribution by truck from the Datsun terminal, two rail spurs with room for nine trilevel railroad cars can start 162 vehicles on their way across the country during an eight hour shift.

The estimated cost for the improvements will cost about \$240,000. Along with a smaller, already improved parcel, the DAS terminal will be almost 50 acres. Work is expected to be completed by next January. (Port of Los Angeles) The world's largest containership, SEA-LAND GALLOWAY, the first SL-7 to serve the Port of New York, being unloaded by five cranes at the Elizabeth-Port Authority Marine Terminal on completion of its maiden voyage early in October.

New York:—The world's largest and fastest containership, the SEA-LAND GALLOWAY completed her maiden voyage to the Port Authority of New York and New Jersey's Elizabeth Marine Terminal Friday evening, October 6. Measuring 946 feet in length, 105 feet 6 inches in breadth, and capable of carrying 1096 containers, the GALLOWAY is the first of two SL-7 class, 33-knot vessels to be engaged by Sea-Land in the intensely competitive North Atlantic service between the Port of New York and Rotterdam/Bremerhaven. The two vessels will operate on 14-day turns. One will leave Bremerhaven and Rotterdam each week and the other will leave New York the same week, each returning the following week.

The container-handling ability of the Elizabeth Marine Terminal proved the value of the new ship and shore techniques. Using five shore-based container cranes, the vessel was completely discharged and reloaded in 19 hours, involving a total of 2,100 containers or an equivalent of 35,000 long tons of general cargo. To handle an equal volume of general cargo on a conventional breakbulk vessel, even if worked at top speed, would have taken approximately 20 days, with 10 longshore gangs at work 12 hours per day. It is estimated that one SL-7 is the equivalent of five Mariners, the largest breakbulk vessel class in the U.S. Merchant Marine on the North Atlantic.

To accommodate Sea-Land's expanding world-wide container operations, the Port Authority's Marine Terminals Department, under the leadership of IAPH President A. Lyle King, is presently developing a new 232-acre container facility with almost a mile of berthing space at the Elizabeth Marine Terminal. The new facility is being developed in the southeast section of the Elizabeth seaport and is scheduled for completion early in 1973. The new terminal will provide 4,519 feet of berthing space, 40-foot-depth berths, a turning basin and wider access channels to the berths.

Already the world's largest and most modern containership facility, the Elizabeth marine terminal is handling a steadily increasing volume of goods shipped in containers to worldwide markets. Upon completion in 1973, the \$205 million Elizabeth seaport will have over three miles of containership berthing space. When fully operational, the facility is expected to handle 12 million tons of containerized cargo a year.

# Sty Dock project

New Orleans, La., October 10:— The Board of Commissioners of the Port of New Orleans (the Dock Board) has acquired the Stuyvesant Docks from Illinois Central Gulf Railroad. The property, located on the Mississippi River between Louisiana Avenue and Napoleon Avenue, consists of 4,750 feet of waterfront dock space and a total of 26.84 acres of cargo handling and storage space. The Dock Board's investment in the ten-berth acquisition is \$3.2 million.

The facilities will be converted by the Dock Board in the near future for use by a variety of services, including ship repair, automobile servicing, and cargo handling by breakbulk carriers as well as LASH-type barge-carrier vessels.

Illinois Central Gulf Vice-President Paul Reistrup was in New Orleans to consummate negotiations with Dock Board General Manager E. S. Reed. Reed pointed out that the Stuyvesant Dock area is one of the few locations on the river where there is adequate back-up space for modern cargo handling. The Sty Dock project will add to the importance of the riverfront dock area from Henry Clay Avenue through Louisiana Avenue. This area is and will continue to be a vital part of the port's long-range development plan, however, those older wharves in other sections of the port with insufficient back-up areas will be phased out of service by the year 2000. The Sty Dock to Henry Clay area will handle about 50% of the port's tonnage by that year, the other half being handled at the France Road Terminal and other facilities located on the tidewater areas on or near the Mississippi River-Gulf Outlet. Reed pointed out that these areas are not subject to seasonal river highwater fluctuations and that they offer adequate back-up space and are within easy reach of both the Public Belt Railroad and interstate highway systems. The Dock Board is currently working with the Corps of Engineers on plans to construct a new shiplock and channel to adequately connect the Gulf Outlet area with the Mississippi River.

The Illinois Central Railroad had

acquired the Stuyvesant Docks prior to the establishment of the Dock Board in 1896, and since that time the property has been one of only two general cargo terminals on the river not operated as public facilities. The new acquisition does much to consolidate and improve the port's operations in this relatively spacious and convenient location, said Reed. (Port of New Orleans News Release)

# We oppose it, too!

San Diego, Calif., October 11:--The Port of San Diego's Board of Commissioners has voted to oppose Proposition 20, a coastline issue on the November ballot, "Because its usurpation of local authority and unreasonable, restrictive actions will result if this proposition is passed," said Miles Bowler, chairman.

The Port Commission joins the commissions of major California ports to take position against the proposition. The Ports of Long Beach, Los Angeles, San Francisco, Oakland and Stockton have all previously strongly opposed the coastal initiative. (Port of San Diego News Release)

# San Diego Bay Plan

San Diego, Calif., October 11:---The 1972 version of a San Diego Bay Master Plan was introduced yesterday at the Port Commission meeting.

The first preliminary draft of the Port's plan was discussed by Commissioners who agreed to circulate it for comment prior to final public hearings later this year.

The document is the result of an 18-month study by the Planning Department of the Port District, following public hearings held by the Commission during the past summer. The first Master Plan for the District was developed in 1963 and approved in 1964.

The basic elements of the new 25year projection are three maps—a "Proposed New Land and Water Use" element, a "Circulation/Navigation" element and an "Open Space" element.

