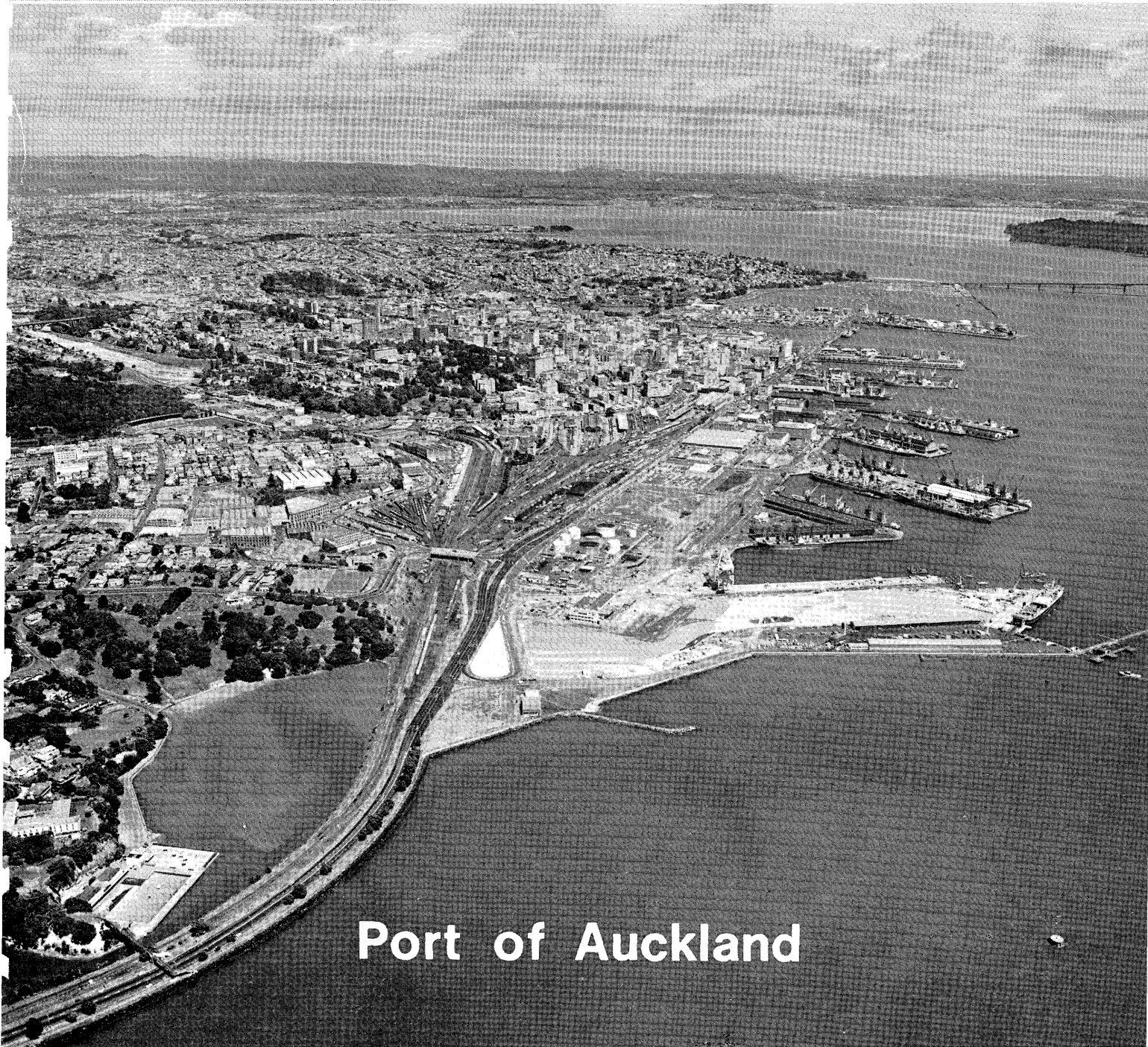


# PORTS *and* HARBORS

November, 1972 Vol.17, No.11



Port of Auckland

**Amsterdam-Rotterdam Conference IAPH May 1973**

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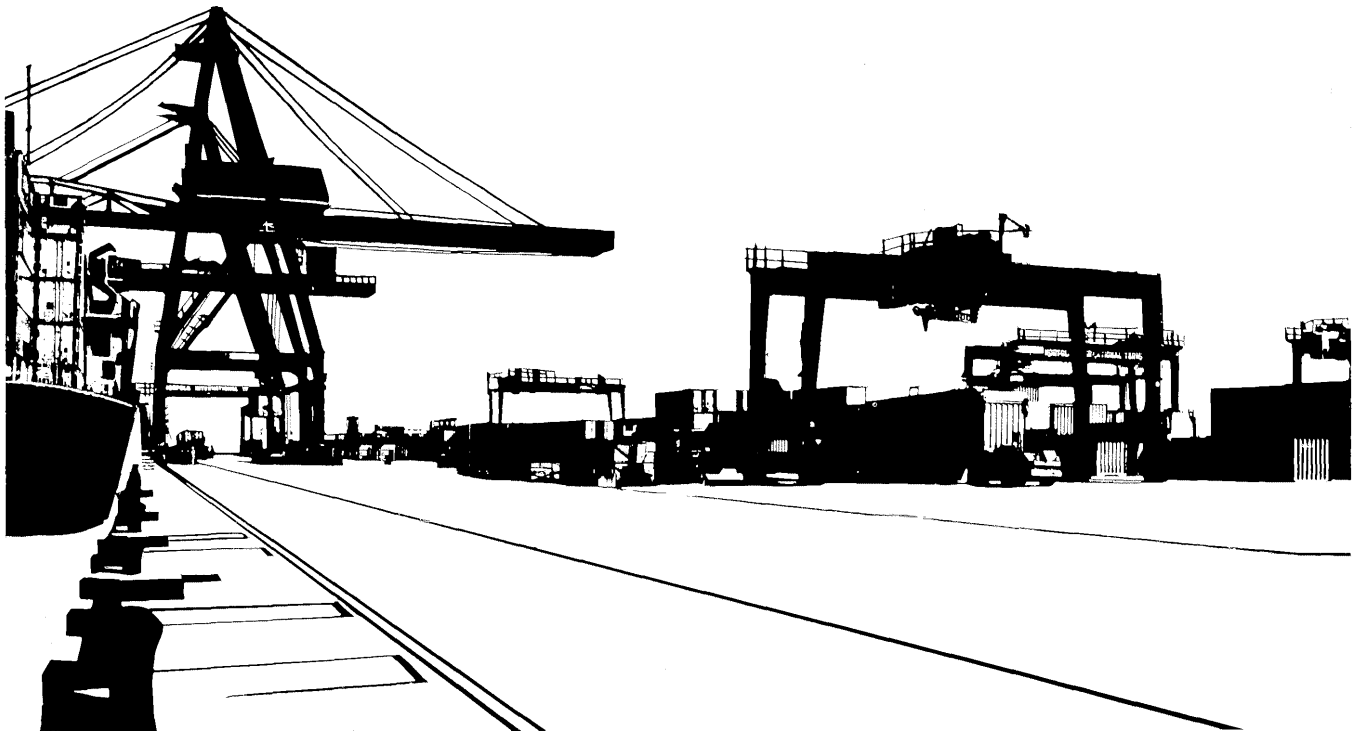
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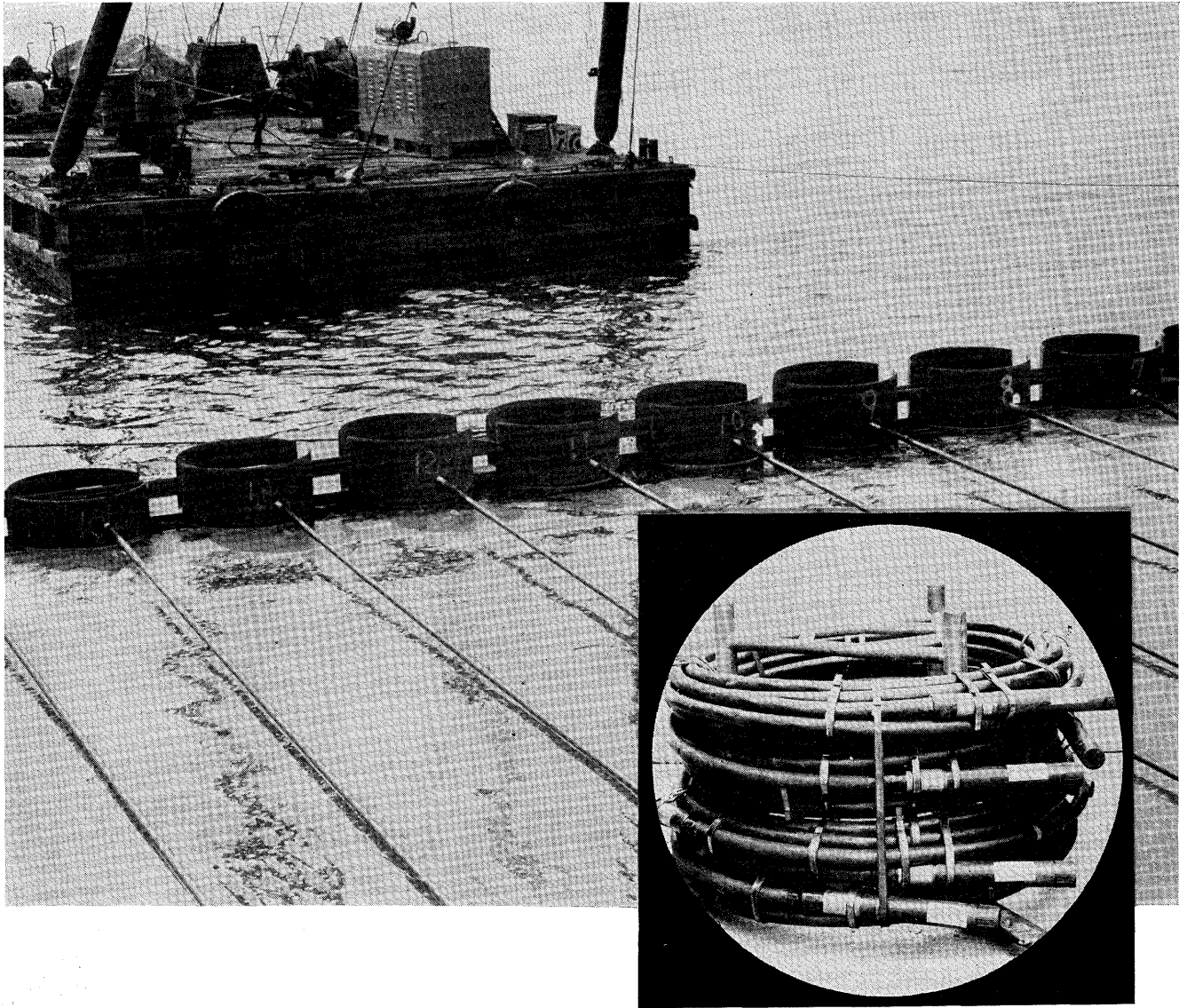
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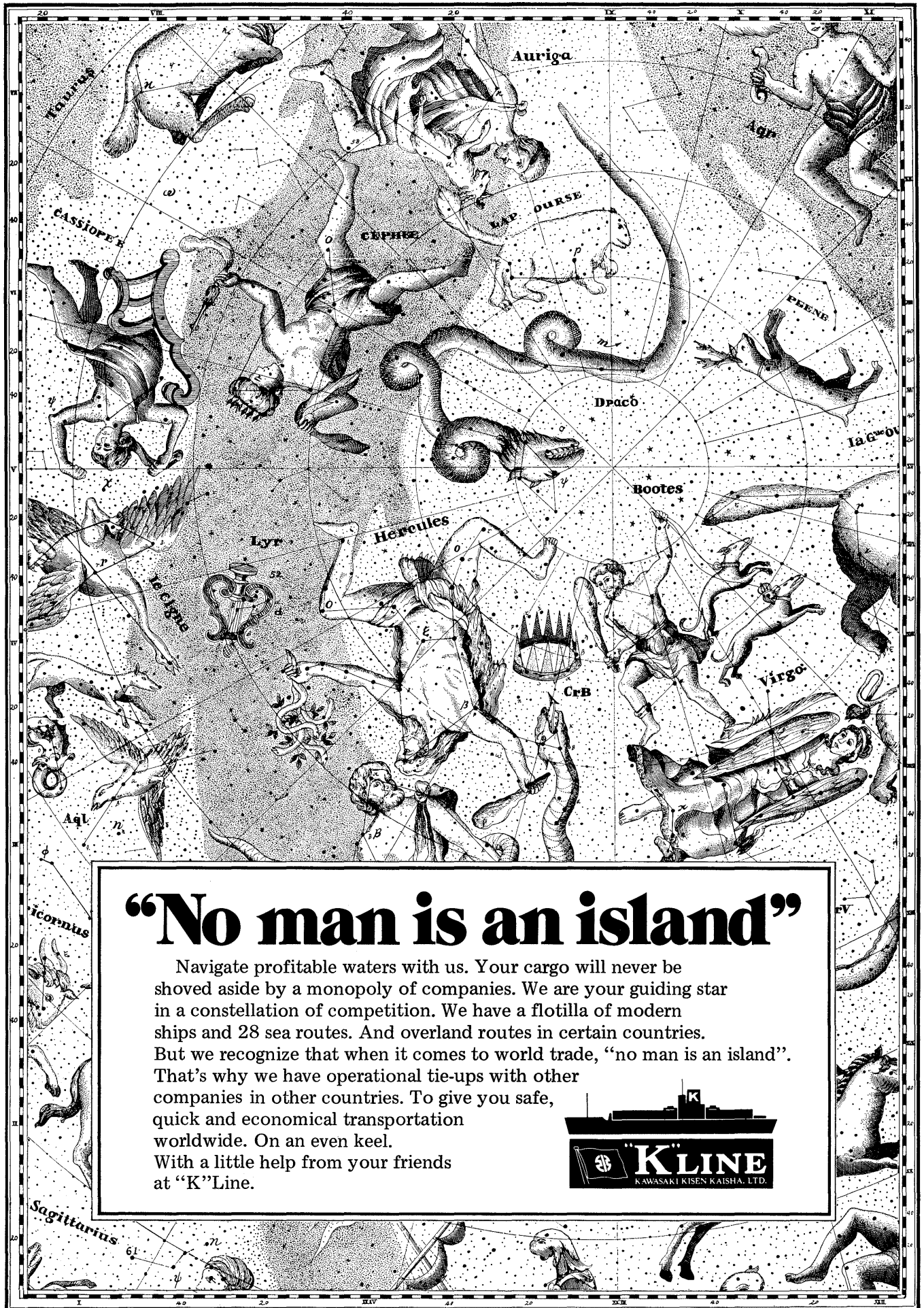
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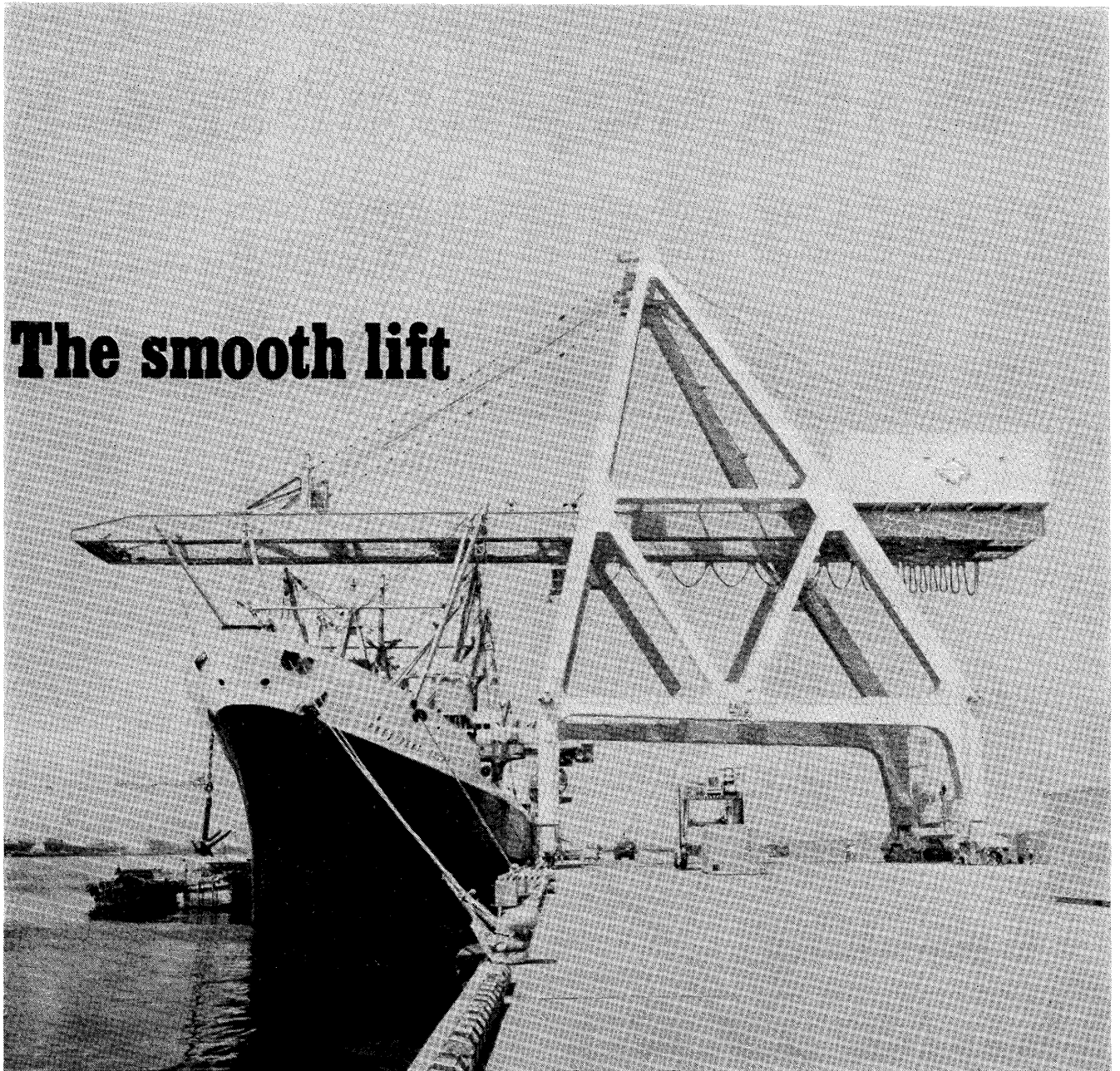


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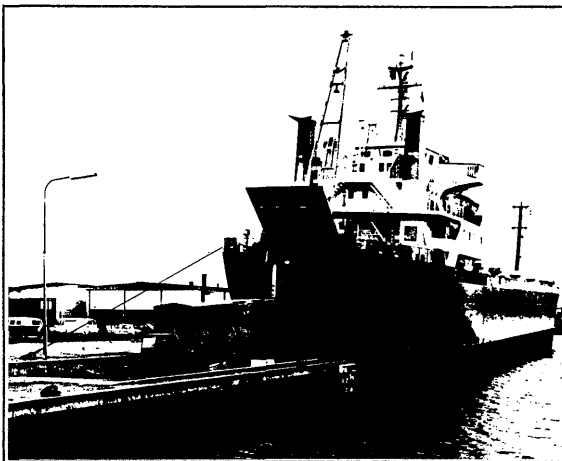
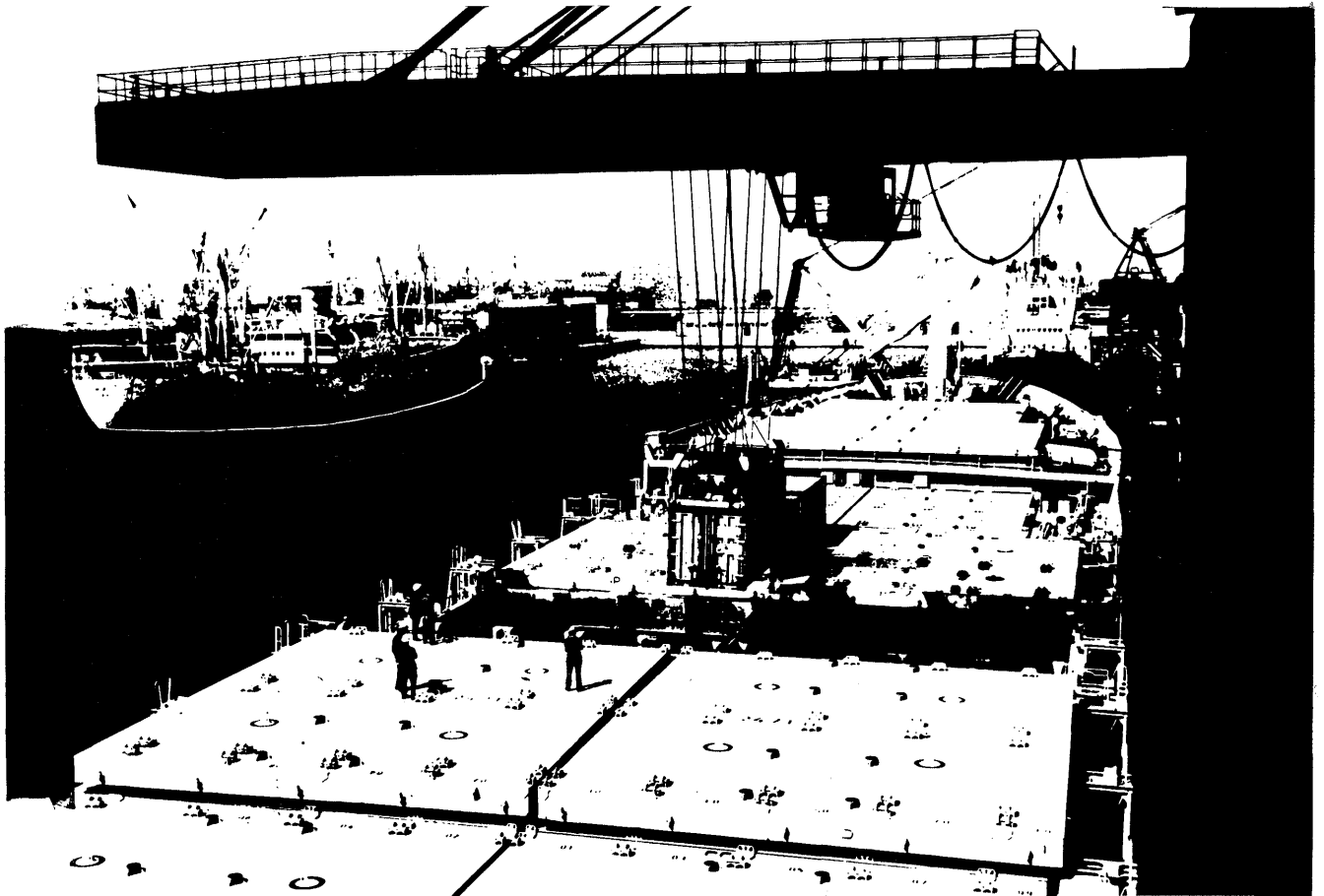
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## CONTENTS

	Page
<b>Forum :</b>	
Why Comprehensive Port Planning? .....By H. A. Mann.....	7
<b>The Eighth Conference, Amsterdam/Rotterdam</b>	
Articles and photographs by the Port of Amsterdam.....	28
<b>Topics :</b>	
New Crew Accommodation Regulations for Towboats Transport Canada News.....	10
World Ports Enter The Computer Age ..... By Townsend M. Lucas.....	11
The Modern Multi-Product Bulk Terminal...By Paul Soros.....	16
International Association of Lighthouse Authorities.....	22
IMCO As Seen by IAPH (Report No. 21).....	23
NPC Book: N. P. C. Study of World Container and Roll-on Fleet .....	30
<b>Ports :</b>	
Ports of Angola in Pictures .....	14
Port of Fremantle.....	19
Fiscal 1971-72 at New Orleans Was A Year of Progress.....	33
Trade Center, Trade Fair Offices In Seattle Being Expanded .....	35
Facts About The Port of Copenhagen .....	40
Containers In the Port of Barcelona.....	43
<b>Orbiter Probe (International News):</b> .....	31~50
IAPH News—The Late Mr. Swanson .....	31

**The Cover :**

**Port of Auckland, New Zealand, showing Portainer crane at the container terminal (foreground, center right) and a trans-Tasman vessel at the roll-on-roll off berth (foreground, extreme right) with wharves for conventional ships extending along the city waterfront beyond the container terminal. The container berth is being extended to 1500 ft and further development will enable the complex to berth two container vessels, provide storage capacity for 2000 20 ft ISO containers stacked two high, and allow 480 insulated containers to be kept under refrigeration at any time.**

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# PORTS *and* HARBORS

## Forum on Port Problems :

### *Why Comprehensive Port Planning?*

An address by

**Howard A. Mann, Vice President**

**Economics & Management Services**

**Swan Wooster Engineering Co., Ltd.**

To the

**Rotary Club of Port Angeles, Washington**

**September 6, 1972**

We who live on the North American Continent have, I think, a love-hate attitude towards planning. On the one hand we have great respect for the concept of mapping out one's future; on the other we soundly distrust the idea that government should plan significant aspects of our lives.

This split in our thinking was well put by John Kenneth Galbraith in his book "The New Industrial State:"

"Until the end of World War II, or shortly thereafter, planning was a moderately evocative word in the United States. It implied a sensible concern for what might happen in the future and a disposition by forehanded action, to forestall avoidable misfortune. As persons won credit for competent planning of their lives, so communities won credit for effective planning of their environment. It was thought good to live in a well-planned city. The United States government had a National Resources Planning Board. During the War, post-war planning acquired the status of a modest industry in both the United States and the United Kingdom; it was felt that it would reassure those who were fighting as to their eventual utility as civilians. With the cold war, however, the word planning acquired ideological overtones. The Communist

countries not only socialized property which seemed not a strong likelihood in the United States but they planned, which somehow seemed more of a danger. Since liberty there was circumscribed, it followed that planning was something that the libertarian society should avoid . . . For understanding the economy and polity of the United States and other advanced industrialized countries, this reaction against the word planning could hardly have been worse timed. It occurred when the increased use of technology and the accompanying commitment of time and capital were forcing extensive planning on all industrial communities. This has now been sensed. And, in many quarters the word planning is again acquiring a measure of respectability."

Subject to a major qualification, this restoration of confidence in planning is, I believe, a healthy trend. My reservation is with regard to endowing the planning process with too much respectability by believing that there is infallibility in a well presented document replete with copious statistics. No planner of stature will make such a claim; no community should expert it from its planners. At the risk of making a trite observation: planning is as much an art as it is a science. In addition to using the tools of scien-

tific work such as data arrived at by physical observation, the process of planning must also take into account the values and aspirations of the community. The assessment of these factors is almost invariably a subjective exercise.

Against this very brief general background then, let us have a look at planning for ports. The port administrator has always had to plan for his harbour. The relatively long construction time for a wharf, particularly where prior dredging and possibly land fill is involved, have made the planning process a part of his daily working life. But in the main the emphasis has in the past been on the development of single facilities rather than of the port as a whole. Sometimes such single facilities were constructed in the hope that they would attract traffic, sometimes there was at least a reasonable guarantee that they would do so. In other cases, the port authority got to the point of planning a dock or shed after chronic congestion had amply proved the need for their construction.

In more recent years the more progressive port administrations have felt that they needed more than ad hoc planning for single facilities. They became convinced that they had to know—in overall, general terms—where their port was headed, what it could reasonably expect by way of cargo types and volumes, what facilities would have to be provided to satisfy this cargo demand, how much money would be needed to build these facilities, what present investment would be obsolete, where new installations should be built, what should be done with superannuated facilities, what competitive demands there would be for the land required for new works, what values there would be for land no longer required for port purposes. As you see, a pretty impressive catalogue of questions all clamoring for answers—and none of them easy to answer.

