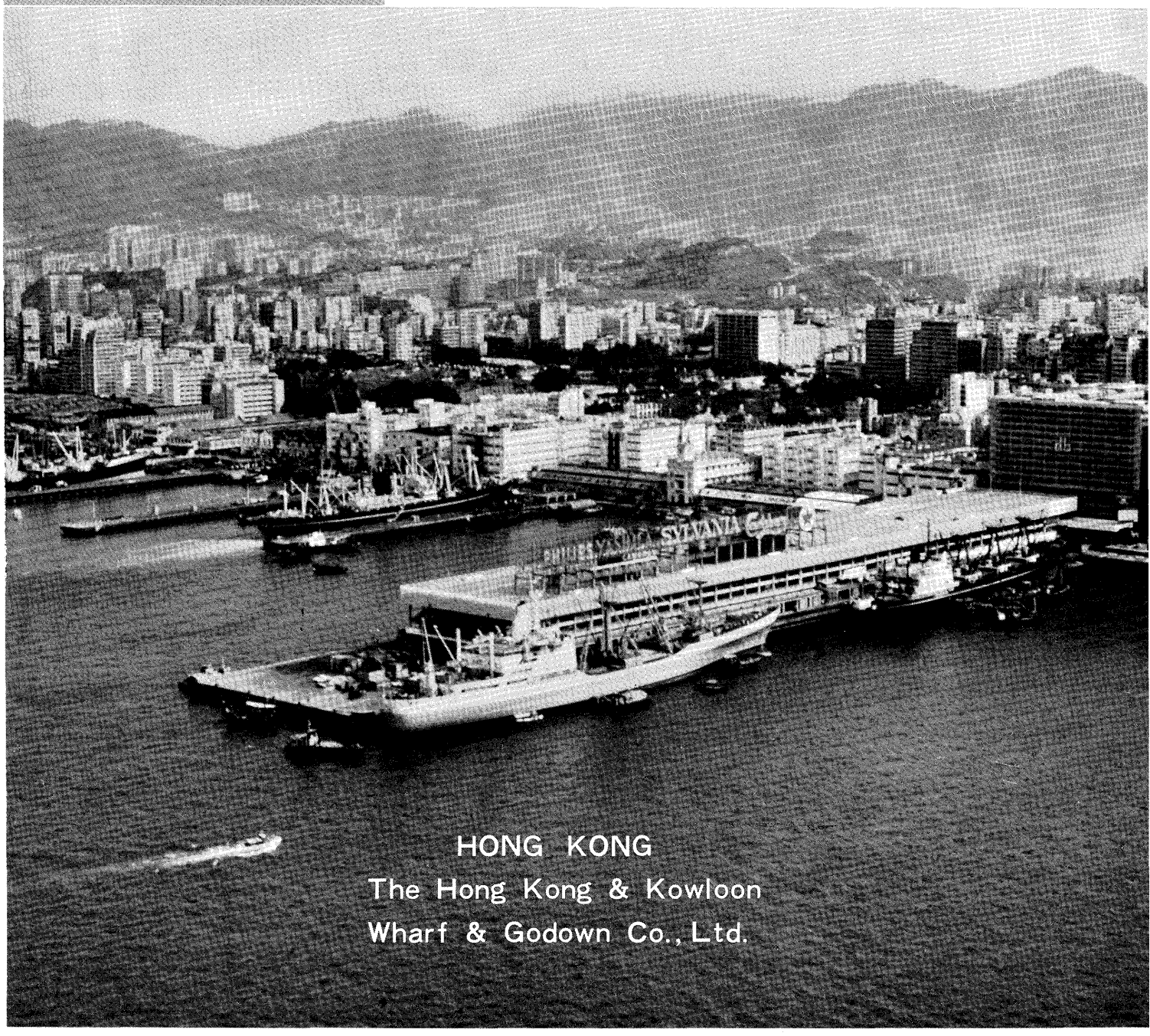
PORTS and HARBORS

January, 1969 Vol. 14, No. 1



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2. Problems in the Development of Ports in the ECAFE Countries by Mr. S. Aldewereld
3. Impact on Port Development of Modern Trends in Ship Design by Ir. F. Posthuma
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5. Development of Ports and the Role of the World Trade Center by the Hon. T.H. Boggs
6. The Future of Tankers by Comm. E.H.W. Platt

10-Minute Speeches (by 19 Port Experts)

1. Local Harbor Commissions for Harbor Administration (by Mr. W. J Manning)
2. A Brief Report on Ports of Taiwan (by Mr. Y. C. Wang)
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5. Ever Increasing Use of Specialization in Harbor Exploitation (by Mr. F. Marques da Silva)
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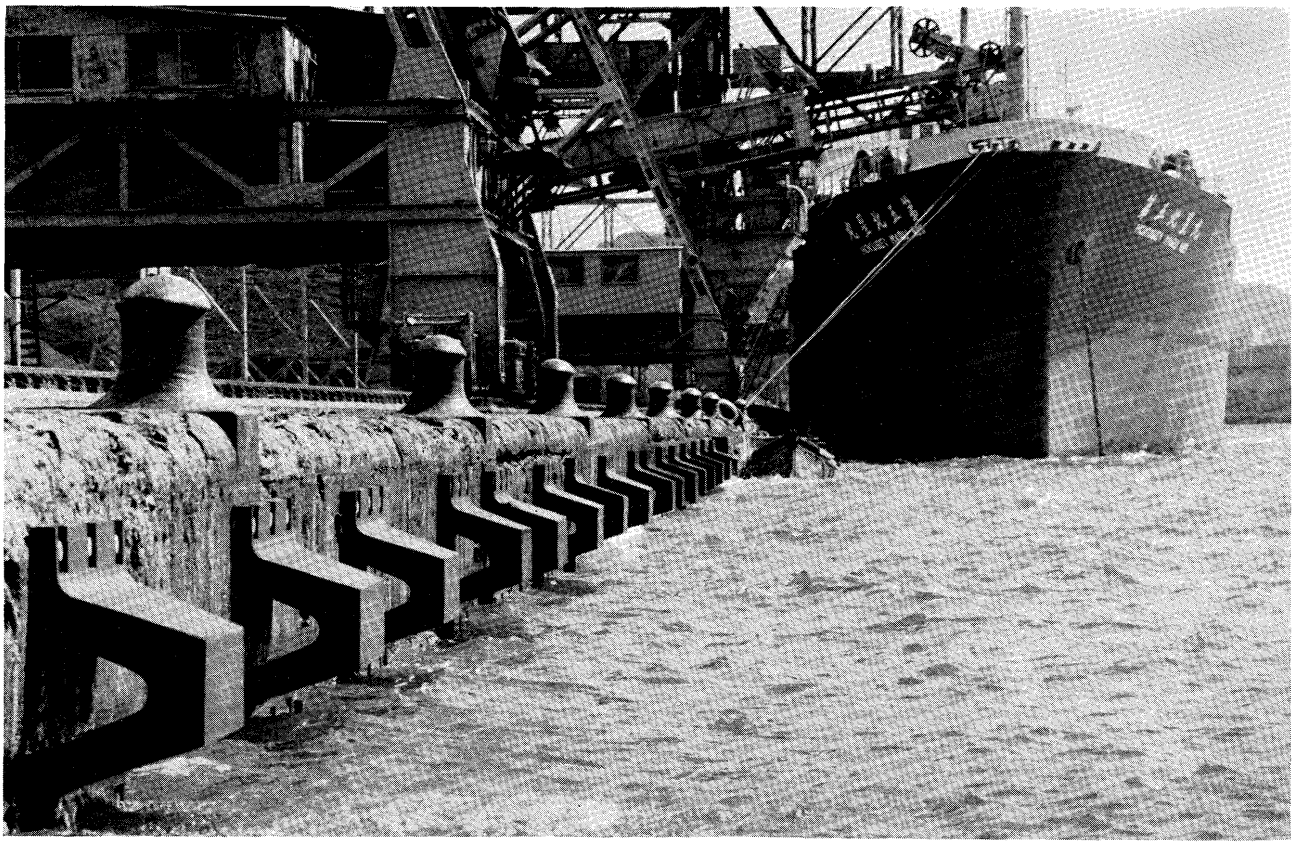

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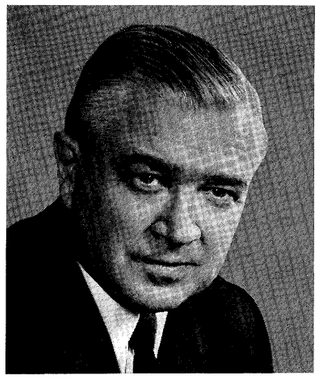

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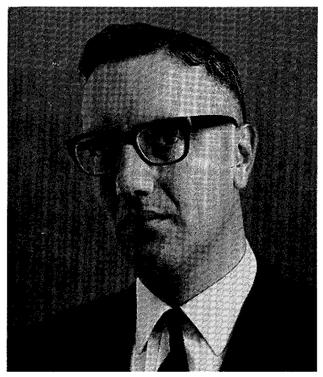

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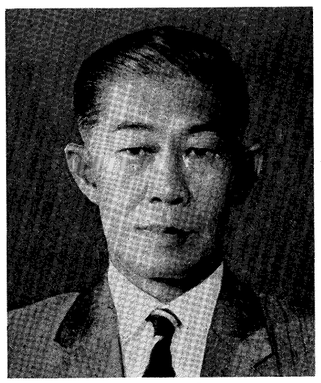

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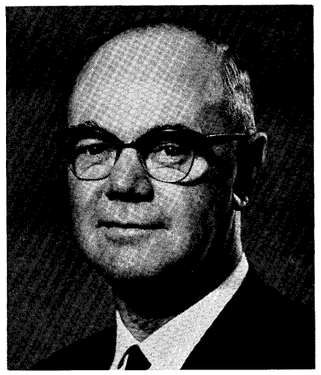

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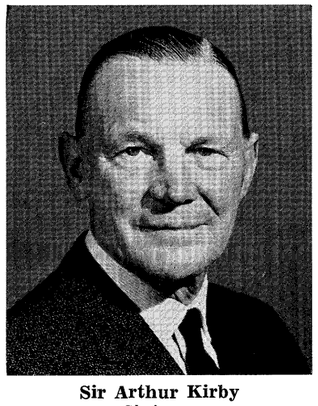

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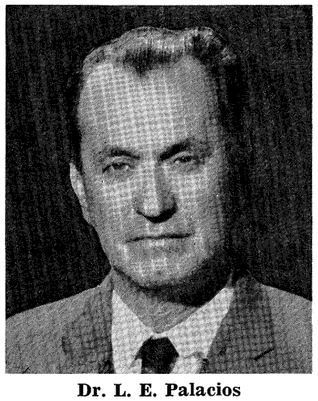

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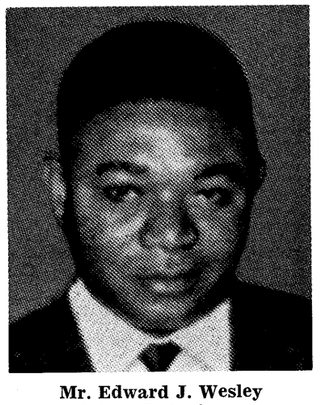

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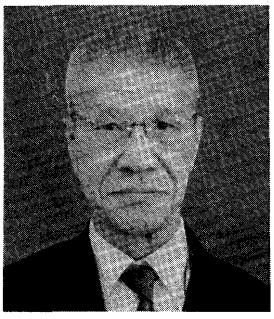

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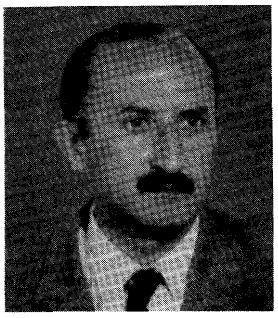

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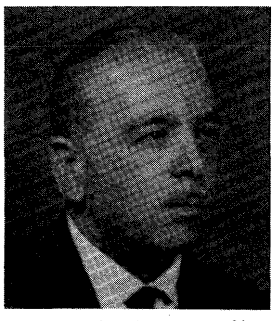

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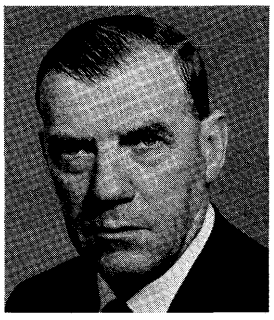

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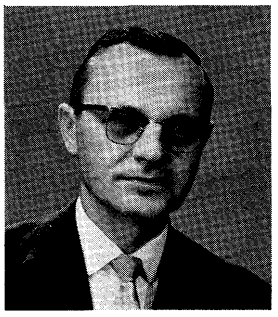

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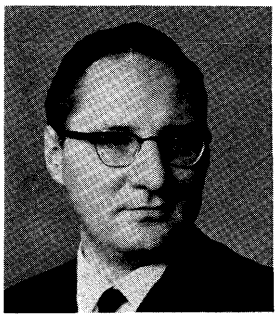

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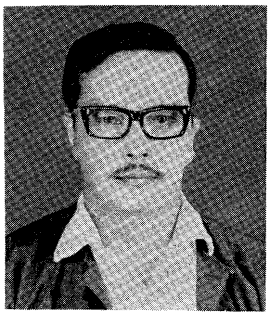

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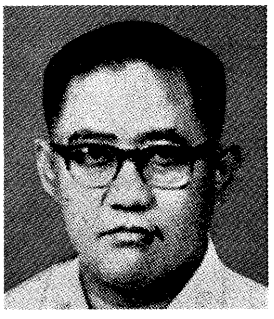

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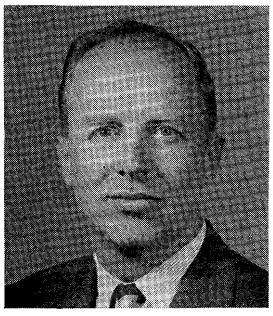

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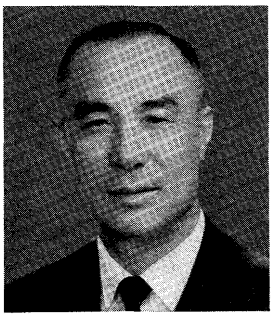

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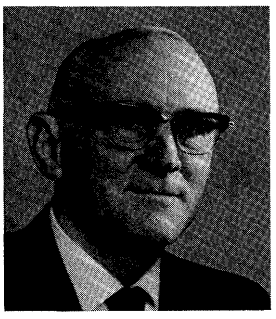

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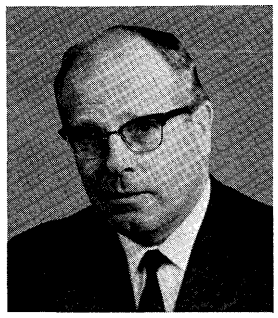

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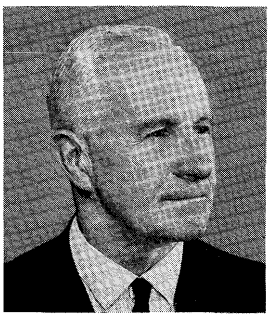

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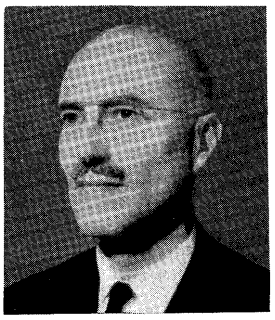

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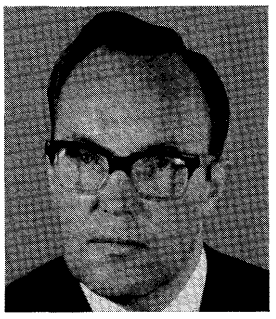

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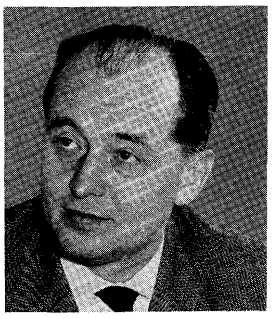

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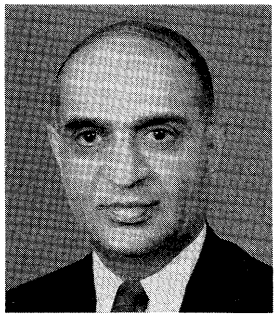

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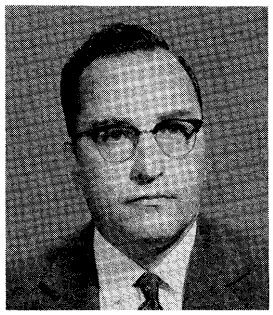

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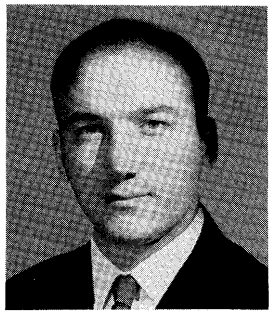

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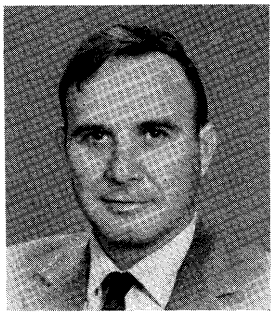