"Public Access to the Bay" and "Open Space" are the two dominant themes woven throughout the plan, following direction given by the Commission when the project began. (Port of San Diego News Release)

# CAPA annual meeting

Delegates to the CAPA's 1972 annual meeting established Association policy concerning rates and tariffs, environmental legislation and were brought up to date on developments in inter-modal handling of cargoes.

Attending the meeting from the Unified Port District with Nay were William Dick and Paul Smith of the Port of San Diego's management staff.

Port of Los Angeles Director, Bernard J. Caughlin, was elected First Vice President of the Association and J. E. Delsol, General Manager of Ensenal Terminals Corporation, Second Vice President. T. M. Cornish, Port of Long Beach, and C. R. Nickerson of San Francisco were re-elected to the posts of Treasurer and Executive Secretary respectively. (Port of San Diego News Release)

# **CAPA**[resolution

The group, comprising all of California's major seaports, including the Port of San Diego, said the initiative measure, if passed, would do "vast and irreparable damage" to the 'multi-billion'-dollar port system of California."

The resolution followed analysis by a committee of port attorneys that the measure would bring the state's port lands under the jurisdiction of a statewide and regional committees "composed of persons who are neither responsible to elected officials nor the citizenry of the State of California."

The action was taken at the Association's annual meeting at Silverado, October 12.

The eight-member ports, plus two privately operated ocean terminals who are also full members, voted to oppose Proposition 20 because:

"... this measure, by threatening to halt virtually all needed port construction for a period of up to four years, poses the danger of vast and irreparable damage to the 'multibillion-dollar' port system of California and to the entire transportation system of this state, thereby causing untold harm to the state's entire economy."

Approving were the Ports of San Francisco, Oakland, Stockton, Sacramento, Los Angeles, Long Beach, San Diego, Hueneme and the privately owned Howard and Encinal Terminals (San Francisco Bay).

CAPA president, Miriam E. Wolff, San Francisco Port Director, presided over the annual meeting. Don L. Nay, Director of the Port of San Diego, has been selected to succeed Miss Wolff as the Association's president. (Port of San Diego News Release)

# For lower interest

San Diego, Calif., October 17:---Action was taken today by the Port Commission for refunding of over 22-million dollars of Port of San Diego bonds. The Board's decision followed acceptance of a joint bid submitted by First National City Bank and United California Bank.

According to G. J. Gallina, Assistant Port Director and Treasurer, the action will amount to a saving of over \$3.1-million in interest expense between now and 1994, the final maturity date of the 1970 bonds. Gallina stated that the bid was extremely favorable and provides for even greater fiscal stability for the Unified Port District.

Early in September the Port Board notified potential bidders that the 1970 Port Improvement Bonds, maturing on and after May of 1981, were to be refunded in order to take advantage of more favorable interest rates. Action of the State Legislature during the 1972 session provides necessary authority for public agencies in California to refund outstanding bonds. The bonds were awarded to a group headed by First National City Bank, a New York based institution, and United California Bank as the highest responsible bidder. The group offered a net interest rate of 4.97% during the life of the issue with the total amount of interest payable during that period of \$17,624,000.

The present 1970 Port Improvement Bonds have a net interest cost averaging 6.5% per year.

Eight other financial groups participated in the competitive bidding. (Port of San Diego News Release)

# Giant container crane

San Diego, Calif., October 20:— First direct contact with the Japanese firm which is to build the Port of San Diego's giant container crane will take place next week. Representatives of the Port left for Tokyo this morning.

Port Attorney Joseph D. Patello and Engineer Donald R. Forrest will arrive in Tokyo Saturday evening and will open discussions with officials of Hitachi American, Limited, the heavy construction company designing the 600-ton machine. It eventually will be shipped to the National City Marine Terminal. Arrival next summer is anticipated.

Patello and Forrest will also negotiate a contract with an independent plant inspection firm to represent the Port during the fabrication stage. Forrest will confer with the corporation's design staff.

An initial inspection of construction progress is set for later in 1972 with other Port staff officers and commissioners scheduled for an onsite visit of Hitachi's Tokyo construction facility. (Port of San Diego News Release)

# **Ro-ro** concept

San Francisco:—Fleet modernization running into the hundreds of millions of dollars by lines that call San Francisco their home port it making the news these days.

The 53-year-old States Steamship Company, displaying the familiar red sea horse on its ship stacks, has contracted for the construction of three revolutionary Roll-on/Roll-off ships at a cost of \$114 million.

Bath Iron Works of Bath, Maine, will build the ships, the first of which will be christened Maine. It is scheduled for delivery in April 1975 with the other two ro-ros to come at 120day intervals.

# New Officials Head California Harbors

News Release from California Marine Affairs and Navigation Conference (MANC)

San Diego, Calif., September 28: —Election of new officers and five new directors was a highlight of a two-day meeting here of the state-

The vessels, to sail in the Pacific-Orient service, will feature a 24-foot stern ramp for moving cargo on and off.

The versatile new ships will offer unlimited cargo handling capability, doubled capacity and faster portside loading and unloading. Utilizing its own wheeled equipment, States Line conveyances will handle van and other cargo not mounted on its own wheels. Deck cranes will work special cargo. No auxiliary terminal facilities will be needed for cargo handling, thus maximizing dispatch.

The 684-foot, 20,000 dead weight ton ships will be the first ro-ros built for any U.S. shipping line engaged in foreign trade.

In addition to cargo, the ships also will provide luxury accommodation for 12 passengers.

States SS President J. R. Dant said his company chose ro-ro for flexibility, underscoring the firm's belief that the American merchant fleet is over containerized. He said that frequently there is a demand for shipment of goods that cannot be accommodated by vessel specializing in containerization.