But why this relatively recent emphasis on comprehensive port planning, on the preparation of a master plan for a harbour—or indeed, as is the case in some countries—for a geographic region or the nation as a whole? What are the forces that have urged port administrators and communities to insist on an overall look rather than be satisfied with analyzing each smaller situation as it presented itself? There appear to be basically two factors which make for this insistence on better and fuller knowledge of the plans for port development. They are increasing complexity of transport technology and changes in community attitudes towards economic growth. Let us look at these factors in turn.

The point that the more complex the technology the more planning is required is well made by an example given by Galbraith in another passage from his book "The New Industrial State:"

" . . . When Philip II settled on the redemption of England at the end of March 1587, he was not unduly troubled by the seemingly serious circumstance that Spain had no navy. Some men-of-war were available from newly conquered Portugal but, in the main, merchant ships would suffice. A navy, in other words, could then be bought in the market. Nor was the destruction of a large number of the available ships by Drake at Cadiz three weeks later a fatal blow. Despite what historians have usually described as unconscionable inefficiency, the Armada sailed in a strength of 130 ships a little over a year later on May 18th, 1588. The cost, though considerable, was well within the resources of the Empire. Matters did not change greatly in the next three hundred years. The "Victory," from which Nelson called Englishmen to their duty at Trafalgar, though an excellent fighting ship, was a full forty years old at the time. The exiguous flying machines of World War I, built only to carry a man or two and a weapon were designed and put in combat in a matter of months.

To create a modern fleet of the numerical size of the Armada,

with aircraft carriers, and appropriate complement of aircraft, nuclear submarines and missiles, auxiliary and supporting craft and bases and communications, would take a first-rate industrial power a minimum of twenty years. Though modern Spain is rich beyond the dreams of its monarchs in its most expensive age, it could not for a moment contemplate such an enterprise."

In the case of commercial water transportation and the support elements for its accommodation, the pace of technological advance has been particularly rapid since the end of World War II.

World ocean borne trade has doubled every 10 years since 1950 to reach its current level of 2 billion tons. It is predicted to almost double again by 1980. This trade growth will require a parallel increase in world vessel capacity and, because of economies of scale, the trend will be to relatively fewer ships of dramatically increased size.

In 1950 the world's largest ship was a 28,000 DWT tanker; by 1960 the size had more than doubled to 70,000 DWT. During the 1960's the doubling time reduced to 5 years. Today's largest vessel is a 376,000 DWT tanker and, before the middle of this decade, very large crude carriers will be almost 500,000 DWT.

There has been considerable discussion about the feasibility of constructing a 1 million DWT tanker. While there would appear to be no insuperable difficulties technically to prevent the building of such a vessel, a recent study done by the Norwegian Classification Society Det Norske Veritas concluded that such super-supertankers would not be built within the foreseeable future. The reason: these giants could navigate in only a few ocean areas. Some of the data given in the study show why. A 1 million ton tanker would be nearly 1805 feet long, have a beam of 328 feet and a draft of 131 feet. Fully loaded and at full speed, such a vessel would take 12 to 15 nautical miles to come to a complete stop — even if all her engines were slammed into reverse.

Nevertheless, bulk carriers will continue to grow in size and will be

dominated by priority vessels devoted to specific commodities and trade routes. Combination hulls are being constructed to take advantage of backhauling cargo rather than ballast.

The major restricting factor on bulk ship size has been draft, which has been governed mainly by port and approach channel considerations and is now, as mentioned earlier, being inhibited by the depth of some of the world's major shipping lanes. As ship sizes have increased, draft restrictions have generally resulted in an increase in the beam relative to the length of the vessel. Other factors which tend to limit the ultimate size of ships include construction and repair facilities, propulsion, maneuverability, insurance and, in particular, pollution control considerations.

Dry bulk and combination hulls will not be as large as tankers. Ore-oil combinations may reach 350,000 DWT and coal carriers 250,000 DWT. Draft restrictions in many ports, lower terminal throughput capabilities and marketing considerations will likely keep carriers in some trades such as potash and grain around 100,000 DWT and in others, such as sugar, below 50,000 DWT.

Barge transportation—a technique in which the West Coast of North America leads the world—will continue to be of great importance. It has already led to the development of barge carrying motherships in the case of the so-called LASH and Seabee vessels. Deepsea barges in the 20,000 DWT range presently operate over 1500 to 2000 miles; these may increase to 50,000 DWT as safer, faster towing or pushing techniques are perfected for the open sea. The economics of barging are, in part, related to the reduction in operating cost. For example, a 10,000 DWT vessel requires a crew of 30 or 40, while a tug and barge operates with a crew of 8 to 10 men on board and one backup crew. Another advantage, of course, is that barges can service ports with limited draft.

A vital link in the system of bulk transport from origin to destination is that represented by connecting inland transportation. The unit

train composed of special cars dedicated to a specific commodity route has revolutionized the transport of bulk cargoes over long distances. Key to its economics is the reduction of turnaround time which maximizes equipment utilization. The port area must, therefore, provide uncongested rail corridors away, if at all possible, from existing built up areas and switching points as well as high capacity loading and unloading facilities. There must be sufficient trackage at the port to permit unit train operation with minimum disruption.

Other connecting transportation links which may have to be taken into consideration when planning bulk areas for ports are those pertaining to the pipelining of liquid and solid commodities. Two methods of solids pipelining which may be adopted are the reduction of solids to a slurry (coal and iron ore are suited to this technique) and the capsulization of solids transported in a carrier fluid such as oil.

These technological changes in the ocean and land carriers converging at the port are behind the need to adapt existing and—in many cases—develop entirely new port facilities. For instance, economic pressure of the high cost of idle vessel time has led to the creation of capital intensive bulk loading terminals whose loading rates are geared to the achievement of a fast vessel turnaround time.

In the case of dry bulk terminals, land and access corridor requirements are extremely important. Approximately 50 to 100 acres can be taken up for storage, unit train loop tracks and, if necessary, for solids pipeline recovery facilities. Such automated terminals are capable of respectable throughputs of bulk materials. Their annual capacities are currently in the 5 to 15 million ton range per berth, depending on variables such as ship size and frequency, storage areas, commodity type, connecting transportation and terminal equipment.

In the case of non-bulk cargoes the same pressures of technological change have made themselves felt in the port. The incentive to improve the handling speed of such cargoes comes from a combination of con-

gestion, vessel idle time and the economic cost of goods in transit. Intermodal transport systems which integrate the carriage of commodities from origin to destination have developed to decrease transit time and cost.

From handling general cargo box by box and stick by stick we have come to espouse the system of unitization. The pallet was the first recognized unit load. Today, unit load techniques are being applied to an increasingly wide number of commodities, particularly general cargo in containers. In fact, the wide application of containers and their adaptability to a variety of commodities suggests that they may eventually be used for handling the majority of general cargo.

Because of the heterogeneous nature of their cargo, container ships carry less tonnage than bulk carriers of similar size. For example, a 50,000 DWT (2000 20-ft. containers) cellular container ship has approximately the same dimensions as a 100,000 DWT bulk carrier. The dimensions of these vessels have been influenced by restrictions on world trade routes, particularly the Panama Canal, as well as by economic considerations such as the provision of frequent service.

Here again we have seen technology change at a rapid rate. Three thousand unit container vessels and service speeds of 30 knots and higher should be commonplace by the end of the decade.

Container vessels and other specialized ship types such as roll-on-roll-off vessels, specialized forest products and automobile carriers as well as barge carrying ships postulate significant changes in marine terminal requirements. Here once more we see the need for the port to have an overall plan for the most rational accommodation of these requirements.

While some older marine terminals will continue to be used for the handling of conventional break-bulk cargo, attention will increasingly be directed in the non-bulk sector towards unit load terminals.

Container terminals are setting the standard for the design and operation of these facilities and, in many cases, the same intermodal techniques now being applied to

containers can be utilized for specialized commodities such as forest products.

The chief characteristics of these new unit load terminals is that their berths will be of marginal wharf design with the berth faces, wherever possible, in a continuous line so as to permit the easy joint utilization of terminal equipment such as cranes and mobile yard units. Transit storage areas will be between 20 and 30 acres per berth, with covered storage for certain commodities such as newsprint. Road and rail access should be provided along the rear margin of terminals in order to avoid conflict with terminal to ship activities. The annual capacity per berth will vary with the commodity type, terminal operation and facilities. Much depends on the handling and transfer system chosen.

This then is a brief overview of the technological changes which impinge on the port. What they mean for the harbour is the need to look at existing facilities critically in order to see whether they really meet the demands of the new transportation environment, to face the need which may exist of having to provide entirely new facilities, to ensure that the next phase of port development is undertaken in such a way that the capital and space consumptive requirements of the new breed of port terminals can be optimized.

This is the technological pressure behind the desire and, indeed, the need to plan comprehensively for a port—to have a master plan.

But, as mentioned earlier, there is another pressure which pushes towards the development of a port master plan. This pressure arises out of the changes in community attitudes towards economic growth and towards impingement on the environment.

It is simply no longer acceptable to the public to have a port add a pier here, and a roadway or black-top area there just because a new facility is needed through a growth in regular traffic or through the emergence of a new volume of cargo. The port operates in a sensitive environmental zone. The area where land meets water is an area of no substitution or interchange.

It is by way of a scarce resource.

Many demands are made on this coastal zone in which the port of necessity finds itself: shipping, recreation, waste disposal, resource exploitation, food generation are only some of these. It was not so long ago that there was considerable indifference by the public as to how the coastal zone was used. Public attitudes have swung to the exact opposite now. There is today virtually nothing that can be done unilaterally by a port authority in the United States which affects the water and shore environment.

A former director of the Port of Milwaukee recently put it this way:

"As a kind of by-product of the environmental concerns of our times comes the new public awareness of water as a resource and as an aesthetic feature of life. After a generation of disinterest in waterfronts, there arises a public demand for seashore and waterside parks, and a closer human relationship with the water. All over the United States, and in many other parts of the world, are imaginative plans for apartment complexes, marinas, shore-side restaurants, and other amenities to bring people to the shore.

More than one port has found its area the center of controversy. Community planners, by the nature of their training, tend to emphasize aesthetics rather than economic considerations. They tend to favour parks over ports, or people over piers. They would prefer a limited economic stimulus from a recreational undertaking, rather than a major economic stimulus through commercial shipping and port development."

Whether or not one agrees with the statement in its totality, it demonstrates the awareness in port administration circles now of the importance of other claims on the waterfront.

But these claims cannot be met or even intelligently discussed until they are assessed along with those made by the port itself. And the port is hardly in a position to advance its claims for considerable stretches of water and shore line unless it knows what it needs. Here

# *New Crew Accommodation Regulations for Towboats*

Transport Canada News No. 98/72

Ottawa, September 14: — New regulations respecting accommodation in towboats have been passed and will greatly improve the lot of their crew members, Transport Minister Don Jamieson announced today.

In terms of the new regulations, all ships used for towing will be required to implement certain basic changes within the next year and secondary alterations and refinements will have to be completed within the subsequent three years. However, all the new regulations will apply to new towboats, the construction of which commenced in or after August this year.

Some of the major changes encompassed by the new regulations are as follows:

- Every dining area, galley, recreation space and toilet space on the new ship must be separated by bulkheads from every other room on that ship.
- Every part of the crew accommodation must be kept free of stores.
- No cargo may be kept in any part of the crew accommodation.
- Bulkheads, deckhouses and casings exposed to the weather must be of weathertight construction.
- Crew accommodation must be protected by insulation from the effects of condensation and heat and cold emanating from outside that accommodation.

again we come back to the need for comprehensive port planning, for the evolution of a master plan for a port. Only when such a plan has been formulated can the public understand what the harbour requires and how it can fit its requirements into those of other community sectors. Only when a comprehensive scheme exists for the port can the community which may be called upon to finance or guarantee port developments, judge the priorities of competing claims made on it.

—Interior sidewalls, ceilings, furniture, fittings and all exposed surfaces in the crew accommodation must be suitably painted, panelled or finished.

—In every new ship 75 feet in length or over, no more than two persons may be accommodated in each sleeping room, which may have a floor area not less than 55 square feet.

—In every new ship less than 75 feet in length, no more than four persons may be accommodated in each sleeping room, which may have a floor area not less than 75 square feet.

Other regulations govern the furniture and fittings in sleeping rooms, dining areas, recreation areas and toilet spaces, the space and provisions for galleys, the supply of potable and washing water and the availability of storage space, lighting, ventilation and drainage.

As part of a continuing study into the standard of accommodation provided on such vessels, the Ministry has received tenders from naval architects to conduct studies relating to the acoustic habitability of towboats. The object of these studies is the development of noise control procedures and techniques which will in turn assist the Ministry in formulating appropriate regulations. These regulations will take account of the various levels of acceptable noise in such different locations as sleeping rooms and dining and recreation areas.

In the related field of towboat safety, the Ministry has received tenders from naval architects to conduct studies into the relationship between the features of the towing vessel and those of the vessel or object being towed. The need for such a study has been emphasized by several developments in the realm of marine towing in recent years. One of these is the increased power of towboats, in relation to their size,

(Continued on Next Page Bottom)

# World Ports Enter The Computer Age

By Townsend M. Lucas

Manager, Port Service Improvement Committee  
The Port Authority of New York and New Jersey

The revolutionary changes affecting the physical handling of cargoes in the maritime industry during the past decade have fostered a burgeoning integrated transportation environment. The introduction of high-speed container ships RO/RO (roll-on/roll-off) vessels and highly sophisticated materials handling equipment have all contributed to the rapid advance toward a fully integrated ocean transportation system. On the other hand, the integration of information systems related to these physical system advances are, comparatively speaking, in an embryonic developmental stage.

Computer technology provides the scientific means through which the detrimental factors peculiar to marine cargo movement and maritime industry fragmentation can now be largely overcome. Several years ago, the Port of Seattle made a pioneering effort in harnessing the computer to help in conducting that Port's business. The system is basically a cargo inventory control system which monitors the processing of cargo under the jurisdiction of the Seattle Port organization. The Port of Hamburg, through the diligence of its foreign freight forwarders, has also developed a computer capability. The Seaport Hamburg Information Processing System (SHIPS) is an export data collection, communications, and documentation system which became operational in April, 1970. The system's success is due in large part to the integral link between

as an outgrowth of improvements in marine diesel engine design. Another is the increase in the amount of long distance towing of extremely large vessels such as oil drilling rigs and cargo barges of the type being used in growing numbers along Canada's Pacific coast.

trucker and forwarder which permits the early capture of data concerning a shipment at the moment of pickup.

The most notable development in cargo tracing and documentation has not taken place at the seaport, however, but at an airport. The London Airport Cargo EDP Scheme (LACES) is by far the most sophisticated system of cargo control now in operation. Its major elements are an inventory of cargo on the airport; computerized documentation entry; tariff and tax calculation; and, customs clearance. Since it came on-line last August, significant improvements have been made in London Airport's cargo dispatch. Cargo space availability and through-put have been increased. At the same time, costs have been reduced and manpower more effectively utilized because cargo information is now available on a 24-hour basis.

These worldwide developments have stimulated considerable interest in the New York-New Jersey Port community. In December, 1971 the Port Authority's Port Service Improvement Committee, created for the purpose of investigating and developing practical solutions to problems affecting service in the Port of New York, retained the consultant firm of Drake Sheahan/Stewart Dougall, Inc. to determine the feasibility of developing an automated cargo information system for the port. Drake Sheahan recently completed its study and has reported that such a program is feasible from both an operations and economic viewpoint. Further development and implementation of the systems concept will enhance the Port's competitive position and provide direct benefits to all segments of the Port's business community.



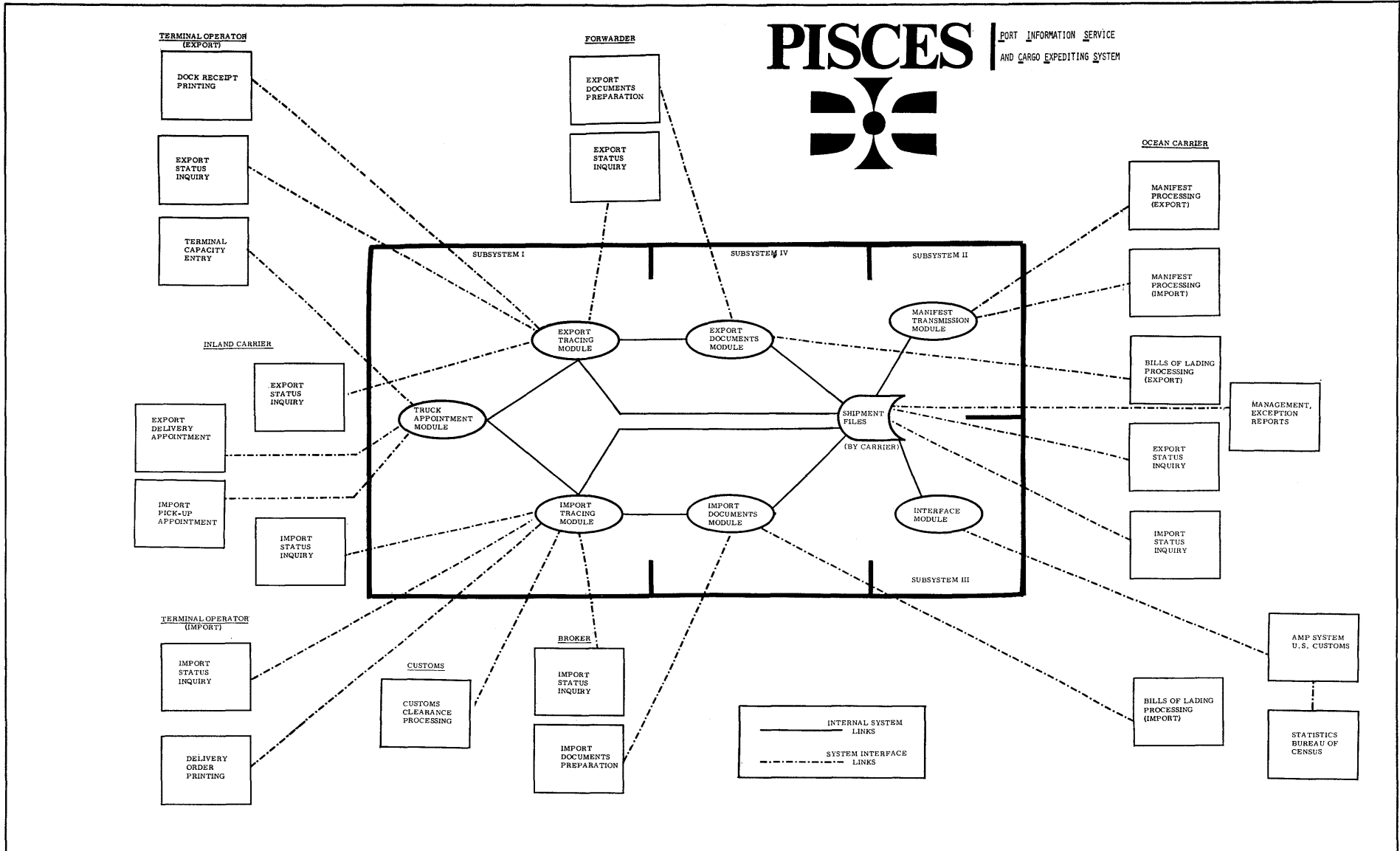
Mr. Townsend M. Lucas

## PISCES

The information systems concept, as outlined by Drake Sheahan, comprises four subsystems to be implemented over a period of several years. Designated PISCES (Port Information Service and Cargo Expediting System), the plan calls for an export/import tracing module and truck appointment system to be in Stage I. Subsystems II and III would consist of an overseas transmission module and central interfacing module, respectively. The final phase of the system provides for the printout of documentation required in all phases of import/export cargo movement.

Subsystem I, the most critical module of the system, would be designed to provide the exact status of export/import shipments transiting the Port of New York and New Jersey. The current status of shipments would be provided, under strict security controls, to all authorized parties involved with a specific shipment including forwarders and brokers, truckmen, stevedores, and steamship carriers. This system will save considerable time in tracing cargo, almost eliminating present methods which involve intensive use of the telephone, messenger service telex and other communication devices. Moreover the Port customer will obtain better service since their agents at the Port will have immediate access to vital cargo status information.

(Continued on Page 13)



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PORT OF NEW YORK AUTHORITY

# SYSTEM CONCEPT

DESIGNATIONS  
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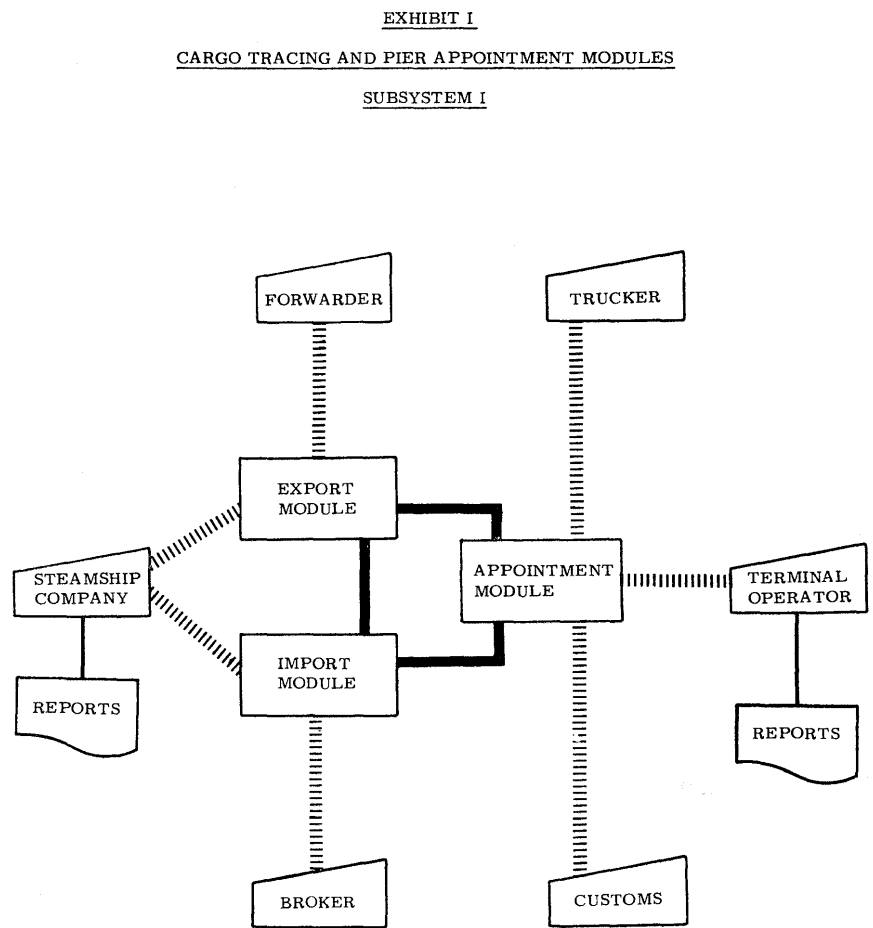
(Continued from Page 11)

The truck appointment system module is also an important aspect of Subsystem I. This system will provide an appointment calendar by steamship company or by pier which would allow a truckman to select, five days in advance using a computer terminal in his own office, an appropriate appointment for pickup and delivery of cargo. The benefits of this arrangement to the trucker are tremendous in terms of better utilization of manpower and equipment and an ability to determine in advance, through the PISCES network, the exact status of cargo before dispatching trucks to the pier. For example, information available on import cargo would indicate whether or not freight charges have been paid, customs entries made, customs' clearances obtained, and that the cargo is physically available for pickup.

The system will also provide truckmen with a pier-by-pier listing of cargo assigned thereby allowing better coordination of pickups and deliveries. A hidden advantage of the system will be improved cargo security. A trucking company could transmit into the system an identification code for the driver assigned to pickup a particular consignment of cargo. Such a code would consist of motor vehicle license number, social security number, or other identifiers.

The terminal operator similarly will obtain decided benefits from the system by having available, on a real-time basis, the number of trucks expected to be serviced on a given day, thus simplifying the allocation of appropriate labor and equipment. The system will also provide the terminal operator with exception reports of demurrage cargoes and shipments requiring further processing. The total impact to the terminal operator of a more efficient information transfer system would be a better utilization of terminal space, thereby increasing terminal through-put.

The broker would also have easy reference to all shipment information on cargo which he is handling. It is anticipated that the system will be tied directly into the Bureau of Customs' AMPS (Auto-



mated Merchandise Processing System) network which would provide direct feedback into PISCES on the nature of Customs' action on entries and cargo inspection. The broker and forwarder will also be able to provide their customers with instantaneous information on all factors affecting shipments while in transit via the Port of New York and New Jersey.

The steamship company would obtain automatic daily summaries on cargo handled under its jurisdiction, exception reports, and a host of other reports required in its day-to-day operations.

As outlined the overall advantages inherent in an integrated information system are extensive and far-reaching. The greatest advantage is that of matching the speed of information exchange to the speed of physical distribution facilities now available in the Port. The system will also have far-reaching benefits by providing a major step toward the standardization of communication interfaces within the Port community. It is not unreasonable to expect that in the

future the PISCES system will provide for the direct interchange of information among the computers of business organization servicing the Port of New York.

For the shippers and users of the Port there are specific advantages relating to cost reduction, facilitation of cargo tracing, and improved cargo security. Through exception reports available to the brokers and forwarder, shippers can be apprised of traffic volumes, relative costs, speed of shipments, and a host of other service factors related to the movement of their products in international trade.

The first step toward implementation of this comprehensive program was the establishment of an industry task force to work on the definitive design requirements of the system. A number of steamship carriers, brokers, forwarders, stevedores, trucking companies, and railroad have pledged their support to the project. The development, design and programming for the system will be completed within the next twelve months.