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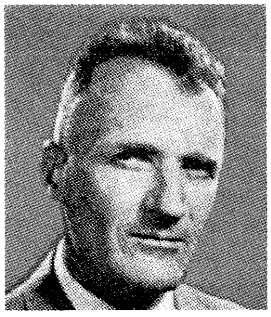

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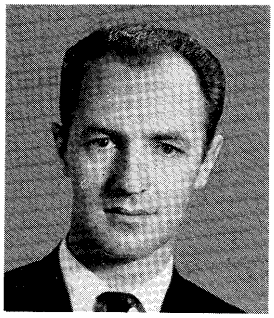

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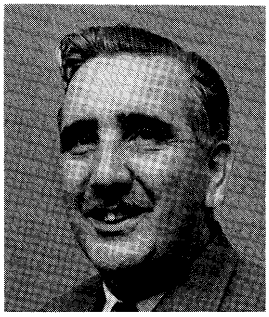

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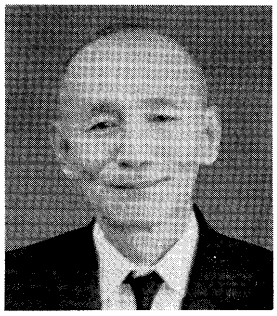

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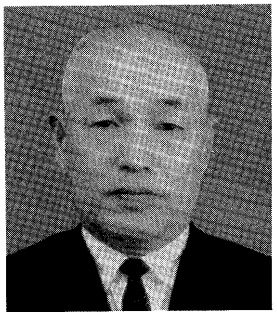

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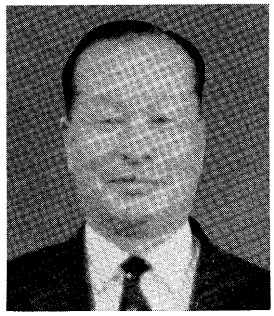

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Mr. Masamoto Tamai
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Director, Bureau of Port & Harbor, Tokyo Metropolitan Government

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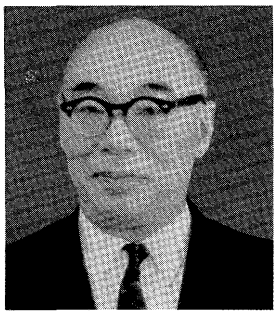

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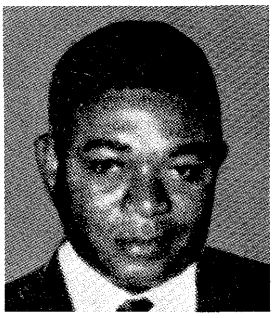

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Consul
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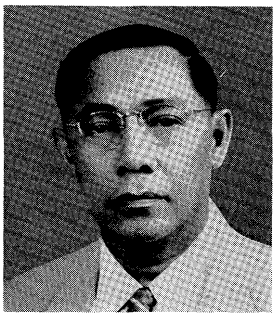

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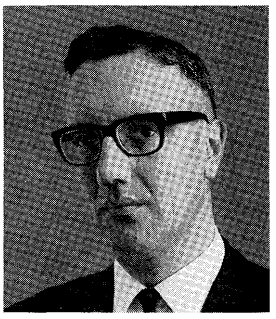

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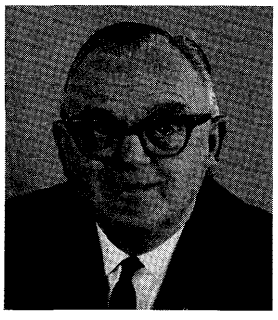

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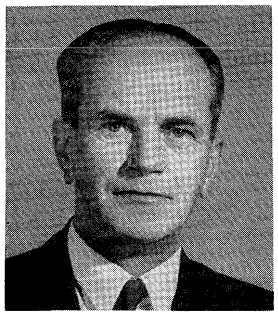

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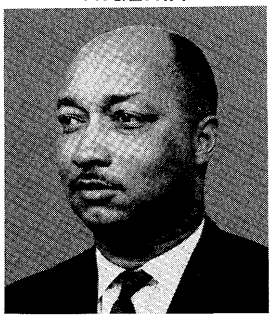
NIGERIA



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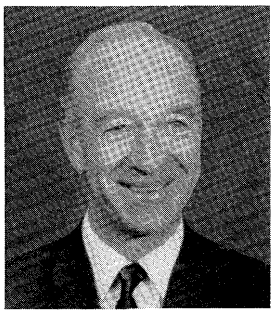
NORWAY



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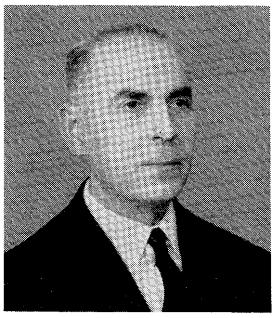
PORTUGAL



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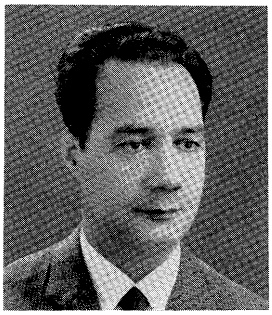

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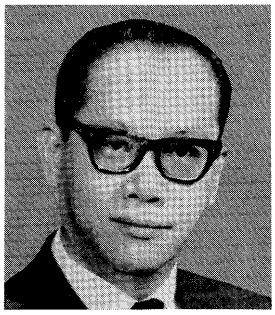

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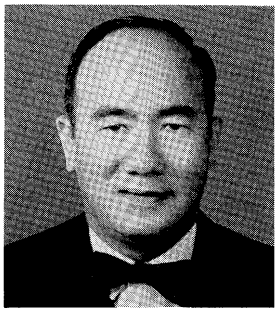

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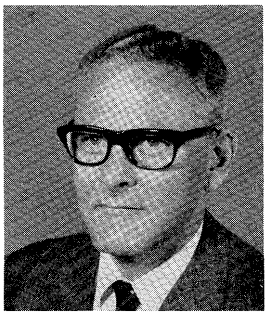

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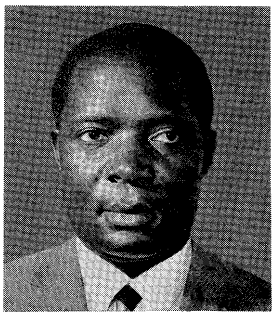

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East African Harbours Corp.

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Mr. Joseph Musembi
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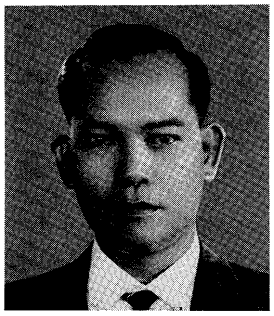
THAILAND



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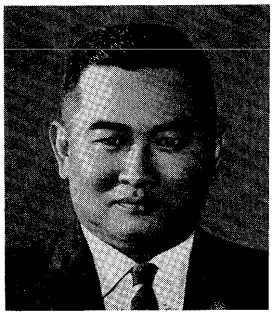
Port Authority of Thailand



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State Railways of the Rep. of Turkey

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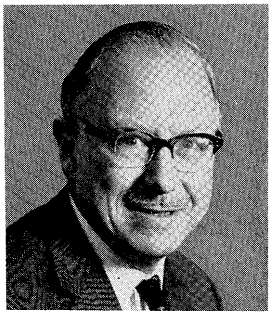

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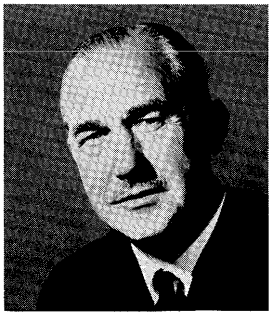

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Director of Marine Terminals
Port of New York Authority

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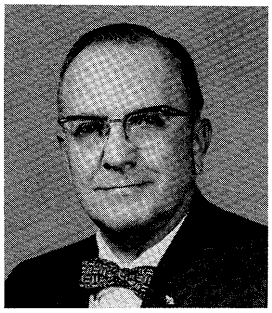

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Mr. Thomas P. Guerin
General Manager & Secretary
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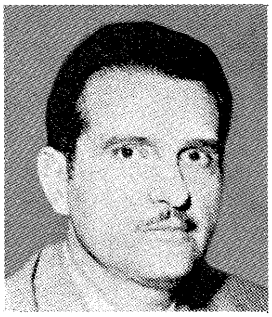

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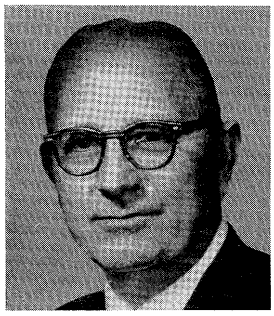
Administrador General
Servicios Portuarios Nacionales
Ministerio de Hacienda



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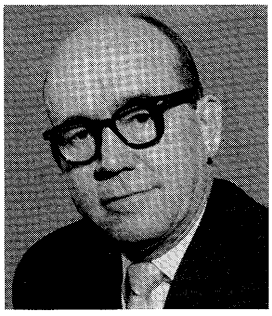

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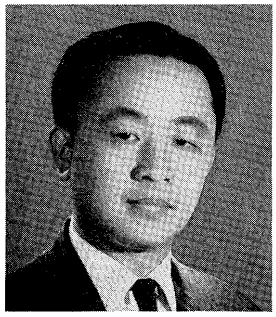

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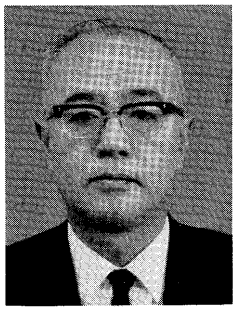

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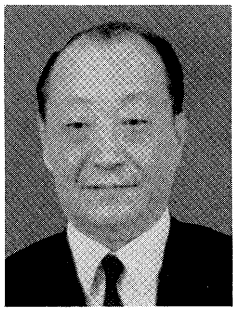

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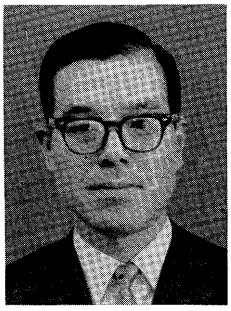

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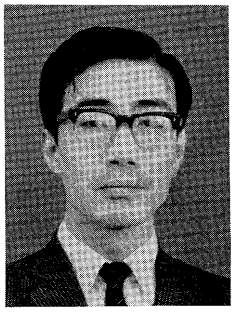

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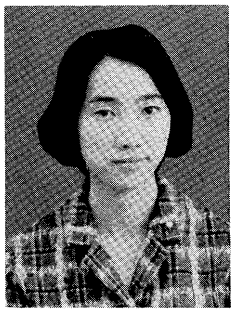

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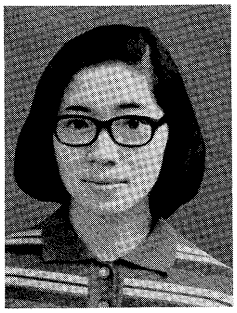

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PORTS and HARBORS

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January, 1969 Vol. 14, No. 1

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PORTS and HARBORS

Forum on Port Problems:

Problems with Containerisation on British Docks

By D. A. Stringer

Deputy Managing Director
British Transport Docks Board

(Paper delivered October 29, 1968 at the 2nd International Container Services & Equipment Exposition, Baltimore 1968)

Some of you may not be too sure what the British Transport Docks Board is, so it might be appropriate by way of introduction for me to give a brief outline description.

It is an autonomous public authority directly responsible to the British Minister of Transport who appoints its members. The Board employs a staff of some 12,000 people and it owns, administers, manages and operates 19 United Kingdom ports, through which passes one third of Britain's dry cargo trade. The Docks Board was established on 1 January 1963 and in its first year of ownership, and in every year since, it achieved a profit of around $12 million (after depreciation on a replacement cost basis) before payment of interest on capital. After interest the annual net profit of about $4 million has been put aside to reserves together with depreciation provisions of the order of $8 million. This has provided an important annual contribution from internal sources of over $12 million towards financing our capital development programme at present running at a rate of some $40 million per annum.

Our stand in the exhibition hall features three of the Board's 19 ports—Southampton, Hull and Newport—but these three are not the only ports of ours where we have introduced or planned purpose-built terminals for containerised and unit-load roll-on/roll-off services. It was in fact a Docks Board port which had the first ocean container ship terminal in Britain with a transporter crane to serve a fully containerised trans-Atlantic shipping service.

During last year, 1967, our ports handled in round figures 55,000 containers and over a million long tons of unit load freight.

I mention these facts to indicate that the Docks Board is by no means a stranger in the field of containerisation. Nor, of course, to unit-load traffic by the roll-on/roll-off method. We have in fact provided 18 specialised lift-on/lift-off and roll-on/roll-off terminals in the past five years.

So much then for background to the main part of my paper which deals with the problems of containerisation we have encountered.

It would be untrue, of course, to suggest that we have not had any problems, and naturally we fully expect more to arise as our container service programme gets under way. There are many different problems, and in the short time available to me I have selected three to talk to you about. These are: Capital Investment, Operating, and Labour Relations.

Capital Investment

Critics of modern developments (or lack of them) in the ports industry are apt to say with a heavy sigh, an accusing finger or a shake of the head: "too little, too late" or "too much, too soon" or, condescendingly, "about right, but in the wrong place", or a combination of all three! The rather unpalatable thought is that in many cases these comments may be at least partially justified. I am sure you will agree with me that in the intensively competitive and rapidly changing society of today the port industry is very well aware of the penalties for making a bad investment. Much of the money invested in ports is spent on reclaiming land from the sea, on dredging mud from the beds of estuaries, and on pouring concrete into holes and huge moulds. If shipowners then decide not to base their operations there, you are left with a truly gargantuan white elephant and a lot of red figures in your accounts.

This is probably overstating the obvious, and I must readily agree that it is a problem common to many other service industries, but it is something which we certainly dare not forget. Of course we all adopt the lastest techniques that can contribute to making a sound decision, but in the end we are faced with having to assess what our customers or potential customers will do, and then to take a straightforward commercial risk when reliance is placed in good judgement drawn from wide experience.

Perhaps I may illustrate my point by citing the case history of the considerable capital investment made by the Docks Board at their port of Southampton.

Why did we invest millions for containers in Southampton? Because of the facilities which have made it Britain's premier deep sea passenger port! This may be thought an irrelevant reason but it is not altogether so. People demand to travel to a regular timetable; so do containers. People do not like

to be kept waiting; neither to containers. People should not have to risk delay whilst lock gates are opened; nor should containers.

Southampton's deep water, lock-free access with its unique double tide has attracted two thirds of Britain's ocean going passenger trade. It was the home of both the Cunard Line's 'Queens' and will shortly welcome the new 'Queen Elizabeth II'. It is the host port for such great liners as 'United States', 'France', 'Rotterdam' and many others. Perhaps therefore, we are not excessively presumptuous in believing it will prove itself to be the most suitable in Britain for these square, solid, impatient, and expensive new 'elite'—containers.

At the centre of England's southern coast and only 70 miles from London, the fame of Southampton rests largely on the ability it affords shipowners to maintain rigid arrival and departure schedules fixed, and in most cases publicly advertised, a year or more in advance. This is surely what is wanted for containers —we are convinced of it. This is why we have built container berthage out into the deep water as an extension of Southampton's western docks. It occupies an ideal position where one can stand between the first two container cranes and look straight down the open water towards the sea.

Ships are able to arrive and sail at any time throughout the 24 hours of each day, irrespective of tides, and the port services they require are available by day and by night including Sundays. Labour flexibility is such that ships can be worked for 21 hours of the 24 hour day.

These are the things that are important to container operators when endeavouring to secure the maximum use of container ships. Only regular shipping schedules can lead to assured regular land transport services and regular programmes of delivery to and collection from importers' and exporters' premises.

I will not contribute here to the continuing 'chicken and egg' debate on whether it is better to build in the hope that users will come, as opposed to building after they have arrived, except to say that Southampton does not have to enter so seriously into this 'either/or' type of decision, because of its ability to construct economically viable units piece by piece.

We have been given Parliamentary powers to extend Southampton's existing five miles of quays by the equivalent of 30 deep water berths each providing back-up operational land to accommodate a containerised terminating service. Most of the project exists in outline only, but we are able to construct berths in step with requirements either individually of varying lengths, or in groups of two or more at a time, without involving duplication or incurring negatory expenditure.

So far one thousand feet of new quay has been built and is operational to support three trans-Atlantic services. The next phase is planned, and will be ready by the time future users require it.

We feel this step by step method of construction reduces to a minimum the commercial risk element, and it has the advantage of leaving us with the initiative to incorporate the changes in layout and design that will be necessary to reflect progressive operating techniques and the individual requirements of future customers.

It is also desirable to remember that the smaller the proportion of the revenues derived from current traffics which has to be diverted to service new capital investment in development projects, the better is the financial health of the port concerned. It can the better maintain the level of its charges to existing users, retain its commercially competitive position, and thereby plan for the future with greater confidence.

In saying this, I do not at all advocate that the risk element in port investment proposals must be eliminated before investment is permitted to proceed. In practice this would be impossible to achieve and if taken too far would mean that no investment was ever made. However, I do maintain that the risk should be made as small as realistically possible. If this is not done there will be the danger of over-investment and wasteful duplication in excess of what might be regarded as economically acceptable in any free competitive society.