He added that ro-ros are not dependent on "complicated port equipment."

States Steamship Company was organized in 1919 by Charles E. Dant and a group of Oregon businessmen. After World War II service, the family-owned steamship line further expanded. Since then the line has added two new Mariner class cargoliners, six Advance Mariner class ships and five Colorado class vessels. (Port of San Francisco News, September) wide conference representing all California ports and harbors.

Kenneth Sampson, harbor manager of California's largest marina complex—the Orange County Harbor District—was selected to head the California Marine Affairs and Navigation Conference. Chief engineer for the world's second most active container port—Paul Sorensen, of the Port of Oakland—will serve as vice president of the 16-yearold navigation civil works agency. Leonard W. Pores, chairman of the Port of Stockton Commission, representing the state's first inland commercial harbor, was elected treasurer, while Robert H. Langner, Marine Exchange executive director, will continue in the same capacity for the conference.

Five new directors will serve for three years as policymakers: Miriam Wolff, San Francisco Port director; Carl Brower, Crescent City Harbor commissioner; Edward Millan, Port of Hueneme general manager; K. C. "Kris" Klinger, Ventura Port District general manager, and Robert Krueger, partner, Nossman, Waters, Scott, Krueger and Riordan, attorneys.



San Diego, Calif., October 20:—Three new officers were among the 60 California harbor officials who met recently to discuss Golden State navigational needs and responses to environmental problems: (Left) Paul Sorensen, Port of Oakland chief engineer, was elected vice president of the California Marine Affairs and Navigation Conference; Miriam Wolff, San Francisco port director and newly-elected C-MANC board member, and Brig. Gen. George Fink, who assumed command mid-year as South Pacific Division Army Engineer. Fink reported at the two-day session on San Diego Bay on Corps of Engineers procedures to evaluate benefits and costs of harbor projects. (C-MANC)

At their San Diego sessions, conferees heard California Resources Agency project coordinator Paul L. Clifton describe how the state reviews environmental "impact reports", including those for proposed navigation improvements. Questioned about evaluation of economic factors in considering implications of new projects, the senior official responsible for these reviews advised conference members that while this factor was not usually included, it probably should be.

A special event was commendation of Carl F. Reupsch, former Port of San Diego planning director—who designed the Harbor Island where the meeting was held, and its adjacent Shelter Island. Don Nay, Port director and former C-MANC president, presented Reupsch with the seldom-awarded certificate.

The port engineers, harbor executives and public works officials also heard Brig. Gen. George Fink, South Pacific Division Army Engineer, describe the process by which the Corps of Engineers arrive at a "benefit/cost ratio" for proposed federal projects. Noting that San Diego Bay was the first harbor to be improved by the Corps in California, he traced evolution of the increasingly sophisticated analyses now required to determine the net "value" of a project.

Efforts of a conference committee in the San Francisco Bay area to reach some agreement with state and federal agencies to allow essential navigation dredging to continue were described by Frank Boerger, consultant to Contra Costa and Solano counties. The former San Francisco District Army Engineer cited application of Environmental Protection Agency "guidelines" by the region's Water Quality Control Board as now requiring transportation of most of the area's annual 8 million cubic yards of dredged materials to the 100 fathom line-some 30 miles at sea. He advised that the Bay's ports and small craft harbors could not meet such expenses-estimated at four to eight times current dredging costsespecially when the change in dredging practices is not based on known adverse effects of previous spoils disposal procedures.



San Francisco, Calif., October 16:—S. I. Hayakawa, president of San Francisco State University, hears the good news from Joe Ricketts (right) of Prudential Grace Steamship Lines of San Francisco. Prudential Grace Lines provided the 2nd place prize, in the University's student scholarship and development fund drive, a seven-day ocean voyage for two to Canada and return.

Miss Joanne Hendricks, University Alumnae President, said of the recent fund drive "A large measure of this year's success must be credited to the maritime Industry's backing such Prudential Grace Lines. (San Francisco State University)

Lawrence Whiteneck, harbor engineer for the Port of Los Angeles and 1971–72 conference president, told the membership that progress was being made in assuring limitation of liability—now "open ended" —for local project sponsors required to provide "hold and safe" assurances to the federal government.

Acting as a committee-of-thewhole, the conferees also reviewed proposed funding of 34 California navigation and beach erosion projects for the next fiscal year, with a total federal cost (when completed) of \$103 million. The Marine Affairs Conference will seek inclusion in the presidential budget of \$5,726,000, including \$1.9 million for 12 current Corps of Engineers harbor studies, \$287,000 to cover seven beach erosion studies, \$155,000 to start up six needed studies now inactive, and \$3.3 million for design and construction work. The recommendations will be presented to the Office of Management and Budget in Washington, D.C. early next month by conference executive director Robert Langner.

It was also decided to hold the spring, 1973 meeting in Crescent City, site of California's most northern harbor and the first time the event has been scheduled north of San Francisco.



Port of Antwerp:-B.A.S.F. plant near Zandvliet lock

# **Navigation congress**

Antwerp:-On 8th and 9th June last, the Third European Inland Navigation Congress was held in Antwerp, sponsored by Institute for Navigation along Inland Waterways, European Centre for Study and Information and Committee for the Study of International Law governing Inland Navigation, when Mr. F. Delmotte, the Belgian Minister of Communications, in his inaugural address, stressed the economic impact of inland shipping, the activities of which-he said-still remain unknown to many and are not always being valued 100%. He felt that the present problems of inland shipping should no longer be contemplated from too narrow or too national a point of view.

Mr. Dr. H. Wassermeyer, a German specialist on these matters, analyzed the numerous juridical aspects of pushed shipping. In the preliminary part of his speech he dealt with the collision liability in the case of towed navigation and said how desirable it would be to reach some uniform rules in the spirit contained in Belgian and German legislation.