# *Ports of Angola in Pictures*



Port of Luanda, general view

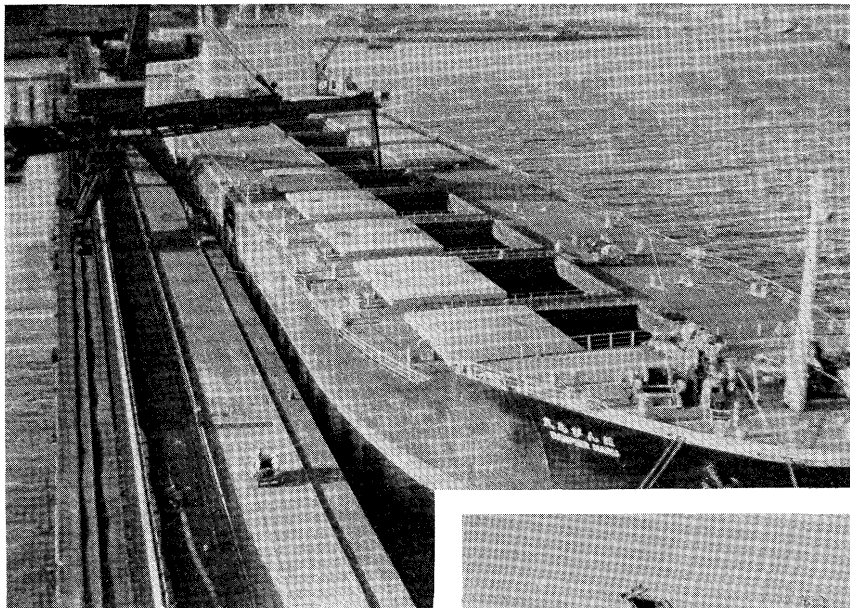
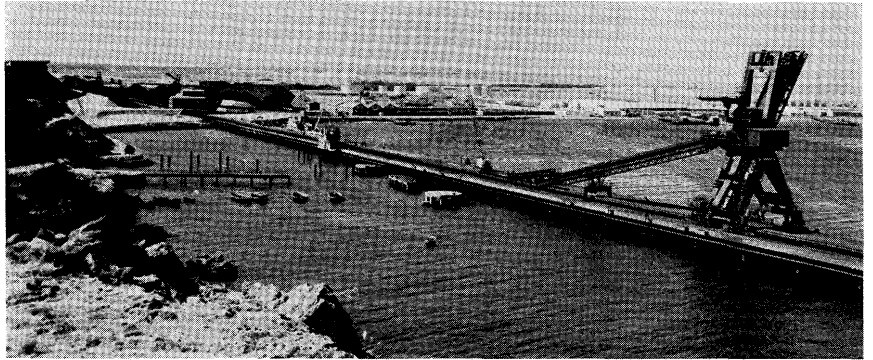


Aerial view of Lobito Port



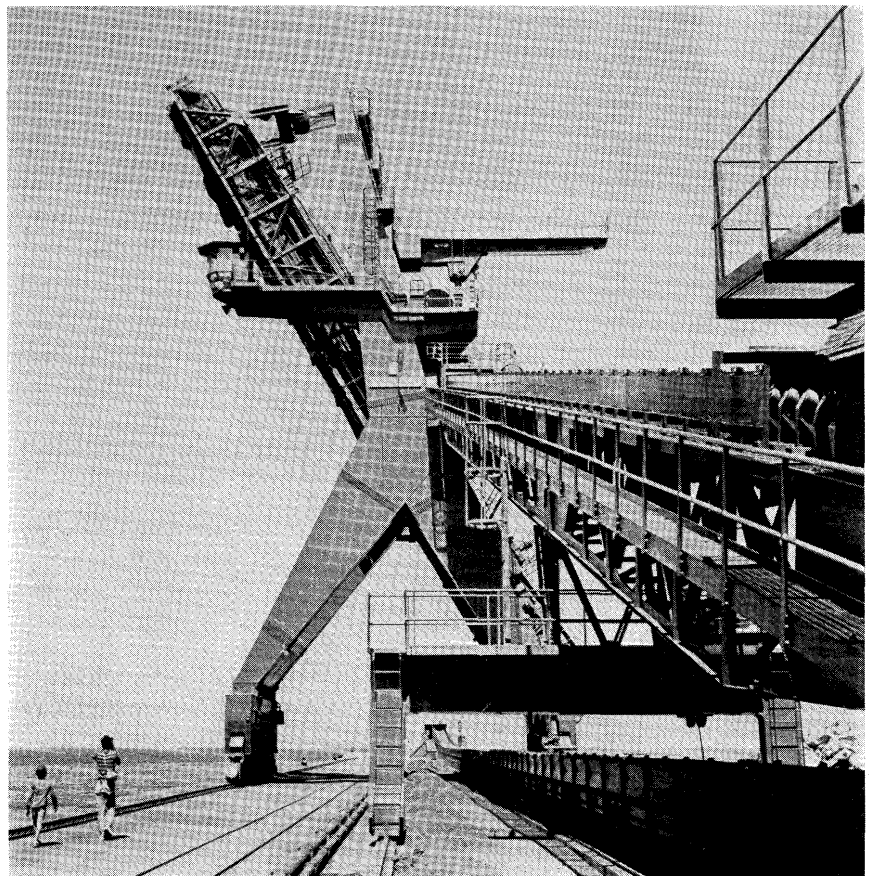
(By courtesy of The Direction of Services of Ports, Railways and Transports,  
Central Bureau, Province of Angola. Republic of Portugal)

→  
Port "Salazar" iron ore terminal,  
Moçamedes.



←  
Port "Salazar", Moçamedes. An  
ore carrier at ore loading terminal.

→  
Shiploader at Port "Salazar",  
Moçamedes.



# The Modern Multi-Product Bulk Terminal

By Paul Soros, President  
Soros Associates, Consulting Engineers

There were dozens of different types of bulk cargoes going thru the port of Savannah, Georgia, including many grades of kaolin, different ores, minerals and chemicals, all types of fertilizers, clinkers, peanuts, etc. These cargoes were transported to and from Savannah in all types and sizes of railroad cars and by all types of trucks.

The use of large bulk carriers was hindered by lack of sufficient covered storage at the port, as well as slow loading and unloading capacities. Handling costs were high and many

of the bulk commodities constituted a dust and pollution nuisance in the port.

Bulk terminals of conventional design would have required separate and different facilities for various groups of commodities. However, the tonnages for any group of commodities were too small to pay for efficient installations.

The MULTI-PRODUCT TERMINAL, utilizing advanced concepts of engineering, succeeded in achieving an economic break-thru, by consolidating all these commodi-

ties and operations into a single, high capacity, efficient installation, handling a large annual volume of cargo.

## General Plan—Fig. 1

The Savannah Multi-Product Bulk Terminal has separate berths for the loading and unloading of ships and barges. Covered storage facilities incorporate 14 compartments. There are separate facilities for loading and unloading railroad cars and trucks. Each of these facilities can handle two different materials at the same time and each is served by two railroad tracks as well as separate access roads and turnaround areas for trucks. The loading and unloading stations can accommodate all types of railroad cars and trucks. A platform scale is available for both incoming and outgoing railroad cars and trucks. Cargoes loaded onto ships are measured by a continuous weigh scale. The entire installation incorporates the latest in pollution control systems as well as extensive washdown and cleaning facilities. Operations are directed from a central control building. The entire facility is designed to permit expansion without interruption of operations, to provide the Georgia Ports Authority with utmost flexibility in accommodating all new customers.

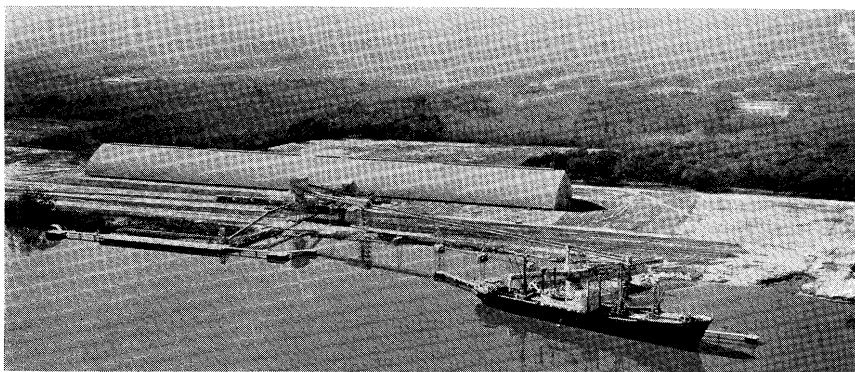
A unique feature of the Savannah Multi-Product Terminal is the flexibility enabling it to perform a variety of operations at the same time. The storage, loading and unloading systems can handle two different materials simultaneously, to better serve the variety of customers with different types of small cargoes.

Another unique feature is the recirculation of material within the system. This prevents any waste or loss of material at the completion of loading a certain commodity.

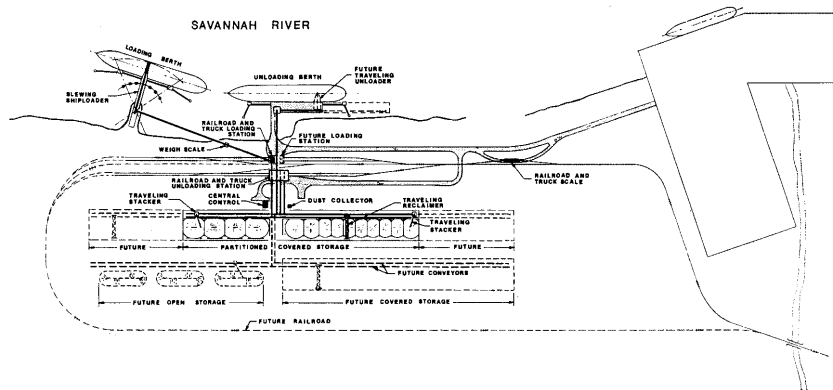
## Covered Storage—Fig. 2

The covered storage building is 170 ft. wide and 1368 ft. long. It contains 14 compartments ranging in size from 2500 to 8000 tons capacity. It can be extended in the future to 2600 ft. without interfering with operations, to accommodate new customers as required.

The storage building is served by two travelling stackers, with capacities of 800 TPH and 1400 TPH. By raising and lowering the boom of



Title Picture. Savannah's new Multi-Product Bulk Terminal features novel concepts in engineering as well as in Construction Management.



12	14	16	18	20	22	24	26	28	30
<small>THIS DRAWING, INCLUDING ANY MATERIALS OF ARTWORK THEREON, IS THE PROPERTY OF SOROS ASSOCIATES, INC. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, EITHER WHOLLY OR IN PART, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION OF SOROS ASSOCIATES, INC.</small>		<small>DATE: DEC. 27, 1971</small> <b>SOROS ASSOCIATES, INC.</b> <small>BULK HANDLING PORT DEVELOPMENT</small> NEW YORK, NEW YORK	<b>GEORGIA PORTS AUTHORITY</b>	<b>PLOT PLAN</b>					

General Plan—Fig. 1.

the stackers, storage piles are formed without dropping the material. This prevents material degradation and dusting inside the building. In this manner contamination of one material with the dust of another is avoided.

Material is reclaimed by a traveling scraper reclaimer. This machine spans the entire storage pile. It travels back and forth on its tracks along the sides of the building while a series of 6' 6" wide blades pull the material from the top of the stockpile without dusting, in a continuous stream, onto the reclaim conveyor alongside the storage piles. The capacity of this machine is 1400 TPH.

All material in the covered storage building can be reclaimed by a single operator without the aid of bulldozers or payloaders. The storage compartments have sloping floors, designed to facilitate sweeping and washdown for complete cleaning between change of materials.

The conveyor feeding the loadout station originates in the center of the building and can be fed by either of the two reclaim conveyors. This design provides for the future installation of a second reclaimer and the reclaiming of two materials at the same time.

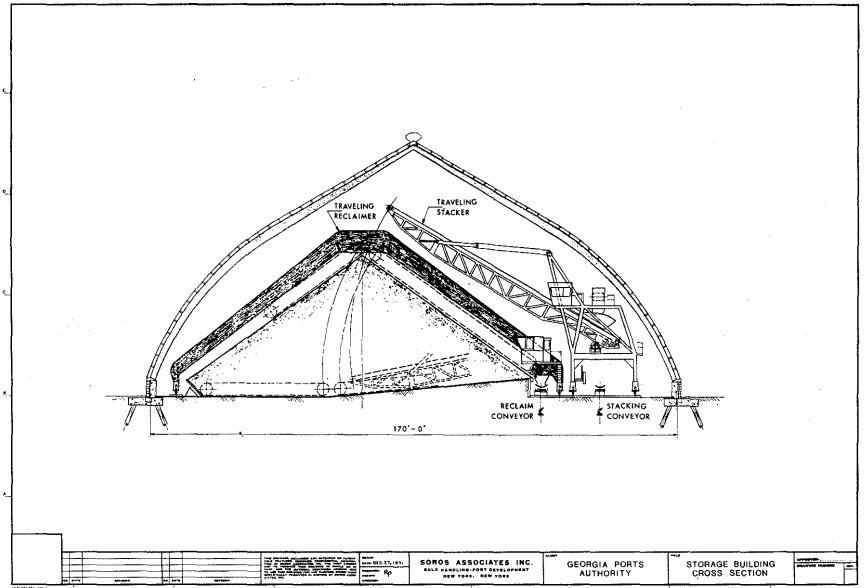
The storage had to be constructed in a marshy area. To solve the problem of soil settlements economically, the design utilizes the buildings as an envelope, carrying no imposed loads. Inside the envelope, all equipment practically floats on ballasted runways and carefully articulated structures and foundations. Only the perimeter of the building is supported on piled foundations. Prior to the driving of the piles a trench was excavated and filled with sand, to prevent lateral movement of the piling due to the action of the storage piles on the soupy soil. (See Fig. 3)

#### Central Transfer—Fig. 4

All the conveyor transfer installations are concentrated in the center of the building to facilitate operation, maintenance and cleanup and are served by a central dust collection system. The same area is equipped for the servicing and cleaning of the scraper reclaimer.

#### Rail & Truck Unloading—Fig. 5

The receiving station is served by



Covered Storage—Fig. 2.

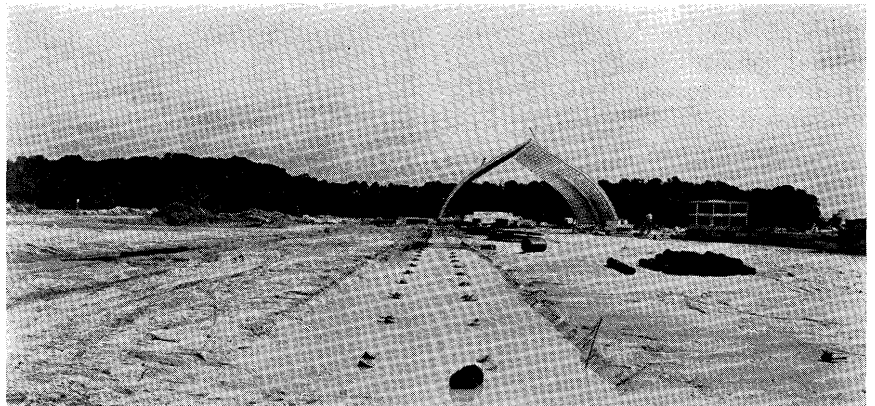
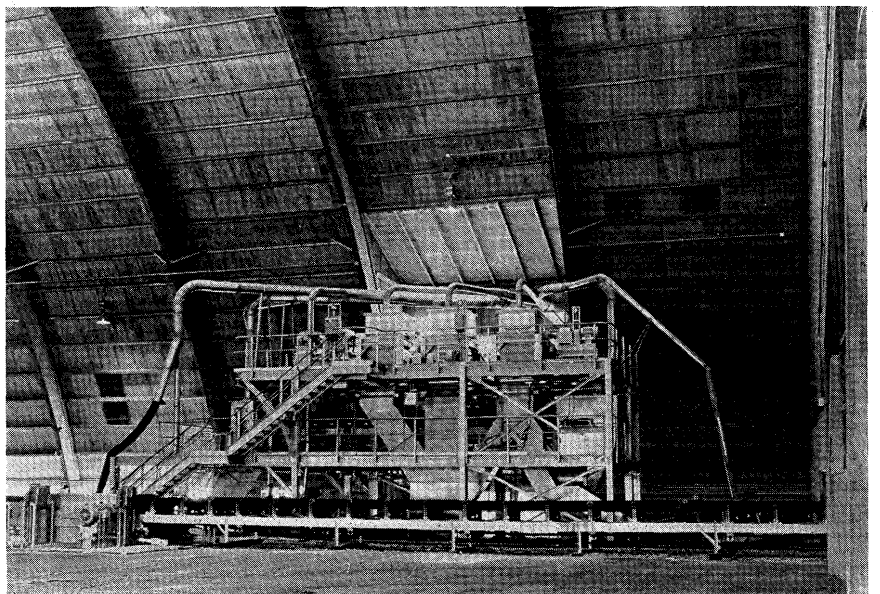


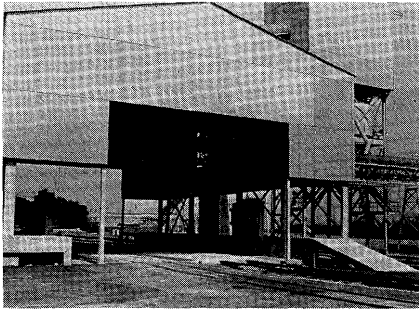
Figure 3.



Central Transfer—Fig. 4.

two railroad tracks and by an access road for trucks. Two different materials can be unloaded at the same time. Each of the receiving

systems is equipped with different types of hoppers specifically designed for the efficient unloading of various types of railroad cars and trucks.

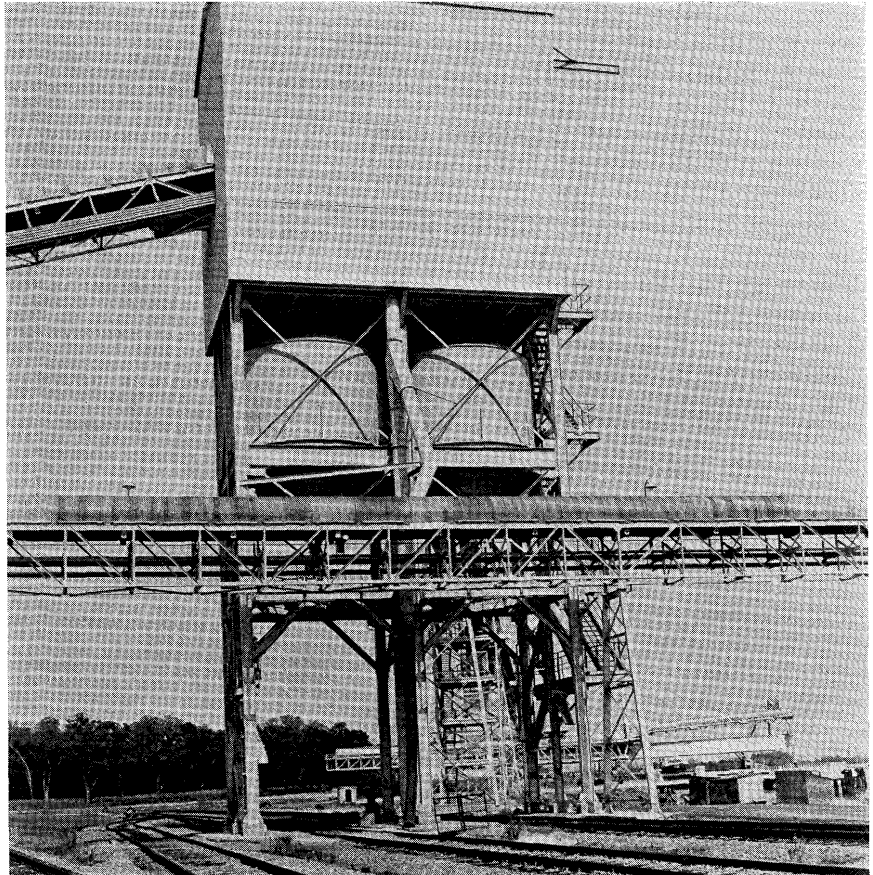


Rail & Truck Unloading—Fig. 5.

The capacity of the receiving conveyor systems is 1200 TPH.

#### Rail & Truck Loading—Fig. 6

The loading station is served by two railroad tracks and by an access road for trucks. Two materials can be loaded out at the same time. Each loading installation incorporates a 100 ton capacity surge bin and is equipped with loading chutes suitable for both top and side loading, that can accommodate all types of railroad cars and trucks. The loadout capacity is 1400 TPH.



Rail & Truck Loading—Fig. 6.

#### Ship Loading Berth—Fig. 7

Ships or barges can be loaded at the rate of 1400 TPH with a slewing bridge type ship loader. Originally developed by Soros Associates this consists of a bridge moving in an arc around a pivot. This bridge supports a loading conveyor which can move in and out and up and down to direct the material loaded into any part of a ship's hold.

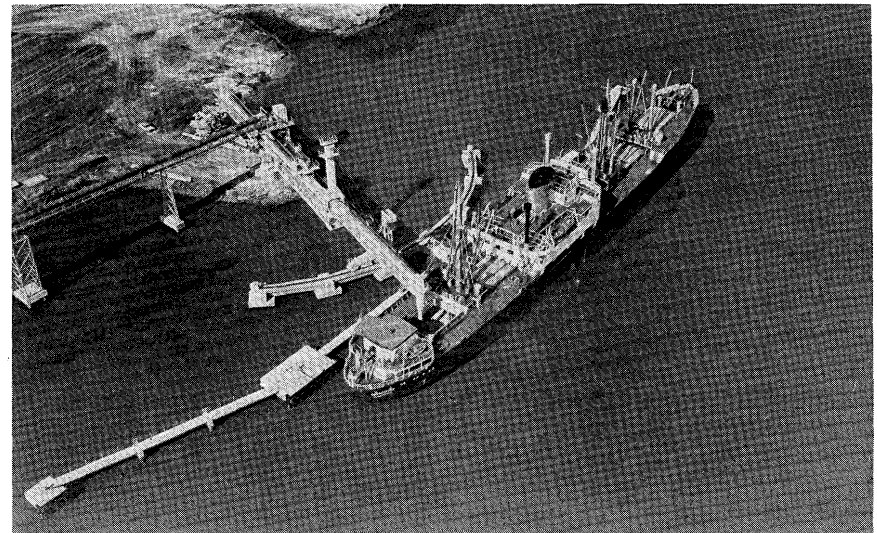
The loading chute of the ship-loader is equipped to operate with a rotating spout or a rotating slinger. Similarly to the rest of the installation, the ship loader conveyor is enclosed and incorporates a dust collection installation.

From the beginning, the project was planned with a Construction Management approach developed especially for bulk terminals by Soros Associates resulting in lower capital costs, shorter construction time and prevention of budget overruns.

In order to keep capital costs to the minimum, the project was organized into the following 5 contracts:

1. Shiploader
2. Unloader
3. Scraper-reclaimer
4. Conveyor system
5. Civil works

This contract break-down was planned to assure ample competitive



Ship Loading Berth—Fig. 7.

bids in each category and to eliminate the mark-ups and risk factors reflected in bids that go beyond the supplier's standard lines. For the same reason, the project was to be carried out without a general contractor, with the consulting engineers providing the coordination and site supervision.

A key feature of this CM approach that requires an integrated engineering capability and special know-how is the completion of the

civil designs, prior to placing any equipment contracts. This saves approximately 4–6 months construction time, with a corresponding saving in interest costs during construction. Of equal importance, the Owner has firm lump sum prices on the entire project, before any commitments are made for construction.

The feasibility study, with preli-

(Continued on Next Page Bottom)

# Port of Fremantle

## Extracts from Port of Fremantle Handbook, 1972

The Port of Fremantle, situated on the western coast of Australia in the vicinity of the 32nd parallel, is the major port of Western Australia, and is well known as the western gateway to Australia.

It is the first and last port of call in Australia for ships from or to Great Britain, Europe, South Africa, India and parts of South East Asia. It is directly connected to both State and Australia-wide road and rail transport systems, is adjacent to the City of Fremantle, and only 12 miles from Perth, capital city of Western Australia.

The State of Western Australia, extending from latitude 13° 15' in the north to latitude 35° 2' in the south, covers almost one million square miles, approximately one

third of the entire Australian continent. However, of the total population of 1,000,000 more than half reside in the metropolitan area within a radius of 25 miles from Perth. It is understandable therefore, that the Port of Fremantle is the main commercial port of the State.

Perth, Fremantle, and surrounding districts enjoy a "Mediterranean" climate with an annual rainfall of approximately 35 inches, the bulk of which falls in the winter months between May and September.

Fremantle is an all-weather port, little troubled by storms or fog, is virtually tideless, and provides the

most modern facilities for ships and passengers.

### Early history and development

Fremantle derived its name from Captain Charles H. Fremantle, of H.M.S. "Challenger," who on 2nd May, 1829, landed at the little bay between Anglesea Point and Arthur Head, adjacent to but to the southward of the mouth of the river, and, hoisting the British flag on Arthur Head, took possession of this portion of the continent of Australia in the name of His Majesty King George IV.

On 2nd June, 1829, Captain James Stirling and a party of sixty-eight settlers arrived in the transport "Parmelia" and founded a settlement on the banks of the Swan River. Sixteen days later, the first proclamation was issued, annexing the colony to the British Empire.

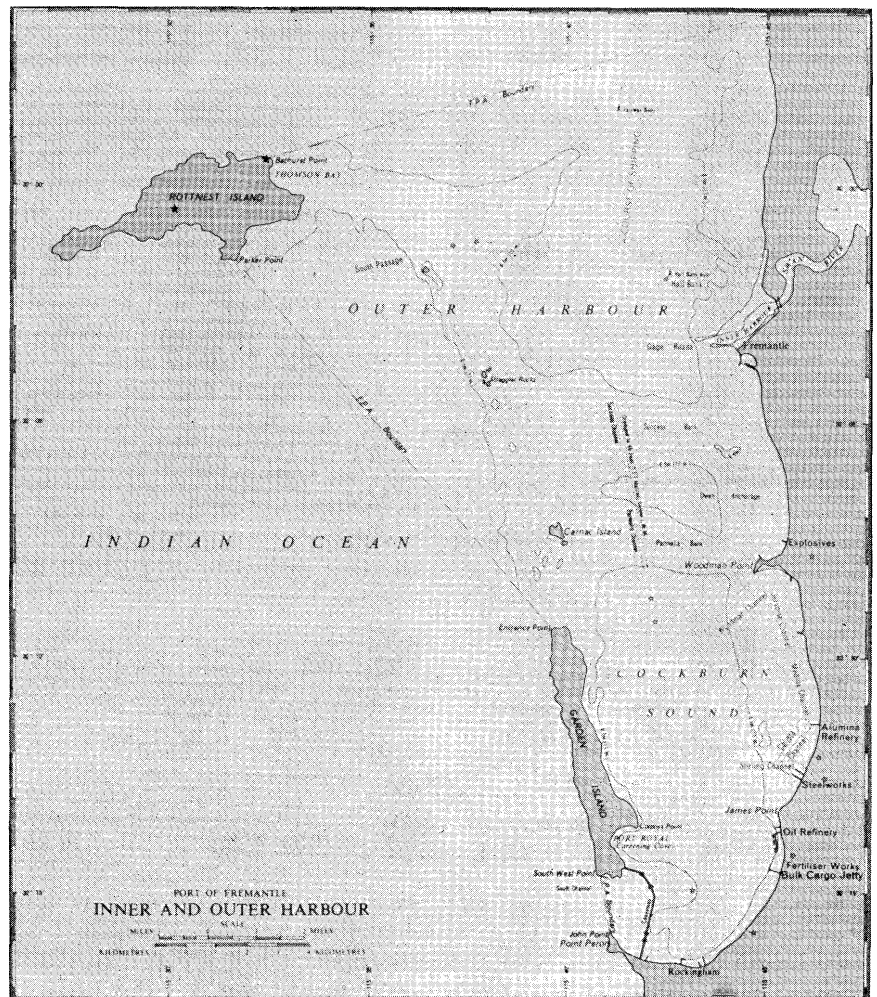
The history of Fremantle as a port commenced with the founda-

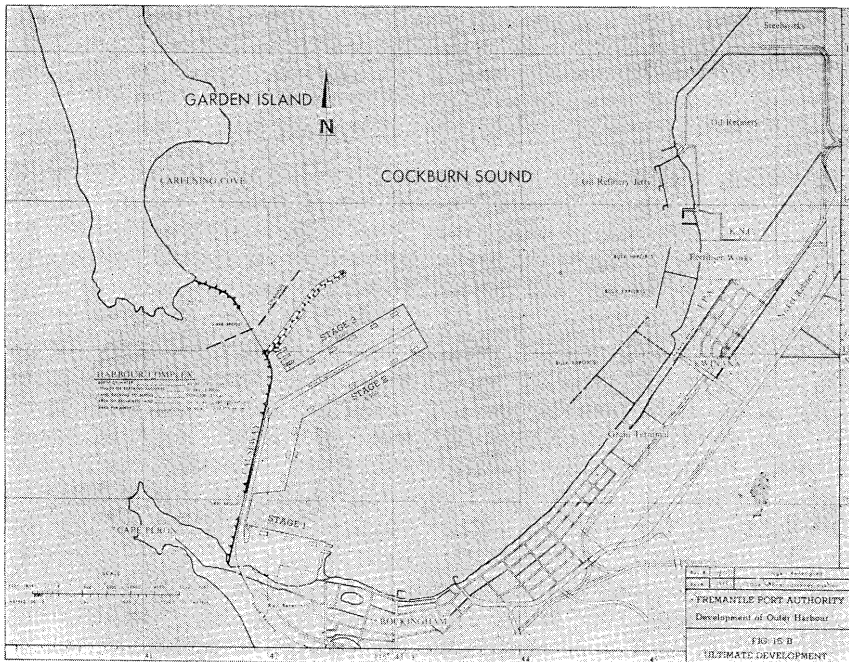
minary designs and budget estimates was prepared in 2½ months. The estimates included 7½% contingency for bidding and escalation and 2½% for construction. Final engineering was authorized within two weeks by the Georgia State Ports Authority after receipt of the feasibility report.

