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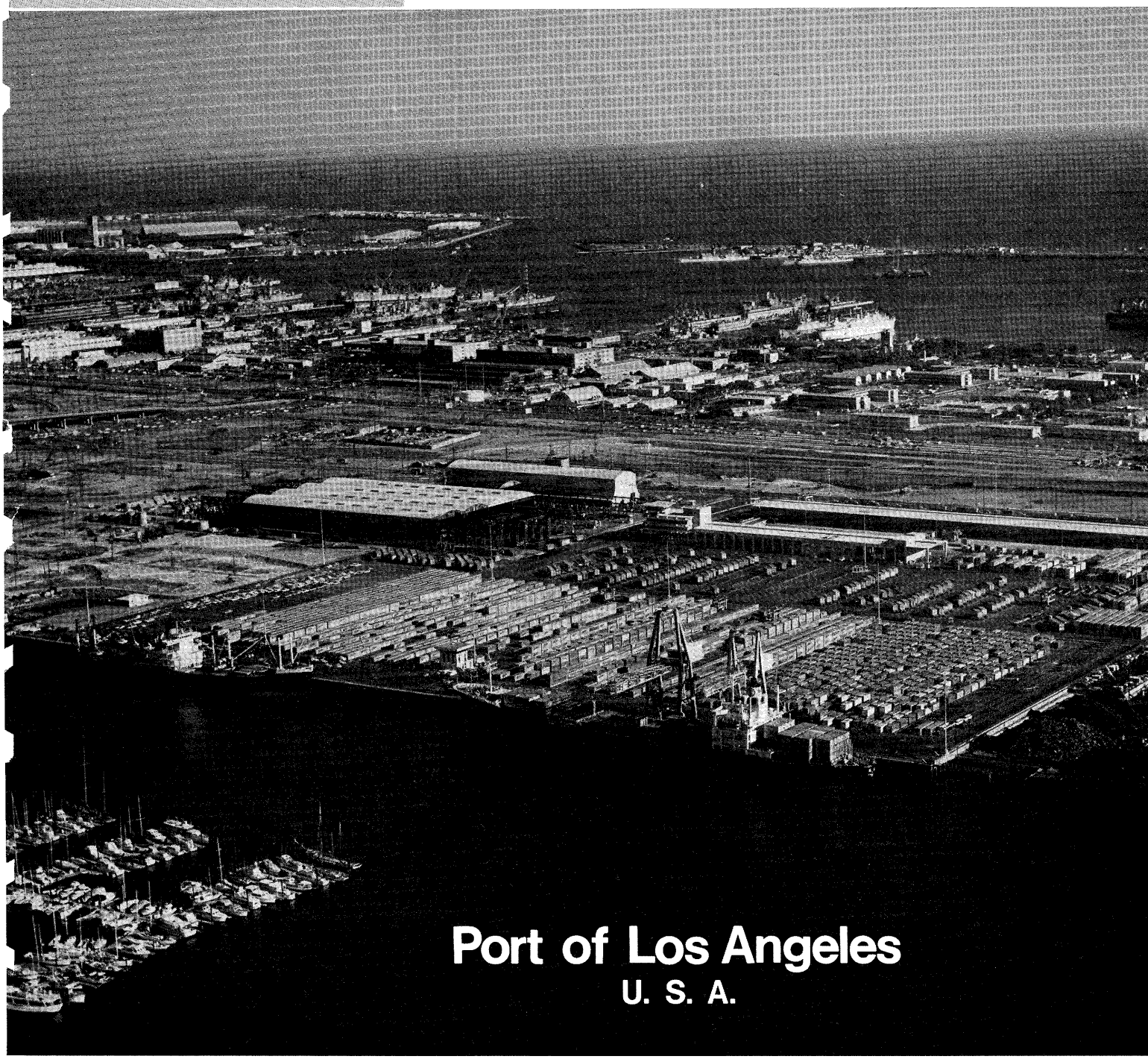

Port of Los Angeles
U. S. A.

MONTREAL CONFERENCE JUNE 7-12 1971

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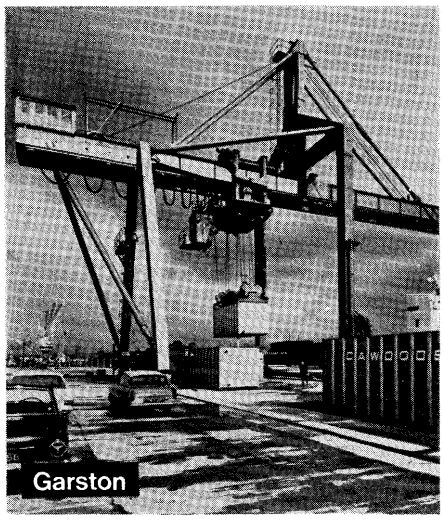