When dealing with "ex lege" liability limitation, the speaker quoted that, under German law, each owner in the pushed convoy has to accept liability for the faults committed by the crew, to the extent of his own shipping capacity only. Consequently, the various owners involved will contribute in equal shares to the compensation of the loss. It appeared from the views exchanged that many delegates present endorsed the position taken up by Dr. Wassermeyer and were strongly desirable of sticking to the generally valid principle of subjective liability with fault per ship.

It was nevertheless considered to be fair that the value of abandonment of the pushing unit should then be made to represent a reasonable lumpsum.

Mr. Smeesters, a legal adviser to the Belgian Ministry of Communications and Postal Services, also presiding over the congress, then pointed to the substantial economic implications of these juridical views, such as in connection with insurance premiums.

In the course of a reception held in the Antwerp City Hall, Mr. Delwaide, the Alderman for the Port, stressed that, in the course of 1971, 56,000 inland craft discharged/loaded in Antwerp not less than 36,500,-000 tons of goods, i.e. 35% of all cargo that was carried by inland craft in the whole of Belgium that year. More-over, some 25,000 inland craft proceeded via Antwerp to and from Albert Canal. The new Scheldt-Rhine-Junction which is expected to be available for traffic in 1975, is bound to involve considerable benefits to inland navigation, he said.

On the 2nd day of the congress, it was Mr. Dr. W. Van Gunsteren, President of the International Union of Inland Shipping (UINF), who dealt on the topic of economic and political results of the Rhine-Main-Danube Canal that is to be given to traffic in 1981. It is namely the case that, at that time, the countries of Eastern Europe will enjoy full freedom on inland waters of Western Europe, also USA-interests with their LASH-barges. Yet, that liberty does not prevail in the States, nor does it on the Danube.

The rapporteur based himself on two premises: (1) initially, seeing to the economic reconstruction of Europe's own inland navigation by achieving that the liberty, so highly praised in the Mannheim Convention should be everybody's share; (2) as regards those countries that did not subscribe to the Mannheim Convention, see to it that they will grant identical liberty for everybody on their own territories. (Antwerp Port News, July)

# Tribute to port laborers

Antwerp: --- Conformably to a yearly tradition, CEPA (Central Office of Port Labour Employers) organized a homage to be rendered to a large number of port labourers who, on account of services rendered, had become honoured with official decorations such as the Gold Medal in the Order to Leopold II and the Labour Decoration 1st or 2nd Class. The ceremony was held in the Antwerp Commercial Exchange where Mr. Van Bladel, Chairman of the National Committee of the Port of Antwerp, in addition to some 880 port labourers, also had occasion to welcome Mr. Louis Major, Minister of Labour and Employment; Mr. Kinsbergen, Governor of the Province of Antwerp and many other prominent persons.

The Minister expressed his feelings of sympathy with the port labourers and after stressing the expanding evolution of the port, he called attention to the enormous importance of a sound working climate in the midst of such an industrial

(Continued on Page 44)

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### (Continued from Page 42)

area.

He felt that this problem was going to receive proper support thanks to the powerful trade associations, both on the side of workers and employers. The social benefits enjoyed by the port labourers in Antwerp are amongst the best in Europe. (Antwerp Port News, June)

# Tariff of port dues

Antwerp:—Since 1st June 1972, port dues for seagoing vessels have been adapted as follows:

The general tariff will be BF 13 per BNT (net tonnage as per Belgian measuring brief). For regular liners, the tariff becomes BF 8 per BNT for the first 10 voyages in the year made by the same vessel, BF 5 per BNT for the next 10 voyages, and BF 4 per BNT for all further voyages.

In case a vessel's stay in port exceeds one month, the rate of BF 13 per BNT is charged after the said month.

In certain cases, a reduction may be granted on the above rates, chiefly a reduction of BF 2.50 per BNT for vessels over 5,000 BNT, handling a maximum of 800 tons of goods and leaving the port within 48 hours.

Port dues are, the main source of income for the port and their yield nearly reached about BF 523,000,000 in 1971. (Antwerp Port News, June)

# **Docks Board in Barry**

London, 19 October (B.T.D.B.): ---Sir Humphrey Browne, C.B.E., chairman of the British Transport Docks Board, and members of the Board, are to hold their next meeting in Barry on Tuesday, morning, 24th October. This follows the Board's practice of holding some of their meetings at the ports.

After the Board meeting, the party, including Mr. Raymond Cory who is vice-chairman of the Docks Board and chairman of its South Wales Local Board, will inspect Barry port facilities accompanied by Mr. T. S. Roberts, port director of the South Wales Ports, and Mr. Marcuts Watt, docks manager, Barry.

During their visit to South Wales, Sir Humphrey and the Board will meet members of the South Wales Local Board and representatives of local organizations.

### Felixstowe scholarship

Felixstowe, Suffolk., U.K., 25 October:—Each year from 1973, the Port of Felixstowe—in conjunction with the Institute of Work Study Practitioners—is to offer a new scholarship to encourage the highest standards of work study and human relations to increase productivity in the port and shipping industries.

The Felixstowe Dock & Railway Company Scholarship, which is worth up to £100 annually, will be awarded for the best productivity improvement project submitted to the adjudicators.

The scheme is open to all UK citizens employed in shipping and port organizations anywhere in the





Manchester:—Queen Elizabeth II Dock and Eastham Locks at the entrance to the Manchester Ship Canal. (The Port of Manchester)

world. Entries must be based on actual work improvement projects and should be supported by factual evidence of the results.