With the widespread locations of our ports the Docks Board fortunately does not find itself in the situation of one port becoming so parochially convinced that it provides, for that reason alone, a container terminal only then to discover, because shipowners and operators do not share their conviction, that they have erected a costly monument to their own misplaced enthusiasm. By the same token, a port that provides a container terminal merely because it appears to be the thing to do might find itself sole author of its own financial disaster. Unless a port finds itself fitting securely into the criteria for the establishment of an efficient, economic throughout transportation system from producer to consumer it should consider most carefully whether in fact it can afford to take the risk. All port authorities in these crucial early years of containerisation have had to face first this sort of investment problem. We shall be able at this symposium and exhibition to talk about the results of the decisions that have been taken.

Operating Problems

Terminal operating does not in general provide a great number of difficulties. This is probably because there is nothing really new about containers. They have been a common sight certainly for more than 30 years and in themselves present no really new problem. Many other speakers at this and other similar gatherings have undoubtedly said the same thing. But all will I am sure agree that what is new is the determination to implement extensively the concept of throughout conveyance of large containers, built to a standard range of dimensions, in specially built ships.

The physical operation of handling containers is relatively straightforward when compared with handling mixed general cargo, though both demand close coordination between ship, quay, quayside shed, customers, importers, exporters and rail and road operators. The differences between the two are largely of emphasis, in that coordination and control in container operation is inevitably a centralised function, concerned with every phase of cargo movement from originating point right through to final delivery loca-

tion.

Each one of these phases is inextricably interdependent one upon another, and the traditional roles of the various providers of services are changing drastically. For long we have seen this ideal objective successfully applied in the oil trade. The oil is conveyed in pipelines from oil well to ship, and at the end of the voyage, from ship by pipeline to refinery. This example of the principle of integrated operation under one single control is the aim of the throughout container system — in other words it means the elimination of divided responsibilities inherent in the traditional general cargo trade, with all operations being in the hands of one organisation owning ships and containers and sub-contracting such services as are appropriate. If containerisation is a 'revolution' its revolutionary effects will surely be felt most strongly amongst the providers of traditional services. Quick turn-round is what the container ship operator requires. Containers must be assembled at the berth in the right order with regard to contents, weight and destination, and this calls for sound organisation and control. Incoming containers must be likewise dealt with speedily. These things cannot be done without a control procedure which is at one and the same time both sophisticated and simple.

In summing up my comments on operating, I may say that one can easily visualise a situation bordering on chaos that could result from failure to coordinate at any one stage of the overall operation. An effective control capable of acting immediately and accurately when anything begins to go wrong is obviously an essential.

At Southampton, where a railway freight liner terminal was opened earlier this year, and where we operate our own container packing and break-bulk depot within the dock estate, each new container ship operation is planned in detail well before it starts, not only with the owner of the service but with the providers of rail and road transport and the customs authorities. This has meant in practice that our terminal operational arrangements may be regarded as individually tailored to the specific needs of each user.

Labour Problems

Nobody should, in my opinion, take the subject of labour relations in isolation. It is not an isolated academic problem. Although it has engaged the minds of philosophers in many lands over the centuries, as we know so well it all boils down to the matter of men and women living and working together in our own neighbourhoods today. Whenever a labour problem arises it may be found that the root cause is not necessarily that which at first sight seemed to be the reason for the trouble: and that if mutual trust had existed at all levels and had there been frank and informed exchange of views at each stage, the initial difficulty might never have grown into a problem nor the problem have developed into a serious issue.

Containerisation by itself is not a root cause of labour difficulties— nor will be any future method of handling. But fear of redundancy is basic—and understandable. Anxiety for the future can lead to illogical thinking and if the small flames of uncertainty are fanned by historic prejudices and traditional attitudes whether on the part of employers or employed or both, a conflagration may be the final result.

How to prevent this? Consultation: 'Jaw-jaw is better than war-war', was commended by Winston Churchill. Information: Good decisions are made on facts, not on misunderstanding. Involvement: we consider involving all staff in the affairs of the organisation by whom they are employed as probably the most important ingredient for industrial understanding and progress —this is the policy practised by the Docks Board which, incidentally, is the only port authority in Britain that has established its own staff college.

If alongside this there is a planned programme of education, training, and retraining covering all levels and grades of employees, a climate should be capable of achievement in which mutual respect is established and the disagreements that will inevitably arise from time to time may be resolved round the table rather than the alternative of bitterness at the barricades.

Labour relations is a complex subject. We are all individually involved, but the danger of giving such general comments as I have is to be branded as naive or something worse. I must therefore make it clear that I do not think there is any simple standard formula for solving every problem in every port. But by the same token I do not believe for example that common manning and pay scales for all container terminals are necessarily the ideals to be sought for by all the ports in one country or within one continent.

Countries are different. Ports are different. Container services are different. The frequency and duration of calls, the number of containers handled, and how they are handled, must all affect the situation.

In Britain, negotiations to fix manning scales and productivity payments for dockworkers are carried out in the ports themselves within the context of a national agreement. This ensures local conditions are taken into consideration and that local people have their say.

Although the tidyminded may then point to what might appear to be differences in pay for similar work at two ports, a closer examination frequently may reveal that the work is not identical and that such differences as exist are justifiable.

Containers will need fewer people and of that there is no doubt. But new "container-men" will emerge with new, highly paid, skills developed or acquired. It is no solution to the problem to endeavour to preserve a position of employing two or more men to carry out a job that one man can reasonably do by himself—they would get no job satisfaction out of that, and further intractable problems would soon be sure to develop. The situation demands the calm and responsible examination it deserves, and the challenge of finding a solution must be accepted. This is in fact happening in Britain, and many examples can be already found of mutually satisfactory agreements having been reached for realistic manning and remuneration for working container terminals.

Conclusion

Problems, like the vagaries of the weather in Britain, will always be with us. Today we are coping with containers. We do not know today

(Continued on Next Page Bottom)

New Passenger Ship Terminal on the Hudson River

(The Port of New York Authority)

Office of the Mayor, New York City, September 18.:—Mayor John V. Lindsay announced today that the City and the Port of New York Authority have reached basic agreement on a proposal for construction of a consolidated passenger ship terminal on the Hudson River from 46th to 50th Streets.

The Mayor and Austin J. Tobin, Executive Director of the Port Authority, said the modern, air conditioned-and-heated facility would replace present warehouse-like passenger piers and would offer ocean travelers arriving in New York the most comfortable, efficient facilities in the world.

The planned facility, which was proposed by Mayor Lindsay in the first month of his Administration, would eliminate the discomforts, delays and chaotic traffic conditions that exist at the present passenger ships piers. The new facility would provide:

—six berths to accommodate all operating liners and superliners;
—a modern and efficient system for processing baggage through U.S. Customs;
—comfortable lounges for passengers and visitors;
—direct vehicular access to the pier for easy passenger pick-up and discharge;
—parking space for about 1,000 cars.

Mayor Lindsay said the design also would blend into any long-range plans by the City for related development of the inland area immediately adjacent to the terminal. The Mayor pointed out that the terminal would be a focus of interest and activity that would act as a magnet to the public. He also said that it would open up and relate the river and the waterfront to the community.

The City, the Port Authority and the passenger ship lines serving the Port are currently negotiating final lease arrangements providing for the financing, construction and operation of the new facility.

Principals of the Atlantic Passenger Steamship Conference, an organization of companies that will be using the new terminal, will meet with Mayor Lindsay and Port Authority officials Sept. 27 in New York to discuss the final plans for the facility.

Present proposals call for the following conditions:

—The City will finance construction of the facility, at an estimated cost of $60 million, out of Capital Budget funds;
—The Port Authority will construct, operate, and maintain the facility. Construction will take approximately three years. The Port Authority will pay the City a guaranteed annual rent sufficient to amortize the cost of the facility over the course of a 15-year lease.
—Revenues to amortize the construction costs and to maintain and operate the terminal would be derived from user charges to the ship lines and passengers, and fees from parking and other services in the terminal.

Construction is expected to get under way shortly after lease arrangements are completed. The final lease must be approved by the Board of Estimate and the Port Authority Board of Commissioners.

Mayor Lindsay, concerned over the deterioration of the city's passenger ship piers, first proposed construction of a consolidated terminal on January 25, 1966, at a meeting with Mr. Tobin and other Port Authority officials.

In line with the Mayor's proposal, a plan for a terminal was presented to the City by the Port Authority on April 25, 1967.

Subsequent design modifications resulted in a revised plan calling for construction of a new six-berth passenger ship facility on the site now occupied by Piers 86, 88 and 90. The facility would consist of three finger piers, each with four levels, linked by an attractive shore structure or "headhouse" into one large consolidated terminal.

Four Levels

Level 1 of each pier and of the headhouse, the ships' service level, would be devoted to functions related to cargo, ships' stores, offices and other ships' services.

Level 2, the main level, would be used for passenger vehicle loading and unloading platforms in the headhouse, and for baggage handling and Customs clearance on each of the piers.

Level 3 would consist of 20-foot-wide mezzanines on the piers. From these passengers and visitors would be able to look down on the Customs and baggage level.

Level 4, the roof, would consist of short-term parking areas, a vehicular loading and unloading platform on each side of the two outer piers, a public park at the river end of the center pier and smaller park areas at the river end of the outside piers.

Arriving passengers would debark to the new terminal's mezzanine floor where they will be able to make visual and auditory, but not physical, contact with visitors coming to greet them. Passengers would move down to the second pier level for baggage clearance and then horizontally to the headhouse where they could meet their visitors and

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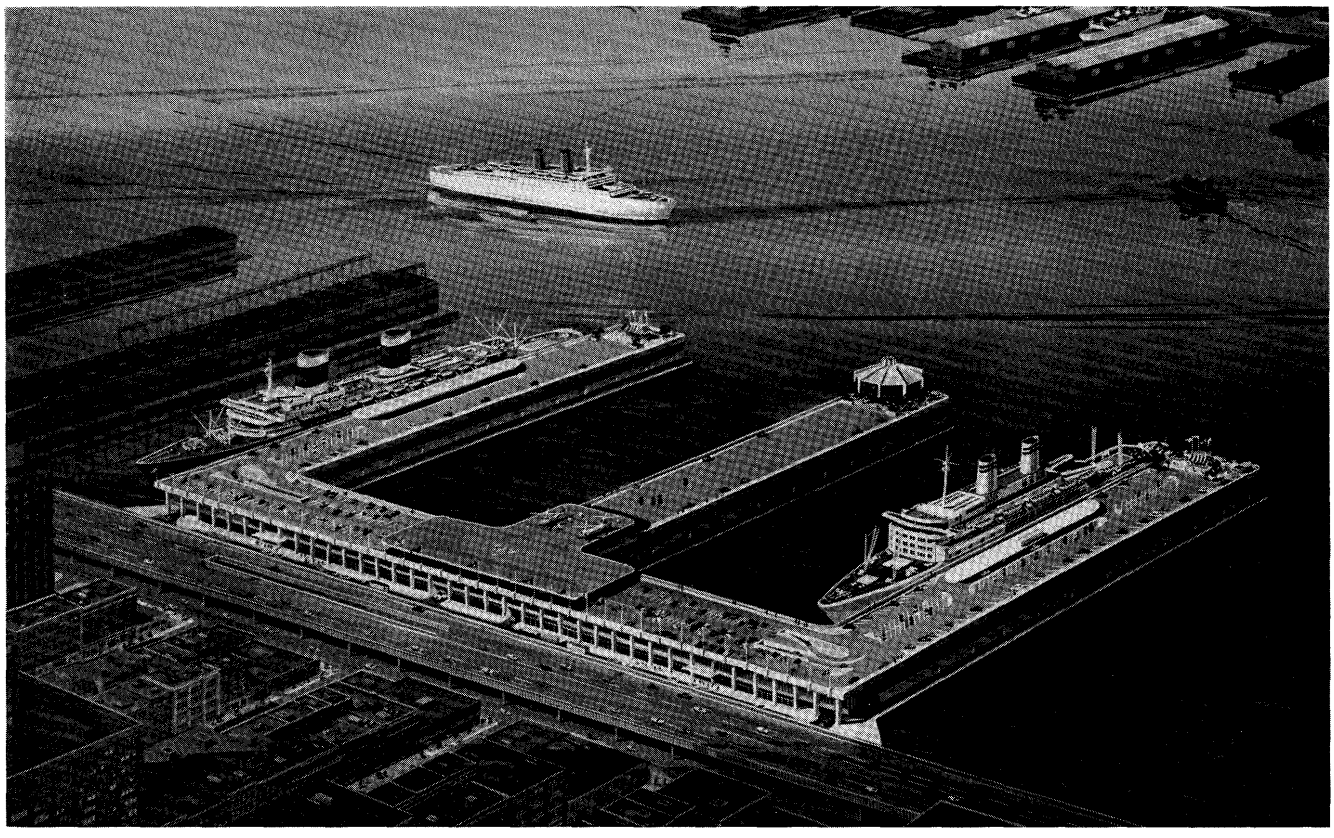
what will emerge as tomorrow's successor to the container. One thing is certain—there will be a successor and there will be symposia in the future. Men and women yet unborn will then exchange views, as we are doing today, and seek solutions to the puzzling difficulties that beset them. We wish them the same measure of success we are hoping for ourselves and trust they will not think too unkindly of us, members of a former age, who at least tried at Baltimore in 1968 to concentrate our minds and endeavours to the welfare of international trade and through that to make our contribution to better international understanding.



Plan for Consolidated Passenger Ship Terminal on Hudson River in mid-Manhattan.

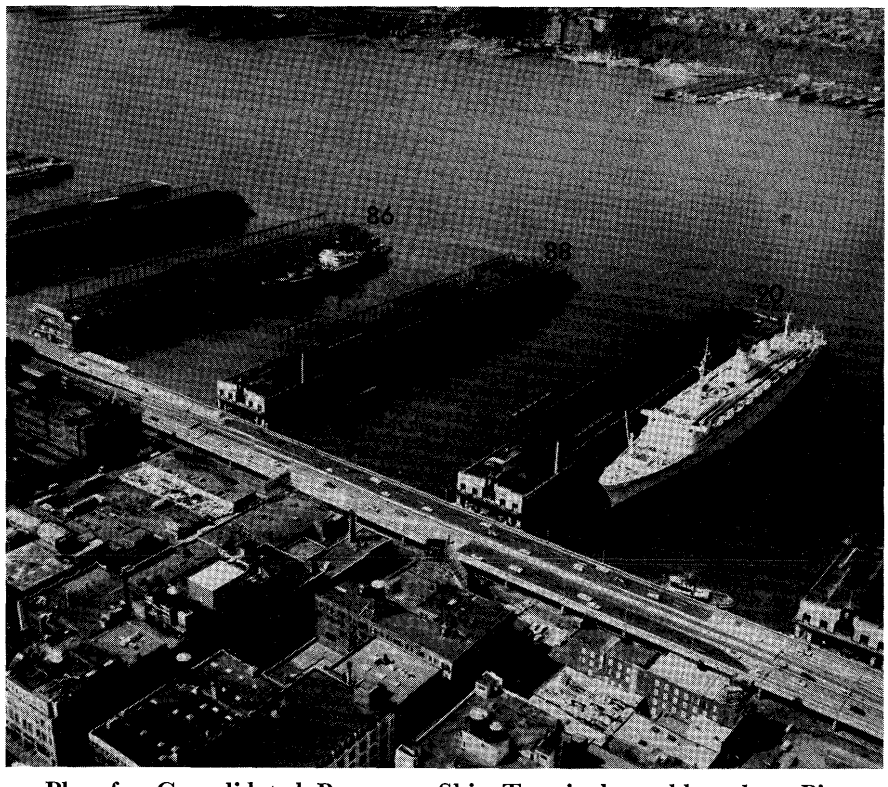
arrange to board taxis or private cars. About 1,600 feet of curb space on this level of the headhouse would allow about 60 cars or taxis to be loaded or unloaded simultaneously.

In the center of the two outer piers a visitors' lobby would contain stairs and elevators providing access to the mezzanine and to the roof. This would also be used by passengers going to the roof loading platforms. Because the center pier would be used primarily by smaller ships, no direct access to the roof parking area would be provided there. The exit from that pier would lead to the loading and unloading platform of the headhouse. This would be connected by ramps to the roof parking areas.