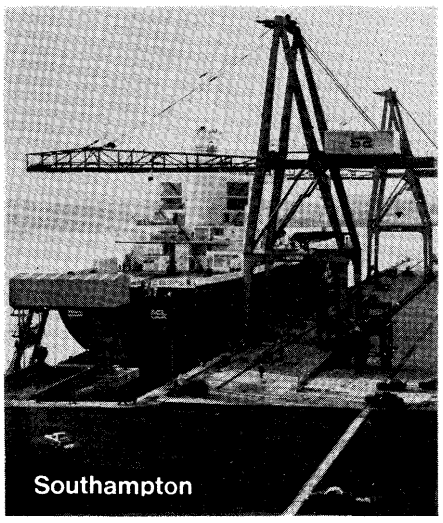

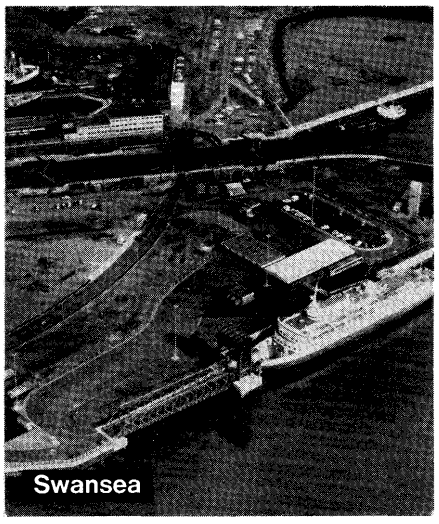

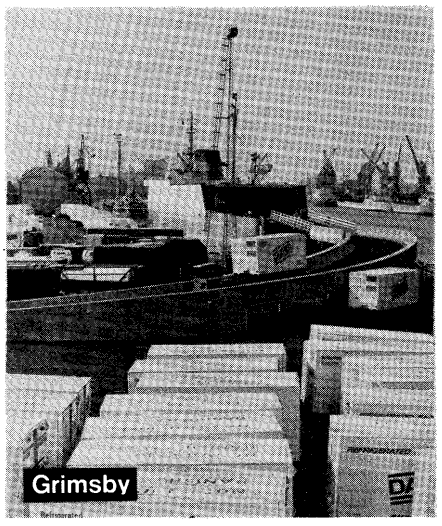

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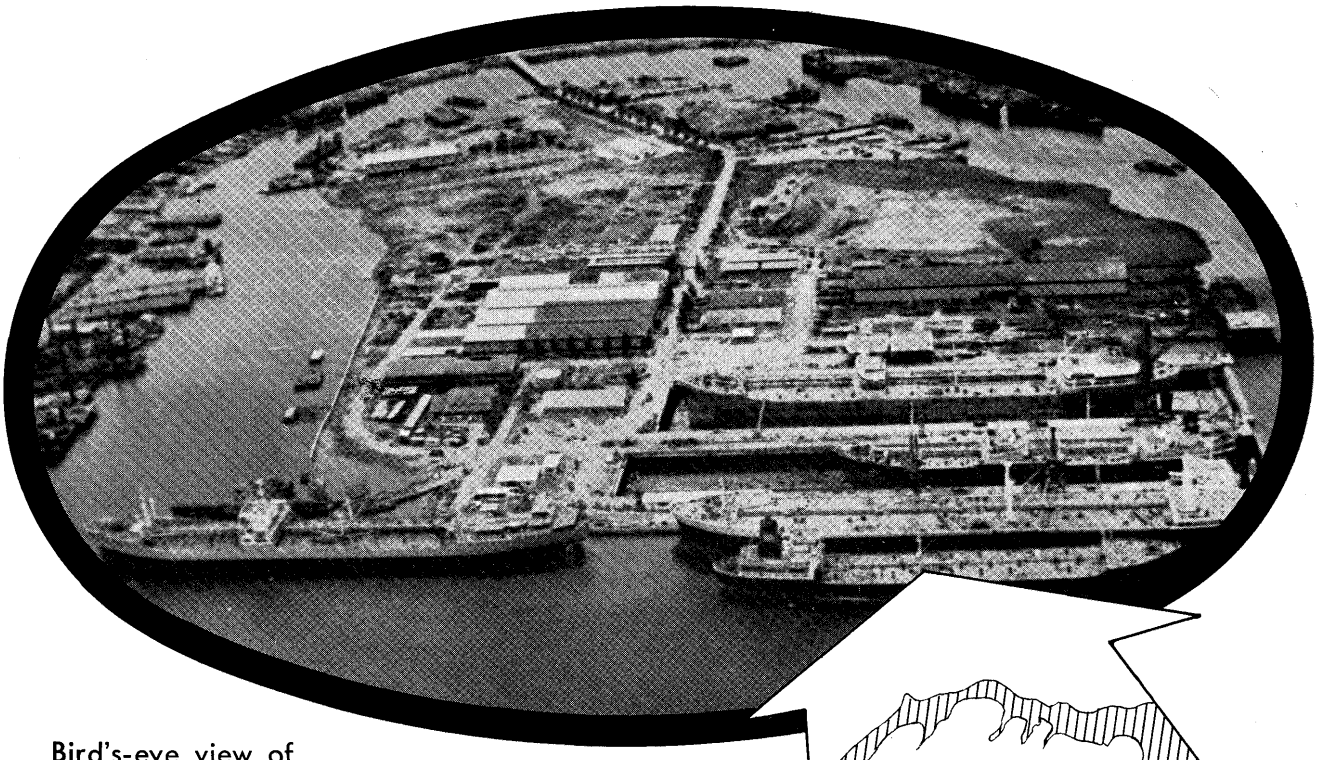
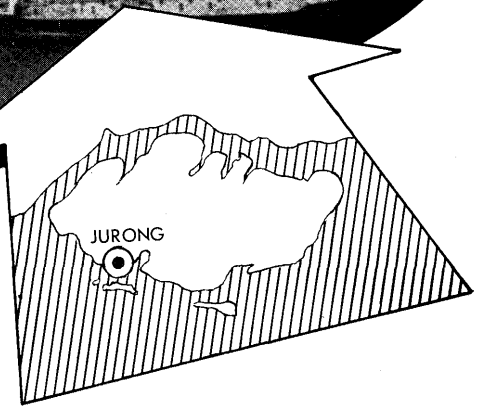