Commenting on the new Scholarship, Mr. Stanley Turner, group managing director of the Felixstowe Dock and Railway Company said, "During the past decade productivity has increased at Felixstowe through the total involvement of all employees and by widespread use of work study and work measurement techniques. We hope that the new Scholarship will encourage the highest standards and wider applications of work study methods."

Entries for the award will close on January 31 each year and the result will be declared in April. Full details and application forms are available from the Secretary of the Institute of Work Study Practitioners: Mr. G. C. Powell, 14 Wood View, Grays, Essex RM17 15TF (News from Port of Felixstowe)

# **Record Cargo**

Felixstowe, Suffolk, U.K., 20 October:—All previous records for general cargo handling and container traffic were broken by the Port of Felixstowe last month when over  $\frac{1}{4}$ million tons of freight was handled by the port, including 10,259 containers. In the 4 weeks ended September 24 cargo of all types shipped through the port totalled 255,204 tons and during the 12 month period to the end of June 1972, Felixstowe handled over  $2\frac{1}{2}$  million tons of freight.

The record figure for September represents more than the total annual throughput of the port 12 years ago—underlining Felixstowe's claim to be Britain's fastest growing port. (News from Port of Felixstowe)

# Port of Le Havre Flashes

Timetable for Antifer: Work on the Port of Le Havre's new oil terminal is progressing steadily. The timetable below shows what has been done already and what is planned for the future.

- 23rd May 1972: exploration of the sea bed completed
- Late June: approach road to the shore completed and work finished at the foot of the cliffs
- Early July: construction of the protective breakwater begins
- December 1972: work starts on dredging the approach channel and swinging area
- May 1973: work completed on clearing and levelling 75 acres of land at the cliff foot
- Late 1973: The Compagnie Industrielle Maritime starts work on the jetties, immediately after completion of the storage tanks and connecting pipeline
- Late 1974: the first berth comes into service
- Spring 1975: the second berth comes into service

Ship-building: Globtik Tankers Ltd. is having the biggest tanker in the world built in Japan. It will be 1,243 feet (379 m) long, 203 feet (62 m) wide and will be able to carry 477,000 tons of crude oil. It will enter service in February 1973.



Le Havre:—The second largest oil refinery in Europe, in the Port of Le Havre industrial zone.



Le Havre:—This is the second container terminal at the Port of Le Havre.

Mr. Tikkoo, Chairman of Globtik Tankers Ltd., believes that as of now one can foresee the construction of megatonners which only the Port of Le Havre-Antifer will be able to accommodate.

2nd refinery in Europe: In September the Total group's subsidiary, the Compagnie Française de Raffinage, which operates in the port industrial zone, will join the Pernis refinery near Rotterdam at the head of the list of major European refineries. It will then be putting a new distillation unit into service with a capacity of 9 million tons a year, to bring the refinery's total annual capacity up to 23 million tons.

16 days earlier: The 4,000th vessel to enter harbour in 1972 arrived on July 11th. She was the Seagull Ferries' vehicle-carrier Saint Christophe. Last year's record holder, the Hagno, did not appear until July 27th.

Maritime links in 1971: Ships sailing to and from Le Havre traded last year with 553 ports around the world. This compares with 535 in 1970.

2nd container terminal opens for business: On August 3rd the first container crane to be installed was used to put three turbine condensers, including one weighing 33 tons, aboard the Panamanian coaster Wodan. They were on their way to Rumania. This was the first commercial operation to be carried out at the new container terminal, which will eventually extend over 111 acres and have 4 gantry cranes with a run of 124 feet. The quay will be 2,950 feet long and will become completely operational in January 1973. It will be mainly used for Ro-Ro container traffic.

The SEABEES are coming: The American barge carrier Doctor Lykes arrived for the first time on August 23rd. She is the first of a series of three vessels having Le Havre as their only French port of call. The new ship is 876 feet (267 m) long and can carry 38 barges with a capacity of 850 tons each. Once unloaded the barges continue to their destination without transhipment.

# 11th "Europort" in RAI

Amsterdam:—The 11th annual "Europort" exhibition, is set to be held at Amsterdam's RAI Exhibition and Congress Centre from 14 through 18 November. Billed as the largest marine equipment show in the world, Europort '72 will have some 1,500 exhibitors from 30 countries.

Aside from the company exhibits, there will be national exhibits from England, Japan, Poland, East Germany, Czechoslovakia and Yugoslavia. Highlights of the exhibit include a maquette of the Delta Works project and the first showing of a newly developed hovercraft which can carry six people and travel at 80 miles an hour over water and swampy terrain.

A congress will be held at the same time as the exhibit and themes include "Developments in Dredging" and "Offshore Activities". A number of speakers will participate in this programme as well as a number of other topics. (Amsterdam Promotion, Press Edition, October)

# Int'l Harbour Meeting

Rotterdam: — The traditional Rotterdam International Harbour Meeting organized by the Stichting 'Havenbelangen' in co-operation with the Rotterdam town council, Scheepvaart Vereeniging Zuid and Rotterdam Chamber of Commerce will be held this year on October 5 and 6.

For many years it has been a characteristic meeting of shippers from abroad who are invited by the executive and associates (=firms in the port) of the Stichting 'Havenbelangen' to discuss common interests with their Rotterdam business relations in a relaxed atmosphere.

This is why the programme of the Rotterdam International Harbour Meeting always includes the opportunity for such discussions. No overcrowded 'time-table of work', but many possibilities for contacts—different to the usual.