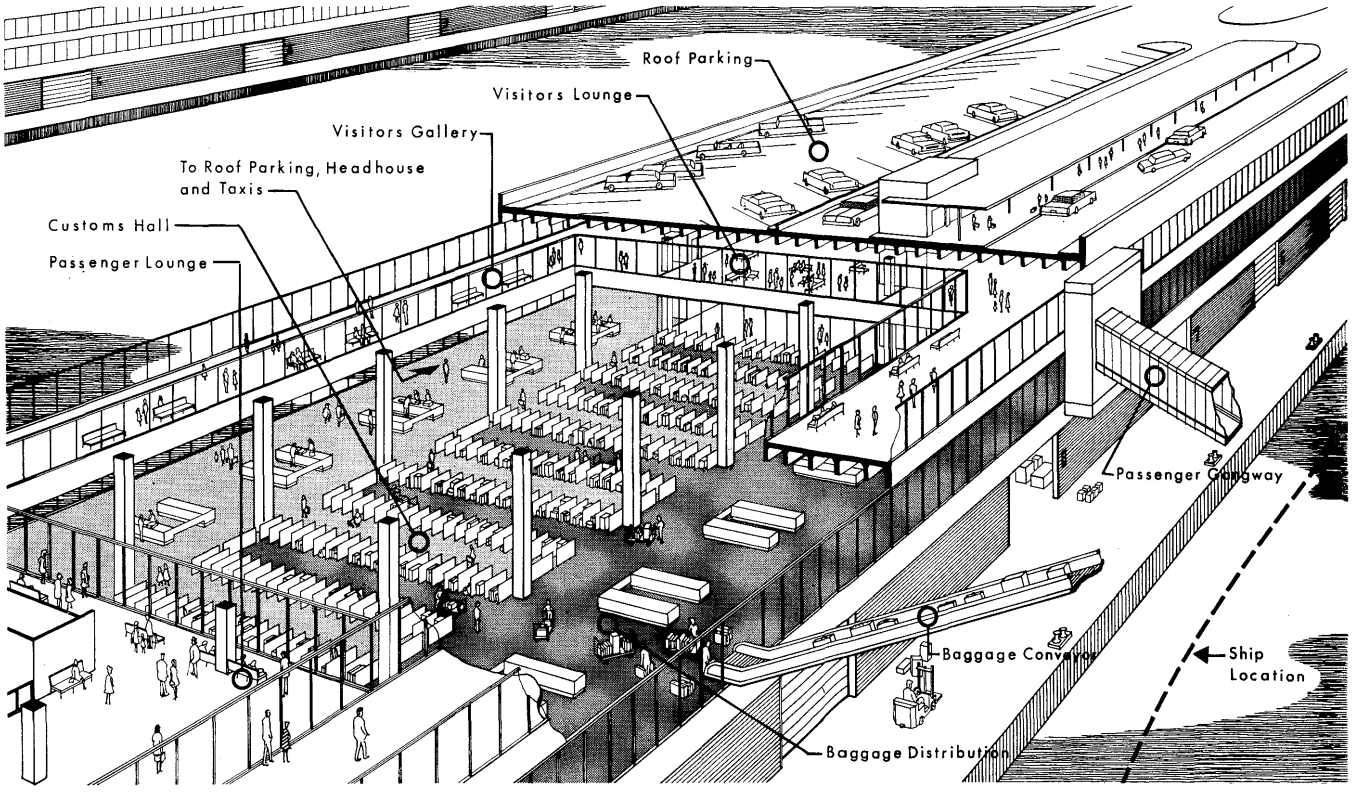
Improved Customs Procedure

The terminal plan was developed around an improved system for sorting baggage and for carrying out the required Customs examination. Under this system all baggage would be delivered by conveyor directly to the second level of the pier. The entire width of the pier at this level would be devoted to bag-

(**Continued on Next Page**)



Plan for Consolidated Passenger Ship Terminal would replace Piers 86, 88 and 90, Hudson River.



Plan for Consolidated Passenger Ship Terminal in The Port of New York. Cutaway View of Passenger and Customs Facilities.

gage handling and movement.

Baggage would be sorted and placed by longshoremen in bins two feet wide and five feet deep which would be assigned to passengers by number, letter and color. Rows of bins, 21 to a row, would be located in the center of the pier level which would be divided into four separate, identical baggage halls, each identified by a different color. Each hall would have 12 rows of bins for a total of 252 bins. The rows of bins would be separated by 11-foot-wide aisles and alternate ends of the aisles would be closed off so that longshoremen would be on one side of the bins and passengers on the other.

The four halls would have sorting space for 1,008 declarations which normally would accommodate up to 1,600 passengers. On rare occasions when more than this number must be accommodated, temporary bins would be set up.

After debarking, passengers would wait in the mezzanine lounges where they could communicate with visitors through glass walls. Special equipment would enable them to talk with their friends. When the passengers observe that baggage is being sorted, they can proceed down to the aisle on the second level where their bins are situated. They would stand at the opposite end of the bin from where the longshoremen are depositing the baggage.

After all a passenger's baggage has been placed in the bin he would take it out at his end and move down the aisle with it to a Customs counter for baggage examination. There would be a Customs counter located on the far side of the pier from where the ship is berthed for each row of 21 bins. After examination of baggage is completed, a longshoreman would move the passenger's baggage either to the loading platform in the headhouse or to the visitors' lounge in the center of the pier where elevators would lift the longshoreman, baggage and the passenger to the roof loading platform.

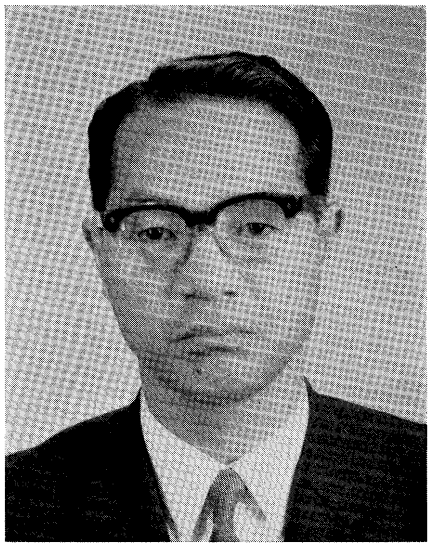
While separation between passengers and longshoremen is maintained during the sorting process, the passenger can be immediately adjacent to the bin into which his baggage is being deposited. Also, as soon as the passenger's baggage is all assembled, it can be moved immediately to the Customs counter.

Participation of other Port Organizations

In developing the plan for the new terminal, the Port Authority's staff consulted with passenger ship lines and with representatives of the International Longshoremen's Association. They also worked closely with the United States Bureau of Customs and other Federal agencies including the Public Health Service, the Immigration and Naturalization Service and the Plant Quarantine Division of the Department of Agriculture.

Tree-Planting In Seaside Industrial Zone

By Hiroshi Otomi
Director,
Public Enterprise Bureau,
Osaka Prefectural Government



Mr. Hiroshi Otomi

1. Outline of Seaside industrial zone of Sakai and Senpoku

At the industrial zones of Japan, those animated with industrial production consist of 4 zones—Keihin zone around Tokyo, Chukyo zone around Nagoya, Hanshin zone around Osaka and Kita Kyushu zone all over Kita Kyushu—which occupy nearly 60% of the total industrial production in Japan.

Above all, Keihin and Hanshin zones accounts for a major proportion, each performing a central function in the economic sphere dividing Japanese economy into 2 parts of Eastern Japan and Western Japan.

Up to around 1935, Hanshin zone had shown an industrial output exceeding that of Keihin zone, forming the first-class zone in Japan. However, the latter was featured by heavy chemical industry, while the former, especially Osaka, showed so slow growth as to yield the first place to the latter around 1940, because in Osaka the light machine and light chemical were major industry and the industrial capital connected with the commercial capital there was comparatively small in scale; so to speak, it had a subcontract character centering around the medium and small enterprises.

Thus, in addition to the weakness in industrial contents, early development in Hanshin zone led to sprawling in the industrial zone and aggravation of urban environment, while a shortage of sites was intensified with extension of factory scale due to technical renovation in every enterprise. So the result of discussions on any countermeasure, it was decided that a seaside industrial zone would be set up in the Sakai and Senpoku area adjacent to south of Osaka and come into effect in 1957.

Such a trend was also seen in other industrial zones: The movement to establish new or more plants in line with technical renovation, showed activity and the industrial production had a rapid progress. Around 1955-1956, occurred the problem of shortage of site and service water, and all over the country began to be carried on the enterprise of setting up seaside industrial zone by reclaiming a tract from the sea, taking the most of the special condition of very long coast line in Japan (area: 370,000 km, coast line: 25,641 km).

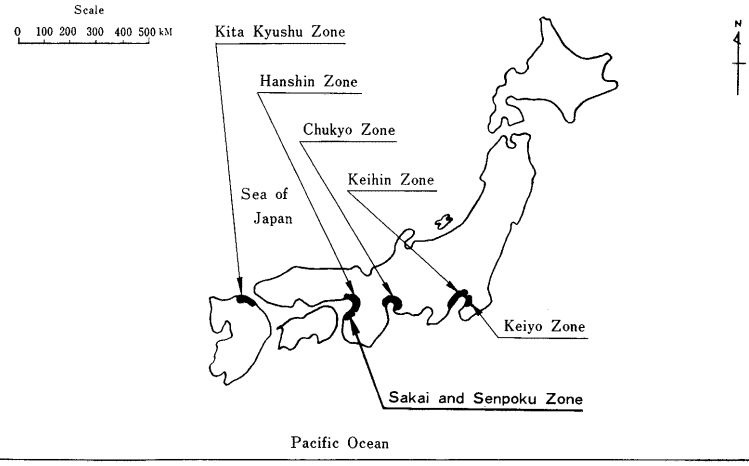
This zone of about 2,000 ha reclaimed land is second in size only to Keiyo area in Japan.

This enterprise started in 1957 has completed 80% of the program and concluded contracts with 120 advancing enterprises. And, the completed factory site was nearly sold out.

Advancing enterprises:	119 total
Iron & Steel	33
Oil	15
Electric	1
Gas	1
Ceramic	12
Chemical	23

Of the contracted 119 companies, 55 have already commenced operation, of which the annual output was approximately 2,500 billion yen in 1967. It is estimated that this output will amount to ¥1,000 billion at the time of perfect operation, while the number of employes and the quantity of handled goods will reach 45,000 and 100 million tons per annum respectively.

Fig. 1 Four Major Industrial Zones in Japan



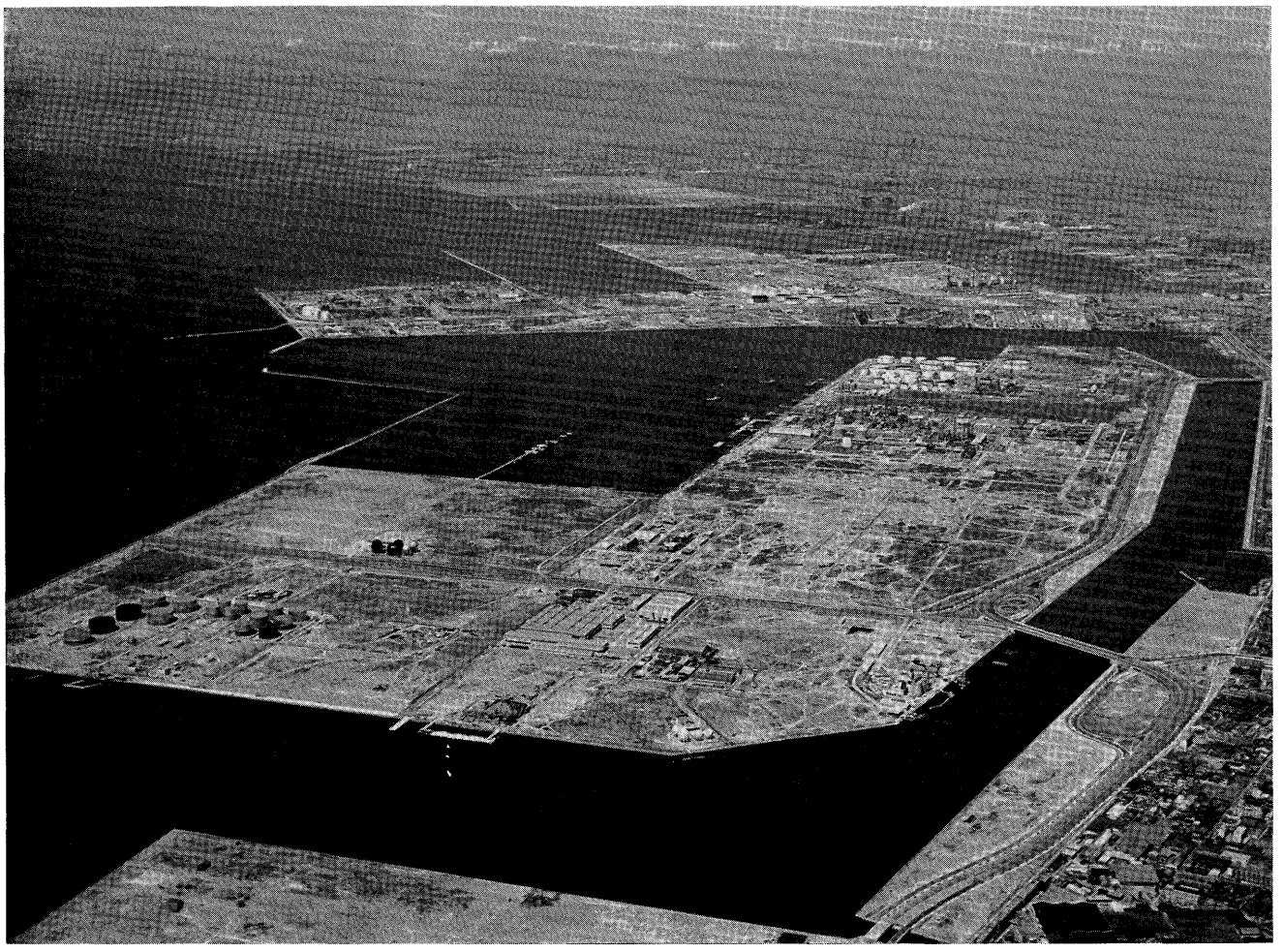


Photo 1. Aerial view of part of the 2 km × 200 m waterway flanked by green belts and recreational areas.

2. Setting-up program

In the factory areas of Japan, there has been an evident trend to construct the largest factory and curtail to a great extent the expenses required for the installations without direct relation to production, with a view to obtaining the highest productivity in the limited site. When setting up the zone concerned was started, such a trend still remained and there were many zones inferior in labour environment. However, based on the idea that from the long-term and synthetic view-point, the very establishment of "bright and functional industrial zone" would promote labour and productive desire and raise productive activity, we decided to plan as widely as possible such sites as roads and waterways and complete the environmental adjustment.

a) Roads

The standard roads of 36 m wide were set up in the area of south-north line parallel with the tangent of the reclaimed land with the old town (9 km), Sakai area (10 km) and Senpoku area (5 km).

Moreover, in parallel to the roads, was designed the site for public service facilities of 14 m wide. (The site for laying under the ground the public and industrial pipes).

Fig. 2 Sakai and Senpoku Industrial Zone

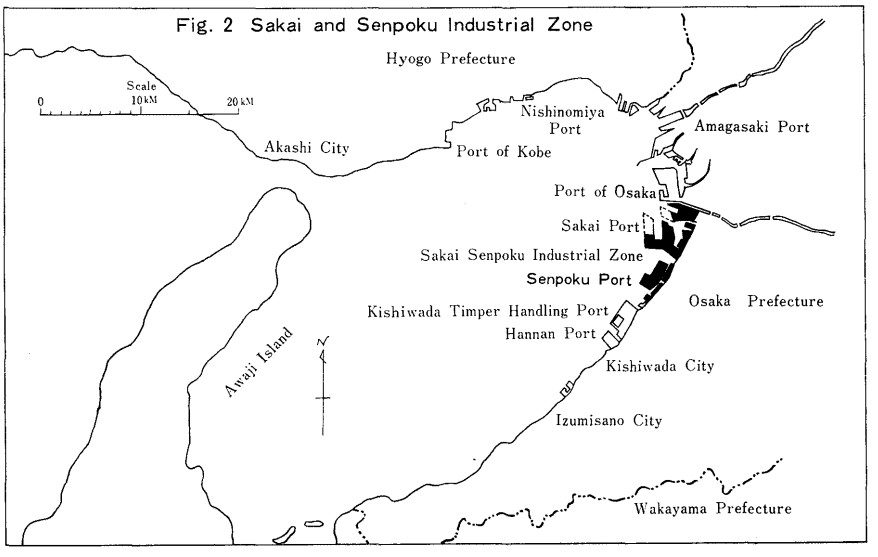


Photo 2. Aerial photo of Sempoku Port, with the treed green belts visible to the right foreground, and the Port of Osaka dimly visible in the distant background.

b) Waterway

In establishing the Senpoku area, with a view to cutting off the oil tank group and the old town, a waterway of 200 m wide was decided to be set up for 2 km between the reclaimed land and the town, making the reclaimed land into an island shape.

3. Environmental adjustment enterprise

At the central position of the industrial zone, "Marine Centre", foundation, made a start as the managing centre in 1965, and the building was completed in 1967.

The Marine Centre is aimed at carrying out the enterprises required for promoting positively the environmental adjustment and laterally the industrial activity and encouraging the industrial zone, while the building as PR centre is equipped with the offices of advancing enterprises and related businesses and various service facilities. Both are the first attempt in Japan.

And, in the contacting area of the reclaimed land and the town, recreation facilities, parks and green zones are to be established for letting the people of both areas utilize them, whereas in Senpoku area, outdoor pool and traffic park were already constructed, and ground, base-ball ground and gymnasium are also to be set up soon.

As regards the environmental adjustment, we are calling every factory for cooperation and devoting ourselves to making such bright environment as adoption of coloured fence, unification of enterprise guide marks and tree-planting in the factory.