The complete engineering, worldwide competitive bidding and bid evaluation was completed in 7½ months. There were at least 5 acceptable lump sum bids in each contract category. The selected bids totaled \$8,497.00 against the engineer's estimate of \$8,430.00, leaving a construction contingency of less than 2%.

The construction was completed within the budget in a period of 21 months. The acceptance testing of the facility was completed without difficulty and the entire installation has been operating without trouble since then.

The consulting engineers were a consortium of Soros Associates and Robert and Company Associates, with Soros Associates responsible for project management, basic design, supervision of construction and start-up.





tion of the colony. During 1829 twenty-one ships arrived, the majority of which were trading ships. The development of the settlement made possible the export of the first consignment of wool, about 7,500 lbs., in 1834, and of timber, in 1836. In January, 1840, the ship "Shepherd" left for London with the first full shipment of the colony's produce, while in 1845 the first shipment of sandalwood was made. In December of the latter year H.M.S. "Driver," the first steam ship to visit the port, arrived.

Owing to the existence at this time of a rocky bar across its mouth, entry to the Swan River for vessels of any size was not possible, and the earliest port facility was a small jetty situated in the bay near Arthur Head. In 1837 a tunnel was excavated through this rocky eminence to give more convenient access to the jetty.

The small jetty referred to was replaced by a much longer one, known as the sea jetty, the first section of which, about 1,400 feet in length, and running in a south-westerly direction from Anglesea Point, was completed in 1873. The structure was subsequently extended in a westerly direction to a total length of 3,830 feet. After the removal of the rock at the mouth

of the river in 1897 this jetty gradually fell into disuse, and was eventually closed to traffic, being for some years used only as a promenade. Its demolition was ordered in 1921.

The necessity for providing well sheltered harbourage for ships at Fremantle had for many years exercised the minds of those concerned with the welfare of the port. Even as far back as 1839 a design for an outer harbour was submitted by the then Surveyor General, but it was not until 1856 that the suggestion of opening the mouth of the river was seriously considered. This suggestion contemplated a narrow channel leading from Gage Roads to the deeper reaches of the river, the intention being that ships should proceed to Perth to load or discharge cargo.

The question of an Inner or an Outer Harbour for Fremantle occasioned considerable debate, and eminent authorities on harbour construction came forward in support of each of several proposals. It was not, however, until 1891 that Mr. C. Y. O'Connor, who in that year had accepted the office of Engineer-in-Chief for Western Australia, submitted designs and proposals which were eventually adopted and became the basis for

the construction of the present Inner Harbour. Work was commenced in accordance with these plans in 1892, and on 16th November of that year the first truckload of stone was tipped into the sea as the beginning of North Mole.

Construction and excavation went ahead steadily until on 4th May, 1897, the rocky bar was sufficiently cleared to enable the first steamer to enter the new harbour. This was the s.s. "Sultan," a ship of 2,062 tons gross register, engaged in the Fremantle-Singapore trade, and the occasion marked the official opening of the Inner Harbour, which was gradually being developed into a deepwater basin.

On 8th October, 1897, the s.s. "Cornwall," of 5,500 tons gross, the first freighter from Britain to enter the new basin, arrived, while the first mail steamer to berth in the Inner Harbour was a German ship, s.s. "Gera," on 10th August, 1898, followed by the "Prinz Regent Luitpold" on 4th October of that year.

It was not until 13th August, 1900, that the first British mail steamer, the R.M.S. "Ormuz," of the Orient-Pacific Line, entered the new harbour, and she was followed by the R.M.S. "India" of the P. & O. Line, on 20th August. These two ships marked the change for these lines from Albany to Fremantle as the port of call for mail steamers in Western Australia.

### The Port Authority

The Authority controlling and administering the Port of Fremantle was originally constituted under the Fremantle Harbour Trust Act, No. 17 of 1902, as the Fremantle Harbour Trust Commission. By an Amendment Act passed in November, 1964 the Act became the Fremantle Port Authority Act, No. 35 of 1964. The rights, powers, functions, duties and liabilities set out under the old Act were preserved, and the name of the body corporate was changed to the Fremantle Port Authority.

The Authority is a statutory corporation with common seal, power to hold land, and perpetual succession.

The Commissioners, five in num-

ber, are appointed triennially by the Governor of the State of Western Australia, and the principal executive officer is the General Manager.

The Authority is charged with the control of the port and its facilities, and the maintenance and preservation of all property vested in it.

Unlike other Port Authorities in Australia, the Fremantle Port Authority acts as wharfinger for the port and carries out shore handling of cargo within the Inner Harbour for which it employs all labour and provides and operates mechanical and other equipment.

The Port Authority also provides for the mooring and unmooring of ships, is responsible for the buoyage and navigation systems of the port, operates the pilotage and signal services, and undertakes the construction of wharf structures, transit sheds, roads and railways in the port area.

#### General description of the Port

The Port of Fremantle covers an area of 180 square miles and includes an Outer Harbour and an Inner Harbour.

#### OUTER HARBOUR

The Outer Harbour, extending westward from the mainland to the eastern shores of Rottnest Island, and southward to Mangles Bay in Cockburn Sound, is protected from the westward by islands and reefs and embraces three main anchorages.

The most northerly is Gage Roads, a safe anchorage in close proximity to the Inner Harbour.

Centrally situated between Success Bank and Parmelia Bank is Owen Anchorage while Cockburn Sound, the largest and most protected anchorage lies to the south.

In all, these three areas of the Outer Harbour provide 73 square miles of deep water.

Access to Owen Anchorage and Cockburn Sound was originally limited to ships of shallow draft which could navigate safely over Success and Parmelia Banks. Some channel dredging was carried out during World War I, and extended during World War II but it was 1954 before the channels were

deepened to provide a channel 38 feet deep at low water. Tankers of up to 32,000 tons, and drawing up to 34 feet, were then able to proceed fully laden to the deep water berths serving the Oil Refinery at Kwinana on the shore of Cockburn Sound.

In 1967 the channels were further deepened to a minimum of 45 feet to accommodate larger tankers and bulk carriers in the 70,000 ton class.

#### (a) Owen Anchorage:

In Owen Anchorage two commercial berths were in operation for many years. Woodman Point Jetty was built for loading and unloading explosives, and is still used exclusively for this purpose.

Robb Jetty, built and used for unloading cattle for the nearby meatworks, has limited depth of water alongside, and has become uneconomical to maintain. Its use has therefore been discontinued, and cattle formerly unloaded at the jetty are now unloaded at berths in the Inner Harbour.

#### (b) Cockburn Sound:

A reinforced concrete jetty at which three tankers can berth simultaneously has been constructed to serve the oil refinery at Kwinana.

A steelworks adjacent to the oil refinery is served by two jetties, one a general purpose jetty equipped with wharf cranes for the rapid loading and unloading of steel and steel products, and the second a bulk cargo jetty fitted with a bulk unloader and belt conveyor for the rapid loading and unloading of bulk products such as iron ore, coke and limestone, used in the steel smelting process.

An alumina refinery adjacent to the steelworks is served by a jetty specially constructed and fitted with machinery for the bulk loading of refined alumina and also equipped for the discharge in bulk of caustic soda, large quantities of which are used in the refining process.

Immediately to the south of the oil refinery jetty the Port Authority has constructed a bulk

cargo jetty, initially fitted with machinery for the bulk unloading of rock phosphate and other materials required for the nearby fertilizer works, and designed for possible extension to permit the bulk loading of mineral ores and similar cargoes.

#### INNER HARBOUR

The Inner Harbour is constructed within the mouth of the Swan River and is protected by two breakwaters, North Mole and South Mole, 4,835 feet and 2,040 feet long respectively.

The approach from Gage Roads is through a short entrance channel protected by the breakwaters and dredged to a depth of 36 feet at low water.

The fully protected Inner Harbour is safe for ships all the year round. It is the hub of general cargo trade and encloses nearly 200 acres of water dredged throughout to a depth of 36 feet at low water.

It has 20 land-backed berths—eight at Victoria Quay and 12 at North Quay. With the exception of 'H' Berth, all berths at Victoria Quay are equipped with transit sheds which give an aggregate of 285,100 square feet of covered storage space.

'H' Berth, recently reconstructed in reinforced concrete, is backed by an open stacking area instead of a transit shed and adjoins a heavy-duty section of wharf specially designed and constructed to permit heavy lifts to be unloaded direct from ship to multi-wheeled road transport.

At North Quay Berths 1, 2, 3, 4, 5 and 10 are equipped with older style transit sheds which give a total of 266,250 square feet of covered storage space.

# *International Association of Lighthouse Authorities*

## *(I.A.L.A.)*

The International Association of Lighthouse Authorities (I.A.L.A.) is a technical, non-governmental, non-profit making organization bringing together Services or organizations responsible for the provision or maintenance of lighthouses and other aids to marine navigation. Headquarters are at 43 Avenue du Président-Wilson, Paris 16, France.

The aims of the Association are:—to discuss of matters of general technical interest;

—to circulate information regarding the work of Lighthouse Authorities in the various countries so that improvements introduced in any one of them may be available to the others;

—to encourage, support and make known researches and inventions which are useful to Lighthouse Authorities.

These aims are achieved by the organization of International Conferences on Lighthouses and other Aids to Navigation, the setting up of Sub-Committees charged with the study of particular technical problems and with the preparation of recommendations, the maintenance of liaison with inter-governmental organization having to do with hydrographic, oceanographic, aviation, communication, meteorological and marine safety matters, the dissemination of information concerning the world wide development of marine aids to navigation, the publication of a quarterly Bulletin and the preparation of an international dictionary of terms used in marine aids to navigation.

I.A.L.A. has existed formally since 1st July 1957, but it originated long before from the first meeting of the Heads of Lighthouse Authorities, held during the XIVth Navigation Congress, in Cairo, in 1926. It is during the course of this meeting that it was decided to organize regular international Conferences on Lighthouses and other Aids to Navigation. Such Conferences were held in London in 1929, Paris 1933,

Berlin 1937, then again in Paris 1950 and in Scheveningen 1955, and now every five years.

It is at the Scheveningen Conference that it was proposed for the first time to create a permanent Secretariat in the form of an international association. However, it was only in 1957, after the approval of the Constitution by twenty Lighthouse Authorities, that I.A.L.A. was formally constituted under its present form. Three further Conference have been held since: the VIth Conference in Washington in 1960, the VIIth Conference in Rome in 1965, the VIIIth Conference in Stockholm in 1970. The IXth Conference will be held in Canada in 1975.

I.A.L.A. holds consultative status with the Inter-Governmental Maritime Consultative Organization (I.M.C.O.).

The two official languages are French and English.

I.A.L.A. now comprises four different categories of members:

“A” Members—Principal Lighthouse Authorities having the right to vote at General Assemblies

Annual subscription:

5,000 Swiss Francs

“B” Members—Principal Lighthouse Authorities not having the right to vote at General Assemblies

Annual subscription:

1,000 Swiss Francs

Associate Members—Services or organizations that provide marine navigational aids, or scientific or non-profit making organizations

Annual subscription:

500 Swiss Francs

Industrial Members—Firms manufacturing marine aids to navigation equipment or companies maintaining aids to navigation under contract

Annual subscription:

1,000 Swiss Francs

A number of technical **Sub-Committees** and **Working-Groups** were set up since the creation of the Association.

Seven of them have finished their

work and published the following **recommendations** and **reports**:

—Recommendations concerning the “Nomenclature of Lights used for Marine Navigation—June 1960”

—Recommendations for the marking of offshore fixed structures—28 May 1965

—Recommendation for the notation of luminous intensity and range of lights—16 November 1966

—Recommendation for the marking of bridges over straits and estuaries—16 November 1967

—Recommendation for the standardization of colours of lighted aids to navigation—4 April 1968

—Recommendation for the calculation of the range of a sound signal—20 November 1968, and the relevant report on “The definition and method of calculation of the nominal range and usual range of a sound signal” published as Supplement No. 3 to the IALA Bulletin.

—Recommendation for the marking of protruding parts of port structures—19 November 1970.

Eight other Sub-Committees are now at work:

—The “Sub-Committee on the calculation of the intensity of lights” is concerned with techniques either to measure directly or calculate light intensity from various lights sources;

—The “Sub-Committee on leading lines” is concerned with improving the design of day-time leading lines and lights;

—The “Sub-Committee on Frequencies” has given up the study of frequencies to be used for television transmission of harbour radar images. It now prepares a request for frequency allocation for data transmission for navigation purposes;

—The “Sub-Committee on microwave aids to navigation” has already published three reports:

“A method of calculating the maximum range of a radar reflector” (Supplement No. 1 to the IALA Bulletin)

“Measurement of the reflecting properties of radar targets” (Supplement No. 2 to the IALA Bulletin)

“Radar Beacons” (Supplement No. 4 to the IALA Bulletin) and the

“Recommendations for radar bea-



- cons"—19 November 1970,
- The "Sub-Committee on mooring of buoys and light-vessels" is concerned with preparing recommendations regarding the best methods to be used for the mooring of buoys and light-vessels;
  - The "Sub-Committee for the unification of new buoyage systems" has been asked to investigate the different systems in use throughout the world in view of their unification;
  - The "Sub-Committee on surface colours for daymarks" has been asked to define colorimetric specifications to be recommended for surface colours of daymarks, and more especially of colours for daymarks belonging to the Uniform system of maritime buoyage agreed in Geneva in 1936;
  - The "Sub-Committee on radio-navigation systems" has been asked to carry out a preliminary survey of existing and planned radio aids to navigation and to ascertain whether IALA can take steps to improve their use and eventually obtain international co-operation.

An International Dictionary of Aids to Marine Navigation is also in preparation. It is to be first printed in three languages: English, French and German.

Four of the eight Chapters of the Dictionary are now printed or ready for being printed:

- Chapter 1—General Terms
- Chapter 2—Visual Aids
- Chapter 3—Audible Aids
- Chapter 4—Radio Aids.

Three other Chapters will now be prepared:

- Chapter 5—Automatic and remote control
- Chapter 7—Civil engineering work
- Chapter 8—Floating equipment.

The principal publications of I.A.L.A. are:

- the reports presented to international Conferences on Light-houses and other Aids to Navigation and Proceedings of the Conferences;
- the IALA Bulletin (49 issues have come out since October 1958);
- the recommendations and reports prepared by Sub-Committees;
- the "International Dictionary of Aids to Marine Navigation".

# IMCO As Seen by IAPH

Reports by observers from IAPH at IMCO sessions

## Report No. 21

**Date:** 19th to 23rd June 1972

**Place:** IMCO Headquarters, London

**Session:** 13th Session of the Sub-Committee on Marine Pollution

**Observer from I.A.P.H.:** Mr. J. H. Potter, Port of London Authority

**Observer was named and the report obtained through the courtesy of the Dock and Harbour Authorities' Association, London**

### Text of Report:

#### 1. Preparation for the 1973 International Conference on Marine Pollution

##### 1.1 Brief Reports on Studies initiated at the tenth session

1.1.1 Segregated Ballast Tankers (U.S.A.)—This study reveals potential advantages in the degree of operational pollution abatement but at an increased ship price and consequently of the required freight rate of between 5%–15%.

1.1.2 Dual Purpose Tanks with means to isolate oil or noxious materials from water (U.S.A.)—This study concerns the use of impermeable membranes within tanks to isolate oil from seawater. The study is not yet complete but suggests that the idea is feasible and a costing study is currently underway.

1.1.3 Retention of Oil on Board (U.K.)—The "load-on-top" system has been analyzed with particular reference to the special problems of operating it on short-haul and OBO carriers. It is suggested that it can be operated within the limits set in the 1969 amendments, but that too much reliance is at present placed on the human element. The study suggests that significant improvements can be achieved in tankers by the use of equipment and systems designed to reduce the influence of the human element, but at an estimated cost of £155 million for the existing world fleet. Universal adoption of recirculatory tank washings is recommended together

with the installation of devices to monitor and/or control overboard discharges. For the existing fleet of non-tankers, at a cost of £160 million, it is recommended that pipework be arranged to pass all bilge contents through a separator and that holding tanks are provided for use in port. Additionally the encouragement of the development of accurate oil content meters capable of cutting off unacceptable discharges is recommended. The measures, it is anticipated, could progressively reduce the L.O.T. tanker discharges to a theoretical minimum of 12,000 tons a year, based on present crude oil movements by sea.

1.1.4 Clean Tanks for Ballast prior to vessel sailing (France)—The report analyses the volume and distribution of crude oil traffic anticipated in 1975 and 1980 and from this deduces pollution per voyage and per year. If all tankers were to use the L.O.T. system, total pollution would be 60,000 tons in 1975 and 90,000 tons in 1980. The study concerns the consequences of ensuring that the ship sails from the discharging port with clean ballast. The annual cost of such action is estimated at between \$130 million and \$190 million in 1975 and \$165 million to \$280 million in 1980 or an on-cost per gross ton transported of between 7 and 11 cents.

1.1.5 Retaining Duty Ballast on Board for In-Port Disposal (Israel)—The study relates to oily waste generated by world crude oil traffic which comprises more than 80% of the total oil carried at sea and about 40% of which is carried in the Mediterranean, where the short-haul character of the traffic inhibits the use of the present load-on-top procedure. The maximum permitted amount of oil which could be discharged to the sea in 1980, according to the 1969 Amendments to the Convention, has been calculated at about 160,000 tons per year, whilst a 10 p.p.m. limitation to on-shore

ballast reception and treatment systems could reduce the amount of oil discharged into the sea to about 8,000 tons per year. The total world investment cost required (buoys, submarine pipelines, storage tanks, treatment facilities) is estimated at  $520 \times 106$  dollars, with annual operating costs of  $176 \times 106$  dollars (plant, ship delay time, berthage etc.), producing a unit cost per ton of crude oil at loading terminals of 7.3 cents per ton.

1.1.6 The Environmental and Financial Consequence of Oil Pollution from Ships (U.K.)—Preliminary findings indicate that oil discharged intentionally from ships probably contributes about a quarter of the total emissions at sea and on land, which themselves could lie between 3 and 7 million tons per annum. It is tentatively concluded that oil spills in coastal waters are liable to more rapid bacterial breakdown than spills in open sea and that emissions reaching the sea via the atmosphere are probably quickly diluted and degraded. The continual release of oily effluents from certain refineries and shore facilities can have chronically adverse effects on adjacent marine life, more particularly those effluents from refined products with a high proportion of aromatics. There is no conclusive evidence that the release of oils in their present quantities in open sea affects marine life, but this may be because of inadequacies in biological monitoring techniques. The study is to be extended to amenity aspects and to accumulation of oil or residues in the biosphere.

1.1.7 Collection and Disposal of Ship - Generated Dry Garbage (U.S.S.R.)—The study concerns a study of the problem with the preparation of short and long term programmes leading to agreements on restrictions and prohibitions on the discharge of garbage overboard for inclusion into the draft International Convention of 1973. International standard garbage receptacles, which are interchangeable, are anticipated as is the development of suitable equipment to be incorporated both ashore and in the construction of ships. Studies have been carried

out on the quantity and composition of garbage collected on ships and proposals have been formulated on methods of collection, treatment and disposal.

1.1.8 Ship - Generated Sewage Treatment and Holding Systems (Canada)—Eleven basic methods of treating shipboard sewage have been evaluated, the re-circulating system being generally the most effective when all variables are taken into account whilst the evaporative and vacuum transport types appear the most suitable for short term development. It is suggested that cargo ships could, without undue difficulty, be fitted with sewage treatment systems suitable for use in all waters, but the cost would be much higher for existing than for new vessels. The initial capital cost on a new large cargo vessel averages \$55,000 with an annual operating cost of up to \$10,000. For new large passenger vessels the capital installed cost can vary from \$250,000 to \$1,000,000 with operating costs of up to \$70,000 per year, but the conversion of the vast majority of existing passenger ships would be economically prohibitive.

1.1.9 Pollution Caused by the Discharge of Noxious Substances Other than Oil, through normal operational procedure of ships engaged in bulk transport (Norway)—The best estimates of the quantity of noxious liquid substances other than oil carried by sea in 1970 amounts to about 16.5 million tons. Operational discharges into the sea for this period amounted to less than 10,000 tons, of which more than a third occurred in the North Sea, a quarter in the Caribbean Sea and a fifth in the North Atlantic West, whilst the North Pacific Far East received the remaining 12 per cent. The concentration of the substances was found soon to reduce to about 1 p.p.m. after discharge and further investigation into the discharge of tank washings is being carried out for products spontaneously toxic in concentrations below this level and for products which are persistent and accumulate in marine organisms. It is reported that it is both technically and economically possible to receive and treat tank washings

from bulk chemical tankers in on-shore industrial or municipal waste treatment plants at discharging terminals. Studies into the transport of dry cargoes are not yet complete.

## 1.2 General Principles of the draft 1973 Convention

1.2.1 The Sub-Committee agreed for the time being to continue to work on the basis of a single composite Convention on the assumption that it would be possible for governments to accept individual Annexes separately. A number of delegates were of the opinion that it would be a serious mistake to abandon the 1954 Convention and to incorporate the oil pollution provisions as one among a number of Annexes to a composite Convention. Their concern related to possible discouragement of further acceptances of the 1969 Amendments before the composite Convention came into force or was implemented.

1.2.2 The Sub-Committee discussed at length the definition of "oil" and "noxious substance" and there was some opinion expressed as to the desirability of including certain forms of oil under "other noxious substances" rather than under "oil". It was generally agreed that the definition of "harmful substance" and "noxious substance" should be in line with the definition of marine pollution formulated by G.E.S.A.M.P. who are to prepare hazard ratings for about 200 substances, including some animal and vegetable oils, additional to those shown in their Preliminary Report. The Sub-Committee reported that it would not be possible to prepare, a draft relating to the pollution arising from the operation of nuclear ships in time for submission to the 1973 Conference.

1.2.3 The meaning of "complete elimination of wilful and intentional pollution" called for by Assembly Resolution A.237 (vii) was interpreted by the Sub-Committee as the complete elimination of harmful discharge and they agreed that in respect of oil that the work on the provisions of the draft 1973 Convention should proceed towards an improvement of the requirements of the 1969 and

1971 amendments.

1.2.4 The Law of the Sea Conference of the United Nations is scheduled to begin in 1973 and this may resolve some outstanding legal problems of the application of Conventions in the marine environment. For the purpose of the IMCO Conference standards are to be established which can be generally applied in all navigable waters and it is proposed that the new Convention should contain provisions of such nature and strength that their application, especially in coastal or territorial waters, would obviate the need for additional national regulations.

1.2.5 The Sub-Committee stressed the importance of introducing rapid amendments procedures, particularly to take account of technological developments and they agreed in principle three methods of amendment procedure, each requiring initial adoption by the Maritime Safety Committee. Adoption by the Assembly would only be required for amending the Articles and technical Annexes, but Appendices and Annexes containing details such as the list of noxious substances would only require tacit acceptance by Contracting Governments after adoption by the M.S.C.

### 1.3 Draft Articles of the 1973 Convention

1.3.1 The Sub-Committee accepted the second draft of the Preamble and Articles of the 1973 Convention as a basis for further discussion and agreed that the lower limit of ship size for the applicability of articles relating to the carriage of noxious substances should be 50 gross tons.

1.3.2 The draft Convention imposes a responsibility on Contracting Governments to report annually to the Organization such further national measures as it has taken during the preceding year which have been deemed appropriate to prevent discharges from any ships flying its flag which violate any of the receiving water criteria or damage the marine resources listed in the Annexes.

1.3.3 Any discharge of oil or other noxious substances or effluent in contravention of the provisions of the Annexes, within the territorial

sea of a Contracting State, shall be an offence punishable under the law of that Contracting Government. The penalties imposed under the law of a State shall be adequate in severity to discourage such unlawful discharge.

1.3.4 The Convention imposes a duty on Contracting Governments to co-operate in the detection of offences and to institute environmental monitoring and adequate reporting procedures. One Contracting Government may investigate a ship flying the flag of another State when it enters a port of the former State if it receives a report from any Government that the ship has discharged in contravention of the Convention.

1.3.5 Each Contracting Government shall take appropriate steps to ensure the provision of facilities in ports adequate for the reception of residues and mixtures of oil or noxious substances from ships other than oil tankers, at loading terminals for oil or chemical tankers residues and oily mixtures and similarly for all residues and oily or noxious mixtures remaining for disposal from all ships entering ship repair ports.

1.3.6 Provision is made for the use of oil-record books detailing all processes in which a residual, a discharge or escape of oil or oily mixture is involved and for surveyors to check and certify that the tanks of vessels having been discharged of certain noxious substances are in a suitable condition and that the slop has been transferred to shore reception facilities. In the case of certain less noxious substances it may be enough to transfer the slop to the vessels slop tank and in the case of even less hazardous cargoes an empty tank declaration by the receiver may be enough to allow the ship to perform normal tank cleaning operations as detailed in the Regulations.

1.3.7 There are regulations for the design, construction and equipment of ships to prevent the pollution of the sea by oil or by noxious substance and for the disposal of ship-generated waste water, faecal sewage and garbage.

1.3.8 Ships shall not discharge faecal waters within 50 miles

from the nearest shore unless they have been cleaned and disinfected to within limits of 50 mg/litre B.O.D., a coli-factor of not more than 10,000 and the absence of detection of pathogenic organisms. Each ship shall be equipped with ship-shore connections of international pattern for the discharge of waste and faecal waters ashore or to reception craft and they shall be so fitted as to prevent the discharge of sewage or garbage in contravention of the Convention. Waste water not disinfected is not to be discharged within 25 miles of the nearest shore and garbage within 50 miles from the nearest shore.

## 2. International Convention for the Prevention of Pollution of the Sea by Oil, 1954, Amendments and Methods of Enforcements

2.1 The Federal Republic of Germany undertook the task of preparing an outline of a standard method of identification of oil samples with a view to facilitate the enforcement of this Convention.

## 3. Comprehensive Manual for dealing with Oil Pollution

The English version of Section IV of the Comprehensive Manual on Oil Pollution (Practical information on means of dealing with oil spillages) has been printed as an IMCO publication and is being distributed to governments. French, Spanish and Russian versions will be available shortly.

## 4. Ad Hoc Working Group of the Sub-Committee

Provision has been made for this group to meet in September 1972 when it is to be charged inter alia with drawing up a draft list of noxious substances in co-operation with the Ad Hoc Working Group on Bulk Chemicals and taking account of the Report of the Ad Hoc Panel of GESAMP Experts.

## 5. Further meetings

The Sub-Committee recommended that it should hold its 14th session from 27th November to 1st December 1972 and its 15th session from 19th February to 2nd March 1973.

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



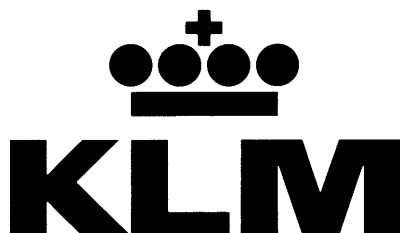


A globe-spanning network, flights straight to Amsterdam. Lots of thoughtful extras—including a booking office right at the congress centre, where you need it. For KLM's the airline with the difference. The airline that cares, start to finish, in the air and on the ground.