While the outward appearance of this manifestation closely resembles that of its predecessors, there is no question of it being a routine matter. On October 5 the Rotterdam town council will give a reception for the approximately 500 participants in the town hall, which lends itself very well for unconstrained conversation. This is followed in the morning of October 6 by a gathering in the 'de Doelen' Congress Building. Here, the guests will be welcomed by Mr. J. A. Reus, chairman of the Stichting 'Havenbelangen' (Foundation for promoting port interests), after which three speakers from Rotterdam's trade and industry will, in short addresses, review the position, function and future possibilities of Rotterdam-Europoort. These speakers are: Mr. L. J. Pieters, chairman of the Scheepvaart Vereeniging Zuid (Port Employers Association), Mr. A. M. Lels, member of the managing board of the Holland America Line, and Mr. M. C. B. Cook, General Manager of Paktank N.V. In 'de Doelen' the film 'Rotterdam-Europoort' will also be shown.

Later in the afternoon, the attention of the guests will be drawn during a boat trip through the port to particularly the distribution function of Rotterdam and the many specialized industries established in the port area. The day ends with a dinner given in the Slot Loevestein castle, where according to the poet the two rivers converge which have meant so much to the town and port of Rotterdam, and finally, a tattoo. After this the return journey to Rotterdam is made. The trip through the port as well as the gathering at Loevestein again present many opportunities for personal contacts.

The design of the Rotterdam International Harbour Meetings was never meant for 'propaganda', but rather to spread information about the port. It could be said that, in general, the guests know the port of Rotterdam very well. This is undoubtedly so, but experience has shown that a quiet chat during a local get-together can often lead to unexpected results.

The latter is certainly so when certain, current aspects are put in the foreground such as on this occasion particularly the rapidly developing specialization in transport and handling of goods, as well as the growing international distribution function of Rottedam-Europoort. In this respect, experience has shown once again, that the shippers/receivers in the hinterland have several wishes, queries and problems, and it is precisely within the framework of on-the-spot meetings such as these that points can be given the necessary attention.

This set-up aimed largely at providing information will be complemented and rounded-off by handing the foreign participants a questionnaire which after they have seen and heard everything during the two-day visit, can be completed with their views and wishes etc., and returned to the Stichting 'Havenbelangen'. The material received in this way can only lead to supplementing and improving the service given by the port. This also constitutes the European importance of the Rotterdam International Harbour Meeting, where many languages will be spoken and the most divergent interests in the field of transport and transhipment, distribution and storage will be represented. (Rotterdam-Europort-Delta 72/3/e)

# **Improving Nacala Port**

Lourenço Marques:—The Mozambique Railways—C.F.M.—continue to make all possible efforts to go ahead with policy of improving the port of Nacala, the city from which, as is known, the C.F.M. railway line starts which serves the Republic of Malawi.

To do this, more than 64 million escudos (R 1,750,000) are to be invested as follows besides the 171,-300,000 escudos pertaining to the new wharves under construction.

For jobs to be done within the actual port area (drainage, paving, and re-covering the wharf), about 6 million escudos.

On the other hand, the acquisition of 20 electric cranes from the Mozambique firm Cometal-Mometal amounts to 58,535,082\$00.

With the efforts which are being made, the port of Nacala is in a position to continue to satisfy the demands made on it for both internal and international traffic. (Monthly Bulletin of the Mozambique Harbours Railways and Transport Administration, March 1972)

## New A.A.P.M.A. President

Melbourne, 25 October:-At the 23rd biennial Conference of The Association of Australian Port and Marine Authorities recently held in Adelaide, South Australia, Mr. W. H. Brotherson, President of the Maritime Services Board of New South Wales, was elected President of this Association, and Mr. A. J. Peel, Director, Department of Harbours and Marine, Queensland, was elected Vice-President. Each will serve in those respective capacities until the conclusion of the next biennial Conference, which will be held in Western Australia in 1974. (R. Brokenshire, Secretary, A.A.P.M.A.)

# New Chairman appointed

Melbourne, 24th October:—The Victorian Governor-in-Council has appointed Mr. Arthur Stanley Mayne as Chairman of the Melbourne Harbor Trust Commissioners.

Since the death of the Late Chairman, Mr. V. G. Swanson in September, Mr. Mayne has held the position of Presiding Commissioner.

Mr. Mayne, who was originally appointed a Commissioner of the Trust in April 1969, representing Shipowners, has had a long and outstanding association with the Shipping Industry and the Port of Melbourne, commencing his career as a Junior Clerk with Birt and Company in Brisbane in 1933.

Melbourne born and educated at Geelong Grammar School and Sydney High School, Mr. Mayne left Birt and Company in 1940 and joined the 2/10th Field Artillery Regiment, 8th Division. He left Australia for Malaya in the Liner "Queen Mary" and was taken prisoner by the Japanese in 1942 and released in 1945.

Rejoining Birts in 1946, Mr. Mayne was transferred to Melbourne in 1948 when Birt Elder was formed, and later that year was appointed Secretary of that Company and then appointed Assistant Manager in 1955, and became a Director in 1965.

Mr. Mayne is a Fellow of the Australian Society of Accountants, Chartered Institute of Secretaries, and Chartered Institute of Transport.

In 1967 he joined Overseas Containers Australia Pty. Ltd. as Victorian Manager and was made a Member of the Board in April of that year. Mr. Mayne was also a Director of Seatainer Terminals Limited and Chairman of the Associated Shipping Agency, Townsville.

Mr. Mayne has held the positions of Vice Chairman of Overseas Shipping Representatives' Association, Chairman of Association of Employers of Waterside Labour, Chairman Melbourne Wool Clearing House, and was a Member of the National Industrial Council, Australian Chamber of Shipping, and The Melbourne Chamber of Commerce.

Married, with two daughters and one son, all of whom are following academic careers, Mr. Mayne, in his youth, was a sportsman of some prowess—representing Queensland at Australian Rules Football, and playing District Cricket. He has also played Competitive Tennis, Golf, Basketball and Table Tennis.