Bird's-eye view of
Jurong Drydock, Singapore.



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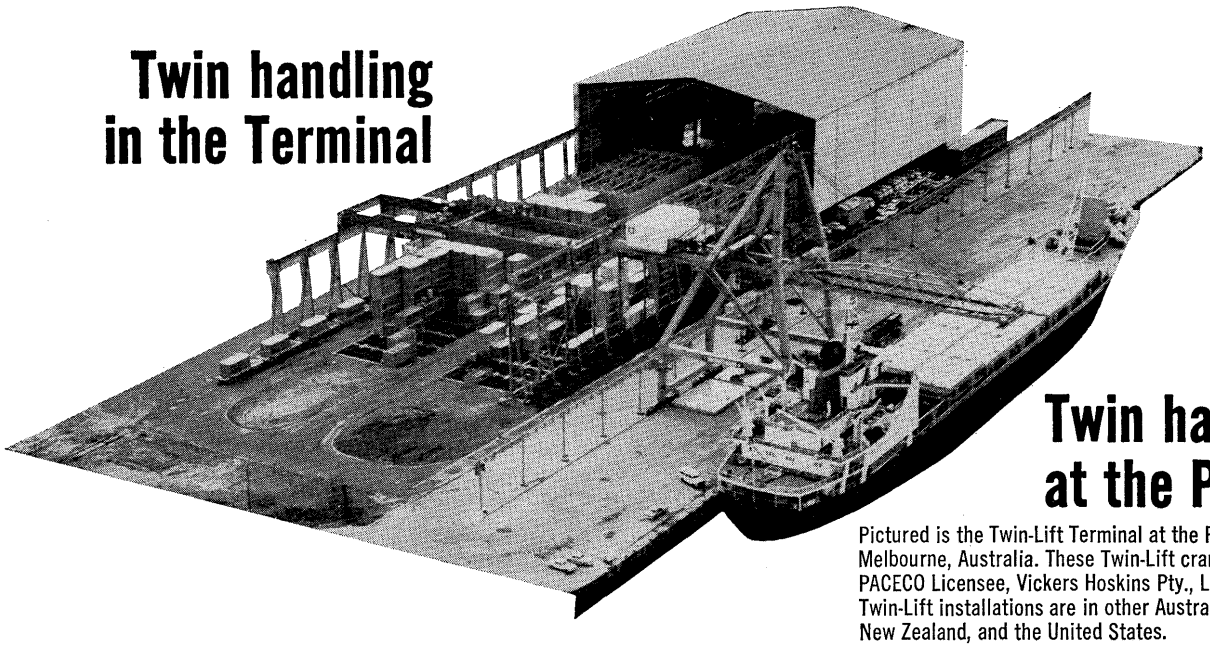
Twin handling in the Terminal



Twin handling at the Pierside

Pictured is the Twin-Lift Terminal at the Port of Melbourne, Australia. These Twin-Lift cranes were built by PACECO Licensee, Vickers Hoskins Pty., Limited. Twin-Lift installations are in other Australian Ports, New Zealand, and the United States.