4. Tree-planting enterprise

As an important part of environmental adjustment, tree-planting was started in 1966, a greater part of which has been accomplished.

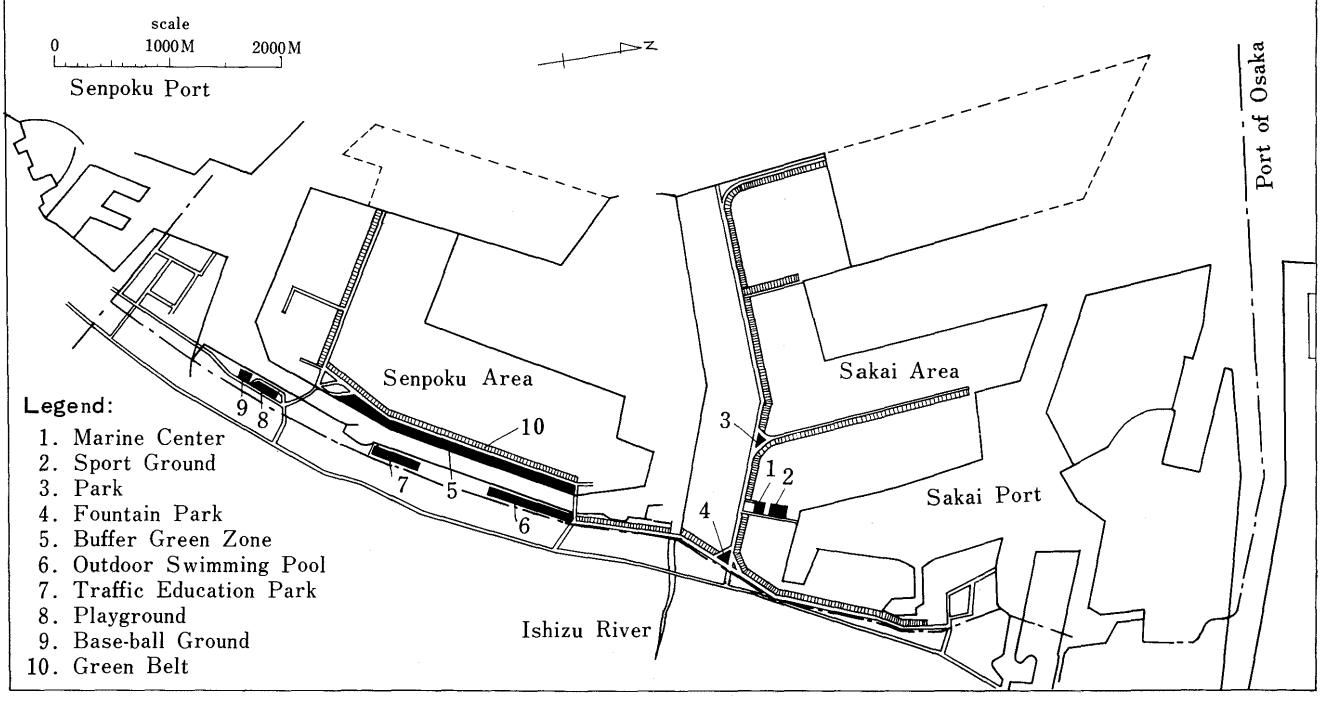
High trees	7,000 pcs.
Middle "	10,000 "
Low "	180,000 "
Total	197,000 "
Lawn	280,000 m²

The kinds and number of principal trees are shown in Table.

Selection of kinds of trees is subject to restrictions of being the marine land, the reclaimed land and the factory area, etc. but especially are required the following features:

being dryness-proof
" wind "
" tide "

Fig. 3 Ground Plan of Sakai and Senpoku Industrial Zone



being smoke proof
" energetic in reproducing power of the underground part
" vigorous in sprouting power on the ground.

Accordingly, we selected the trees meeting the above conditions as possible.

Thus, the trees were planted on the roadside and central zone, and the whole site for public service facilities was also covered with lawn and arranged with high trees. And, as occasion demanded, was set up the tree-planting zone like a small park with some promenades and rest plazas.

The cross-road, in harmony with the trees planted on the road, was made the decorative plaze featured by a fountain or Japanese garden, within the limit not hindering the traffic.

Especially, in Senpoku area, consideration was taken so that a tree-planting zone of 50 m would be set up on the side of the reclaimed land along the 200 m waterway, and that the buffer zone of 800 m, including park, waterway, 50 m green land and road, would be placed between the factory and the old town.

The routes were classified, with the cross-road or turning as cardinal point, according to their direction, and given a singularity by planting there different kinds of trees. And, as for the trees on the roadside, the central zone and the site for public service facilities, the same or similar kinds were arranged selectively to give a spectacular impression on each route and unify the road space as a whole.

In planting trees in the seaside industrial zone with rigid weather conditions, especially important is their maintenance and supervision for some years after tree-planting.

We believe that only when these trees will have grown smoothly under careful supervision, we can come near a step to the ideal of healthy, green factory park.

Orbiter Probe

IAPH News :

Melbourne Is All Set

Believe it or not, Mr. V. G. Swanson, IAPH First Vice President (Chairman, Melbourne Harbor Trust Commissioners) was in Japan with Mrs. Swanson Saturday December 7 through Sunday 15th at the unexpected invitation of a Norwegian shipping company whose ship was to be launched at Tamano Shipyard of Mitsui Shipbuilding Company on Thursday December 12. During his stay in Japan he sat twice with IAPH officials who, through various talks, got a strong impression that things were all being set in good shape in Melbourne for the coming Conference. We were told there were already over 230 applications submitted to the Conference Organizing Committee in Melbourne, and that the rate of increase was gathering momentum.

Saturday, December 7, Mr. Toru Akiyama, Secretary General, and some IAPH staff members welcomed the couple at the Tokyo International Airport. Monday (December 9) evening, a dinner was given by the Secretary General in honor of Mr. and Mrs. Swanson in the Crown Room of the Palace Hotel, Tokyo. Also present at the table were 3 Japanese IAPH Directors, Messrs. Gaku Matsumoto, Shizuo Kuroda, and Gengo Tsuboi, and Alternate Director, Mr. Den Takase, and Several IAPH staff members.

Tuesday (December 10) morning, Mr. Swanson visited the IAPH Head Office where the Secretary General and his staff got briefed on the Melbourne Conference. At noon Mr. and Mrs. Swanson were guests of the World Trade Center Club of Japan at a luncheon meeting at Keidanren-Kaikan, Tokyo.

Friday (December 13) noon, Mr. and Mrs. Swanson were guests at a luncheon at Sorakuen-Kaikan in Kobe by Dr. Chujiro Haraguchi, IAPH President (Mayor of Kobe) and Mrs. Haraguchi, where Mr. Toru Akiyama, Secretary General, and several other Kobe City Officials were present.

Special Stamp

Melbourne: — The Australian Postal Authorities have decided to issue a special 5 cent postage stamp which will commemorate the conference of the International Association of Ports and Harbors to be held in Melbourne in March of next year.

It is expected that the stamp will be on sale throughout Australia about a week before the conference opens on 3rd March.

The Port of Melbourne is the host port to the International Conference, and this is the first time such a conference has been held in the South Pacific area. The conference is held every two years, and the two previous ones were in Tokyo in 1967 and London in 1965.

The stamp, chosen by the Postal Authorities from a number of designs submitted, features shipping and tugs in the Victoria Dock area of the Port, with the skyline of the city as a background, and above is the artist's sketch of the stamp. The stamp will be in four colours, and the artist has captured the atmosphere and activity of a busy port.

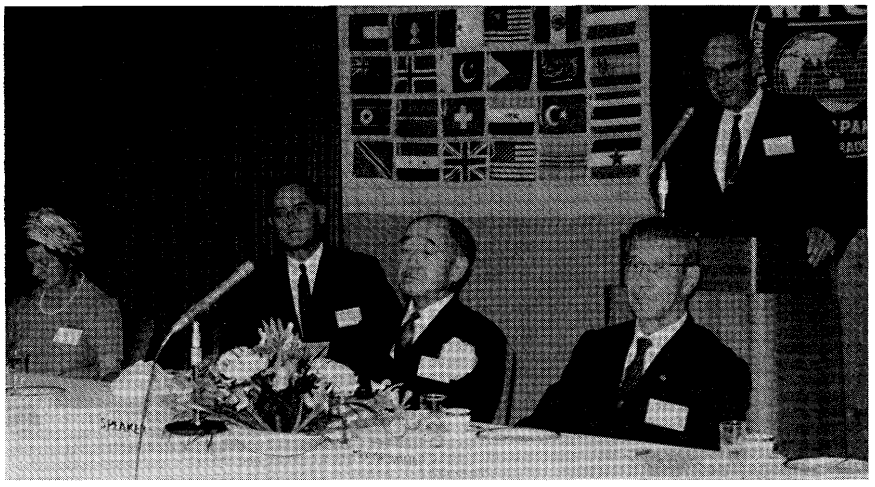
Special postmarks will also be used by the Australian Post Office at the time of the conference to be associated with the stamp, while a special conference post office—for the convenience of delegates attending from all parts of the world—will be established in the Southern Cross Hotel, the main conference venue.

However, the Post Office has warned philatelists that no philatelic services will be made available at the conference post office, as these will be provided by the Philatelic Section which operates from the Russell Street Post Office

Special Stamp in Australia

—From Melbourne Harbor Trust Gazette, Dec. 1968

Mr. Swanson in Tokyo



Mr. V. G. Swanson speaks briefly at the World Trade Center Club Luncheon at Keidanren Kaikan in Tokyo December 10. Left to right; Mrs. Swanson; Mr. Albert H. Zinkand, Vice President, WTCC; Mr. Sukemasa Komamura, President, WTCC, Mr. Gaku Matsumoto, Representative Director, WTCC; and Mr. Swanson.

in the heart of the city.

The special commemorative stamp will be dedicated by the Director-General of Post and Telegraphs at the opening ceremony of the I.A.P.H. conference on Tuesday morning, 4th March, when the Governor of Victoria, Sir Rohan Delacombe, will officially open the conference proceedings.

There are more than 53 countries represented in the International Association of Ports and Harbors, and it is expected that delegates from ports and allied associations in the majority of these countries will attend. (Melbourne Harbor Trust Port Gazette, Dec. 1968)

Wide Representation

Melbourne: — Numerous applications from port and allied organisations intending to be represented at the Melbourne conference are now beginning to reach the Conference Organisers and at this early stage it already appears that the Melbourne Conference will be well attended.

To date organisations from 17 countries not including Australia itself have forwarded the required conference application papers, while many others have notified their intention to be represented.

A feature which is surprising Conference Organisers at this early stage, is the apparently large proportion of ladies who will be accompanying delegates to the conference, compared with the previous two conferences at Tokyo and London. So far, it would appear that about 80% of delegates will be accompanied by ladies, although this percentage could change when all applications are to hand.

In some of the cases it would appear that apart from a growing interest in I.A.P.H. activities, Australia's increased trade relations with a wider range of countries, and her unprecedented industrial mineral and commercial development is attracting representation to the conference.

From among the countries not represented in the International Association of Ports and Harbors, the Melbourne Conference Organisers have already received definite advice that a team of between two to four port specialists from the U.S.S.R. will be attending the conference as observers. (Melbourne Harbor Trust Port Gazette, Dec. 1968)

Directory Notes

1. East African Harbours Corporation Official Representative:

Mr. Cornelius Tamale, Director General

P.O. Box 9184, Dar-es-Salaam

Cable Address: "PORTREEVE" Dar-es-Salaam

Office Phone: 21212 Dar-es-Salaam

Ports under Administration: Mombasa (Kenya), Dar-es-Salaam, Tanga, and Mtwara

The above corporation, on page 175 of 1969 Directory under the country name Kenya and city name Mombasa, should now come under a new country name Tanzania and the city name Dar-es-Salaam in the coming 1970 Directory. This refers to a new situation, not to a misprint.

2. Due to change in the location of authority, Mr. Cornelius Tamale, Director, and Mr. Joseph Musembi, Alternate Director, for Kenya, have been transferred to Tanzania in the same qualifications respectively.

3. Italy now has the following officers:

Director: Arch. Mr. Raimondo Rivieccio
Presidente
Ente Autonomo del Porto di Napoli
Varco Duomo-Piazzale Pisacane
Napoli

Alternate Director:
Prof. Ing. Arturo Polese
Consigliere di Amministrazione
Ente Autonomo del Porto di Napoli
Varco Duomo-Piazzale Pisacane
Napoli

4. Spain now has the following officers:

Director: D. Fernando Ma Yturriaga y Dou
Director General
Direccion General de Puertos y Senales Maritimas
Ministerio de Obras Publicas, Madrid

Alternate Director:
D. Aurelio Gonzales Isla
Director
Junta de Obras y Servicios del Puerto de Barcelona
Puerta de la Paz, Barcelona

9th ICHCA Confab

The Ninth International Conference of ICHCA is scheduled in Gothenburg June 2-5, 1969. Handling International Cargo is to be the theme of the Conference, and subjects discussed will include "A world-wide review of trends and developments in transport", and papers read will deal with general and dry bulk cargo; petroleum and gas; and air freight.

"Developments in the through movement of cargo, and improvements in break-bulk cargo handling" is another subject, and Unit Loads; The International Exporter; Heavy Capital Goods; The Food Industry; The Stevedore; Break-Bulk handling; Productivity study; Feeder Services for Transocean container ports; The needs of shipowners; Feeder capabilities; Organisation of port activities will all be discussed.

Visits of technical interest in the Port of Gothenburg, and to industrial concerns will be arranged. A ladies programme will be planned for the conference period. (ICHCA Monthly Journal, November 1968)

3rd Airports Conference

London:—The 3rd Airports Conference, sponsored by The Institution of Civil Engineers, The Royal Institute of British Architects, The Royal Aeronautical Society, The Institute of Transport, The British Airports Authority, in association with the American Society of Civil Engineers, is scheduled to be held in Queen Elizabeth Hall, London September 23-25, 1969. Further details may be obtained from The Institution of Civil Engineers, Great George Street, Westminister, London, SW1, United Kingdom.

Bibliography

A most up-to-date and elaborate list of books on Economics of Containerization is available for anyone who pays $2.

To the Editor:

Enclosed is a copy of a bibliography prepared by the library which has just been published by the Transportation Center, and which may be of interest to your readers. A BIBLIOGRAPHY ON ECONOMICS OF CONTAINERIZATION lists United States and foreign references on containerization for the period January 1965-December 1967, with an addendum covering materials from January through June 1968. A revision of an earlier bibliography covering the period January 1965-April 1967, it includes more than twice the number of references listed in the earlier work. It is available from the Transportation Center at Northwestern University, 1818 Hinman Ave., Evanston, Ill. 60204, at a cost of $2.00.

Transportation Center Liberary,
Northwestern University

The Introductory to the book by the compiler, Miss Dorothy V. Ramm, reads as follows:

Containerization Bibliography

The increasing interest in containerization shown by the transportation industry has led to a rapid growth of literature on the subject. This bibliography lists United States and foreign references on containerization covering the period of January 1, 1965 to December 31, 1967 with an Addendum for January through June, 1968. An exception has been made in the section "Bibliographies," where several older publications have been listed; these are valuable sources of information on material issued before 1965.

Most, but not all, of the material listed is included in the Transportation Center Library Collection. Economic aspects of containerization have been stressed, in keeping with the library's special emphasis on economic, rather than technical aspects of transportation. Material has been arranged in a broad, general classification by mode.

Finally, I would like to thank all those who have assisted in the preparation of this bibliography. Special thanks are due to the other members of the Transportation Center Library Staff and to Helen Dechief, librarian of Canadian National Railways, who very kindly supplied additional references on containerization from her library collection.

Shell's Tanker Policy

Tokyo:—A surplus of big tankers next year is foreseen by the chairman of Shell International Marine Ltd., F. S. McFadzean.

"Too many large tankers are being built," he declared in an interview at Sasebo for **S&T News.**

With his young daughter Felicity, McFadzean was in Sasebo from London for the naming ceremony of the 212,000-dw/t C. Y. Tung Group tanker **Energy Transport** on Oct. 26. Felicity was the principal sponsor for the ceremony.

His remarks were made in reply to a query as to whether or not Shell planned to order more tankers in addition to its present huge building program. The program is scheduled to be completed in 1969.

McFadzean noted that 22 tankers of the 210,000-dw/t class are included in the program. In addition, eight more were ordered by various owners for charter to Shell —among them the **Energy Transport.** This made a total of 30, aggregating over 6,000,000 dw/t.

As is well known, these "Shell-type" tankers were designed by Shell to operate economically either round the Cape entirely or to transit the Suez Canal in ballast on outward voyages and return homeward via the Cape with cargo.

McFadzean pointed out that with the expected surplus of big tankers Shell will be able to charter further tonnage, if needed.

"No," he emphasized. "We do not intend to order more tankers now. By the spring of next year it won't matter if the Suez Canal is opened or not. Even if the canal remains closed there will be a surplus of big tankers."

McFadzean is also one of the five managing directors of the Royal Dutch Shell Group, and he noted that the development of ports and oil terminals has not kept pace with the increase in the size of tankers.

"Already we have 10 of these big tankers in operation any by the end of this year we will have 16, but we do not have a single receiving terminal that can take them," he said.