# 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 for Port and Harbor's people, May 6-12 next year. Will we be flying you there?



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# *The Eighth Conference, Amsterdam / Rotterdam*

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## **"Floriade '72"**

On Sunday, October 1st, Floriade '72, Amsterdam's six-month-long floral extravaganza closed after bringing millions of flower lovers from all over the worlds to see its glories. However, participants in the 8th IAPH Conference will be able to see much of the splendor of Floriade as much of the 200 acre site—adjoining the RAI Congress Centre where most IAPH meetings are to be held—will be turned into a park for the benefit of the citizens of Amsterdam—and its visitors.

Holland is indeed a land of flowers and bulbs and out flowers account for a growing sector of the national export. Holland's flower "industry" is situated midway be-

tween the bustling activity in the Ports of Rotterdam and Amsterdam, and congress delegates will be able to see much of this colorful activity while travelling either by auto or train between Amsterdam and Rotterdam.

A special feature of the Ladies Events will be a trip to Keukenhof, showplace of many of Holland's top flower producers and a top tourist attraction in its own right. Keukenhof—the name means "kitchen garden", for the site was indeed the kitchen garden of a now demolished castle—is in full bloom in early May, at the time of the IAPH meeting.

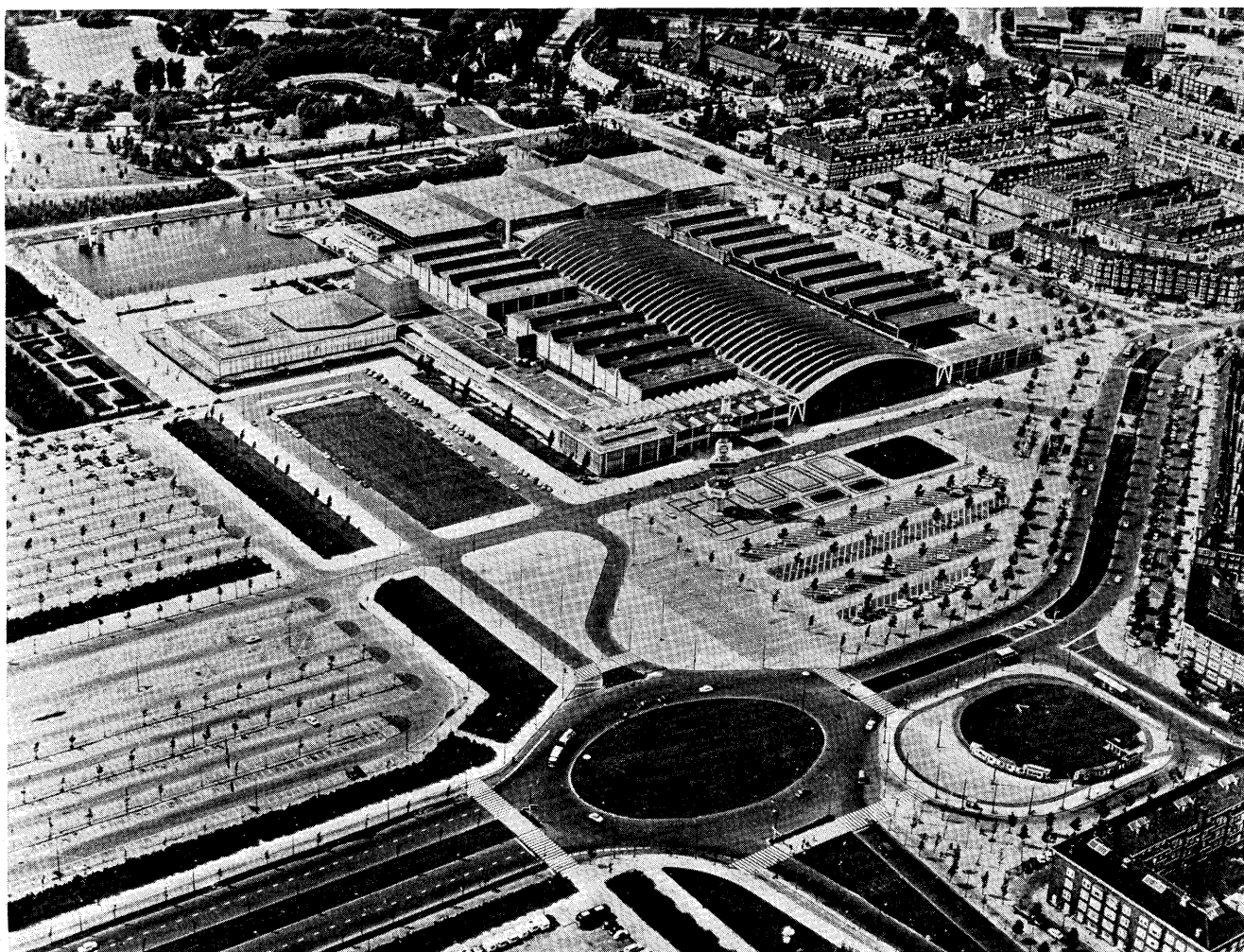
Flowers do play a large role in Holland and this is evidenced by the colorful windowboxes seen in many Dutch houses as well as in the pots

of flowers placed by merchants and municipal authorities in the streets and railway stations of most Dutch towns. Street stalls are seen almost everywhere and the flowers are amazingly inexpensive.

## **RAI Congress Center**

Most of the meetings and conferences of the 8th Conference of the International Association of Ports and Harbors will take place in Amsterdam's RAI Congress Center, one of the largest in Europe.

The RAI Congress Center is part of the vast RAI Exhibition and Congress Center, site of scores of meetings and exhibitions each year. The combined congress and exhibition halls of the RAI have a total area of 70,000 square metres and



International Congress Center RAI Amsterdam.



offer accommodation to meetings and congresses of 10 to 10,000 participants.

Recently, the RAI Congress Centre played host to the 10th ASTA (American Society of Travel Agents) Congress with more than 3,000 participants and scores of separate exhibitions. Amsterdam now has more than 15,000 first class hotel rooms, many of which are within walking distance of the RAI.

The IAPH Conference will take place mostly in the Main Hall which has a maximum capacity of 1,300 persons with an additional 220 in the balcony.

Working meetings which provide each chair with a desk reduce seating capacity to 650. The technical facilities are impressive and provide for wired simultaneous interpretation apparatus with a maximum of six channels, projectors for 35 and 16 mm film, slides and overhead projection as well as booths for the Press, Radio and Television personnel.

The RAI Exhibition Centre celebrated its 10th anniversary earlier this year and the adjoining Congress facilities were opened in January, 1965. Aside from the Main Hall, there are about a dozen other meeting rooms, for committee talks. There is a registration desk with 1,600 mail and document pigeon holes for congress delegates as well as banking and postal facilities. The RAI facilities include several restaurants and cafeterias with variable capacities of up to 1,500 people at one sitting.

The RAI Exhibition and Congress Centre is ideally situated near the soon-to-be completed ring road around Amsterdam which joins high-



Main Hall of RAI Congress Center Amsterdam.

ways to Schiphol Airport, The Hague and Rotterdam as well as other major motorways to other parts of the country. Modern hotels in the area include the Esso Motor Hotel, the Hilton, the Okura Amsterdam, first Japanese hotel in Europe, the Apollo and the latest, the 600-room Alpha Hotel, largest in the Netherlands.

The RAI is but a 10 minute drive to the historic heart of Amsterdam and less than an hour away from Rotterdam, where a day-long programme is scheduled.

### "A herring a day—"

Both Rotterdam and Amsterdam got their starts as fishing ports and

the North Sea herring has been a mainstay of the Dutch fishing fleet for centuries. Each year in early May, the "new herrings" appear in the street stalls—by tradition the first barrel is sent to H.M. Queen Juliana—and millions of Dutchmen adhere to the theory "a herring a day keeps the doctor away". So we hope that the 500 or so expected to attend the 8th IAPH conference will avail themselves of this unique Dutch experience. The fat new herrings are eaten raw, sometimes accompanied by raw onion, and are often washed down with a glass of Dutch genever in a nearby pub.

## ***N.P.C. Study of World Container and Roll-on Fleet***

The second issue of the National Ports Council's new **Bulletin\*** published today, is entirely devoted to a study by the Council's statisticians of the world container and roll-on fleet, which envisages a total world container capacity by the end of next year approaching 400,000 twenty-foot containers (or their equivalent in other sizes).

The joint authors of the report, Brian Wilson and Ted Hunter, respectively Chief Statistician and Principal Statistician of the Council, say that the world population of ships provides a substantial aggregate of container carrying capacity, made up of specialised large capacity ships of recent build with fast sailing speeds, supplemented by the potential carryings of new multi-purpose vessels and newer barge-carrying ships.

They do not consider a further increase in maximum containership size to be imminent, and they add that should an increase in size eventually come, it will almost certainly

be accompanied by radical change in ship design and loading methods. They point out that the 'third generation' containerships of the Trio consortium have already imposed severe requirements on existing container terminals to achieve desirably low ratios of port time to voyage time. At present the maximum beam of new ships is limited by the requirements of transit through the Panama Canal; should 'beamier', non-Panama-transiting vessels be developed this would produce further problems for the ports.

The report, which includes over 50 tables and diagrams, is an 'in depth' study of trends in types, sizes and other features of the world's container and roll-on fleet, undertaken to provide ports with some of the basic ship data needed to plan, operate and charge for container and roll-on facilities.

There has been an enormous growth in the number of specialised lift-on vessels, rising from a total of 77 at the beginning of 1965 to 743 at the end of 1971. By the end of next year the total is expected to be about 950. The established pattern among lift-on container vessels has been for the very smallest as well as for the very largest vessels to

be fully specialised with over 90 per cent of their total capacity available for container operations.

In addition, by the end of next year there are expected to be 900 multi-purpose ships in service, able to carry either full or substantial loads of containers, or alternatively other types of cargo, e.g. grain or packaged timber.

### **Short-Sea Services**

The writers point out that trends to increased size and speed in the smaller vessels engaged on short and near sea routes are increasing the demands on the handling capacity of ports and terminals dealing with these traffics, where so far it has often been possible to achieve acceptable production levels with scotch derrick equipment.

An increasing demand for roll-on facilities at ports can be foreseen with the continuing growth in the number of roll-on vessels in service and on order.

### **Ships with Own Gear**

The report also points out that there is a trend towards the design of ships with their own ramps or shipborne cranes which will enable ports not yet engaged in container and roll-on business to enter the field at comparatively little cost. Such ports might participate in the growing volume and range of transshipment operations as well as competing directly with the very-heavily-capitalised specialised container

(Continued on Next Page Bottom)

\* National Ports Council Bulletin No. 2 published by the National Ports Council, Commonwealth House, 1-19 New Oxford Street, London, WC1A 1DZ. Price £2.00.

## **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

## **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: Congress Centrum, Hamburg



# Orbiter Probe

## IAPH News:

### The Late Mr. Swanson

Biographical Note

On the 14th September 1972, the death occurred of Mr. V. G. Swanson, C.B.E., E.D., Chairman of the Melbourne Harbor Trust at his home in Melbourne, Victoria.

Mr. Swanson, who was 61 years of age, is survived by his wife, one son and a daughter.

In addition to the position of Chairman of the Melbourne Harbor Trust Commissioners which he had held since 1960, Mr. Swanson had been a Member of the Executive Committee of the International Association of Ports and Harbors since 1963, President for the period March 1969 to May 1971 and at the date of his death was Immediate Past President.

Mr. Swanson was also President of the Association of Australian Port and Marine Authorities.

Prior to his appointment to the Melbourne Trust, Mr. Swanson had had a distinguished career in the Public Service of the State of Victoria.

#### Port Charges

On port charges, the report comments on the growing interest in the possibility of changing to the Continental practice of basing charges on gross register tonnage, pointing out that any simple change to g.r.t. on an overall basis would disturb the present relativity of dues between lift-on and roll-on ships. To make a switch to g.r.t. with minimum disturbance it would be necessary to differentiate between the various types of vessel, and the authors comment:

'As different types of vessel make differing demands on ports and port facilities, this practice would seem to have much to recommend it anyway'.  
23rd August 1972.

and had been involved in the construction of most of the major water conservation projects undertaken in the State.

During the twelve years he served as Chairman of the Melbourne Harbor Trust, he piloted the Port through the most active period of development in its history, with the cargo throughput of the port growing from 9.5 million tons to 17 million tons and the capital value of the port being doubled as the result of works undertaken during his period of office.

In 1970 Mr. Swanson was awarded the C.B.E. by Her Majesty Queen Elizabeth in recognition of his outstanding contribution to port affairs. (Courtesy Mr. K. R. Truman, Secretary, The Melbourne Harbor Trust Commissioners, 25th September, 1972)

#### Travelers

• A reception was held in the names of Mr. Richard B. Montgomery, President, Mr. Eads Poitevent, Vice President, Board of Commissioners of the Port of New Orleans, Mr. James W. Martin, Deputy Port Director, Trade Development, and Mr. Hiroyuki Matsumoto, Director, Japan Trade Development, at the Hotel Okura (Ariake Room) on Tuesday, September 5, 1972, 6:00 to 8:00 p.m.

The same day at noon, the New Orleans Port officials invited Mr. Katsuya Yokoyama, IAPH Deputy Secretary, and IAPH staff members to a luncheon at the Crescent Restaurant in Shiba, Tokyo.

• Mr. Charles I. Hughes, Director, Trade Development, and Mr. James J. Scott, Jr., Director of Engineering, South Carolina State Ports Authority, visiting the Port of Yokohama on September 8, were received

by Mr. Eiichi Yamazoe, Director of Port and Harbor Bureau, who arranged for a tour of the Port for the two men who also visited Mr. Bungo Tsuda, Governor of Kanagawa Prefecture. On the following day Mr. Scott visited the IAPH Head Office in Tokyo and had conversation with Secretary General Mr. Toru Akiyama. That day the two men left Tokyo for Osaka and Kobe and then for flying to Hong Kong.

#### New S.G. of ICHCA

London, 11th September:—Jhr. H. L. van Suchtelen has been appointed Secretary-General of ICHCA (International Cargo Handling Co-ordination Association) from 1st September 1972.

Born in Java in 1933, he was educated in the Netherlands. During the war, he and his family were interned in Java and returned to Holland in 1945, where he completed his education at the University of Groningen.

After serving in the Netherlands army, Mr. van Suchtelen represented the interests of a leading Scandinavian shipowner with one of Rotterdam's shipping agencies.

In June 1969, he joined the ICHCA Central Office in London as Deputy Secretary-General to Lt. Col. Charles Earle, who retired at the end of May 1972.

Together with his wife and three small sons, Mr. van Suchtelen lives in the delightful Kent village of Otford, near Sevenoaks. (ICHCA Press Information)

#### Welland Canal

Ottawa:—On August 6, 1932, the SS LEMOYNE entered Lock 6 of the Welland Canal to officially open the fourth Canadian waterway to bridge the 326-foot rise of the Nia-

#### Correction

The article "NPC Book: N.P.C. Study of World Container and Roll-on Fleet" was indicated in the Contents page of Ports and Harbors, October 1972 issue for page 30, but it was not there. The article is printed on page 30 of this issue. Editor's apologies.

gara escarpment between Lakes Ontario and Erie.

On August 9, 1972, more than 200 distinguished Canadian and American shipping and government representatives boarded the 730-foot QUETICO to ride from Lock 3 to Lock 4 to celebrate the 40th Anniversary of the Canal.

The anniversary celebration was organized by the Dominion Marine Association in co-operation with The St. Lawrence Seaway Authority. It included the unveiling of a bronze plaque attached to a 3,000-pound anchor embedded in a concrete maple leaf at Lock 3.

The plaque, unveiled by DMA President John N. Paterson and Dr. Pierre Camu, Administrator, Canadian Marine Transportation Administration, reads:

"Welland Ship Canal—This plaque, erected to mark the 40th anniversary of the opening of the Welland Ship Canal to world shipping on August 6, 1932, commemorates the significant role this historic waterway and our inland fleet play in Canada's national life. This canal ranks among the great engineering achievements of this century. It forms part of the Great Lakes-St. Lawrence Seaway system, being the fourth to connect Lake Ontario and Lake Erie since the completion in 1829 of the original Welland Canal.

#### DOMINION MARINE ASSOCIATION

Representing Canada's ship owners  
August 9, 1972

Since the official opening in 1932, the Welland Canal has carried ships from more than 50 countries on more than 300,000 transits, handling in excess of one billion tons of cargo.

The first Welland Canal was opened in 1829 to put an end to the enormous task of portaging ships and equipment around Niagara Falls. It consisted of 40 wooden locks, each 110 feet long.

The present canal has eight locks, each capable of handling ships 730 feet long, 75'6" wide and carrying up to 30,000 tons of cargo. (Monthly Traffic Review, The St. Lawrence Seaway Authority)

#### New York manager

Baltimore, Md., August 29:—The

Maryland Port Administration today announced the appointment of Anthony R. Barber as regional manager of its New York Trade Development office.

In his new position, Mr. Barber succeeds Joseph J. Giancola who was recently promoted to MPA Director of Trade Development. Both appointments are effective September 1, 1972, according to Joseph L. Stanton, Maryland Port Administrator.

As regional manager, Mr. Barber's duties include the promotion of the port of Baltimore through the active solicitation of international trade moving in the greater New York territory. Additionally, he carries out duties and assignments delegated by the Director of Trade Development.

The New York office is one of six trade development locations which the Port Administration, an agency of the Maryland Department of Transportation, maintains outside Baltimore. The others are in Chicago, Ill., and Pittsburgh, Pa., stateside; and Brussels, Belgium; London; England; and Tokyo, Japan, overseas.

A trade and traffic specialist who previously worked for the MPA as assistant regional manager in New York from 1967-69, Mr. Barber brings to his key assignment an extensive background in the foreign traffic field.

The 32-year old native of Brooklyn, N.Y. attended Brooklyn College and the Academy of Advanced Traffic, where he studied economics and transportation. From 1958-62, he worked as a traffic coordinator in the chemicals and metals division of the Bunge Corporation in New York, where he gained a knowledge of domestic and foreign shipping and import procedures.

In 1962, he joined Parsons and Whittemore, Inc., a New York-based pulp and paper mill builder and machine manufacturer, as assistant traffic manager. He was promoted to traffic manager by the firm in 1964.

After serving for two years as MPA assistant regional manager in New York, Mr. Barber resigned in 1969 to accept a position with sea-Land Service, Inc. His most recent position there was New York City

sales manager.

Mr. Barber is married and a resident of Scotch Plains, New Jersey. (News from Maryland Port Administration)

#### CMANC on ecology

Los Angeles, September 18:—The increasing effects of environmental safeguards on California navigation projects will be considered by public and industry officials including representatives of all of the Golden State's commercial harbors and major marinas when they meet Friday (September 22) in San Diego.

More than 60 port directors, engineers, public works officials and related industry members of the California Marine Affairs and Navigation Conference (CMANC) will hear Brig. Gen. George Fink, South Pacific Division, Army Engineers, describe the process by which the Federal Government determines the feasibility of harbor projects.

A report on the state's new policies for reviewing required "environmental impact statements" on all water projects, will be submitted to CMANC by Norman Hill of the California Resources Agency.

L.L. Whiteneck, president of CMANC and chief harbor engineer for the Port of Los Angeles, will summarize the Conference's efforts to seek relief from difficult "hold and save harmless" assurances Federally required of local sponsors for ports and marinas.

A special force program to obtain rational guidelines and procedures for disposing of dredging spoils, now required in most cases to be hauled 30 miles to sea in the case of Golden Gate region channel maintenance, will be reported upon by Frank Boerger, former San Francisco district Army Engineer.

The Conference, founded in 1956, represents all California ports and small craft harbors in seeking Federal studies and funding for maintaining and improving navigation projects. At its fall San Diego meeting, members will also adopt recommendations for appropriations to be sought in the next U.S. Congress for almost 60 projects ranging from the Mexico border to the Oregon state line. (Port of Los Angeles)

## Control plan opposed

Los Angeles, August 24:—Opposition to the Coastal Zone Conservation Initiative has been voted unanimously by the Los Angeles Board of Harbor Commissioners.

The position was taken at the Wednesday (August 23) meeting of the Harbor Board after review of a lengthy analysis of the measure, prepared at their request by Assistant City Attorney Nowland C. Hong.

Opposition to the Initiative (proposition No. 20 on the ballot) is hinged mainly on the adverse effects it would have on the further necessary development of the Port, according to the attorney's analysis.

In his report to the Harbor Commissioners, Hong stated that, "if the initiative measure is passed, there is a great likelihood that the Port of Los Angeles would be prohibited from developing much of its properties to meet the new advances in the steamship industry. Serious consideration has been given by your Board and the Corps of Army Engineers to greater dredging of the harbor in order to accommodate the larger vessels which are now being used and which are presently being constructed."

Hong had pointed out, in his report, that permits would be required for any developments in the coastal zone, and that they would be granted by regional and state commissions to be established by the proposed initiative.

He said that any appeals from adverse decisions by the regional commission could result in delays ranging from two years to the life of the proposed measure, which would terminate in 1976.

The motion to oppose the initiative was made by Harbor Commissioner Frank C. Sullivan, and seconded by John J. Royal, immediate past president of the Board.

The secretary to the Harbor Commission was instructed to draft a resolution opposing the measure and to send copies of it, along with Hong's analysis, to all parties concerned. (Port of Los Angeles)

## Better LASH terminal

Los Angeles, August 22:—Even more rapid handling in the future

# Fiscal 1971-72 at New Orleans Was A Year of Progress

Port of New Orleans News Release

New Orleans, La., September 14:—Fiscal 1971-72 was "a year of gratifying progress" according to the annual report recently submitted to the governor of Louisiana by the Board of Commissioners of the Port of New Orleans.

In his letter to Governor Edwin W. Edwards, Board President Richard B. Montgomery Jr. stated that, although the total volume of cargo handled at public facilities dropped seven percent for the fiscal year, there were substantial increases in several important categories of cargo. Cotton exports increased 77 percent; grain exports were up 20 percent, and coffee imports were up 19 percent. The number of containers handled increased by 66 percent. The port now handles more than 4,300 containers a month.

Montgomery stated that the fac-

tors contributing to the decline in general cargo tonnage were the United States longshoreman strike in late 1971, the imposition of import surcharges, the instability of international monetary affairs, and a maritime strike in Japan, which is the port's principal trade partner.

The Port of New Orleans continues as the second port in the United States in tonnage of waterborne cargo and value of foreign cargo. It is the largest industry in Louisiana, contributing close to two billion dollars a year to the state's economy.

During fiscal 1971-72, the port was awarded the President's E Star Award for "continued superior performance" in furthering the sale of United States products overseas. New Orleans is the only United States port to have received both

of cargo at the Port of Los Angeles received a boost today (August 23) as the Board of Harbor Commissioners approved certain designs and plans for a Lighter-Aboard-Ship (LASH) terminal.

Pacific Far East Line, already engaged in LASH activity across the Port's Main Channel from the proposed new terminal, was issued a nonexclusive preferential berth assignment at the site located south of the Vincent Thomas Bridge at Berths 232 C, D and E, and 233-235.

The plans call for building a reinforced concrete wharf, a combination cargo control tower and longshoremen's toilet facility, and a gatehouse including office and customs accommodations. Also to be installed are backland improvements such as heavy-duty paving, floodlighting, and utilities for electricity, water, storm drains and sewers.

equipped with a large crane capable of unloading cargo barges into the sea outside a harbor. The watertight barges then may be towed into port by smaller craft.

Among the major advantages of the system is that goods may be shipped to a small harbor otherwise not able to accept a large ship. The mother ship is also capable of transporting conventional container vans and the facilities to be constructed at the Port of Los Angeles will provide for the handling of these vans as well as the barges.

Of principal importance is that in-port or discharge time may be cut as much as 90 percent, and that general shipping time on certain routes might be sliced up to 70 percent.

LASH barges have been standardized to compliment containers, and can accommodate almost any type of cargo.

Pacific Far East Line currently has five LASH ships in its fleet, and a sixth will be added in the near future. (Port of Los Angeles)

the E Award (in 1962) and the E Star Award.

The port spent \$6.2 million in new construction and major rehabilitation during the fiscal year. Much of this sum was devoted to completion of the first berth and commencement of the second berth at the France Road Container Terminal. Container marshalling yards have been introduced at Florida Avenue and Harmony Street wharves. Two barge fleeting facilities to accommodate LASH and SEABEE barges have been built on the Mississippi River across from Nashville Avenue wharf. Additional ground storage space has been provided at the Public Bulk Terminal, and new cargo handling equipment is being installed there. Major electrical work was completed at four wharves, and six others are being rehabilitated now. Eight wharves were painted in bright colors in keeping with the trend to modernize the general appearance of the port's 25 miles of facilities.

Major projects in progress at the port include promotion of a new ship lock and canal for St. Bernard parish, the purchase of Stuyvesant Docks from Illinois Central Railroad and conversion of the docks to berths for barge-carrying ships, and provision of roll-on/roll-off facilities for vehicular cargo at Florida Avenue wharf.

At the Foreign-Trade Zone No. 2 the value of merchandise handled was \$80.3 million, a \$10.6 million increase over last year. The facility produces an annual operating gain and uses 84 percent of its available space for income-producing purposes. The Zone served 164 businesses during the fiscal year.

The annual report also cited improvements to the Harbor Police communications system and national recognition of the unexcelled security system the Harbor Police provides for shippers using the port. The port's two fireboats, in addition to their routine surveillance work, continued to be used as harbor tour vessels for local civic groups participating in the "Know Your Port" campaign.

The Trade Development Department continued to promote import-export trade through the port, operating from offices in New Orleans,

St. Louis, Chicago, New York, Tokyo, Hong Kong, Melbourne, London, Brussels and Panama City.

### Port Authority renamed

New York, N.Y., September 19:—The Port of New York Authority has become The Port Authority of New York and New Jersey in accordance with legislation recently passed by the two states. The Port of New York District, as defined by the Port Compact of 1921 between the States of New York and New Jersey, encompasses an area embracing parts of both states within an approximate 25 mile radius of the Statue of Liberty. The Port has a water frontage of 750 miles of which 460 miles are in New York and 290 miles in New Jersey.

The Port Authority is responsible for development and operation of transportation, terminal and other facilities of commerce, and for the promotion and protection of the commerce of the bi-state Port.

The Port Authority facilities comprise:

#### RAIL AND BUS COMMUTER FACILITIES

Port Authority Bus Terminal  
George Washington Bridge Bus Station  
Port Authority Trans-Hudson (PATH) System

#### TUNNELS AND BRIDGES

Bayonne Bridge, George Washington Bridge, Goethals Bridge, Outerbridge Crossing, Holland Tunnel, Lincoln Tunnel

#### AIR TERMINALS

John F. Kennedy International Airport, LaGuardia Airport, Newark Airport, Teterboro Airport, Port Authority-West 30th Street Heliport, Port Authority-Downtown Heliport

#### PIERS AND DOCKS AND

#### OTHER FACILITIES

Brooklyn-Port Authority Marine Terminal, Columbia Street Marine Terminal, Elizabeth-Port Authority Marine Terminal, Erie Basin-Port Authority Marine Terminal, Hoboken-Port Authority Marine Terminal, Port Newark, Passenger Ship Terminal (under construction), Newark Union Motor Truck Terminal, New York Union Motor Truck Terminal, Port Authority Building, The World

#### Trade Center

To promote the commerce of the Port, a network of Trade Development Offices is maintained in important international traffic generating areas in the United States and abroad. The staff members of these offices provide exporters and importers with up-to-date information on the services and facilities which can be best used to speed the flow of World Trade through the New York/New Jersey Port.