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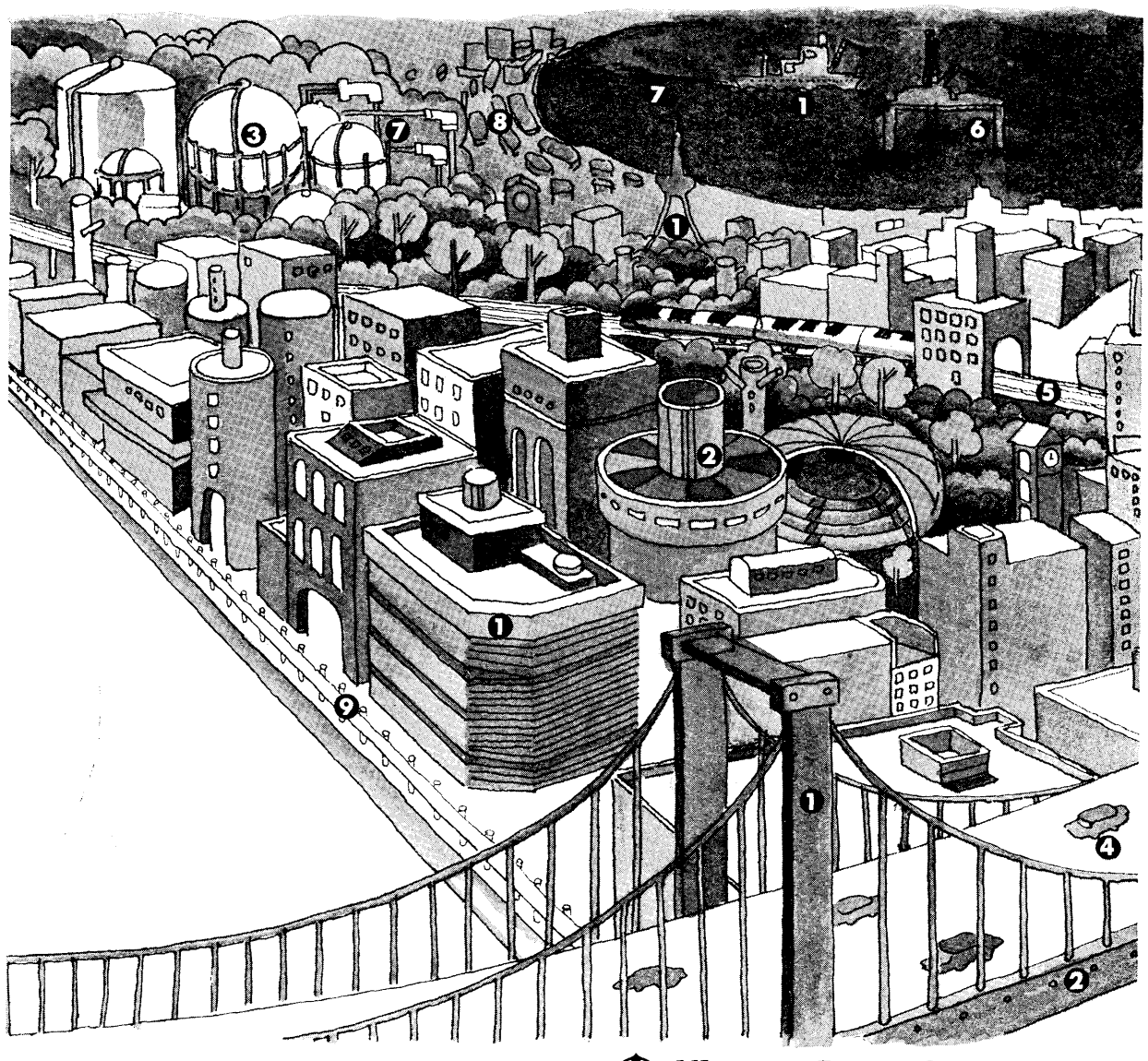

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Present and Future Container Facilities in Major Ports of the World (3) 45–56

The Cover:

The newest facilities at Los Angeles Harbor is the $10 million Matson container yard on Terminal Island. Dedicated Feb. 26 and in operation, the new 50-acre site handles cargo on two huge container vessels at one time, with a pair of giant (400 and 360 tons respectively) cranes mounted on railway trucks. (See also news on Pages 26~28.)