He said that three or four termi-

nals will be ready in 1969 and 1970.

Meanwhile, Shell is using two 70,000-dw/t tankers to lighten the 200,000-tonners in the English Channel, which then can go in and berth at the terminals. The two smaller tankers are taken alongside the big ones, in this operation, and part of the cargo is off-loaded into them.

The four European terminals being developed are at Gothenburg, Rotterdam's Europoort, Le Havre, and at Fos, near Marseilles.

McFadzean said that, of the various advances made in oil loading terminals and receiving terminals, he feels that the single buoy mooring system has been the most successful.

One main advantage of it is that additional warfage is not necessary, so big savings are possible, he said.

He also feels that the lightening method used by Shell in the English Channel has further possibilities.

"Looking 10 years ahead, it is quite possible that the same technique could be applied to larger tankers," he said.

Smiling, he added: "It is even not impossible that the **Energy Transport** herself might be used to lighten bigger tankers built by then."

The Shell executive said he expects to see an even more spectacular increase in the size of tankers in the future.

"The next jump in size will not be a small one, but of 700,000 tons or more," he said. (Shipping and Trade News)

Lord Geddes

London, December 5: — A plea for better Government treatment of Britain's invisible earners—shipping being prominent among them—was made by Lord Geddes, president of the Chamber of Shipping, when he spoke at the Chamber's annual dinner in London last night.

The Government should treat invisible earners as the "massive contributors they are to our economic strength." In balance of payments terms "British ships gave a better return than almost any manufacturing industry" said Lord Geddes.

One of the matters of immediate concern was the content of the White Paper on ports, which would shortly be unveiled.

"What that content will be I do not know. But the ports are among our most vital tools, and the Government has it in its power to sharpen them or, inadvertently and with the best intentions, to blunt them irretrievably."

Lord Geddes continued: "We would only ask that, whatever the new proposals may be, the Government should not commit itself too far and too soon without the fullest consultation with us. We are practical men with a lot of experience, and we believe that our advice would be of mutual value at what, we hope, will still be a formative stage of the Government's policies."

Earlier Lord Geddes had referred to the criteria by which shipping should be judged.

"Last year," he said, "the United Kingdom fleet had gross earnings of nearly £700 million, of which more than 60 per cent, were from abroad. We are convinced that in balance of payments terms British ships give a better return than almost any manufacturing industry. We hope that we can demonstrate this to Lord Rochdale and to the Government."

But the least they could ask was that the Government should no longer neglect its invisible earners, themselves included, and should treat them as the massive contributors they were to the country's economic strength.

"I will say no more now on this essential point, but I am sure that it will not be lost on you, Mr. President." (Lloyd's List)

100-Knot Ship

Greenock, Scotland: — Cameron H. Parker, head of one of Britain's top marine engineering firms, is a man in a hurry who wants to see a 100-knot north Atlantic freight service within the next decade or so.

He thinks it can be done despite what he calls the inherent conservatism of the marine industry.

"The prospect for 100 to 150 knot surface effect ships should be very earnestly considered," Parker wrote in an illustrated brochure marking the centenary of his firm, John G. Kincaid and Co. Ltd. and he favored an air bubble type of hovercraft which would skim over the waves on an aircushion.

"It should be possible within, say, 10 years to build a contained air bubble (CAB) ship for a 100 knot north Atlantic cargo service, such a vessel could complete the Europe-U.S. voyage in 48 hours and, although weather would restrict operations to a considerable extent, weather routing could be usefully employed due to the shortness of the voyage.

"A 5,000-ton CAB ship for container service has been proposed and the propulsion system suggested is eight marine gas turbines each developing 25,000 hp.

"The speed of this CAB ship would achieve about 80 knots for 200,000 hp against a wave height of 10 feet.

"At present the ideal power plant for surface effective ships is the gas turbine, due to its low specific weight.

"Conventional steam and diesel plants would be too heavy, but nuclear power would be an active contender as there would be no bunkering penalty in either weight or time."

Commenting on his article, Parker emphasized that no blueprints yet existed for the kind of ship he had in mind.

"I'm just doing a bit of crystal-ball gazing," he said. "In the traditionally conservative marine industry the idea, 10 years ago, of a 200,000 tons deadweight tanker sailing with an unmanned engine room was considered wildly futuristic.

"It is more than likely, therefore, that what will become the actuality of marine propulsion in the 1980's will be treated today as no more than a wild flight of the imagination. However, an article such as this can only be written by repressing conservatism and should be read by applying the same mental process."

In his article Parker considers it unlikely that tanker size will increase much beyond 300,000 tons deadweight because of operating

difficulties.

Parker does not see the nuclear merchant fleet, at present limited to four ships, as an answer in the immediate future.

"The present difficulties in the path of nuclear propulison are a very high cost, relatively high and specialized manning levels, and lack of reasonable insurance," he says. "In addition, there are substantial problems in respect of contamination and collision risks. (Japan Times)

Vans Done Overboard

Tokyo: — Twenty-two containers were allegedly "washed away" from the deck of the **Hawaiian Builder** of Matson Navigation Co. of the United States while the 12,130-dw/t (7,895-g/t) containership was wallowing through stormy seas about 40 nautical miles off the U.S. Pacific Coast on Dec. 1, according to reports received by local cargo insurers December 11.

The 22 containers were among a total of 50 riding on the ship's deck. Several other containers were alleged to have been "crushed under strong wave pressure."

Because of this incident the ship had to return to Oakland and after unloading the damaged cargoes left for Honolulu, the reports said.

Matson's agents did not reveal an estimate of the cargoes lost and damaged.

The reports said, however, that sundry shipments accounted for 19 out of the 22 lost containers and a total of 150 hogs for the remaining three.

As for the circumstances under which the incident occurred, it is still under investigation whether any commission or omission was involved, according to local insurers.

The question, they say, is whether the 22 containers were swept away because of broken hooks or were they jettisoned purposely for the sake of the ship's operational safety.

It is also still unknown if any portion of the lost and damaged cargoes of the **Hawaiian Builder** were destined to Japan.

However, they are taking a serious view of the nature of this case in the belief that the risks involved in on-deck container loading arrangements are very grave.

They are thus closely following the progress of the current investigation into this case. (Shipping and Trade News)

Quaratine Breakthrough

U.S. Congressman William S. Mailliard (left) and Dr. Richard B. Eads (right), Pacific Coast Sanitation Consultant, USPHS, were among 66 persons attending a recent luncheon honoring retiring quarantine officer-in-charge L. B. Schneider. A chiming ship's clock was presented to the veteran public health official, who announced December 1 inauguration of "radio pratique"—quarantine inspection-free entry of most ships—initially at San Francisco and New York harbors. (Oct. 21, 1968)

ILA Strike

New York, N.Y.:—Alfred Giardino, chief negotiator for the New York Shipping Association, said January 6 that the 17-day strike by the International Longshoremen's Association (ILA) has reached an impasse because of the union's "insistence on what they call 'national bargaining.'"

He told a press conference that unless there is an early agreement "New York can't solve the problems of other ports. I'm afraid the strike will last for several more weeks." The strike has tied up some 250 ships in ports from Maine to Texas.

Giardino said New York does not have the authority to negotiate with the union in several areas of the so-called master contract for such other ports as Philadelphia, Boston and Baltimore.

He further explained that most other northeastern ports have in the past agreed to abide by the New York contract in regard to wages, pensions and welfare contributions, but that now the union is asking for an extension of the master contract so that the agreements reached in New York on containerization and guaranteed annual wages will be applied to the other ports. (Japan Times)

New York, N.Y.: — The striking International Long-shoremen's Association Monday (December 23) renewed a bid for guaranteed annual wage in all five of the north Atlantic district ports.

The union asked that the guarantee, now operative only in New York and Philadelphia, be added to a master contract proposal already blocked by management objections to other new clauses.

The ILA's 75,000 members struck the Atlantic and Gulf ports last

John M. Fulton, a member of Oregon Governor Tom McCall's recent trade mission to Japan, Korea and Taiwan, was elected 1969 Chairman of the Portland Dock Commission at the Commission's December 5 meeting. Fulton, Corporate Representative of Crown Zellerbach Corporation, was appointed to the Commission in 1966 and has served as Vice Chairman during the past year.

Friday (December 20) night.

ILA president Thomas W. Gleason said the union asked the New York Shipping Association to make an offer that would "assure a reasonable guaranteed annual wage in Baltimore and Hampton Roads."

At the same time, he said he expected something new from Boston on the guarantee issue. Boston had an inoperative plan because of an inadequate number of longshoremen working there to date.

Gleason disclosed the ILA move after a joint meeting with the 140-firm shipping association at which he said management "moved but not enough" on a containerization clause.

The guarantee issue presumably would meet with new objections from managements outside the Port of New York on grounds that the shipping association was never authorized to bargain beyond five basic master contract items — wages, hours, length of the contract, pension and welfare.

Management in Philadelphia and Boston raised such objections earlier to expansion of the master contract by the addition of clauses not only on containerization, but on union dues checkoff, vacations and holidays.

The result was the blocking of a settlement last Friday, when ILA members in deep sea ports on the Atlantic and Gulf coasts resumed a strike that had been halted by an 80-day Taft-Hartley injunction.

Gleason conceded to newsmen that inclusion of the wage guarantee in the master contract expansion would require still further added authority for the shipping association.

He remarked, "someone will have to ask for authorization."

The wage guarantee became a contract issue in a pact which expired Sept. 30, but as a local bargaining matter.

Gleason talked between caucuses which followed a one-hour joint session at a motor hotel overlooking the luxury liner piers on Manhattan's Hudson River waterfront, where only a single ship was visible.

The U.S. Maritime Administration said 120 ships were idle on the two coasts, including 49 in New York harbor.

Other ships fled to sea to avoid being caught by the strike.

The only two vessels being worked by longshoremen in the port of New York were military cargo vessels at Bayonne, N.J.

Operations continued under a military exemption from the strike.

Gleason said that in the joint session management "made some changes" in the suggested contract language concerning containerization.

He added that the ILA was considering the changes in a caucus and later would give management its reply.

Talks in strike broke up with no progress reported, and were not scheduled to resume until Friday.

Daniel Fitzpatrick, a federal mediator in the disputes, said "no progress" had been made in the talks between the union and the New York Shipping Association.

Monday's developments seemed to preclude any quick settlement of the dispute, which has tied up shipping in the Atlantic and Gulf ports. (Japan Times)

Halifax, Container Port

Ottaka, Dec. 23: — Halifax won an important round December 20 in the battle for container traffic between Europe and North America, with the announcement that a three-company steamship consortium has chosen the Nova Scotia capital as its Canadian terminal.

The consortium also had been considering St. John, New Brunswick.

The stakes are high. A fast, smooth operation on the Atlantic coast could wrest cargo traffic away from the St. Lawrence route.

The ultimate question is whether shippers will find it better to transfer cargo between ships and fast trains at Halifax, thus saving time, or to use ships closer to the interior of the continent, taking more time but spending less money. The answer is by no means clear.

The three-company consortium, made up of Clarke Traffic Services, Ltd., of Montreal, Compagnie Maritime Belge, of Antwerp, and the Bristol City Line of Bristol, England, plans to inaugurate a regular weekly service connecting European ports, Halifax and a U.S. port in 1970. It has ordered three 50,000-ton containerships.

An interim service, using smaller ships and a conventional Halifax pier, will begin in mid-1969. (Shipping and Trade News)

Syphon Culvert

Ottawa, November 26, 1968: — The St. Lawrence Seaway Authority has awarded a $6,410,375 contract for construction of a concrete syphon culvert and associated excavation on the new length of navigation channel for the Welland Canal section of the Seaway.

The contract award has been made to Pitts-Atlas, a joint venture of C.A. Pitts Construction (Ontario) Limited and Atlas Construction Company Limited.

Excavation for the river diversion and culvert trench will total 1.5 million yards. An additional three million yards will be excavated for a section of the channel adjacent to the culvert.

The inverted syphon culvert will

NFTA Takes Giant Step Forward

Buffalo, N.Y.:—On the first anniversary of the Niagara Frontier Transportation Authority, under the dynamic leadership of Chairman Charles R. Diebold, it can be said that all modes of transportation have taken a giant step forward. With NFTA participating in the 2.5 billion dollar bond issue now encompassing all modes of transport used to move people and goods, there has been a resurgence of the port with numerous improvements on all segments of port activity.

The building of Warehouse "B" almost doubled the amount of covered storage space available at Port Terminal. It is 160 feet wide, 520 feet long with nearly 84,000 square feet and 1,848,000 cubic feet of storage space. A loading dock and a double track railroad spur run the length of the building.

Acquisition of a Mobile Gantry Crane is other evidence of the giant step forward taken by the port of Buffalo. Completely adaptable to bulk, general and containerized cargo of all types, the new giant Gantry Crane, in use almost daily, is of tremendous value to the port in handling such commodities as rock salt, steel beams, steel bars and clay.

A second general cargo operator in the new 2 million dollar terminal "B" has also swung into full operation and with a 30% increase in the bulk movement, plans are being brought to a favorable conclusion for a bulk liquid terminal which will be in operation with the opening of navigation in 1969.

In addition, the Niagara Frontier Port Authority has effected impressive strides forward by contracting with the Buffalo Overseas Terminal Inc. to handle waterfront activity. This augments the operations of Pittston Company which has been active on the piers for the past several years. Buffalo Overseas Terminals Inc. is already utilizing the new warehouse for transit storage for overseas cargoes prior to navigation and the company plans to install up-to-the-minute equipment as technical changes in the industry occur.

Viewing the transportation progress picture from the air, the main northeast-southeast runway of the Greater Buffalo International Airport switched on its new center-line lights recently and became the second in the country to have its runway covered by approximately 6,500 peak-candlepower lights. The new system provides 160-200-watt lights countersunk in the runway and produces a light beam in both directions along the center-line.

Most significant of the progress achieved by the Niagara Frontier Port Authority in the 1967-68 period was the official "go-ahead" for the plans to expand the Greater Buffalo International Airport terminal area designed to handle rapidly increasing traffic. Scheduled for construction is a new west terminal with 10 passenger gates to be occupied by Eastern, Allegheny and Lake Central. The present terminal will be expanded from 14 to 18 gates to be used by American, United and Mohawk. There will be a new 350-500 space parking area built at the new west terminal along Genesee Street and the terminal will be connected by service roads and a minibus system. Other improvements include an expansion of apron space for airplane storage and maneuvering, with the enlarged paved areas designed to handle "air buses." These huge jet vehicles will carry from 250 to 350 passengers and are expected to be in service within two years to meet the upsurge in passenger travel in and out of the Greater Buffalo International Airport. In '67 alone, record breaking passenger travel here reached the two million mark and there is every indication traffic will literally and figuratively soar to new heights in the immediate future.

Perhaps the progress story is best told by the authority's annual report which revealed that the Niagara Frontier Port Authority ended its fiscal year, March 31st, with a net income of $94,180, as compared with deficit the previous years. (News From NFTA)

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carry the Welland River under the canal channel near the north end of the new eight-mile cut. Water in the river is seven feet below the operating level of the canal and the culvert will have a flood time capacity of 9,000 cubic feet per second.

The four-tube structure will be 638 feet long and 92 feet wide. It extends 30 feet below the navigation channel and will require 39,000 cubic yards of concrete.

A one-mile diversion channel for the river will link with the culvert and return the river to its natural course to flow on to the Niagara River.