Port of New York and New Jersey Trade Development Offices are located in the following cities:

New York      London  
Chicago        San Juan  
Cleveland     Tokyo  
Pittsburgh    Zurich  
Washington

(News from The Port Authority of New York and New Jersey)

### Greater Port Newark

New York, Sept. 14:—Expansion of Port Newark by The Port Authority of New York and New Jersey to accommodate the steadily growing volume of world-wide waterborne commerce is contemplated by an agreement with the Penn Central Transportation Company which would provide new cargo facilities for port users, new revenues to the railroad, and tax revenues which could grow to almost \$1 million a year to the City of Newark. The consent of the City of Newark for the proposed expansion is required.

Announcement of the plan for the busy New Jersey seaport was made today by Chairman James C. Kellogg, 3rd, following the monthly Board meeting.

Under the proposal, the Port Authority would lease from Penn Central for an initial term of 40 years a 95.6 acre parcel of land north of the New Jersey Turnpike Extension and west of Doremus Avenue at an average annual rental of \$226,635. The Port Authority would obligate itself to make additional rental payments equal to the taxes due to the City of Newark from the railroad on the area. In the first year, these additional payments would total about \$55,000, and could grow to almost \$1 million a year upon completion of the proposed development.

# Trade Center, Trade Fair Offices In Seattle Being Expanded

News Release from Port of Seattle

On this site, the bi-state agency would build about 830,000 square feet of cargo distribution and storage space, and provide about 2.3 million square feet of paved upland area at an estimated project cost of \$19,000,000. These improvements would be owned by the Penn Central Transportation Company, which would provide rail service to the area.

The Penn Central Transportation Company is in reorganization under the jurisdiction of the Federal District Court and approval by the Court is necessary for the proposed agreement to become effective. In addition, the agreement must be approved by the Board of Directors of the United Railroad and Canal Co., which owns the property and has leased it for 999 years to Penn Central Transportation Company.

## Development Intensified

Development of Port Newark and the adjacent Elizabeth Marine Terminal by the Port Authority has been intensified to insure that facilities would be available to handle the wide variety of products produced and used by New Jersey industries. The volume of production by these industries now ranks New Jersey eighth of the 50 States in dollar value of exports.

The 789-acre Port Newark, developed by the Port Authority under a lease with the City of Newark since 1948, provides diversified facilities for handling all types of cargoes shipped in international commerce. Upon completion in 1976 of development programs now under way, Port Newark will have over 4¼ miles of berthing space, 416 acres of paved upland area, over 50 cargo storage and distribution buildings and numerous specialized cargo installations. The Authority's investment in Port Newark will amount to \$185,000,000, and the annual cargo handling capacity will be increased to six million tons.

The local economic impact of these marine terminals is significant. About 300,000 workers, or 37 per cent of all manufacturing employees in New Jersey, produce export products moving through these facilities. Over 7,200 men and women earning \$57 million a year handle and

Seattle, Washington, September 10:—New homes and expanded futures for two agencies closely identified with international trade were announced yesterday by officials of the Port of Seattle and Washington State International Trade Fair (WSITF).

The two groups have agreed that the Trade Fair will become an autonomous unit, separate from the Port, and the Port's World Trade Center will establish a new program at Sea-Tac International Airport. Robert N. Turner, who has been serving as executive director of both organizations, will resign from the Port of Seattle to become fulltime managing director of the International Trade Fair. Miss Patricia Baillargeon, who has been assistant director of both for the past five years, will assume the directorship of the World Trade Center. The Center will become a part of the Trade Development Department and will operate out of the Port's Bell Street headquarters.

Announcement of the new status of the two agencies was released jointly by Frank R. Kitchell, Seattle Port Commissioner and long-time leader in the World Trade Center movement in Seattle and Henry Simonson, Seattle manufacturer and president of the Washington State International Trade Fair.

"Establishment of the WSITF as a separate, independent organization has been a goal of ours for a number of years," said Simonson. With the constant assistance of the Port of Seattle, both in financial support and in providing manpower for the Trade Fair's management, we have

process the goods at the seaports. An additional 800 men are busy working on construction of the additional facilities needed to meet the demand of increased port operation. (News from The Port Authority of New York and New Jersey)

grown—statewide—to a point where our future as one of the nation's outstanding trade fairs is completely assured. Unimart '72 was a resounding success, the greatest since the Fair was established in 1951 by the Port of Seattle. We have a promise of continued and increased Port support. This, plus our expanded membership throughout the state and the tremendous assistance we receive from the Washington State Department of Commerce and Economic Development, means we can continue a program of major trade fairs here as well as participate in the larger of the European, Asiatic and Pacific Rim fairs as we have done in recent years."

In the past 22 years, the WSITF has been a major exhibitor at fairs in Munich, Sydney, Brussels, Tokyo, Kobe and Osaka. More than 150 Washington State manufacturers and exporters have been joint participants in these events, racking up millions of dollars in export sales. The program has had the wholehearted support of Governor Evans, with extensive dollar and manpower assistance furnished by the State. The WSITF has also been awarded The Presidential "E" Star Award for continued excellence in promoting Washington State exports.

Commissioner Kitchell stated "The launching of the Port's World Trade Center activities at Sea-Tac International Airport is a result of the continuing emphasis by Port officials to provide World Trade Center services to those engaged in foreign trade, to both domestic traders and those from overseas." He complimented Turner on the growth of the Center, which has been administered as a separate department of the Port. "The World Trade Center has been of assistance to not only the sales efforts of the Port of Seattle but to countless business men interested in import and export op-

portunities," said Kitchell. "It has become very apparent in recent years that most world traders arrive and depart from this region via Sea-Tac International. We have programmed our development of the terminal to assure us the finest possible facilities for the World Trade Center activities there. Miss Baillargeon's extensive knowledge and experience in this field, coupled with the World Trade Center's affiliation with our Trade Development department, will enable us to give the best possible service to international tradesmen."

"Selected trade publications now housed in the Port's library will be moved to the Center's quarters at Sea-Tac", Kitchell said. Research and stenographic assistance will be available at the Sea-Tac Center, as well as meeting rooms for travelling businessmen. The Port's Trade Development department, which will supervise the World Trade Center activity, is under the direction of Robert O. Edwards.

Opening of the new Trade Center and Trade Fair offices are set for January, 1973. Location of the new Trade Fair offices will be announced later.

### Three floating derricks

New York, August 30:—Shippers using the New Jersey-New York Port have been assured that vital floating heavy derrick operations in the bi-state harbor will continue to be available. Three vessels, capable of handling lifts of up to 500 tons, have been purchased by The Port Authority of New York and New Jersey from the heavy construction firm of Raymond International, Inc. which had discontinued this specialized service. Retention of the equipment will assure the preeminence of the Port of New York in handling heavy lift shipments and related cargoes.

The three vessels — "Century," with a lift capacity of 500 tons, "Monarch," which can lift 250 tons, and "Construction," 150 tons—complement a large Port of New York-based fleet of floating derricks and shore-based mobile and fixed crane services provided by several operators.

The capability of the bi-state harbor to provide a broad range of

specialized lift services assures shippers of individualized attention to their specific requirements in routing heavy lift shipments via the Port of New York. Hoffman Rigging & Crane Service, Inc. has been engaged by the Port Authority to operate the newly acquired vessels. (News from The Port Authority of New York and New Jersey)

### Annual luncheon

Philadelphia, Pa., July 23:—The annual Ports of Philadelphia Day luncheon will be held on Friday, Oct. 20, at the Packer Avenue Marine Terminal, Delaware and Packer aves. Mayor Frank L. Rizzo is honorary chairman of the event and Frederic A. Potts, chairman of the board of the Philadelphia Port Corporation, is chairman.

In announcing the event, Commerce Director Harry R. Belinger said that some 1,100 members of the Port and civic community in the Delaware Valley are being invited to the luncheon which marks the 290th anniversary of the arrival of William Penn at the Philadelphia harbor. The luncheon will also serve to focus public attention on the Port as an important element in the economic vitality of this region, he said.

The Philadelphia Port Corporation will coordinate the activities of the Day which will include a reception, luncheon, and dedication ceremony in the new transit shed located adjacent to the recently completed container and roll-on/roll-off berths at Packer Avenue Marine Terminal. Special industrial exhibits will be on the site on Oct. 20, and mementos of the occasion will be presented to all who attend.

Last year's event, which marked the dedication of the modern new Tioga Marine Terminal, drew over 1000 port and community leaders. (City of Philadelphia News Release)

### USDA cargo of oats

San Diego, Calif., September 8:—The United States Department of Agriculture has designated 890 tons of rolled oats, currently being stored at the 10th Avenue marine terminal, to be shipped to the Philippines.

The States Line ship, S/S MICHIGAN, will pick up the cargo in San

Diego on September 20 and then transport it to the Philippines for distribution in that country by the Catholic Relief Agency and Church World Services. (Port of San Diego News Release)

### European Port Seminar

Rotterdam:—The European Port Seminar organized by two Rotterdam Junior Chambers, took place in Rotterdam on 12th and 13th May, 1972. Over 200 persons from 15 countries discussed the problems concerning the transport in information and the information in transport.

From the Report of the Seminar is quoted below the motivation speech of Mr. Joop Bonebakker, Congress Chairman:

The idea to hold a European Port Seminar originates from a general desire among members of the Rotterdam Junior Chambers engaged in the transportation industry to pay an active contribution to finding solutions for the many problems existing in this industry. It is our contention that the younger generation should have the opportunity to develop and voice new ideas. In the International Junior Chamber organisation with its members between 25 and 40 years of age we have an ideal platform for such action.

The seminar theme "transPORT in information, information in transPORT" points to the interrelation between the transportation flow and the corresponding information flow through ports. Modern communication systems and data processing machinery, which are now widely being introduced, will have a great impact on the transportation industry and lead to major structural and social changes in the ports.

The theme will be dealt with in four subjects shown on the next pages. In order to ensure an active and substantial Junior Chamber contribution to the seminar theme, the Chambers of Amsterdam, Hamburg, Le Havre and London will present papers on the four aspects of the theme. The seminar is an ambitious project: for Junior Chamber In-

ternational to show that it is able to produce valuable contributions to major international problems; for the Junior Chambers Rotterdam to prove their organizing abilities.

That is the challenge.

The Report book may be obtained for Dfl. 7.50 a piece from Mr. C. A. Sprenger, Chamber of Commerce and Industry, Beursgebouw, Cool-singel 58, Rotterdam.

### Confab on pipe transport

London, 20th September:—Mr. N. N. B. Ordman, Assistant Director-General of the Port of London Authority, today (Wednesday September 20) opened the second International Conference on the Hydraulic Transport of Solids in Pipes at Warwick University by reminding delegates of the environmental advantages of pipeline transport.

Addressing some 160 delegates from 21 countries who in the three-day conference will be dealing with 41 technical papers, Mr. Ordman welcomed the opportunity this would give for a healthy cross-fertilisation of ideas. Complimenting the British Hydromechanics Research Association, the conference organisers, on the assembling of such important and wide spread expertise he said that he was sure that in grappling with the many detailed technical problems they would be mindful of both economic and social benefits which their research could produce.

He cited the scarring of countryside by conventional rail and road transportation plus the associated noise and pollution risks which could be obviated unobtrusively and environmentally isolated pipeline systems.

Mr. Ordman outlined to the conference the proposed Maplin project in the Thames Estuary describing it as "a hydro-transport project of the first magnitude" in reclaiming some 7,000 hectares of land from the sea to create London's third airport and major deepwater seaport for super tankers and the next generation of containerships. He described the plan to serve the oil refineries up-river from the new seaport by a pipeline network giving the environmental plusses of obviating risks of congestion of shipping channels, collisions and pollution by



**Antwerp:—MORE GRAIN CAPACITY**—Photograph shows a grain terminal with a 50,000 ton silo and, on a pier, five elevators each having a capacity of 400 tons an hour. There is also an elevator of 150 tons an hour and a loading plant with a capacity of 900 tons an hour. The subject terminal started an expansion programme which will increase the storage capacity by 30,000 tons. This will bring total grain storage capacity in the port of Antwerp to 165,000 tons. Last year the grain traffic amounted to 2.6 million metric tons, an increase of 30% as compared with 1970. (Port of Antwerp)

oil spillage.

He called for further investigation of application of hydro-transport as a means of moving a wide variety of both solids and fluids in ways which will reduce the despoilation of the environment. (News from PLA)

### Traffic Office moved

London, 14th September:—The Port of London Authority's Traffic

Co-ordination Centre is moving on Saturday, September 16th from Thames House, Gallions to new accommodation in the PLA Thames Navigation Building at Gravesend.

From 1000 hours on Saturday, the operations of the PLA Traffic Co-ordination Centre will be carried out from the Gravesend centre on new specially installed telephone lines. These are:

Traffic Co-ordinator



### INDIA & MILLWALL DOCKS

This group of docks is situated on the Isle of Dogs, bounded on three sides by the great sweep of Limehouse, Greenwich and Blackwall Reaches.

Some 40 shipping companies based on the India & Millwall Docks operate regular services between London and America, E. and S. Africa, the West Indies, Scandinavia, the Mediterranean ports, the Persian Gulf, the Middle East, the Far East, the Canary Islands, Spain, Portugal, Italy, Yugoslavia, Bulgaria and the Continent.

The main imports are green fruit, vegetables, softwood, hardwood, wine, paper pulp and boards, hides and skins, canned goods, rubber, hemp and manufactured goods from the Far East.

The Port Authority are the main employer of labour in these docks with a total of 1,257 dock workers. Five stevedoring companies employ a further total of 1,043 dock workers. The PLA perform all quay work except at berths leased to Fred Olsen, Timber Wharves Ltd. and McDougalls Ltd. Ship discharge is carried out by the PLA in the North, Middle and Main Sections and by Stevedoring Contractors in the South Section. In all Sections the loading of vessels is effected by Stevedoring Contractors.

Shipping movements average 300 per month. Approximately 800 vehicles with exports arrive at these docks each day. (Port of London Authority)

Gravesend (0474) 68111  
Assistant Traffic Co-ordinator  
Gravesend (0474) 60311  
Shipping Movements, Tug Hire,  
River Moorings  
Gravesend (0474) 60311  
(3 lines)  
General Shipping Enquiries and  
Records  
Gravesend (0474) 68111  
(2 lines)  
The new telex number is: 262880

The Traffic Co-ordination Centre is continuously manned to give 24 hour daily service and deals with

the programming of all vessel arrivals and departures at the docks and the within-dock ship movements. It also deals with the allocation of river moorings, provision of tugs, dummy pontoons and other ancillary marine services for ships in dock.

Ship owners, agents stevedores and ship masters are asked to direct their information about ships E.T.As and E.T.Ds. to the centre using the new telephone numbers from 1000 hours Saturday.

The move is designed to achieve even greater efficiency by placing

the Traffic Co-ordination function alongside the Thames Navigation Service operations room and so give a better service to port users. (News from PLA)

### Container depot at Hull

London, 22 September (B.T.D.-B.) :—A new depot for 'stuffing and stripping' containers will be brought into operation by the British Transport Docks Board at Hull docks on Monday morning (25 September) following the successful completion of negotiations with unions and port users.

Announcing this today (Friday, 22 September), Mr. John Williams, Hull's docks manager, said that by opening its own groupage depot for container traffic within the dock boundaries, the Docks Board was fulfilling an undertaking given to dockers in the recent Aldington-Jones report that port authorities would do all in their power to attract additional container work back into the docks.

"This is a step towards that end which will guarantee a number of jobs for the future, although at this stage the number is fairly small," Mr. Williams said.

"But if the port's unit load traffic continues to build up as we expect it to, and the new depot can produce the sort of service our customers require, I would expect to see a steady expansion of container groupage work at Hull Docks," he said.

The new depot will be located at No. 16 Shed on the south side of Queen Elizabeth Dock, near the container and roll-on/roll-off berths.

Besides consolidating and breaking down full container loads, the depot will also act as a Customs clearance centre, stripping containers for Customs inspection as required.

Normal hours of business will be 7 a.m.—9 p.m., Monday to Friday, but weekend working will be available.

### Harbour Master of Humber

London, 30 August (B.T.D.B.) :—The British Transport Docks Board have appointed Captain Duncan Oowler Robertson to the newly-created post of Harbour Master, Humber, with effect from Friday, 1 September.



Captain Robertson joins the Docks Board from the port Manchester, where he has been Deputy Harbour Master of the Manchester Ship Canal Company since May 1970.

In his new post, Captain Robertson will be responsible to the Port Director, Humber, for all navigational and marine matters in the estuary, as well as providing specialist advice to the Docks Managers of the Humber Ports.

His responsibilities will include the running of the Humber Ports Operation and Information Service; assisting in the preparation of schemes for dealing with marine emergencies; and advising the Port Director on navigational aspects of proposed development projects.

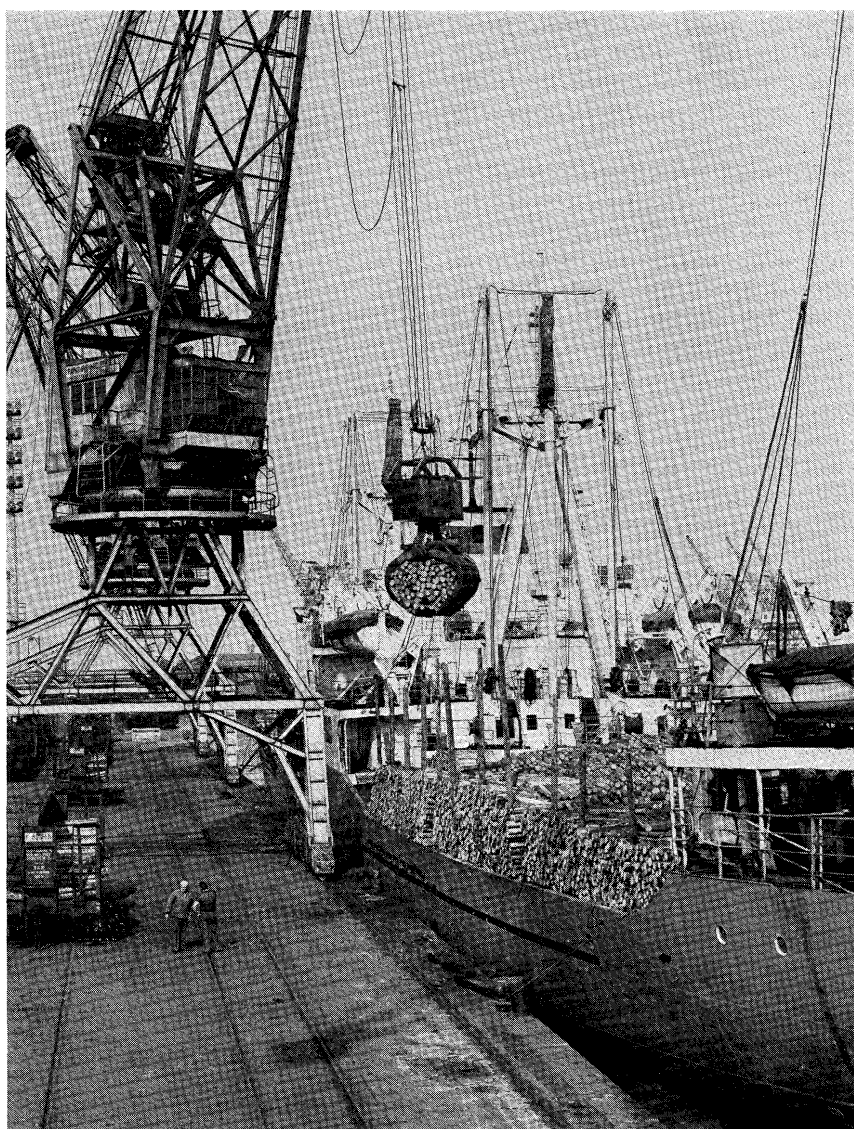
As the Docks Board's appointed Harbour Master he will be vested with the authority conferred on his office under any Public or Local Act applicable to the Humber and the Humber Ports, including the Conservancy Acts and the British Transport Docks Act, 1972, which contains new powers for the regulation of navigation in the Humber.

Captain Robertson, who was born in Liverpool in 1925, is married with two children. Before joining the Manchester Ship Canal Company in 1961, he served with the Bowring Steamship Company for nearly 20 years, spending five of these as Master of large foreign-going bulk carriers, cargo vessels and tankers. He is a Member of the Honourable Company of Master Mariners and also an Associate of the Royal Institute of Naval Architects.

### Port of Le Havre Flashes

**Giant tankers:** 57 tankers of over 300,000 tons are now on order or being built in the world. 48 of them are of between 300,000 and 350,000 tons, 5 of over 350,000 tons, 3 of 477,000 tons and 1 of 500,000 tons. Though none of them could use the Port of Le Havre itself, they will all be able to berth at the future Antifer oil terminal, where the preliminary drilling was concluded on May 23rd.

**Seagull Ferries:** Last month saw the start of a new scheduled service for the transport of vehicles between Le Havre and Southampton. The



Port of Dunkirk:—Discharge of wood logs with special grips.

St. Christophe has been making the round trip daily since June 13th and will be joined in the second half of July by the St. George. Thereafter there will be two sailings daily in each direction.

In choosing Le Havre and Southampton as the terminals for their new line, Seagull Ferries were influenced by the proximity of both ports to important industrial zones as well as by their excellent road connections, including nearby motorways.

**3,000th Entry:** The 3,000th ship to enter harbour arrived on May 26th, a fortnight earlier than last year. She was the Danish freighter Bymos.

**U.S.A.-Le Havre in less than 5 days:** The German containership

Eurofreighter, sailing for sea-train on the North Atlantic run, recently broke a record. She reached Le Havre from New York in 4 days 23 hours 24 minutes, at an average speed of 27.2 knots, which is almost half a knot better than the previous record held by the Euroliner.

**1,000th Channel crossing:** We hear from Normandy Ferries, who operate a twice-daily service to Southampton, that their car-ferry Léopard made its thousandth crossing on July 2nd. Congratulations!

**New export service to the Far East:** On June 2nd the Bunga Tanjong, belonging to the Malaysian International Shipping Corporation of Kuala Lumpur, inaugurated a new regular monthly service from Le Havre for outward shipments

to Hong Kong and Japan. The Malaysian State line's ships already called at Le Havre with incoming loads and will naturally continue to do so.

**Investing for the future:** The rate of investment in the port of Le Havre has doubled in the last five years, even before any account is taken of the future Antifer oil terminal. For many more years to come the port will be humming with activity as vast new construction sites equip it for the leading role it is destined to play.

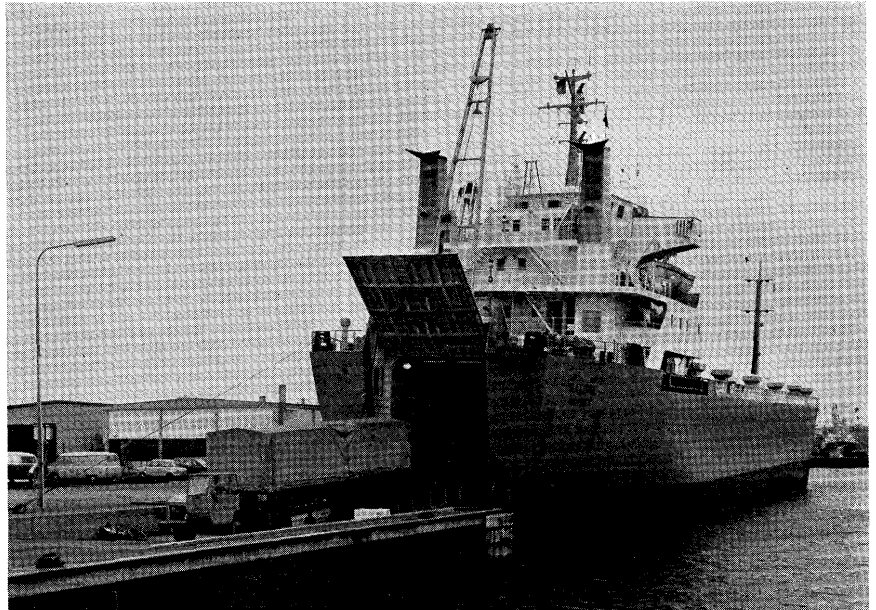
**Further rise in container traffic:** 7,700 containers were handled in April this year against 6,200 in April 1971. The total throughput of 31,000 containers during the first four months of 1972 compares with 24,000 during the same period last year.

**New container terminal:** The second container terminal is to be equipped with light towers of a special type, 100 ft high (30 m), but only 2 ft in diameter at the base (60 cms), and 1 ft in diameter at the top (30 cms). The lighting unit consists of a cluster of twelve projectors. Each tower has a guide rail to which a self-propelled electric lift can be attached capable of taking two people to the top.

**Delegation from Louisiana:** A trade mission from Louisiana led by Mr. Erik K. Johnsen, President of the Central Gulf Steamship Corporation, visited the port on May 15th. Shipping, industry and commerce were all represented and we gather that the harbour installations and the industrial zone created a very favourable impression indeed. (Port of Le Havre Flashes, July 1972)

## Facts About The Port of Copenhagen

Port of Copenhagen Authority



Roll-on/roll-off in The Free Port Nord. The cover picture of Ports and Harbors October issue showed the container terminal.

1971 represented another year of progress for the Port of Copenhagen. The upward trend in goods turnover has been maintained. The figures for 1969 were 11.9 mill. tons, for 1970, 12.3 mill. tons and for 1971, 12.7 mill. tons. The decrease in tonnage from 20.6 mill. NRT in 1970 to 18.8 mill. NRT in 1971, considered in conjunction with the volume of goods, indicates more rational utilization of cargo space.

The rise in goods turnover has been matched by a corresponding increase in the number of containers and trailers handled. The 1971 figures for containers and trailers handled were 22,000 and 5,000 respectively, a total of 27,000 units, or an increase of about 33% compared with 1970.

The centre for the roll-on/roll-off traffic is in the most northern part of the port, the Ferry Port Nord district, where development has continued constantly since 1968, so

that today the area covers about 130,000 square metres. In this particular area, apart from general cargo, 9,100 containers and trailers were handled in 1971, and in addition to several conventional freight routes calling at Copenhagen, there are roll-on/roll-off lines regularly serving ports in Norway, Sweden, Finland, Germany, England, France, and the United States.

In addition to the roll-on/roll-off traffic the stevedoring company. The Car-Ferry Terminal Ltd. has invested Dkr. 4.5 million in a lift-on/lift-off container terminal, which started operating primo September, 1972. This terminal includes a 25-ton container crane, a marshalling area of 50,000 square metres and warehouse space of 9,000 square metres.

Of the 22,000 containers referred to, 12,500 were handled in the Free Port, mainly at the Container Terminal. This terminal now serves

several container lines plying direct deep-sea routes and North European transshipment traffic. The total area of the terminal amounts to about 120,000 square metres.

Whilst the container traffic in the northern section of the Free Port has been concentrated on the Container Terminal, considerable volumes of general cargo are being gradually transferred to the central part of the Free Port, where, by the Atlas quay, a transit shed of about 15,000 square metres—the port's largest single-storeyed building—was opened in 1970.

South of the bridge "Sjællandsbrøen," in the South Harbour, the Port Authority has reclaimed areas for industrial sites. Since 1967 about 120,000 square metres have been filled in so that today the area here amounts to about 400,000 square metres.

Also in the eastern section of the port, which includes the oil harbour "Provøstenen," Burmeister & Wain's large shipyard and the new municipal power plant "Amagerværket," some increase of land is being effected. In the oil harbour an area of about 40,000 square metres has been filled in to provide parking space for the oil companies. In addition to this there are also plans for filling in about 75,000 square metres near the large pier head for leasing to oil companies, as sites for storage tanks.