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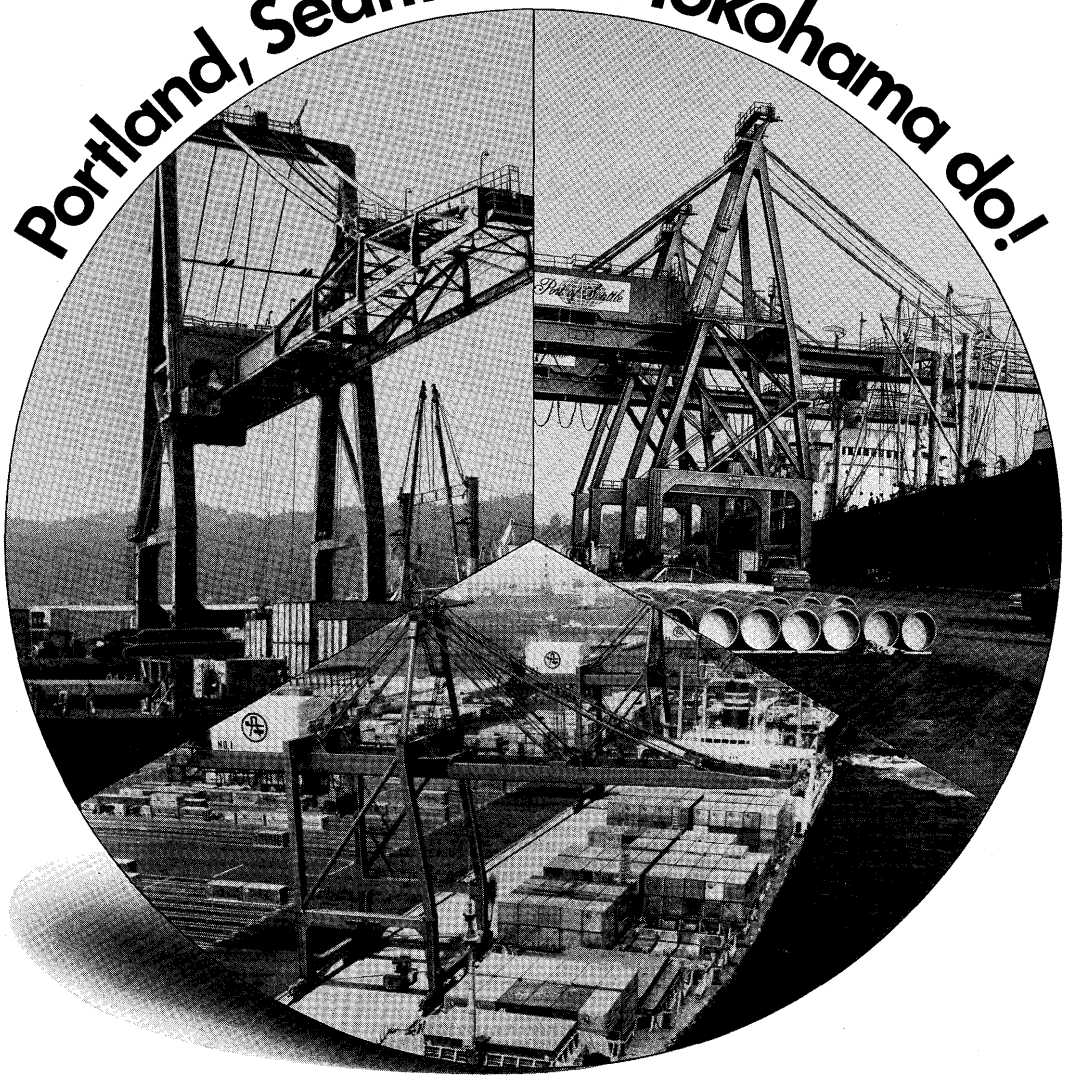

Container cranes supplied to the Port of Portland, U.S.A.

Five container cranes load and unload quickly at the Port of Yokohama, Japan.

A pair of diesel-electric cranes hoist for the Port of Seattle, U.S.A.

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Forum on Port Problems:

Minister of Transport Tables Consultants' Economic Analysis of The St. Lawrence Seaway

The St. Lawrence Seaway Authority

Ottawa, January 19, 1971:—The report of an extensive study of the economic and financial aspects of the St. Lawrence Seaway Authority, conducted by D. Wm Carr & Associates, economic consultants, was tabled in the House of Commons today by Minister of Transport Don C. Jamieson.

Volume I of this two volume report presents a general analysis and conclusions; it was submitted to the Government late in 1970 and is now available to the public in both English and French. Volume II, containing supporting detail, is expected to be completed in the very near future.

The report envisages both an interim and a long term approach to the Seaway's problems. The interim proposals include (1) the removal of the Authority's liability to repay capital debt while retaining the obligation to pay interest on the investment, (2) the reduction of present capital loans to more appropriate levels and (3) a five per cent a year increase in tolls over five years on a unilateral basis.

The long term approach involves the further development of certain basic principles of public investment in transportation which are set forth in the report, and looks toward an eventual rationalization of the recoverability aspect of investment in all transportation modes, including the Seaway. The achievement of this long term objective would form a part of the ongoing study by the Ministry of Transport which should contribute to the solution of the Seaway's problems.