Mr. Mayne's long association with the Port of Melbourne, both as a Commissioner and Senior Executive in the Shipping Industry, has given him a close insight into the operations of the Melbourne Harbor Trust Commissioners.

His wide experience and thorough knowledge of both the Trust and the Shipping Industry will be of inestimable value in the planning of the future development of the Port.

Mr. Mayne's appointment is for a period of five years. (The Melbourne Harbor Trust Commissioners)

# **Elected AAPMA President**

Sydney, 20th October:--Mr. W. H. Brotherson, President of the Maritime Services Board of N.S.W., was to-day elected as President of the Association of Australian Port and Marine Authorities.

The Association has been holding its Biennial Conference in Adelaide during this week.

Mr. Brotherson, who was formerly Vice-President of the Association, will hold the Office of President until the conclusion of the next Conference to be held in Perth in two years time when a further election will be taking place.

He succeeded the late V.G. Swanson, C.B.E., formerly Chairman of the Melbourne Harbor Trust and who, until his recent death, was President of the Association.

Mr. Brotherson is the Australian National Director of the International Association of Ports and Harbors, a Member of the Executive Body of that Association and of the Containerization Sub-Committee set up by the International Association.

He is a member of the Sydney Harbour Transport Board, a member of the Transport Advisory Council, a fellow of the Institute of Management and a member of the Council of the N.S.W. Division of that Institute. He is a fellow of the Chartered Institute of Transport and a fellow of the Royal Institute of Public Administration.

Mr. Brotherson was awarded the C.B.E. in the 1970 Queens Birthday Honours List for his services in the field of port administration.

Speaking at the conclusion of the Conference to-day, Mr. Brotherson said that membership of the Association of Australian Port and Marine Authorities comprises representatives from all port and marine authorities throughout Australia.

He said that 91 delegates attended the Adelaide Conference, including Mr. J. Lunch, Director General of the Port of London Authority, who delivered an address at the Conference outlining recent administrative changes undertaken by his organization.

A representative of the New Zealand Harbours Association and representatives of a number of individual ports in New Zealand were also present.

Mr. Brotherson said that, between Conferences, the affairs of the Association are conducted by a Council of which he is also Chairman, comprising representatives of each of the capital city ports, two representatives of smaller ports and representatives of the six state marine authorities and of the Commonwealth Department of Shipping and Transport.

He said the intention of the Association is to permit of a wider knowledge of the methods of handling port and marine affairs, to secure as far as practicable uniformity in port and marine practices and to provide a means of discussion by port and marine authorities of matters relating to their functions with a view to the sharing of knowledge and experience. (The Maritime Services Board of N.S.W.)

# Polluter to be fined

Sydney, 25th October: — The Maritime Services Board will prosecute the Australian Gas Light Company in connection with the discharge of an oily substance from the premises of the Company at Mortlake last week.

This was stated to-day by Mr. W. H. Brotherson, President of the Maritime Services Board of N.S.W., who said that all the evidence needed to institute proceedings had been obtained and, as the Board is very concerned at the extent of the pollution resulting from the discharge, it is intended to pursue the matter with expedition.

He said the prosecution will proceed under the Prevention of Oil Pollution of Navigable Waters Act which, at present, provides for fines of up to \$2,000. (The Maritime Services Board of N.S.W.)

# New roll-on/roll-off wharf

The Maritime Services Board, at its meeting held in Sydney on Thursday last, approved of the letting of a contract to Graham Evans and Co. Pty. Ltd., at a cost of \$1,000,000 for the construction of a wharf shed and associated office and amenity facilities at No. 5 Berth, Darling Harbour.

This was announced in Sydney today by Mr. W. H. Brotherson, President of the Maritime Services Board of N.S.W., who said that the new facilities are to cater for the special roll-on/roll-off ships now serving the Australia/West Coast of America trade and which will be shortly entering the Australia/Scandinavian trade.

Mr. Brotherson said the new building is by far the largest wharf shed to be constructed in Australia.

Its overall dimensions are 550 feet long by 220 feet wide and it embraces an area of 2.8 acres. The total wharf area inclusive of the shed is 12 acres.

He said the largest transit sheds previously constructed by the Board in the Darlin; Harbour redevelopment have dimensions of 500 feet long by 150 feet wide.

The contract provides that the new building will be completed within 60 weeks.

The building will stand on the reclamation being under-taken by the Board in Darling Harbour in its programme for the redevelopment of the area. The reclamation in this area has already been completed in preparation for the shed contract.

Mr. Brotherson said the new facility has been decided upon following consultation with the shipping companies who will use the berth. Trans Austral Shipping Co. Pty. Ltd., operates three vessels to the West Coast of America and Scandinavian Australian Carriers Pty. Ltd., will operate the five ships trading between Australia and the Continent.

The three ships in the American trade are now in service and the first of the European vessels will enter service next month.

Mr. Brotherson said the eight ships are of a special roll-on/roll-off type to allow of them using an ordinary long shore wharfage facility.

This is accomplished by the ship lowering on to the wharf a ramp which it carries itself and which falls away from the ship at the appropriate angle to form a bridge between the ship and the shore. This permits the mechanical equipment used for loading and unloading the vessel to move from the ship to the wharf. (The Maritime Services Board of N.S.W.)

# Large bulk carrier

Sydney, 29th September:—The largest commercial vessel ever to visit the Port of Sydney will arrive off the heads at 6 a.m. on Monday next, 2nd October, 1972.

This was announced in Sydney to-day by Mr. W. H. Brotherson, President, the Maritime Services Board of N.S.W., who said that the Japanese bulk carrier, "Furyu Maru", which has a dead weight tonnage of 101,179 tons, a length of 850 feet, a beam of 130 feet and loaded draft of 47 feet 3 inches will be going to the No. 1 Explosives Buoy to take on bunker fuel and will be leaving at 5 p.m. the same evening.