The river flow will be put through the new culvert in the Spring of 1970 and the existing river course cofferdammed to allow completion of the channel excavation. (The St. Lawrence Seaway Authority)

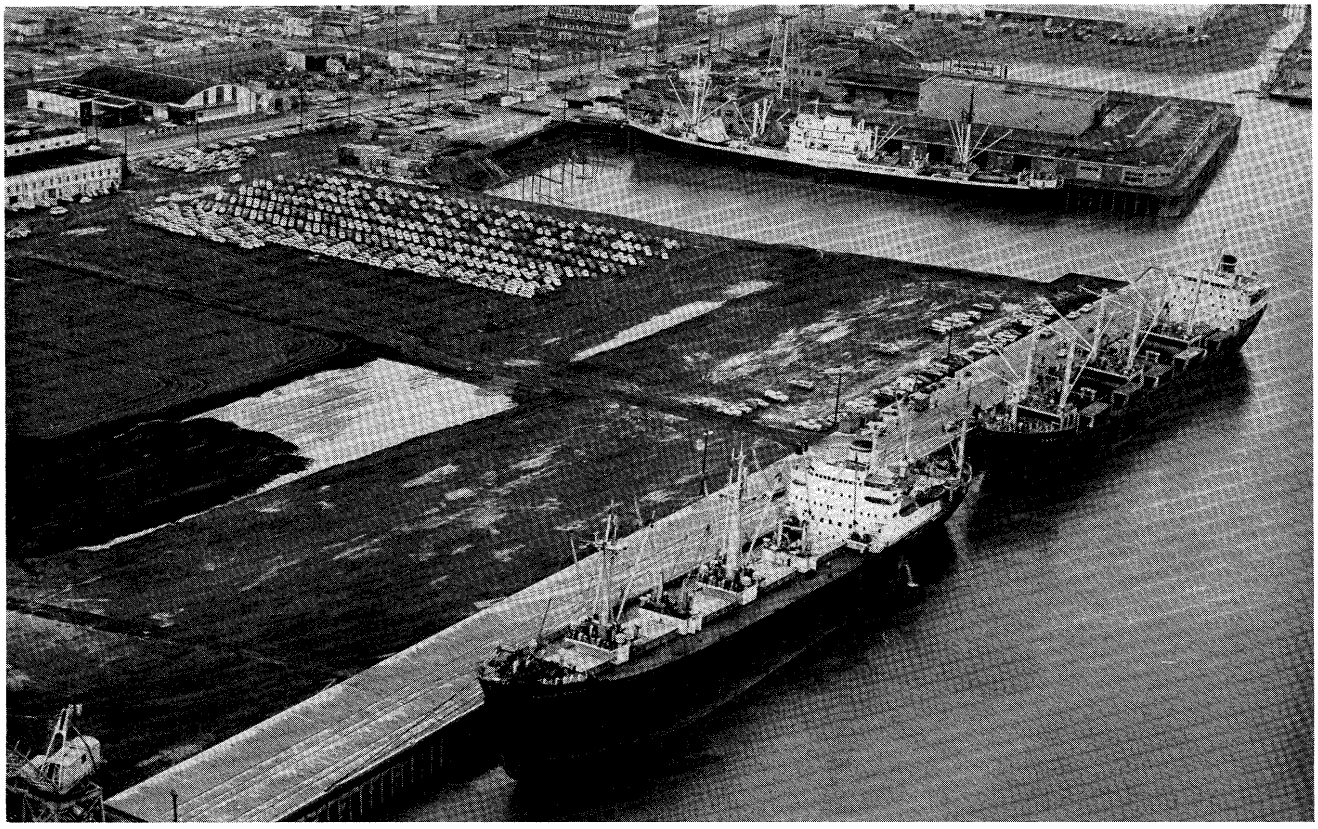
Two Giant Steps

Baltimore, Md.:—The Maryland Port Authority has approved the purchase, at the low bid of $893,-300, of a new Paceco container crane and installation at its public container terminal at the Dundalk Marine Terminal.

The self-powered container crane will enable the terminal to double its present rate of container cargo handling.

At Dundalk Marine Terminal, the Authority had allocated, for immediate use, two berths of its eight berths to container operations to satisfy the initial demands of the "container revolution," and has four more berths, designed specifically for container use, now under construction.

Phase I Completed in Portland



An initial construction phase was officially declared completed by Commission of Public Docks officers in ceremonies dedicating Portland, Oregon's second container/general cargo terminal on November 21. A 1340-foot completed concrete dock was utilized immediately as two vessels discharged 1650 imported automobiles, a one-day record for the Pacific Northwest. Installation of a 40-ton capacity Hitachi container crane, as well as surfacing of open storage areas and construction of transit and warehouses, will be included in Phase II of the 26-acre, $9 million project. Two Dock Commission whirley cranes will handle container and other lifting assignments for the flexible two-berth dock until mid-1969, when the high-speed container crane is in operation.

The four new berths were originally scheduled for completion in 1971, but now the Authority is **six** months ahead in construction of these berths, and will have all four in operation in August, 1970.

The gain of six months in the construction comes about from the method of creating new land fill. Originally this would have been done by trucking in land fill, but the work is being done by barge with suitable fill obtained by hydraulic dredging.

In addition to the bridge-type container crane that will be in operation next August, a 65,000 square-foot container consolidation shed will be completed by next March. This shed will support the present two-berth container facility. Later, additional space will be provided by a second larger consolidation shed of 100,000 square feet to be constructed on the filled land, which will support the four new berths, and is scheduled for completion by January, 1970. (Port of Baltimore Bulletin, September 1968)

Focus on Melbourne

Melbourne: — The Port of Melbourne is becoming a focal point of world maritime interests as the time draws closer for two major events which will take place in the port early next year.

The first event is the sixth conference of the International Association of Ports and Harbors, which will be held from 3rd-8th of March, with Melbourne as the host port. There are 53 countries represented in the membership of the Association, and it is expected that delegates from port and allied organisations in most of the countries will attend.

This will be the first time that an international port conference has been held either in Australia or in the Southern Hemisphere, and the organising committee is in the final stages of preparations to welcome delegates and their ladies. As is fitting, the conference and associated functions have been planned with a marked Australian background.

The second event is the arrival,

at about the same time, of the first "pure" container ship in the first overseas container service out of Australia. Two British shipping consortia will operate a weekly service out of Melbourne, Sydney, and Fremantle to Tilbury in the Port of London. Specially designed port and container handling facilities are nearing completion in the Port of Melbourne at the new Swanson Dock complex, which will cater for the majority of pure container services. Meantime this dock and other areas in the Port are also being fitted for unit-load/container/multi-purpose ships, operated in overseas services by four European shipping companies.

So far this year, many visitors from overseas countries have come to Melbourne to study the latest developments and preparations being made, and countries represented by some of the recent visitors shown here were Japan, Pakistan, Taiwan, Canada and France.

FROM JAPAN came the Secretary General of the International Association of Ports and Harbors, Mr. Toru Akiyama, who was visiting Australia for reasons associated with his many and varied business activities in Japan, as well as in connection with the Melbourne conference of the I.A.P.H.

Mr. Akiyama discussed preparations under way with the Chairman of the Port of Melbourne and Host to the conference, Mr. V. G. Swanson, and the conference organiser, Mr. N. L. Fidge.

While in Melbourne Mr. Akiyama took the opportunity of making a tour of inspection of the port. On his visit to Australia, Mr. Akiyama was accompanied by the under secretary of the I.A.P.H., Mr. Shigehiro Kusu, who also took part in the discussions about the conference.

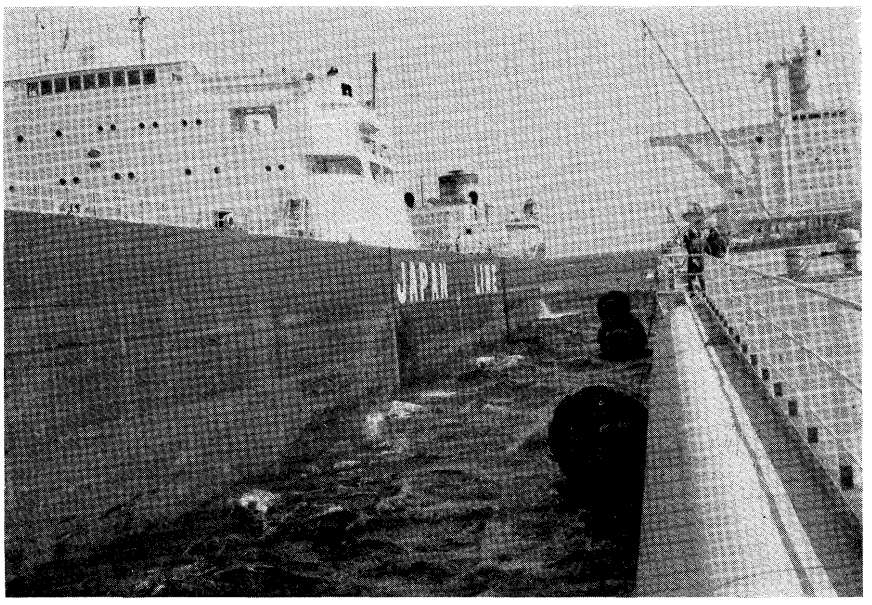
FROM FRANCE came Mr. Claude Mandray, the director of commercial development of the Port of Marseilles. Mr. Mandray was in Australia to study container and unit-load developments in the European trade, particularly in regard to wool shipments out of Australia.

FROM PAKISTAN came Mr. A. Raymond, the traffic manager of the Karachi Port Trust. Mr. Raymond was accompanied on his tour by his nephew who now lives in Australia. Mr. Raymond made a general inspection of facilities at several Australian ports.

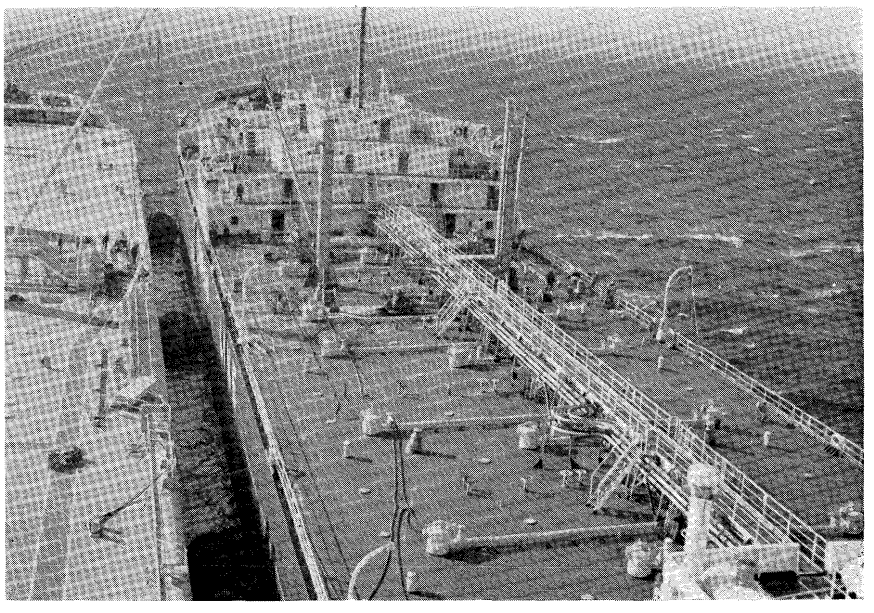
FROM CANADA came Captain G. H. Dragemark, whose home is Sweden, but who is stationed in Montreal as the maritime superintendent of the Atlanttrafik Express Service Shipping Line for Canada and the United States. Captain Dragemark was last in the Port of Melbourne in 1961, when he was the Master of one of the Atlanttrafik ships which lift refrigerated and general cargo out of Australia for east coast U.S. and Canadian ports.

FROM TAIWAN came Mr. S.

Rubber Fenders

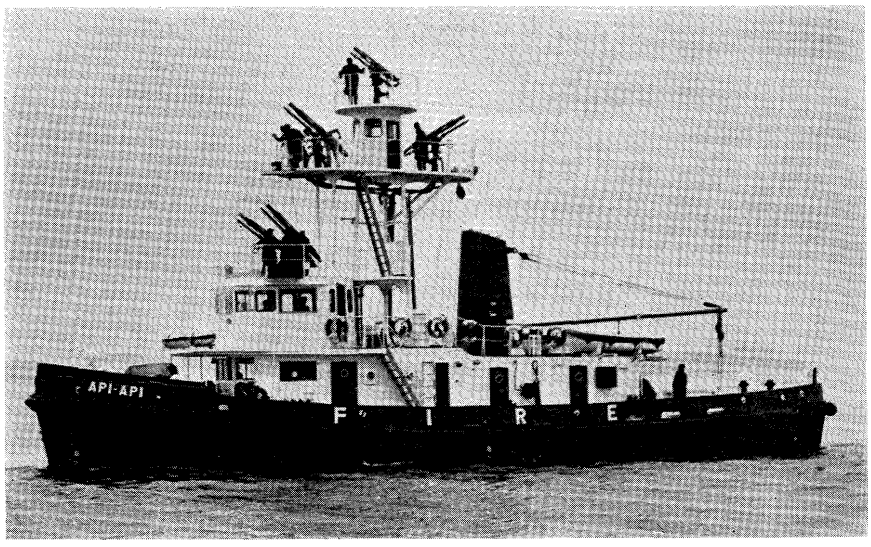


1. Two tankers sidle broadside to broadside, with pneumatic rubber fenders lowered.



2. Offshore from a Yokohama Refinery in Japan, oil is being transferred from a 160,000 dwt tanker (left) to a 33,000 dwt tanker (right).—Photos by Yokohama Rubber Co., Ltd.

Singapore's Fireboat "Api-Api"



W. Chen, the Chief of Keelung Harbour Bureau who was on a six month United Nations fellowship to study cargo handling methods in the United States, the United Kingdom, the Netherlands and Australian ports.

In Melbourne Mr. Chen paid special attention to Swanson Dock, the port's new container dock complex. He was particularly impressed with the area of land available behind container and unit-load cargo handling areas in Melbourne. (Melbourne Harbor Trust Port Gazette, November 1968)

Fire Boat

Singapore: — A new modern fire fighting vessel named 'Api Api' has just been commissioned for service with the Authority's Fire Brigade. This new $1.4 million vessel has a displacement tonnage of 225 tons and was built by a local shipyard to strengthen the Authority's fire fighting force and to ensure greater safety of the increasing tonnage of shipping using the Port.

Launched only five months ago, the 'Api Api' is fully equipped with the most up-to-date fire fighting as well as salvage equipment. She has a speed of about 12 knots and is stabilized for operation in rough seas. Fitted with four high pressure hose reels of 180-ft length each, she is capable of fighting oil fires efficiently as well as containing oil spill fires with an inflatable oil boom.

This fire float has an inter-communication system, VHF/UHF systems and a saloon that can be converted into a hospital in an emergency. She will be manned round-the-clock.

The five foam and water monitors on the vessel are mounted at five different deck levels, the highest of which is on a tower 35 feet above water level. These dual purpose monitors are believed to be the first of its kind fitted for use on such a vessel in the region and have a water jet range of 230 feet working at 170 lbs per square inch. For the discharge of foam, the monitors have a range of 190 feet working all five monitors simultaneously at a pressure of 170 lbs per square inch. This supply comes from a storage tank of 2,000 gallons of mechanical foam compound in bulk for oil and spill fires. All these monitors can be rotated by hand wheels and are adjustable at any angle. The water is supplied to these monitors through three 'Suzler' pumps which are capable of supplying 2,150 gallons of water per minute.

The 'Api Api' is capable of protecting herself from spill fires as she in equipped with ten fog nozzles located all round the vessel. When in operation, each nozzle is capable of spraying about 250 gallons of water per minute.

The vessel is also equipped with a battery of 10 × 100 lbs (carbon dioxide) cylinders.

Added to the capability of this vessel are two GP 70 generators which can discharge 7,000 cubic feet of foam per minute using 55 gallons of water through its high expansion foam equipment. This equipment can also be used as a smoke blower if required and will be most efficient for fighting fires in confined spaces, because the foam smothers out fire turning its water content into steam to act as another fire extinguishing agent. (The Port of Singapore Authority Press Release)

What's in Statistics?

Antwerp: — Last year Antwerp's maritime cargo traffic increased to 62,271,506 metric tons (20 million tons constituted by general cargo). This, according to our information, makes Antwerp the third port of the world and the second in Europe.

But what's in a statistic? Is there any sense in adding so many tons of crude oil and so many tons of general cargo? What to do with ports where cargo transhipped from ocean vessel into small boats, in order to be forwarded a few miles along the coast, is counted twice as maritime traffic. In order to compare one should add for Antwerp the 35 million tons shipped by barges, the 14 million tons forwarded by rail and the—unknown —quantity of cargo forwarded by road which would bring us to a total cargo traffic of some 130 million tons.

It has been said that there are small lies, big lies and . . . statistics. Anyway we prefer to compare the comparable which shows for Antwerp an increase of the national traffic (imports and exports by sea) of 1.8 million tons or 3.8% from 1966 to 1967, and for transit traffic (incoming or outgoing by sea) a progress of 1.7 million tons or 14.4%. Total maritime traffic (national + transit) rose with 6.1%.

1967 thus was a most satisfac-

tory year, especially with regard to the fast expansion of transit traffic, illustrating the remarkable strengthening of our competitive position vis-a-vis other continental ports in Europe. There seems to be something in a statistic after all.

Another statistic which can hardly be misinterpreted became available. It covers the container traffic during the first quarter of 1968. During this period 15,165 containers (150,516 tons of cargo) were loaded and unloaded. A comparison with the first quarter of 1967 (91,000 tons) and with the corresponding period of 1966 (65,000 tons) shows that Antwerp is meeting the container challenge successfully.

By the way, dealing with containers; the fifth container gantry crane, set up in the port is nearing completion. Soon seven of these cranes (lifting capacity from 38 tons to 53 tons) will be in operation, making Antwerp one of the best equipped container ports in the world.

It is true however that one cannot put everything into a statistic. Industrialization for example. The two newest developments in this field are the establishment of a Russian-Belgian joint venture NAFTA which will set up storage facilities for Russian petroleum products on a site of 25 hectares; and the decision of the German chemical concern Degussa to build a plant (on a site of 90 hectares) for the production of cyanides and peroxides. This plant will require an investment of over $37 million. Total industrial investments in the Antwerp port zone over a period of 10 year thus will exceed $900 million.

So, statistics may not say everything; but, with a cargo traffic reaching a new record height, with a continuous expansion of the container traffic and with a further progress in the field of port industries, the future looks promising. (Antwerp Port News, September 1968)

Soaring Container Traffic in Antwerp

During the first nine months of 1968 the Antwerp container traffic amounted to 446,000 tons; an increase of 36% over the corresponding period of 1967 and more than double the 1966 figure.

There is a further trend towards a balance between loadings and unloadings since loadings progressed 45% to 200,000 tons and unloadings 29% to 246,000 tons.