The consultants' study also examines the relative benefits and financial contributions between Canada and the United States on the St. Lawrence-Great Lakes waterway and confirms that Canada bears a considerably larger burden of the costs than does the U.S. although both countries share about equally in the benefits. According to the report, "of the overall public investment in canals, locks and connecting channels, Canada provides about two-thirds. On the lakes and rivers above Lake Erie the United States provides most of the investment but its use of those facilities is also quite predominant. On the waterway below Lake Erie, the United States provides about 11 per cent of the investment but has a traffic usage of about 50 per cent on the Seaway and 33 per cent from Montreal downriver to the Atlantic. In annual expenditures Canada provides an even larger share than she has in long-term total investments. On the Seaway alone under conditions existing in 1969, although traffic use was roughly about evenly divided between the two countries, Canada carried about five-sixths of the investment costs and about six-sevenths of the deficits." In Dr. Carr's view, "the economic advantages accruing to the United States by resisting increases in Seaway tolls suggests that country will remain firm in its present stand and that Canada will need to take similarly firm measures if her position on the Seaway and its financing is not to be jeopardized."

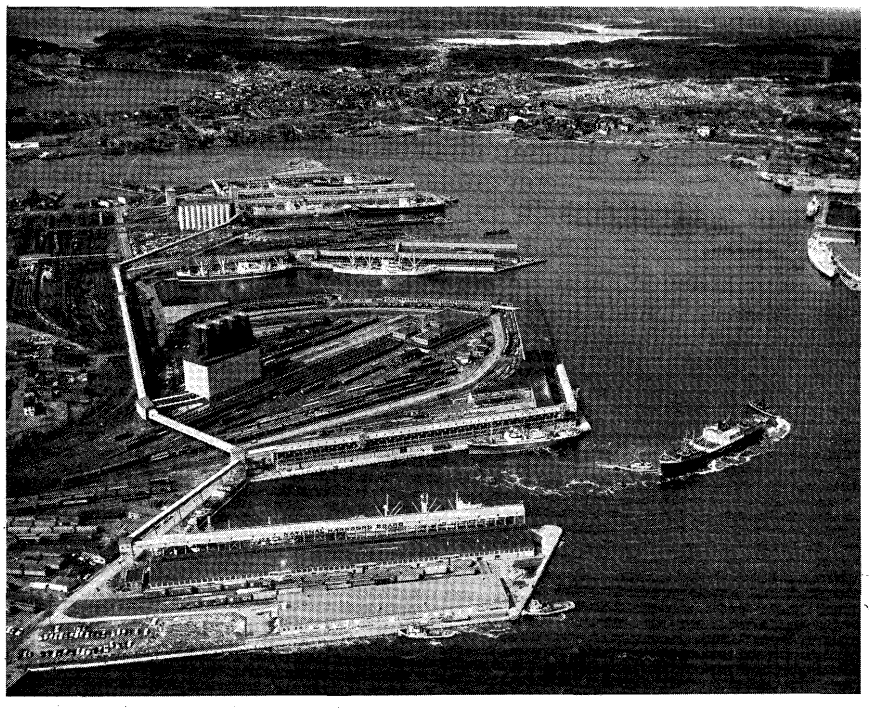
In the exchange of notes, in 1967, which confirmed the agreement between Canada and the United States on the level and sharing of tolls on the St. Lawrence Seaway, it was agreed that the sufficiency and division of these tolls could, at the request of either, be subject to review at the end of the 1970 navigation season. The St. Lawrence Seaway Authority, in 1969, asked the firm of D. Wm Carr and Associates, of Ottawa, to prepare a report on the outlook and potential for Seaway traffic and to assess the economic implications of tolls and possible changes in the level of tolls. Subsequently, Dr. Carr was asked to expand the project to include an appraisal of the Seaway financial structure, a comparison of Canada-United States use and expenditures on the waterway and an analysis of the competitive outlook for the Seaway.

Volume I of the report concludes that the Seaway is an economically viable transportation mode that should continue to enjoy traffic growth although not, perhaps, at the rate which has characterized the first twelve years of the Seaway's operation during which cargo tonnage increased from 20 million tons, in 1959, to a record 51 million in 1970. According to the report, "there is evidence of substantial savings in the costs of transportation (direct benefits) and major indirect benefits as a result of the public investments made in the St. Lawrence Seaway". The report goes on to say, on the question of responsiveness of traffic to tolls, that "most of the major commodity groups in Seaway traffic would not be significantly influenced in the long run by a moder-

(Continued on Page 12.)

Port of Halifax, N.S.

Port of Saint John, N.B.



(Eight photographs of cities as well as their captions reproduced here are provided through the courtesy of the Organizing Committee of Montreal Conference.)