For the time being an area is being filled in immediately north of "Amagerværket" for leasing to a building materials firm. If there is a demand for it, this area can be extended even further, as there is a possibility of procuring about 300,000 square metres of land with a quay length of about 900 metres.

An important question for the Port of Copenhagen Authority is the prevention of pollution. Some years ago floating material for removal of floating seaweed deposits etc. was acquired to keep the basins and approaches clear of such waste products.

An order has been placed for an oil separator to receive oil-contaminated discharge water from ships.

The Port Authority has lately, as

an extra service to tourist liners and freight ships calling at Copenhagen, made it possible for these to order containers for waste products to be placed alongside the ship.

The Port of Copenhagen Authority introduced in April, 1972 a Contact-Service. By dialling the Contact-Service's telephone number, 01 14 43 40, exporters are able to get information about the first departure or any other departure from Copenhagen to destinations all over the world. If no suitable direct connection can be pointed out, the Contact-Service will assist the customer in finding a way of re-routing his cargo. As far as known this is a unique assistance offered to shippers.

The port has continually carried out a comprehensive programme of modernization and extensions. Technological developments in forms of cargo transport necessitated extension of the northern sector of the port, including construction of the roll-on/roll-off and lift on/lift-off centre in the Ferry Port Nord district. This district also provided the ideal site for the Container Terminal in the Free Port, described earlier, and also the site for a spacious new transit warehouse, built in 1970.

Within a radius of one mile these combined projects have led to the creation of a port sector with an overall design to facilitate close interrelation of the various sections and their functions, to enable the Port of Copenhagen to enhance its position as an ideal centre for export and import, serving both deep-sea liner services and North European feeder traffic.

### ISSA Congress, Rouen-'72

Rouen, September 21:—The congress of the International Ship Suppliers Association (ISSA) on September 13, 14, 15 was characterized by three days of an intense activity. Working assemblies at the Chamber of Commerce of Rouen were alternated with bright manifestations.

Owing to the ISSA's local delegate, Mr. Pierre ISIDORE, general manager of the Société Générale

d'Approvisionnement et d'Équipements (SGAE), the most important ship suppliers in the port of Rouen, the organization of this international meeting was perfectly carried out. The City of Rouen, the Chamber of Commerce and the Port of Rouen Authority brought also contribution to the success of this manifestation.

The objects of ISSA, founded in 1956, are: to promote the economic interests of the ship suppliers; to promote contracts between the organizations of ship suppliers concerning questions of common interest; to establish contracts on an international level with the organizations of ship-owners; to represent ship suppliers on an international level. ISSA has established a standard of business practice in ship supplying known as "ISSA-Conditions". About 700 supplier firms in 240 ports are presently registered as ISSA's members.

Ship supplying activity, it may be recalled, consists to supply the ships with provisions, fresh water, spare parts, bunkers, lubricating oil, personal orders of crew members, etc. . . .

Twenty three nations were represented at the congress of Rouen by about 250 persons coming from a hundred of ship supplying firms. The most important delegations were Germany, Great Britain, Netherlands, France and Italy. Delegations from South Africa, Eastern Germany, Antigua, Bahrein, Belgium, Brazil, Bulgaria, Canada, Denmark, Finland, Greece, Malta, Poland, Portugal, Sri Lanka, Sweden, USSR, USA were also received.

Delegates were welcomed in Rouen by Mr. DEKYTSPOTTER, President of the Syndicat National des Approvisionneurs de Navires (French association of ship suppliers) and Mr. BURNEYAT, the ISSA's President.

Some major problems of ship supplying were discussed in working committees such as:

—receipts to be proof of delivery (final "addition", provisional receipt . . .)

—supplementary charges in case of unusual supplying conditions (i.e. during the week-end, by night, to ships which are not docking along-side a quay or

## Europe-Africa

- at anchor in a river...)
- standardisation of products, package...
- storing facilities aboard ships (accessibility...). Access to ships in ports, particularly in oil ports
- gratuities to ship crews
- standardisation of documentation (for computer use for instance).

From the discussions, it may be concluded that it is necessary to maintain a mutual comprehension between ship suppliers, shipping companies, port and customs authorities, in order to reach the professional objectives with the best efficacy.

Some particularly successful manifestations were greatly appreciated specially the gala-dinner ("Dîner à la Française") held on September, 13 (Halle aux Toiles, Rouen) and the luncheon "Reception Bovary" on September, 15 (Golf du Vaudreuil).

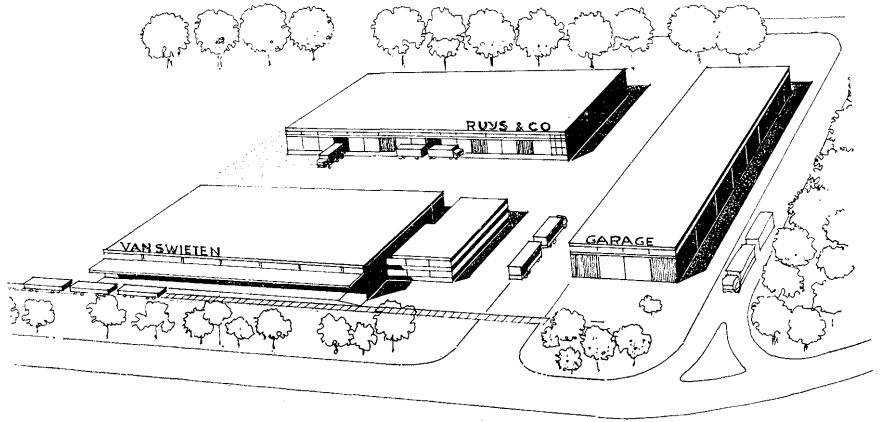
Bremen received the ISSA's congress in 1971. Amsterdam was generally given as the probable place for the 1973 general assembly. (Rouen Port News)

## Deepening of Weser

Bremen:—The dredging of the Outer Weser to deeper than its present 12 metres and of the Lower Weser (now 9 metres) is technically quite possible, according to the opinion of experts. The president of the Wasser-und Schifffahrtsdirektion, Bremen (Maritime Waterway Authorities), Ramacher, sees no problem at all in dredging the Outer Weser down to 14 metres. A further deepening to 16 metres would, with modern techniques, mean only a disproportionate increase in maintenance costs. (Bremen International 9-1972)

## Atom containership next?

Bremen:—The result of a study entitled "Nuclear-powered 80,000 h.p. Containerships" made by a German-Japanese shipyard group: nuclear energy propulsion is more economic for large, speedy containerships than is the conventional propulsion. Certainly still much research and development work is needed before the first atom-containership



## Int'l transport centre

Amsterdam, September 8:—Amsterdam Burgomaster Dr. I. Samkalden dedicated September 7, the construction of a new road haulage centre in the Western port areas. The large centre is expected to be readied by June, 1973.

At that time the road haulage firm, Van Swieten, will move into the new accommodations which adjoin the only two years old "Vervoerscentrum", the large haulage terminal, set up by the Amsterdam Port Management. The move signifies the cooperation between the public authorities and private enterprise in the Port of Amsterdam.

Amsterdam and its port will benefit by the new facilities which can handle all types of general cargo quickly and efficiently. The concentration of these services in the same area provides for optimum use of the terminals.

The International Transport Terminal VAN SWIETEN, as the new facility will be called, will cover an area of 20,735 square metres and will have a bonded warehouse and free shed with an area of 2,500 square metres for Van Swieten, as well as another similar structure measuring 3,500 square metres for Ruys & Co. (bringing the total shed storage space of Ruys in the port to

can be launched. The earliest date has been given as the 1978/79 turn of the year. Important preparatory work has already been undertaken in this research from the German side since the end of 1966 by the participating Bremen shipyard VUL-



11,500 square metres), a garage and repair shop of 2,250 square metres as well as a 1,000 square metre office for Van Swieten.

The new establishment will be very modern and its centralized position affords excellent links by road and rail to the rest of Europe. Both sheds will have a ramp 130 cm above street level for the efficient loading and discharging of trucks and railway waggons.

Van Swieten and Ruys & Co. are both members of the Ruys Transport Group, the land organization of the Nederlandse Scheepvaart Unie (NSU), which has emphasised its confidence in the future of Amsterdam by this move. (Vereniging "de Amsterdamsche Haven")

KAN, with its own projected studies in containership construction. The VULKAN has in recent years taken a leading position in this specialised field. (Bremen International 9-1972)

# Containers

## In The Port of Barcelona

Puerto de Barcelona Boletín Informativo  
March/April and May/June 1971 issues

Perhaps the most frequent theme of discussion in all the grand ports which handle general cargoes, is at the present time, the growing use of the container.

Barcelona, with its three million tons of general cargo every year, the majority of which could be containerized, cannot stand on the side-lines with this question, and so, I shall dedicate these lines to the process of adoption of this unit of transport in our Port.

As antecedents to container traffic in this port, one can mention the so-called "parcel boxes", which weighed about two hundred kgs., and were used for many years by the coastal lines and the island lines, especially between Barcelona and Palma de Mallorca. These wooden cases, of small dimensions, which was in accordance with their weight limitations, were unloaded from the ships by means of the stanchions on board; and in these the navigation companies grouped together the great number of small packets and parcels which a coastal line usually transports.

Also, for many years the crates known as "Cadres" were used, these were huge wooden boxes used for transporting furniture. When these "cadres" were lined with a cushioning material, they were distinguished with the name "Capitones" (furniture car), and with these "capitones", one has the precedent of these containers being unloaded from the ship onto a wheeled platform, which then took them to their destinations. The classic "capiton" made the door-to-door delivery in a normal furniture van.

Apart from this traditional manifestation of cargo units of this type, in a yet more recent time, but before the modern concept of containers, the parallelepipedons, (rectangular tanks) were used for the transport of liquids, principally in-

secticides and oils, on the Canary Islands-Barcelona Line. This type of container, for liquids, is still used. Its measurements are  $1.35 \times 1.40 \times 0.25$ , and it is constructed of metal sheet which is flange welded, and it can be managed by cranes or derricks by means of the rings in its upper surface, or it can also be handled by fork lift trucks, since it is provided with feet which allow the fork to slide under.

Apart from these antecedents of an historical type, the container, in its modern concept, had its first use in Barcelona with the interisland shipping lines.

Because of this, several types of containers or flats have been, and are still being used, and among those, we can cite the following:

For transporting kitchen stoves and refrigerators, metal containers of the traditional metal sheet construction, and of the standard  $2.07 \times 2.23 \times 2.13$  size are used. These containers are the property of a few certain manufacturers of the above mentioned items, which they ship to various ports on the peninsula and to the islands, in these containers.

For the shipping, mainly to the Balearic Islands, of sanitary wares, a special type of flat, known as a combitainer is used. This consists of five dis-mountable lattice-work panels, which are mounted onto a pallet, thus forming a rectangular box, (parallelepiped) of  $15 \times 1.00 \times 2.08$  or  $1.15 \times 1.00 \times 1.55$ . The sanitary wares are then placed inside this container, packed with straw. The containers are returned to their origin, folded flat, which is a considerable saving in space.

Also, a special type of flat is used by the Balearic lines, which is made up of a tray of  $4.25 \times 1.20$  m, with side walls of a metallic material of 0.32 m height, which are placed in the sliding hatches of the coastal ships, suspended from the coamings,

thus taking advantage of the free space which is left above "delicate" cargoes, mainly motorcars, which are placed immediately below this level.

Also, there is a system used by the coastal shipping companies, and especially by the Compañia Transmediterranea, which consists of flats with raised flanges and fitted with wheels, which are used in the transporters, employing the "roll-on, roll-off" system. The dimensions of these flats are  $5.00 \times 2.00 \times 1.60$  m.

The figures for the movement in coastal shipping during the 1971 period were as follows.

The coastal lines, during 1971 handled some 100,000 containers for general cargoes, and liquids.

With regard to international traffic, the container traffic began in this port in the year 1953, with metallic containers of  $8 \text{ m}^3$  capacity, and were unloaded by the firm Tráficos Portuarios, and they were used for the transport of merchandise destined for the American Military Bases in Spain.

The container, dedicated to the civil commercial merchandise did not begin until the year 1959, at first with containers of  $8 \text{ m}^3$  capacity which were used in the exportation of typewriters, tartaric acid, and electric lamps. One after the other, various lines began using this method of containers and they have been using the following types: Italiana Costa Line, metallic containers of  $2.35 \times 2.05 \times 1.90$ , the Israel line Zim use  $2.40 \times 2.08 \times 1.90$  m; other companies used the British containers with the chamfered corners. Progressively, the number of units handled, of this type has been diminishing, and in their place, the normalized sizes have come into the fore-front, of  $8 \times 8 \times 20$  ft., with  $30 \text{ m}^3$  and 20 tons capacity, and  $8 \times 8 \times 40$  ft., of 40 tons capacity.

At present, external navigation moved 12,000 units of  $8 \times 8 \times 20$ , and some 6,000 units of other sizes, during the year 1971.

Today, we have established the movement of the regular container carrying lines, and the figures are as follow:

Approximate Movement in 1970	
Sea-Land, with special	
35 ft. containers . . . . .	2,600

## Europe-Africa

Fabre Line .....	2,900
American Export Insbrandtsen .....	5,900
Manchester Line .....	1,800
Mak-Pak Service .....	2,600
Total .....	15,800

### Handling of the Containers

During the period of introduction of this type of cargo unit, described in the afore going section, the handling operations have been accompanied by the traffic necessities at every moment.

There exists a primary fundamental division between the case of the containers which are transported at the same time with other types of cargo, and those containers which are carried by ships which are dedicated to the exclusive transport of them.

Until the introduction of the regular line of Isbrandtsen, all the other containers received in this port were forming part of heterogeneous cargoes.

The handling of the containers has always been done by the cranes or derricks on the dock, and all the berths in this port are equipped with these units, which have a lifting capacity of up to 6 tons.

As a result of this, there had never been any problems in particular, neither in regards to the machinery for unloading, nor with regards to space in which to affect this operation, until the advent of the 20 ft., container. All the other containers, whether of metal or wood, the combitainers and the flats were handled simultaneously with the other cargoes, without presenting specific problems which required special solutions.

On the other hand, it has been necessary to make a special study of the situation as from 1967 onwards, and this has been due, in the first place to the arrival, in progressively larger quantities of the 20 ft. containers, and in the second place, to the introduction of special lines of ships which are dedicated exclusively to this type of cargo.

Furthermore, it was necessary to dedicate a very special attention to this theme, in view of the fact that the traffic dealing with containers would grow rapidly within the next few years, especially in ships specializing in this type of cargo.



### PORT OF HELSINGBORG

Aerial view of the Grain Bulk Terminal. In the distance is seen the Skane Terminal—the expanding container port, which is now ranking next largest in Scandinavia with an annual turnover of 25,000 units converted into 20-foot equivalents.

Our policy in this field has been developed simultaneously with the adaptation of docks, already in existence for the creation of provisional terminals for containers, and for the adaptation of the machinery at our disposal for the movement of the containers around the docks, and the planning and projection of a terminal specially dedicated to this type of cargo.

In existence at the present moment there exist the following specialized terminals:

No. 1. On the Adosado Dock, in the form of an administrative concession to Sea-Land, in the shape of a flat space of 12,960 m<sup>2</sup>, and a shed of 1,200 m<sup>2</sup> for the filling and emptying of the containers.

No. 2. A multi-operational terminal on the Costa Dock, which has the following characteristics:

Area .....	17,000 m <sup>2</sup>
Mooring Length .....	375 mtrs.
Capacity in one tier ..	450

Equipment: 3 cranes of 15 tons for unloading the ships, and 4 straddle carriers for 20 ft., containers.

The dock cranes of 12 tons were built for the unloading of tree trunks, and have a velocity of elevation of 30 meters per minute, which

is much higher than that which is normally used for the unloading of containers. This has obliged us to use expert crane operators, but on the other hand, we have been able to achieve a very high rate of speed in unloading the containers.

Meanwhile the traffic is being developed and handled in this manner, a special terminal for containers is under construction, and this new terminal has the following characteristics.

This terminal will be equipped with a shed of 2,750 m<sup>2</sup>, with doors at each side for the operations of containerization, and will also have a special system of plugs whereby the refrigerated containers will be able to use the same terminal with its facilities. The terminal will also have three railway sidings for the direct unloading of the containers onto platforms, or for transferring them from truck to train and vice-versa.

In regard to the equipment, we shall construct a beam crane of 50 tons capacity, as one of the basic elements for the movement of the containers, and we shall have, to move the containers around the wharf, side loaders, straddle carriers and three gauge porticos.

The cost of the construction of the

dock is estimated at 220 million pesetas, and planned date for the finish of construction is 1972.

It has also been planned that this terminal can easily be expanded to a total area of 167,000 m<sup>2</sup>, and in this case, the capacity would be increased by 160%.

## Ocean Terminal

Lourenço Marques:—During the current month of January, a meeting will take place in Lourenço Marques of technicians so as to proceed with studies which are presently taking place with a view to going ahead very shortly with the ocean terminal at Ponta Dobela, situated within the limits of the port of Lourenço Marques.

We thus have that the port of Lourenço Marques is replying efficiently to the natural tendency and necessity to augment tremendously again and again the dimensions and tonnages of bulk ore carriers.

The ocean terminal of Ponta Dobela, which will be localized on the open sea, will give to the port complex of Lourenço Marques the possibility of satisfying the necessities of the hinterland which it serves. (Portos, Caminhos de Ferro e Transportes de Moçambique, January 1972)

## Port of Helsingborg

July 13, 1972: — ENORMOUS INCREASE IN CONTAINER TRAFFIC AT THE PORT OF HELSINGBORG — SEMI-ANNUAL REPORT DISCLOSES 38 pct RISE.

The preliminary statistics for the first six months of 1972 show an unprecedented upswing for the container traffic. During the period a total number of 12,700 containers and flats were handled by lift-on methods. The corresponding figure for 1971 was 9,200 units, meaning an increase of 3,500 20' equivalents. Thus there is good hope for that the total number for the whole of the year 1972 will exceed 25,000 units in lo-lo traffic.

Other traffic also developed most satisfactory. The overall cargo volume rose from 3,210,000 tons to 3,320,000 tons, an increase of 110,000 tons. The number of ships' arrivals and departures during the



## PORT OF HELSINGBORG

The Skane Terminal is the next largest container port in Scandinavia. Frequent regular services are operated to a row of British and continental ports. Convenient feeder services link Helsingborg with USA, east and west, the Gulf, Honolulu and Japan.

six months period arrived at 62,400, up 600. This corresponds to 29,323,000 net register tons in comparison with last year's 26,563,000, up 10 pct or 2,760,000 nrt.

### Dominating roll-on/roll-off traffic

The steady trend towards increased roll-on traffic that was noticeable already in the annual report of 1971 is emphasized in the now available preliminary six months report. The conventional cargo turnover stayed at 1,565,000 tons, slightly below the figure for the first six months of 1971 of 1,574,000 tons. Instead the roll-on cargo rose to 1,755,000 tons against 1,637,000, up 7 pct. Out of this 977,000 tons were railway cargo, while other ro-ro cargo amounted at 778,000 tons, meaning an increase of 11 pct in comparison with the same period of 1971.

### 260,000 more passengers

During the period 6,621,000 passengers travelled via Helsingborg in comparison with 6,361,000 last year. This means that no less than 260,000 passengers were added to last year's all time record. The number of motor-vehicles in traffic increased from 415,000 to 428,000.

### Revenues up 0.5 million Sw. Crs.

In parallel with the traffic increase revenues—such as harbour dues and crane charges—swelled by 485,000 Sw. Crs. to 7,983,000 Sw. Crs.

### Container terminal extension

A further extension of the Skane Terminal—the container harbour of Helsingborg—is planned to start in September next. The sand that is now covering some 30,000 sq. m of the available area of the terminal will then be removed and used for land reclamation on the south of the harbour. It is estimated that this work will be completed by spring 1973.

### Incinerator taking shape

Melbourne:—Construction is well advanced on an incinerator for the Port of Melbourne, the capital cost of which is being met by the Commonwealth Government. The contract for its design, supply, delivery, erection and testing was let to Von-Roll-John Holland (Constructions) Joint Venture at an approximate cost of \$750,000 of this amount only \$40,000 will consist of imported material, while the rest of the installation will be manufactured and built

in the Commonwealth.

Located on the present site of the Melbourne Harbor Trust Tip on Trust land, in Port Melbourne, at the corner of Todd and Short Roads, access to the incinerator is from Todd Road.

The Trust undertook a census on two occasions of the amounts and types of refuse that was delivered to its present tip, with the sole object of determining the best and most efficient type of incinerator for the Port.

The census took in the variety of materials of differing calorific values and water contents found in ships' garbage and galley wastes; ships dunnage; timber of lengths up to 20 feet; refuse from wharves; hold sweepings; Quarantine Department consignments ranging from paper to timber, meat, vegetable and animal wastes as well as refuse consignments from the Department of Agriculture, Customs, Education and the Government Laboratory, before deciding on Von-Roll type incinerator.

The main installation consists of a Von-Roll type 30 Furnace with a capacity of 1¾ long tons per hour, with a second stand-by batch type furnace, capacity ½ ton per hour, for use when the main furnace is out of operation for any reason.

Refuse will be delivered to the covered reception area by special vehicles, the arrival of a vehicle being signalled to the plant operator by an electric sensing device in the floor. The refuse will be tipped into a concrete hopper approximately 20 feet deep where it will be picked up by an overhead travelling grab and fed to the furnace hopper. The bunker doors will be weatherproof and reasonably airtight, and in addition, the installation will operate under a slight vacuum, in order to prevent the escape of offensive odours into the surrounding air. Apart from charging the furnace, the crane will premix refuse of varying calorific values when these are present in the hopper.

The crane operator who is also the furnace operator, will be housed in a stationary cabin built in the longitudinal wall directly opposite the bunker doors and located between the two furnaces, from which position he will have a full view of the

storage bunker and its contents.

The hopper of the main of First Preference cell is directly mounted on the furnace supporting structure and charges the combustion chamber through hydraulically controlled flap doors controlled by the operator. The continuous reciprocating grate is divided into three zones whose speed can be individually controlled thereby ensuing that the thickness of the refuse layer is suitable for thorough and complete combustion and incineration. The dust formed from the first two zones of the grate drops into two dust collecting hoppers, whilst the clinker from the last section drops to the clinker trough where it is quenched by water and then fed by conveyor to containers.

An auxiliary gas burner will be installed to cope with wet or not readily combustible refuse, and will come into operation automatically as soon as the combustion chamber temperature falls below the required minimum.

The furnace is a steel framed structure, with a gas tight sheet steel casing lined with thick refractory brickwork which will serve as a heat bank, reducing temperature variations to a minimum.

The design of the heat exchanger is such that dust deposited in the tubes may be cleared out without shutting down the plant.

From the heat exchanger the gases will pass to an electrostatic precipitator, with two fields and one rectifier unit, the precipitator casing being of welded steel construction and containing dust collecting electrodes, special discharge electrodes, mechanical rapping device for the discharge electrodes, insulators, motors and reduction gear for driving the rapping device and timer for adjustment of the rapping cycle. The dust removal efficiency of the precipitator is 98% with a dust content of at least 8 grammes per cubic metre of gas.

An induced draft fan between the precipitator and the chimney stack maintains the plant under a continuous vacuum as previously described. The chimney, of AUSTEN 50 steel plate is 71 feet high, supported by a steel lattice tower and mounted on the roof of the building to discharge the gases 120 feet about

the ground level.

The stand-by Second Preference cell will be charged through manually operated sliding doors. There will be a fixed grating of heat resisting material and combustion air is supplied by a forced draft fan.

Ashes and slag can be removed and deposited in the same disposal system as for the First Preference cell. After complete combustion the gases will be guided into the settling chamber where the heavy particles will be deposited. After cooling by air admixture, the gases pass to the electrostatic precipitator and stack.

Included in the plant is a bulky waste shear to cut up items of refuse too large to be handled by the grab.

The plant is housed in a steel framed building with steel wall cladding and roofing. The main operating floors, the charging area to the Second Preference cell and the Control Room are of reinforced concrete, the rest of the flooring being steel chequer plate or grid. The Control Room has forced ventilation and is fitted with a fire door. An amenities area will be provided including a change room, toilets and dress room.

Operating for twenty four hours a day and seven days a week the plant will be capable of incinerating a weekly total of 295 tons of refuse. The amount of putrescible material in the residual will not exceed 1% by weight, and the amount of solids in the flue gas will not exceed 0.1 grain per cubic foot of gas.

The plant is being built on reinforced concrete piles one hundred feet long. A well pointing system was installed for the excavation, enabling the reinforced concrete refuse bunker and foundations to be constructed in the dry. The structural steel frame work is almost complete, and installation of plant has commenced. (Melbourne Harbor Trust Port Gazette, August 1972)

### **"Boating in N.S.W."**

Sydney, 3rd August:—The first issue of a booklet entitled "Boating in N.S.W." was released to-day by Mr. W. H. Brotherson, President of the Maritime Services Board of N.S.W.

Mr. Brotherson said the booklet



is aimed at educating the boating public, particularly those operating fast boats in the waterways of the State.

He said the Commonwealth Department of Shipping and Transport issued a booklet last year embracing the total subject but the aim of the Board's booklet is to supplement the Commonwealth publication and to pay particular regard to the rules and regulations applying in waterways of N.S.W. under the control of the Maritime Services Board.

In making the release, Mr. Brotherson said that the booklet will be issued in conjunction with tests conducted for licences to drive a boat in the State in terms of the Water Traffic Regulations and would emphasise the safety aspects of boating.

He said a recent decision of the Board to constitute the N.S.W. Council for the Promotion of Safe Boating was also aimed at furthering the education of the boating public so far as the safety aspects of their activity are concerned.

Apart from reproducing the Water Traffic Regulations and the Collision Regulations (Rules of the Road), the booklet contains a number of pages dealing with various aspects of boating in N.S.W. Under a heading entitled "Some Rules for Boat Owners", (pages 1 to 4), details are given of requirements to be included in regulations administered by the Board covering such items as pollution, occupation licences (moorings) and residence on vessels. (The Maritime Services Board of N.S.W.)

### **New wharf used**

Sydney, 8th September:—The new No. 6 Berth in Darling Harbour in the Port of Sydney is expected to be introduced into commission to-night when the 10,000 ton m.v. "Golden Venture" is scheduled to arrive.

The "Golden Venture" will discharge steel from Japan and will be loading a cargo of scrap metal.

The use of the new No. 6 Berth, Darling Harbour, marks the completion of the first stage in the Maritime Services Board's plan for the redevelopment of the northern sec-

tion of Darling Harbour with solid fill long shore berths in lieu of the finger type timber jetties which formerly occupied the site.

The berth has a length of 500 feet and embraces an area of 5 acres.

It features a modern single span cargo shed with a length of 375 feet and a width of 150 feet.

The berth will serve a dual purpose, being equipped with a ramp for use by roll-on/roll-off vessels. The "Golden Venture", however, is a conventional type of cargo ship.

Amenities at the berth include shower rooms, change rooms and a dining room with seating for 120 port workers. This building also incorporates offices for Customs, delivery clerks and stevedores.

The cost of No. 6 Berth, Darling Harbour, including the reclamation, cargo shed, roll-on/roll-off ramp and office and amenities block is approximately \$2 million. (The Maritime Services Board of N.S.W.)