Total container traffic

	Unloaded		Loaded		Total	
	Number	Tons	Number	Tons	Number	Tons
9 months 1966	20.772	136.006	10.323	64.783	32.095	200.789
9 months 1967	23.340	190.408	15.779	138.158	39.119	328.566
9 months 1968	24.749	246.114	18.856	200.272	43.605	446.386

On the basis of these figures the total traffic for 1968 may be estimated at some 60,000 containers and 600,000 tons of cargo, as compared with 481,000 tons for the year 1967 and 295,000 tons for 1966.

The large part of this total is of course made up by traffic from and to North America.

Container traffic with U.S.A. and Canada

	Unloaded		Loaded		Total	
	Number	Tons	Number	Tons	Number	Tons
9 months 1966	10.603	49.675	3.676	17.834	14.279	67.509
9 months 1967	14.232	125.112	8.221	88.877	22.453	213.989
9 months 1968	16.024	174.938	10.487	133.628	26.511	308.566

The traffic with North America thus represents 67% of the total loadings and 71% of the total unloadings. (Stad Antwerpen HB/AD/SP PD. PS/4266 Dec. 19, 1968)

Future Container Traffic

Liverpool: — Liverpool's point of view on the future trends of container traffic were given at Baltimore, Maryland, yesterday (29th October), by Mr. Robert S. F. Edwards, C.V.O., C.B.E., General Manager of the Mersey Docks and Harbour Board. He was speaking at the 2nd International Container Services and Equipment Exposition, where the Board has its own exhibit.

He said that Liverpool had become Britain's leading port in the deep-sea export trades not by accident but because its natural watershed embraced a very high proportion of the industrial population, with nearly one-third of the entire population living and working within 100 miles.

"It is our belief", he said, "that potential container operators do not fully appreciate the value of this British market. It would seem that we as a Port are the only 'sales force' for this, and our recent establishment of a United States office in New York and current advertising campaigns exist because we must impress upon people the advantages to be gained by using present and future container facilities at Liverpool for this market."

For the future, his view was that the ultimate development will be the extension and consolidation of genuine through container services, with the complete integration of road, rail and sea transport into an international network of routes, on which the major ports were the key links.

As an example, Mr. Edwards quoted the present 30-days duration of the voyage of a fast freighter from Japan to Hamburg. "A container service in the new concept would take nine days from Japan to the U.S. West Coast, its containerised cargoes could cross the United States in three days and be shipped across the Atlantic to Liverpool in say seven days. The development of an efficient distribution freightliner network across Britain will ensure the delivery of the goods by container ferries to the Western European hinterland two days later.

"Not only is the total journey time much less, but the normal loading and discharging delays affecting traditional vessels at each port have been eradicated. These new concepts are to me most exciting and offer a challenge to all of us. From the port operator's point

Humber Terminal for Giant Tankers

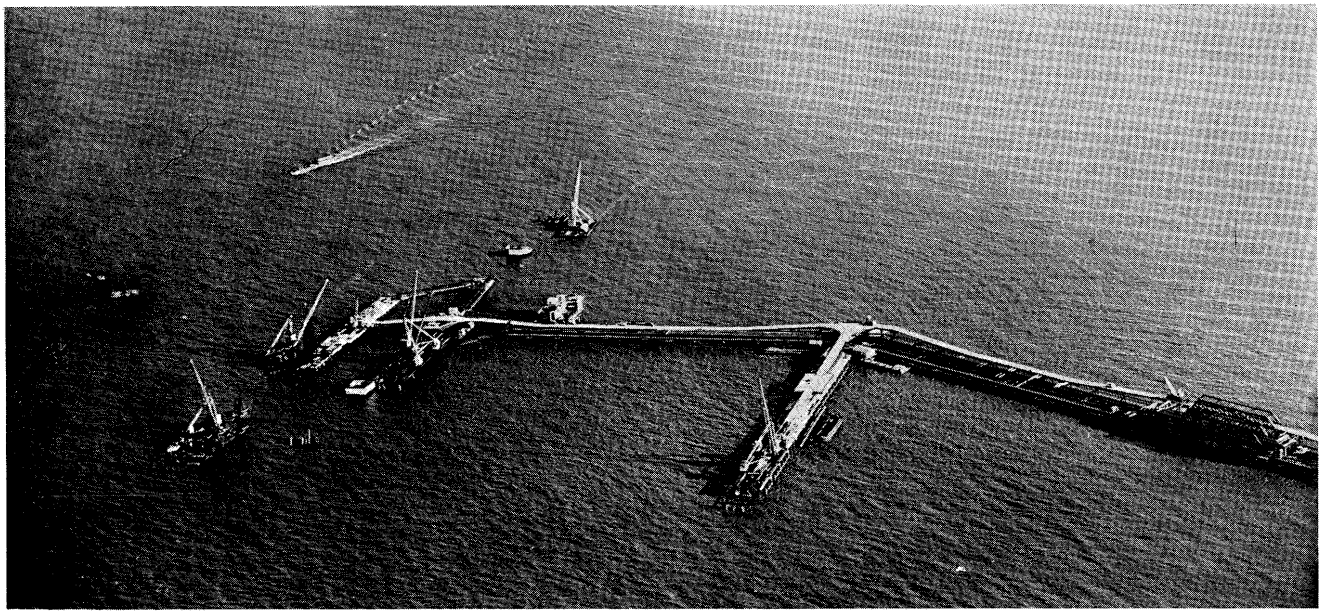


PHOTO SHOWS: The latest stages in the construction of the Humber Oil Terminal at Immingham. The jetty heads and associated dolphins are clearly identified on the left and in the centre is the smaller finger pier which will eventually have four berths. Further to the right is the navigation arch to assist the passage of barges in the river.

of view his quays remain uncongested and not filled with goods for long periods awaiting collection or shipment." (Mersey Docks and Harbour Board)

Efficient Dockers

London:—For over 40 years this magazine has been steadfastly pointing out that in efficiency and versatility, the London docker is unmatched anywhere in the world. The advent of the highly mechanised operations at container berths, far from out-moding the claim, has in fact underlined the high quality of the London dock worker. In container operations the handling of 30 containers or over per hour has come to be recognised as good going, for the type of berth and container represented by the United States Lines terminal at Tilbury. But the rate achieved during a recent visit by the **American Lancer** was 38 per hour! This is a remarkable achievement, for which the berth crew deserve hearty congratulations.

Work started on the ship at 3.20 p.m. on 27th August and was completed at 3.10 ap.m. on 28th August. During this time 241 laden containers were discharged and 107 loaded. In addition, 78 laden containers were re-stowed and 27 empty containers shipped, making a total of 453 containers handled—a rate of 38 per hour.

The berth is operated by one Traffic Officer, one Foreman and 13 skilled dock workers. The total tonnage of cargo loaded and discharged was 4,181 tons. Compare such figures with conventional handling of cargo. One of the pieces of simple arithmetic which is at the heart of modern port administration is the fact that if a port authority can handle ships at a berth at such a rate as the **American Lancer** was handled, then the port authority concerned needs fewer ships to cope with a given tonnage of cargo. A modern container berth, complete with its quays and equipment, can cost up to £3 million. Roughly speaking, such a berth can do the work of about 10 conventional berths for the purposes of this discussion. The net result is that port handling charges cost shippers less, especially when one considers that a container berth is operated by far fewer men than conventional berth.

Another relevant point is that the operation described was the fifth voyage of the **American Lancer,** underlining the speed at which the London dock worker can adapt to new techniques. (The PLA Monthly)

New Crane at Newport

London:—Newport Docks (Mon.) are to be equipped for dealing with container ship services following authorisation given by the Minister of Transport to the British Transport Docks Board for the purchase of a £200,000 35-ton Paceco-Vickers container transporter crane.

The crane, for which an order is to be placed immediately, is to be installed at the new deep-water wharf on the north side of South Dock as part of the final stages of a £2¼ million development by the Docks Board. There is ample land available adjacent to the berth for container operations and an area

is to be leased to Newport Container Terminals Ltd., who are co-operating with the Docks Board in promoting the development of container traffic through the port.

In assessing the need for such a crane at Newport, the Docks Board have taken into account the possibility of its also being used for the shipment of steel exports for the British Steel Corporation. Its presence will permit development of methods of shipping steel coils from the RTB Division's nearby Spencer Works two or more at a time.

The concept of handling both containers and steel coils with one transporter crane is not a new one and is in line with developments on the Continent, where the system has been adopted at the new Gylsen terminal at Antwerp.

"The establishment at Newport of a deep-water container terminal serves to underwrite the great potential of the port," said Mr. Vernon Snow, Newport's docks manager today, "particularly by virtue of its geographical location in relation to the industrial centres of the country. Newport can take the big container ships of up to 33,000 tons deadweight and I am sure that with the facilities we are providing the future is a very bright one." (British Transport Docks Board)

Normandy Ferries Co.

Rouen: — The Normandy Ferries CY has just launched, starting from Rouen, a line to Great Britain, Portugal and Morocco. The first call at Rouen will take place on the 3rd December 1968. This line is called by the car-ferry "Leopard" of the S.A.G.A., which assumes during summer time the line from Le Havre to Rosslare (Ireland).

The rotations will last 10 days between Rouen-Southampton-Lisbonne-Casablanca and return.

The Morocco Office for Commercialization and Export (O.C.E.) and the Morocco company of Navigation (COMANAV) have favoured this creation which permits to sell fast, products from Morocco, on European markets and to develop touring to Morocco.

1. The aim "freight" in the new line

The traffic of the "Leopard" on that line meets the opening of citrus fruits and early products season from northern africa and more particularly from Morocco. This season spreads from November to June.

The "Leopard" will supply the port of Rouen and Great Britain, starting from Casablanca, with citrus fruits and early vegetables. This traffic assumed by the "Leopard" has to permit to Rouen to increase its importance in fruits.

Imports in fruits and vegetables (over bananas from the Antilles with 140,000 t/year) have reached near 110,000 t during 1967-1968 season, with 90% from Morocco.

Rouen, with its reception and preservation centres and its role of quay-market assumes the redistribution of these fruits and vegetables in the country of Rouen, Northern and Paris countries and more over.

The traffic of the "Leopard" will favour the entering of fruits and vegetables from Morocco to other French and foreign markets increasing so the rotation of direct transit.

This traffic does not leave out other goods and more particularly those using the roll-on/roll-off technic.

At last, this line will develop the traffic between Great Britain, Morocco and Portugal.

To permit the reception of the "Leopard" near by early vegetables centre, the Port Authority of Rouen equipped a bridge in the South darsena of St-Gervais docks, on right side.

With this bridge, the Port of Rouen has three roll-on/roll-off berths.

2. The aim "passengers" of the new line

The creation of this line has too, like objective, to favour the touring to Portugal and Morocco starting from Rouen and Southampton.

The rotation into ten days permits a voyage of 21 days Rouen/Rouen with a residence of 11 days in Morocco.

The confort of the ship and its hobbies organized on board will transforme the crossing into a cruise. The "Leopard" will receive 250 passengers.

This aim brought the port of Rouen to forecast accessorily a place for Custom Office. The hall of wine-store, a building near by the spot where embark passengers will be opened for that purpose.

In a second period, more comfortable offices can be fitted, always in the wine-storage.

3. The characteristics of the "Leopard"

A five-decker car-ferry, built in 1967 at Nantes by the "Ateliers & Chantiers de Bretagne/DUBIGEON-NORMANDIE" for S.A.G.A. CY.

—length: 134,630 m
—draught: 4,82 m with Tdw 2294 t
—speed: 19,31 knots with a dead weight of 1,125 t
15 knots with a dead weight of 2,294 t
—equipment for 850 passengers, with:
—72 cabins for 2 passengers
—28 " " 4 "
—1 " " 6 "
—25 couchette-compartments for 4 passengers
—promenade-deck with aircraft seats for 153 passengers
—restaurant—cafeteria + bar—saloon
—surface for vehicles and goods: near 3,000 m² i.e.

55 loirries or 280 coaches. (Rouen Port News)

100,000th Container

Bremen:—100,000 containers have been handled in Bremen since the fullcontainer service was started in May 1966. The jubilee container—it carried toys from Bavaria—was celebrated in worthy fashion: journalists, the lord-mayor, as well as shippers from all parts of the Federal Republic were on board the c.v. "Sea Witch" as the 40-foot van-container was set on board. The Bremen Senator for Ports, Dr. Borttscheller, accepted a pair of coarse stevedore-gloves from the newly-crowned 'Miss Weser', broke a bottle of champagne (from out of the Bremen Ratskeller) on the corner-post of the light metal-alloyed container and wished the huge toy-box a good journey across the

Atlantic.

To have handled 100,000 containers within two years is quite a considerable achievement,—particularly as this specialised traffic is still in the course of development. The first container-bridge in a German port was put into operation on October 1st 1966: on open-berth No. 24c in the Neustaedter harbour in Bremen. After only a few months the 10,000th container, handled by this bridge, could be celebrated. Since then this has developed to 40,000 per year; an annual turnover which, up to now, has not been achieved by any other container port on the Northsea coast. The excellent handling attainments of the Bremen ports have caused the container stream to swell continuously, resulting in constant additional investment. On the 22nd July of this year the container terminal held its official debut, on which occasion the second container bridge was simultaneously inagurated.

The geographical position of the Bremen/Bremerhaven ports has been very favourable for this development. As the most southerly of the German seaports Bremen commands the shortest and most advantageous freight routeings to the hinterland, whilst Bremerhaven —with its position on the open sea —is specifically suitable for large fastvessels. In addition Bremen, as a railway port, is just perfect for container traffic.

D. J. Keely, Vice-president of the American Export Isbrandtsen Lines—to whom the new fullcontainer ship "Sea Witch" belongs—is able to appreciate this advantage. He, at any rate, declared in a press conference on the occasion of the loading of the 100,000th container: "We are offered here everything we require for our container liner-service and that is why we chose Bremen as our base port in Germany". In January and in April two more fullcontainer ships will be brought onto the run and then the nineday sailing from Bremen to New York will be improved to a weekly service. Bremen will thereby be able to consolidate still further its leading European position in the container trade to America. (Bremen Air Mail)

Container Stacker

Hamburg: — The SE Fahrzeugwerke GmbH., recently established through a working arrangement between the vehicle factories of Hans Still in Hamburg and the Fahrzeugwerke Esslingen GmbH., have developed a universal container stacker in close cooperation with a Hamburg storage and handling enterprise. The diesel fork lift truck can drive into all types of standard containers using its full 2-ton capacity, and in transit sheds and warehouses stack containers up to 5 m. high.

The aim was to design a transport tool to be used inside containers, in workshops, dispatch stores, warehouses and sheds. To cope with these various tasks, the stacker is equipped with a triple hoisting appliance whose height remains unchanged even when stacking two-high inside the low container. By means of this very manoeuvrable container stacker crates, bales, barrels, etc., can be handled and stowed in addition to palletized goods. This is important since for the sake of space-saving non-palletized goods are frequently being stowed in containers (Ship Via Hamburg, September 1968)

Cargo Consolidated

Hamburg:—With 73,344 tons of consolidated export cargoes dispatched in July, the UEbersee-Zentrum reached its highest figure yet. The 1967 result (68,544 tons) of the same month was exceeded by 7 per cent. The major proportion of the goods arrived by rail in 2,804 wagons (plus 6 per cent), whilst the number of motor trucks rose by 15 per cent. The working efficiency of the facility was improved through a further consolidation of individual consignments into larger unit loads (flats and containers). The rising dispatch of consolidated cargo in containers is mainly due to the full and semi-containership services of the North Atlantic companies increasingly calling at Hamburg. (Ship Via Hamburg, September 1968)

Port of Beira Praised

Lourenco Marques: — From the captain of the vessel 'Angola' of the 'Companhia Nacional de Navegacao', we received the following cable which we have the pleasure to quote here:

My name and CNN, I convey my thanks and felicitations for magnificent job done on 'Angola'. Two thousand tons loaded in twenty hours service. We request to transmit chief wharf inspector and staff our apreciation and gratitude for excellent cooperation rendered as well hard specially stevedoring job done superintended by Captain Furtado. Regards. (Boletim, Portos, Caminhos de Ferro e Transportes de Mocanbique, January 1968)

Barcelona News

• The construction work is very advanced on the new wharf for Tanker berths being built by Messrs. C.A.M.P.S.A., who hope to have completed it about the end of this year.

This wharf will comprise three platforms capable of berthing vessels of up to 50,000 tons. The wharf will be over 800 metres long, which will allow simultaneous berthing of six Tankers with a total of 160,000 gross tonnage.

In addition a surface gained from the sea is being filled in to allow and extension of the present C.A.M.P.S.A. Works, with the consequent increase in the number of Tanks and other complementary services.

• Two new lines have been opened during April last. The first of these will unite Barcelona with the Middle East by means of the M.V. 'ESPERIA' of 9,300 gross tonnage, with a speed of 19 knots, which will sail from our Port every fifteen days bound for Naples, Beirut, and Alexandria.

On the 7th April last the Italian vessel 'MARIA CARLA D'AMICO' docked in our Port on her inaugural voyage of the new line serving North Pacific Ports. This line will be served by six vessels, thus sailings from Barcelona may be reckoned as every twenty days. (Puerto de Barcelona Boletin Informativo, June 1968)

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