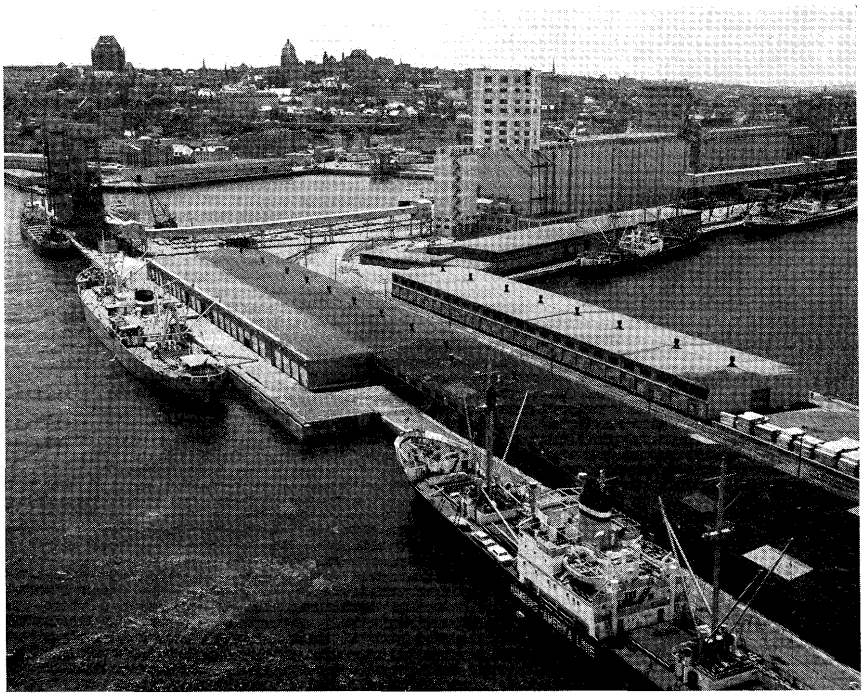
Cities Included in Pre-Conference Tour

1 Halifax, capital of the Province of Nova Scotia, had its origin in 1749 when Col. Edward Cornwallis arrived from England with 2500 settlers to found the first community. Since then it has been noted as one of the world's largest and best protected natural harbours. Canada's largest naval base is located at Halifax and one of the world's great steamship lines was founded in 1840 by a Halifax merchant, Samuel Cunard. The company still bears his name. Canada's first newspaper was printed in Halifax on March 23, 1752. The history of this city contains many other "firsts" and the city itself possesses many distinctive and interesting features. It provides an insight into one facet of the complex country called Canada.

2 Saint John, situated in the Province of New Brunswick where the Saint John River empties into the Bay of Fundy, is Canada's oldest incorporated city. The region was discovered by the French explorer, Samuel de Champlain, in 1604 and the first permanent colony was established in 1631 by Charles La Tour. In the nineteenth century, when the world's commerce was carried in wooden ships, Saint John was famed as a ship building centre and proud vessels from her yards traded to ports all over the globe. Today, Saint John is a modern, well equipped port. Tides of 26 feet or more are a feature of Saint John. These tides are responsible for a natural phenomenon known as the Reversing Falls on the Saint John River. The city is steeped in the early history of Canada's Atlantic region and many links with its historic past have been preserved.

3 Quebec, capital of the Province bearing the same name, is located on the Saint Lawrence River about 160 miles downstream from Montreal. It is one of the most interesting cities in North America, a city in which the historic past and the hustling present blend with its majestic setting to create a grandeur, a charm that is unique on this continent. The region was visited by the French explorer Jacques Cartier in 1534 but the first settlement was established there by Samuel de Champlain in 1608. Located on heights overlooking the river, Quebec presents to the visitor a vista which few cities anywhere in the world can surpass. A broad sweep of the river is complemented by the ancient Laurentian Mountains to the north. On the heights the fortress known as the Citadel tells of the historic past while down below the installations of a modern port speak for the present. Quebec is the only North American City north of Mexico which has preserved its ancient fortifications. Down on the waterfront a container terminal moves cargo with the efficiency demanded in 1971. These are the contrasts which make a visit to Quebec a memorable experience.