### **Trade at N.S.W. Ports**

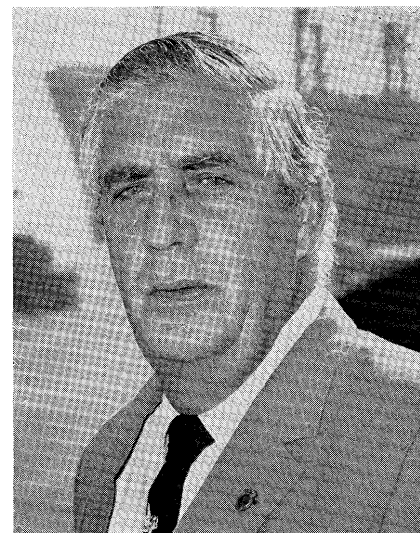
Sydney, 4th August:—The total trade of the Ports of N.S.W. exceeded 52.6 million tons during the last financial year, this being a record tonnage for the Ports and an increase of more than 600,000 tons on the previous financial year.

This was revealed in figures released in Sydney to-day by the President of the Maritime Services Board, Mr. W. H. Brotherson.

Mr. Brotherson said that the twin ports of Sydney and Botany Bay, together serving the metropolis of Sydney, handled a total of 25.2 million tons of cargo, this being an increase of more than 400,000 tons compared with the financial year of 1970-71.

He said there were also increases in tonnage throughput at Port Kembla and the smaller ports of the State which, for statistical purposes, are grouped together.

The trade of the Port of Newcastle dropped from 15.3 million tons in 1970-71 to 14.8 million tons in 1971-72, substantially on account of the reduction in the imports of raw material for steel making such as ironstone and limesand and in phosphatic rock. There was also a significant decline in the tonnage of bulk wheat exports.



Capt. Beresford Lewis Noble was appointed General Manager of the Fremantle Port Authority on 3rd July 1972. He had previously served since 19th October 1969 as Divisional Manager-Operations.

Prior to joining the Fremantle Port Authority in 1969 Capt. Noble's career had comprised of 20 years' sea service including 8 years being in command of foreign-going ships, following which he was appointed Harbourmaster Darwin, Port Superintendent, and Executive Member of the Northern Territory Port Authority. He is a Member of the Institute of Navigation, Fellow of the Chartered Institute of Transport, and Associate Fellow of the Institute of Management.

In commenting on the figures, Mr. Brotherson said that, although there had been an increase in the total trade of the ports this year, the rate of increase was lower than in previous years. In fact, he said, general cargo, which includes manufactured and consumer goods, fell by comparison with the previous year, this being the first time there had been such a decrease for a number of years. This situation highlights the observations being made as to the reduced level of expenditure in the community for consumer goods.

The overseas general cargo trade of the Port of Sydney during 1970-71 amounted to 5.5 million tons whereas in 1971-72 it had dropped to 5.3 million tons. Even counting the reduction indicated for this year,

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*“I would like to take this opportunity to say that I found the study by the author of this book to be of tremendous interest and I would like to congratulate Mr. Nagorski on a first class work”.*

*—Assistant Secretary General, ICHCA*

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an overall increase of 38% during the last five years in this general cargo trade for the Port of Sydney has been achieved.

The increased use of containers for the handling of general cargo through the Port of Sydney was highlighted by Mr. Brotherson who said that almost 2.4 million tons of such cargo from both overseas and interstate sources moved in containers last year.

Mr. Brotherson said that, since the introduction of containers into the Port of Sydney, there has been a steady increase in their use. He gave the following figures to illustrate his point:—

Year	No. of 20' Containers	Tonnage
1968/9	11,290	172,470
1969/70	85,018	1,209,047
1970/71	117,985	1,846,751
1971/2	150,148	2,358,719

(The Maritime Services Board of N.S.W.)

## Oil removed from QE wreck

Hong Kong, 10 Sept.:—Nearly 700 tons of fuel oil have already been removed from the wreck of the “Seawise University”—the former Atlantic liner, Queen Elizabeth—which sank on January 9 this year following a severe fire. The oil removal operation is being carried out by the Fukada Salvage Co. Ltd., a leading Japanese salvage company, to prevent a major pollution threat to Hong Kong’s famous harbour. The operation to remove 3,070 tons of oil in the vessel began on August 24, immediately after the salvage equipment arrived.

The method being used for the removal of the oil is considered safe and is basically simple. A Marine Department spokesman said today; “The operation consists of fixing an outlet and an inlet valve to the vessel’s hull and then drilling holes into the oil storage tanks. Seawater is pumped into the tank to float up the oil which is sucked from the

vessel and into one of the storage barges alongside.”

Oil skimming work is carried out continuously and anti-pollution precautions are rigidly observed during the oil removal operation. The whole project is expected to be completed by mid-December. (The Week in Hong Kong)

## Kwai Chung opens

Hong Kong, 5 Sept.:—The first berth of Hong Kong’s \$500 million (£34.5 million or US\$91 million) container complex at Kwai Chung in the New Territories was used for the first time today when the giant Tokyo Bay moored alongside. The docking of the 59,000-ton container ship came just two years after initial construction work began on the 125-acre site, which is still being developed, mainly on reclaimed land.

The number one berth, which came into operation today, is owned and operated by Modern Terminals Limited. It has an area of about 32 acres and is the first of three

being phased into service during the next 12 months. The three berths will have a total sea frontage of some 4,000 feet.

When the tenders for the three berths were awarded in 1970, a government spokesman said; "They will go a long way towards ensuring that Hong Kong will be able to maintain its position as a leading port in the era of containers which is now developing".

To enable the large container ships to reach the berths at Kwai Chung, more than three million cubic yards of seabed material have been dredged from the Rambler Channel. The approach channel was dredged to a depth of 40 feet below chart datum—the minimum depth required for large container ships.

One-and-a-half miles of roads and a flyover are being built to provide easy access to the container terminal. The Kowloon Foothills Road Corridor, due for completion in 1975, will greatly improve traffic flow between Kwai Chung and industrial towns in Kowloon. Two other container lots at Kwai Chung are being held in reserve and can be made available for future development when a clear need develops. (The Week in Hong Kong)

### **ECAFE meeting on shipping**

Hong Kong, 22 August:—Hong Kong will play host to a ten-day ECAFE meeting on shippers' co-operation next month. About 40 representatives from 19 members and associate members of ECAFE are expected to take part in the meeting, which will be held from September 18 to 27.

The meeting, designed to familiarise participants with specific aspects of the formation and effective operation of shippers' organizations, is being organized by ECAFE with the assistance of the governments of Hong Kong and Norway and the Shippers' Council of Hong Kong.

At the meeting which is a follow up to the one at Bangkok, delegates will discuss methods of forming shippers' organizations, the shipping industry, port efficiency and regional co-operation. In addition, there will be lectures by experts on shipping, and the presentation of case studies for participants to discuss. (The

Week in Hong Kong)

### **Container service**

Hong Kong, 22 August:—A Japanese-French-Italian consortium is to offer Hong Kong yet another container service in November. This one will link Singapore, Hong Kong and Japan with southern Europe via the Mediterranean ports of Marseilles and Genoa.

Initially, three 13,000 dwt ships are planned, carrying 720 20-foot containers at 26 knots from the Far East through Panama to the Mediterranean. The ships are roughly one third the capacity of the giant trio and the Scandutch vessels that will connect Hong Kong with northern Europe. The first of these third generation ships—the Nihon—arrives on Saturday followed by the Trio's Tokyo Bay.

Partners in the venture are Compagnie Maritime des Chargeurs Reunis and Messageries Maritime (French), Lloyd Triestino and Lauro Line (Italian) and NYK and Mitsui OSK (Japanese). (The Week in Hong Kong)

### **50th Anniversary**

Tokyo:—The 50th anniversary of the establishment of Japan Port and Harbor Association is scheduled to be celebrated on Thursday, October 12, 1972 from 1:30 p.m. at the Hotel Pacific in Shiba, Minato-ku, Tokyo, where 4,000-odd people will gather in one big hall.

Dr. Chujiro Haraguchi, ex President and now member of the Executive Committee of IAPH (also former mayor of Kobe), is President of said Association. Dr. H. Sato, Deputy Secretary General of IAPH, is the Director General of the Association. Testimonials will be awarded on that occasion to Mr. Gaku Matsumoto, IAPH Honorary Member, Dr. C. Haraguchi (see above), Mr. Toru Akiyama, IAPH Secretary General, Mr. Yonekichi Yanagisawa and Dr. Shizuo Kuroda, both IAPH Directors for Japan.

Mr. A. Lyle King, IAPH President (Director, Marine Terminals, The Port Authority of New York and New Jersey), sent a congratulatory cable to Dr. Haraguchi on September 27 as follows:

"As President of the International Association of Ports and Harbors, it is my honor and privilege, on behalf of our entire membership, to extend our warmest congratulations to the Japan Port and Harbor Association on the occasion of its 50th Anniversary.

"The accomplishments of your Association since its founding in October, 1922 are truly outstanding. Created at a time when the Japanese port system was inadequate to meet the commercial needs of the nation, your Association has guided the development of a modern and efficient port and harbor system, the equal of the best port facilities in the world. Your contributions to Japan's economic growth and premier ranking among the nations of the world are worthy of the highest praise from both the Japanese nation and its global trading partners.

"On behalf of the international port community, I express the hope that the Japan Port and Harbor Association will enjoy future success in its continuing efforts to provide Japan with the most modern port and harbor facilities."

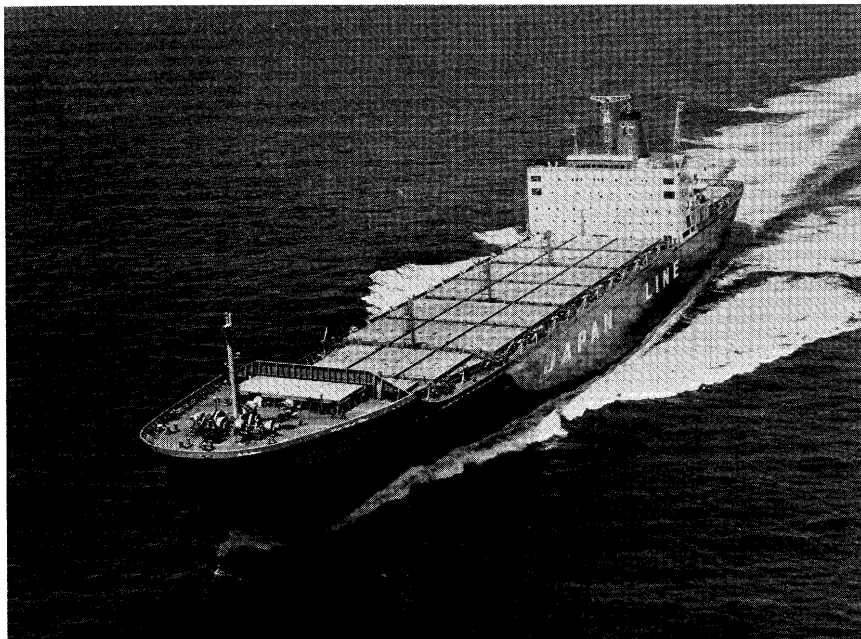
### **Port engineering seminar**

Tokyo:—A cocktail party was held in honor of the participants of the 9th Group Training Course in Port and Harbor Engineering 1972 on September 13, 1972 evening at Seiyoken, Uyeno in Tokyo. The sponsor of the Course is the Overseas Technical Cooperation Agency of Japan. There were ten participants, two each from Egypt and Peru, and one each from the following six countries: Brazil, China, Costa Rica, Ethiopia, Sri Lanka and Thailand.

Mr. Tamotsu Okabe, Director General of Bureau of Ports and Harbors, Ministry of Transport, Dr. H. Sato, IAPH Deputy Secretary General (Director General of Japan Port and Harbor Association) and other Government officials and business representatives were present.

### **M/S "Japan Ambrose"**

Tokyo, Japan, Aug. 31:—The "Japan Ambrose", a 33,287 gt container ship to be assigned to the new Japan/New York container service, which commenced this August, will



M/S "Japan Ambrose"

be delivered on Sep. 8 to her owner, Japan Line, by the Aioi Shipyard of IHI (Ishikawajima-Harima Heavy Industries Co., Ltd.), Japan.

The new vessel, capable of accommodating 1,569 twenty-foot containers, is the second containership to be put on the route, following the *Tohbei Maru* of Yamashita-Shin-nihon Steamship Co. (Y.S. Line).

Powered by a 50,000 shp turbine, the largest of its kind ever installed on a merchant vessel, the ship will run at a service speed of 25.1 knots, taking only 17 days for the one way voyage from Japan to the East Coast of the United States via the Panama Canal.

To calculate her optimum position, the ship is installed with a position fixing system using NNSS (Navy Navigation Satellite System), which receives signal waves from transit satellites revolving around the earth's polar orbit.

The "Japan Ambrose" is scheduled to leave Kobe, Japan on Sep. 12 and to arrive in New York on October 2, after calling at Tokyo Port on Sep. 15 on the way.

IHI's Aioi Shipyard is also building a 39,500 gt containership for the Japan/N.Y. route, the "Kiso Maru" ordered by Nippon Yusen Kaisha, completion being scheduled for March 1973.

Principal particulars of the "Japan Ambrose":

Length, o.a.:	228.00 m
Length, b.p.:	215.00 m
Breadth:	32.20 m
Depth:	19.00 m
Draft (Max.):	11.028 m
Gross tonnage:	33,287 tons
Deadweight tonnage:	28,806 tons
Container loading capacity:	
	1,569 containers (20-foot type)
Service speed:	25.1 knots
Main engine:	

IHI marine steam turbine  
(MCR: 50,000 shp)

(Nippon P.R. Counsellors, Inc. News Release)

### Kelang Port Authority

PORT SWETTENHAM AUTHORITY has with effect from 6th July 1972 been changed to:

KELANG PORT AUTHORITY  
This change follows the re-naming of the town formerly known as PORT SWETTENHAM to PORT KELANG.

All correspondence should now be addressed as follows:

KELANG PORT AUTHORITY  
PORT KELANG  
WEST MALAYSIA  
MALAYSIA  
Telephone No.: 6791-5  
Telex No.: KLTX 344

### Better ferry service

Penang:—Work is progressing according to schedule on the expansion of the ferry service project now

being undertaken by the Penang Port Commission under the Second Malaysia Plan.

The project costing \$18 million includes the construction of additional terminals on the Island and on the mainland together with the purchase of three more ferry vessels. These ferry vessels would be exclusively used to convey vehicular traffic and as such the vessels and the terminals are being designed to handle vehicles on both decks of the ferry vessels. The passenger capacity of the existing service is adequate for the next 20 years and consequently the expansion programme is designed only for vehicular traffic.

The whole project which commenced in June 1971 is scheduled for completion by September 1974. At this stage consultations with various Government departments and organizations concerned with the planning of the project have been carried out by the Commission and agreement has been reached on the layout of the terminals both at Penang and at Butterworth. The Commission's Consulting Engineers are now preparing the detailed structural and civil engineering designs and drawings. The Commission will be calling shortly for applications from suitably qualified contractors to tender for the construction of the two terminals and work is expected to commence in December 1972.

The site of the terminal on the Island will be to the north of the present terminal and will occupy an area of 64,000 sq.ft., and a sea front of 215 feet at Weld Quay. At Butterworth on the mainland, the proposed terminal will be located north of the present terminal and will occupy an area of 150,000 sq.ft. and a sea front of 260 feet. The old Mitchell Pier would be demolished and the present bus terminal transferred to another site nearby.

Applications to tender for the construction of the ferry vessels have already been received and tender documents will be issued to the successful applicants shortly so that they would be able to submit their tenders by October 1972. Construction work on the three ferry vessels is expected to commence in December 1972. (Berita Pelabohan, July)



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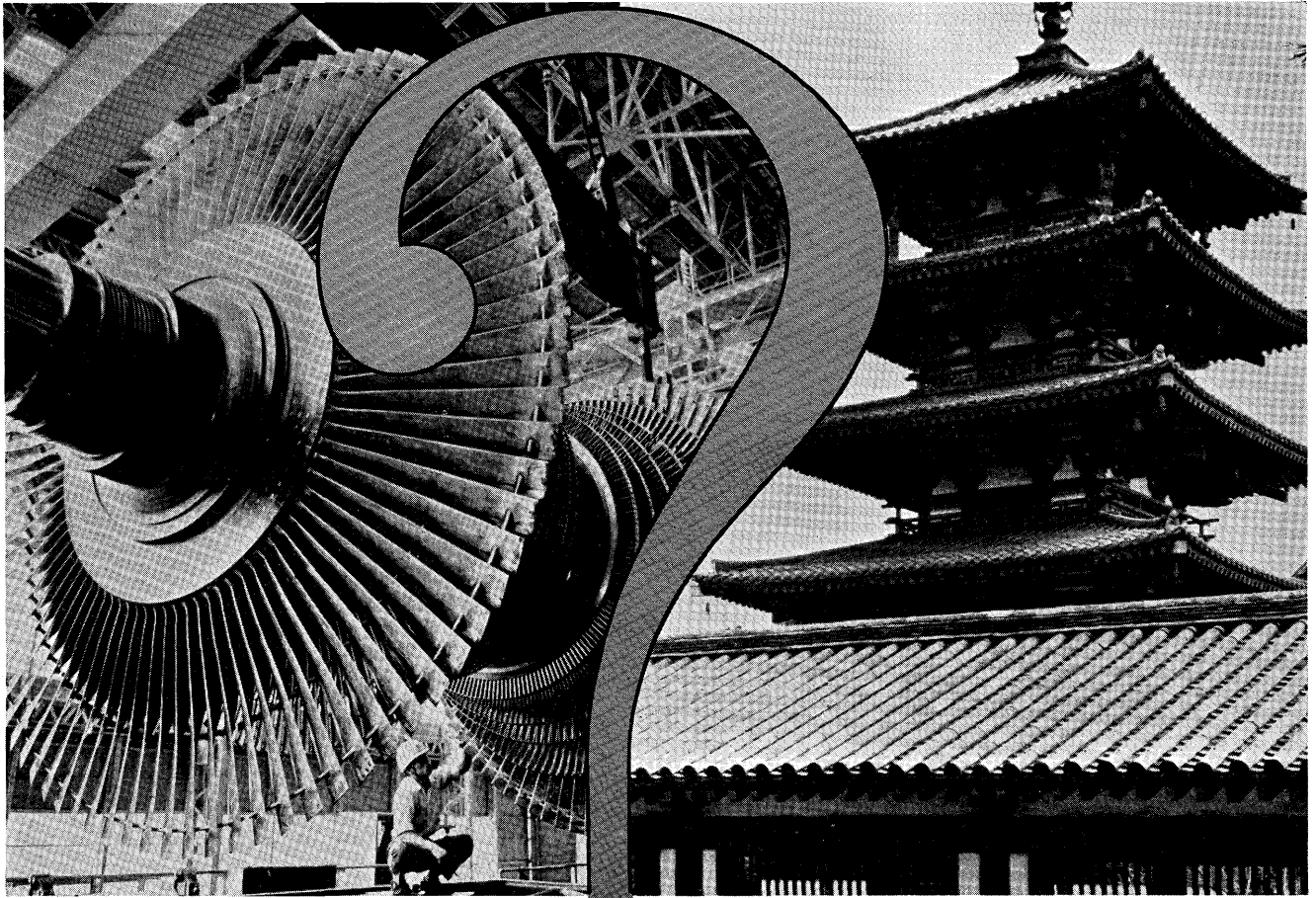
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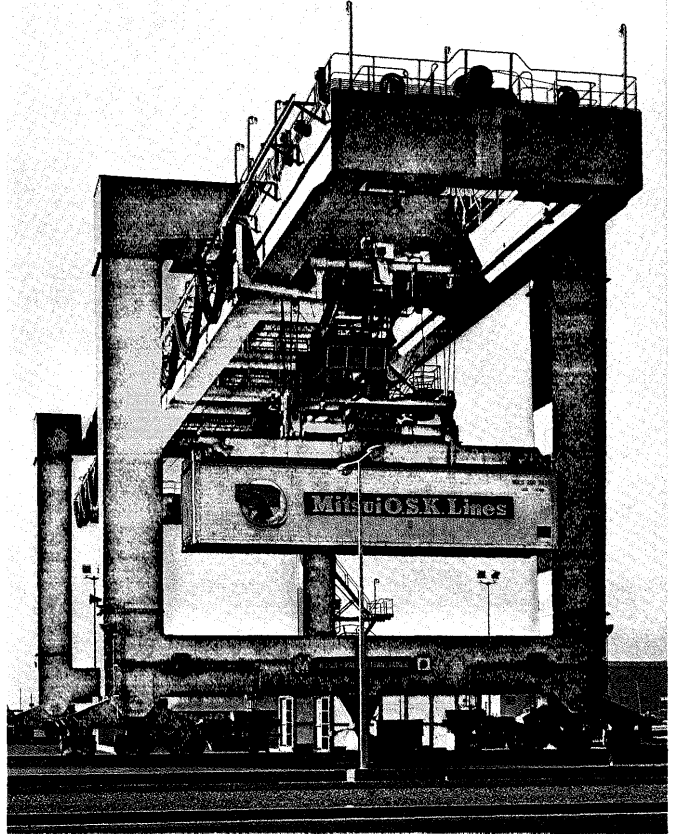
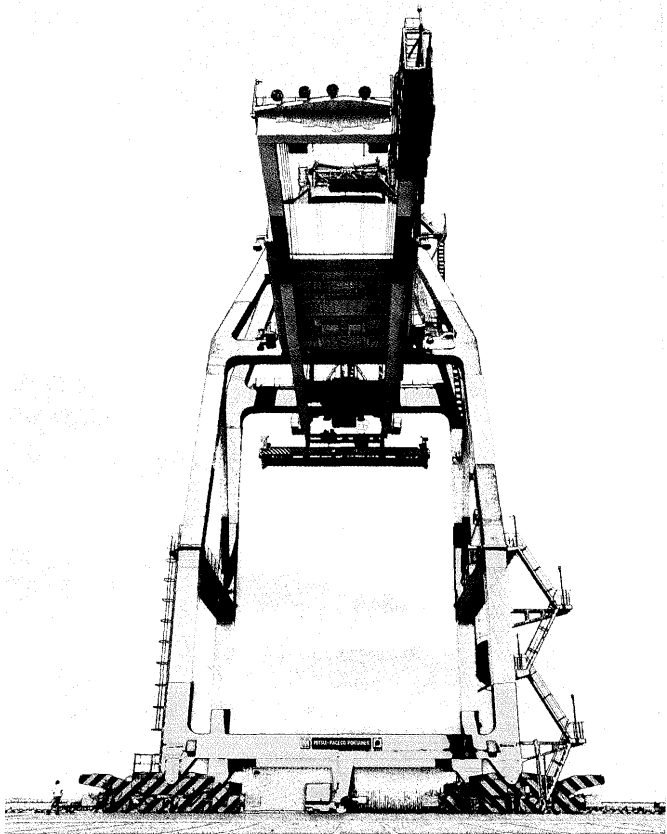


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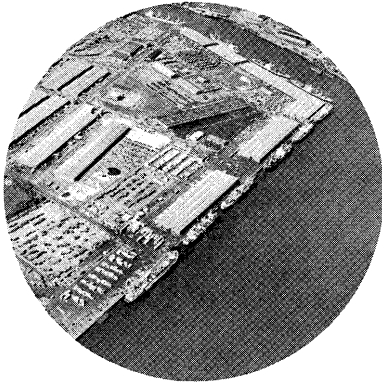
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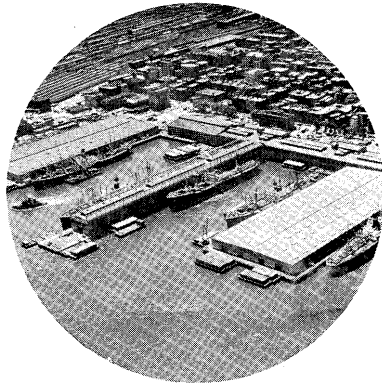


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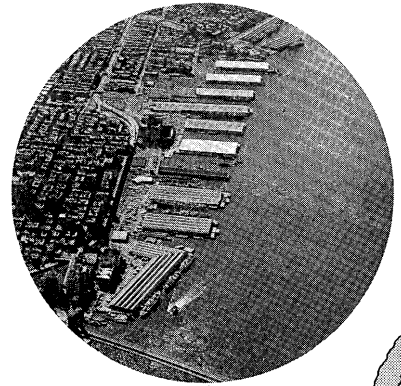
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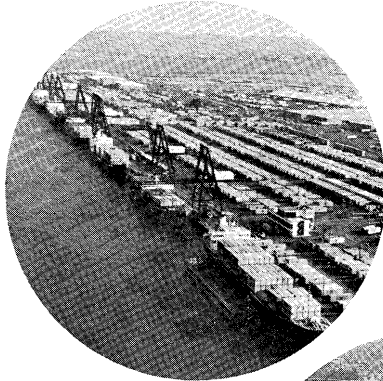
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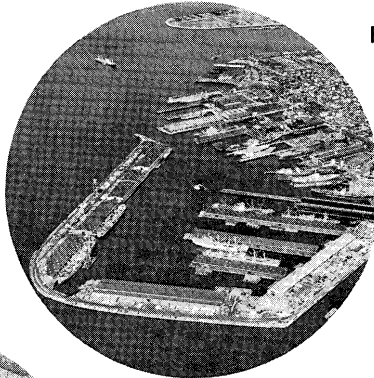
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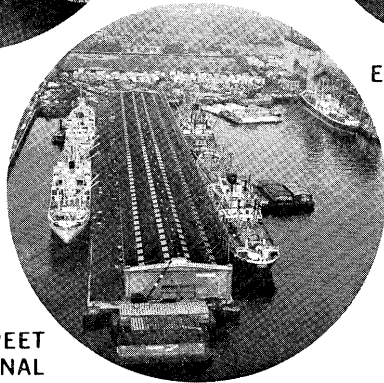
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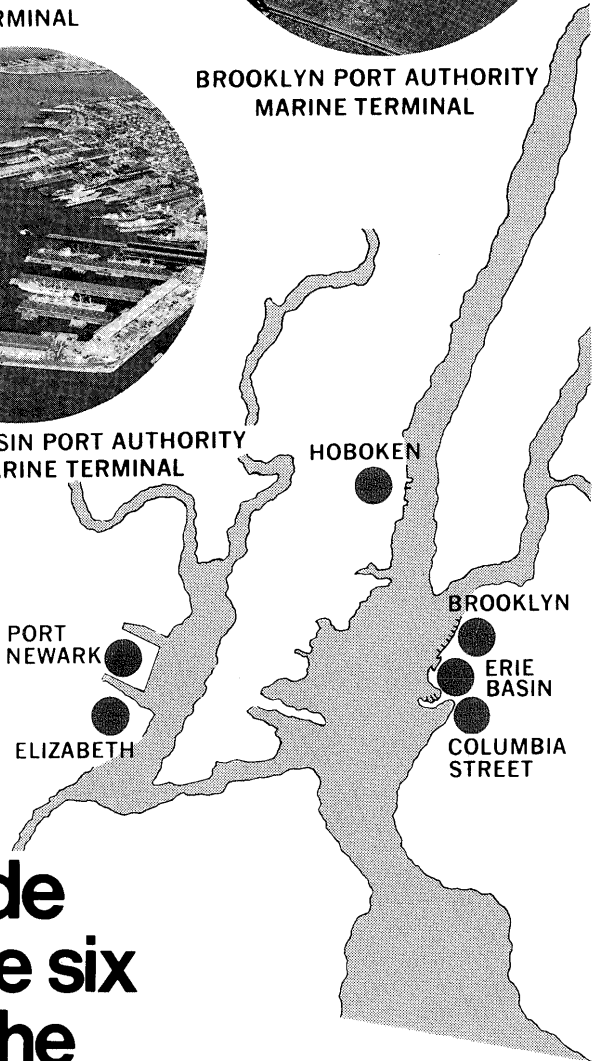
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