He said the vessel, after leaving Sydney, will head for Port Latta in Northern Tasmania where it will load a cargo of approximately 100,-000 tons of iron ore pellets for Japan. (The Maritime Services Board of N.S.W.)

# New navigation lights

Sydney, 22nd August: — Three new navigation lights are to be located in the Sydney Cove area, one at Bennelong Point, in proximity





to the Opera House, one at Dawes Point and the third at Kirribilli.

This was announced in Sydney today by Mr. W. H. Brotherson, President of the Maritime Services Board, who said that each of the three lights are to be rebuilt on their existing site in accordance a design more appropriate to the area.

He said the design provides for a a white fibreglass finish which will require little maintenance. The estimated cost of each of the light structures is \$8,000.

Mr. Brotherson said that work on the installation of the lights will commence shortly. (The Maritime Services Board of N.S.W.)

# Sabah Port officials

Penang:-Y.B. Tuan Haji Mohd. Kassim Kamidin, A.D.K. and Tuan Haji Othman Aliho, Chairman and Deputy Chairman of the Sabah Port Authority respectively, and Board Members of the Authority visited the Port of Penang as part of their familiarization tour of ports in this region. On arrival at the Penang Port Commission, they were met by the Chairman of the Commission, Yang Berbahagia Tan Sri Abdul Jamil bin Abdul Rais, and taken to the Operations Room where they met port officials and were briefed on the Port of Penang and the future development to be undertaken at this port. They were taken on a tour to the port installations on the Island and in the Mainland. They were later entertained to lunch by the Penang Port Commission. (Berita Pelabohan, July)

# Taking a look

Taranaki:—Is the Taranaki Harbours Board too big?

Board member Mr. R. G. Hickford thinks it might be and at the July meeting he pointed out that while some other harbours boards had 12 members or less, the Taranaki Board had 16 making it as large as the Wellington Board and larger than at Auckland.

The subject was debated fully and it was agreed by eight votes to seven that a subcommittee be formed to investigate the mater and report back.

Mr. Hickford suggested that a



Tokyo, October 20:—Mitsubishi Heavy Industries Co. is going to hold a ceremony for the completion of the Koyagi Plant of Nagasaki Yard the day after tomorrow. The photograph above shows the entire plant including the two 600-ton gantry cranes stradding the 250,00 gross ton docks.

smaller number of members might make the Board more "workable." He said that finding a representation for a reduced board might be difficult, but suggested splitting the province into four on a population basis.

These would be New Plymouth, North Taranaki as far as Opunake and including Waltara; an area including the inglewood and Stratford boroughs and counties and Clifton County; and an area from Hawera south.

During the debate Mr. R. Syme objected to the use of the term "workable." He considered the Board had worked well. Any reduction in size might produce some economies but he wondered if it would make any improvement in the workings of the board.

Mr. S. D. Hayton considered the suggestion would give the board a chance to "take a good look at itself" —something it had not done for a long time.

The board elected Sir Henry Blyde and Messrs Hickford, Hayton, C.W. Green, and C. B. Gibson as the committee to investigate the matter. (Taranaki Harbours Board Port News, August, 1972)

# **Coastal shipping**

Taranaki:—"At the present time it would seem that coastal shipping around New Zealand is dying," said the Harbours Board general manager, Mr. J. G. Boddy, in a report to the board on future docking requirements in New Zealand.

"If this continues to be the case," he said, "the use of smaller dock of slipway facilities will lessen and the main requirement for docking in New Zealand will be for the larger type vessels."

The report was requested by the New Zealand Ports Authority which is to prepare a report for the Minister of Marine and Fisheries. The Harbours Board accepted the report and forwarded it to the Authority.

The report indicated that there is a need to ensure a reasonable geographic distribution of slipways to cope with vessels such as trawlers needing repair.

The disappearance of ordinary coastal shipping means that it is necessary to ensure that, to service the remaining vessels on the coast (including harbour board craft) the need to use the smaller docks and larger slipways will remain, and such use should be sufficient for the economic support of allied shipping repair facilities, said the report.

"It is considered that the dockway-slipway facilities at Whangarei, Auckland, Nelson and Lyttelton, for vessels of up to, say 300 ft, are adequate for the need of New Zealand in this particular class of vessel."

The report referred to its plans to provide a 150-ton slipway near the lee breakwater at an estimated cost of \$70,000.

"The finance for the venture is to be raised by loans which have already received the full support of the New Zealand Ports Authority and Local Authorities Loans Board."

Such a slipway would provide benefit to the board in relation to its own floating craft as well as other small vessels, said the report. (Taranaki Harbours Board Port News, August, 1972)

# **Container study tour**

Whangarei: — Two Members of the Northland Harbour Board, Messrs D. C. Waterhouse and W. G. Thompson, and the General Manager, Mr. D. B. Cunneen, returned recently from an extensive study of port facilities abroad.

They were overseas primarily to attend an Inter-Traffic Conference in Hamburg and took the opportunity to inspect the operations of 15 ports—including trends in containerhandling.

The ports were Los Angeles, Long Beach, Oakland, San Francisco, New York, Port of London, Felixstowe, Ipswich, Southampton, Clyde, Hamburg, Amsterdam, Rotterdam, Antwerp and Singapore.

Commenting on the tour, the Board representatives said that although in some areas containerization was obviously an economic success, the view was held in other areas that containerization could be successful only if it were associated with conventional shipping.

They agreed that the study tour had given them new insight into latest trends in cargo-handling abroad. (Points North, August, 1972)

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