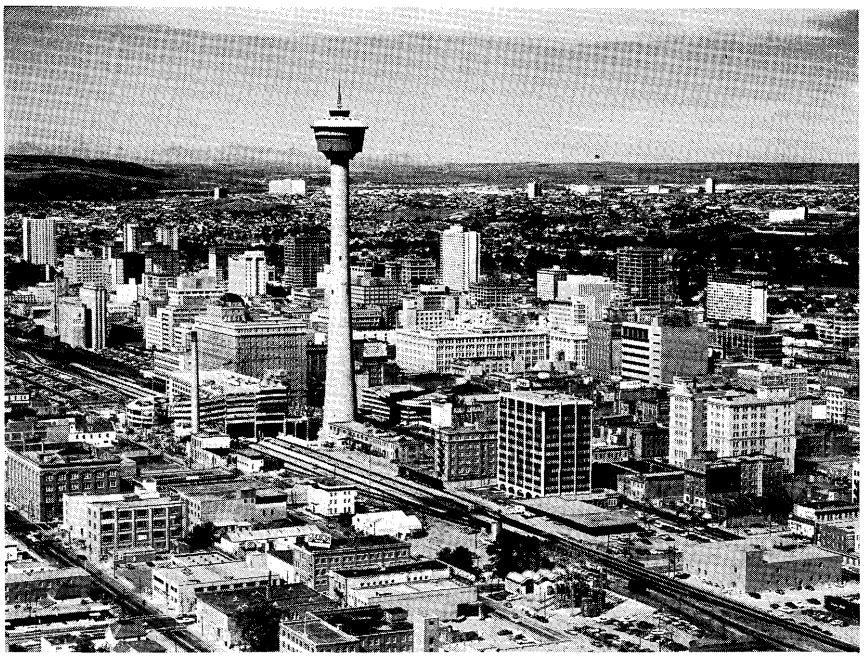
Port of Quebec, P.Q.



4 Toronto, the capital of the Province of Ontario, spreads out along 37 miles of the shoreline of Lake Ontario. It is Canada's second largest city and a great financial, industrial and cultural centre. The head offices of many large Canadian businesses are located in Toronto and its stock exchange, which ranks second on the North American Continent, after New York, in business transacted, plays a very important role in the financial life of Canada. Toronto University, whose graduates are found in all parts of the world, is the largest in the British Commonwealth. Toronto's unusual City Hall, the cause of some controversy during and immediately following its construction, has become a favourite target for visitors' cameras. Devotees of the theatre, opera, ballet, symphony and art in all its forms are well served by the facilities, the talent and the works of art which are available for their enjoyment. The city and region are served by a modern harbour which has access to the sea through the St. Lawrence Seaway and the St. Lawrence River.

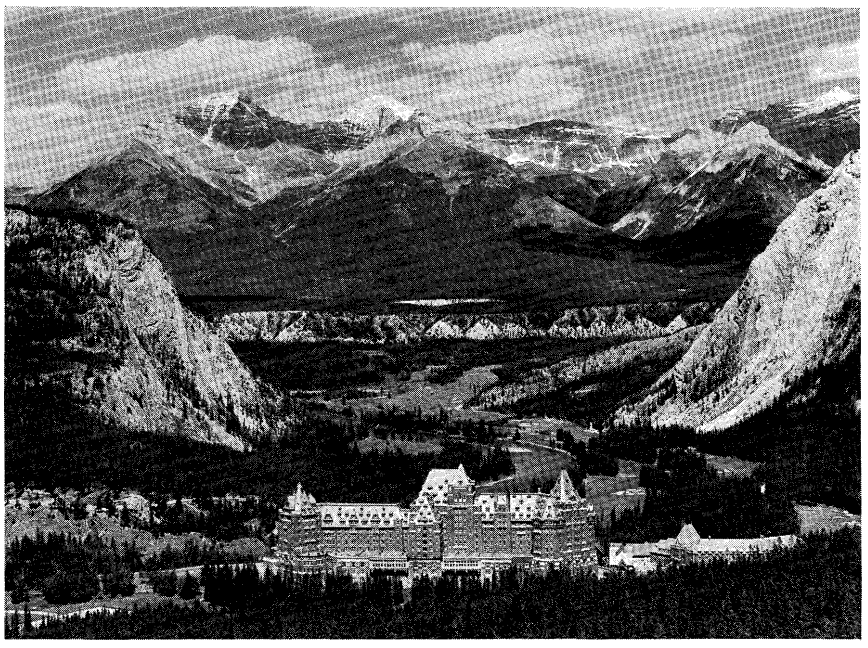
City of Toronto, Ont.

Husky Tower, Calgary, Alberta



5 Calgary, The Alberta city of Calgary, in the foothills of the Rocky Mountains, is within sight of the majestic, snowcapped peaks. With an elevation of over 3400 feet above sea level, it is Canada's highest major city. It has a mixed heritage, based largely on cattle, coal and oil. Large areas of fine grazing land in south western Alberta have produced hundreds of thousands of prime beef cattle. This part of its heritage is commemorated annually by the Calgary Stampede, a rodeo which has attained world wide fame. The region around Calgary also produced great wealth from its tremendous coal fields. Later, with the development of Alberta's vast resources of oil and natural gas, it became the oil capital of Canada, a status which was subsequently claimed by its sister city of Edmonton. Calgary, in the Valley of the Bow River, is a friendly city of beauty and charm.

Banff, Alta. (*Banff Springs Hotel*)



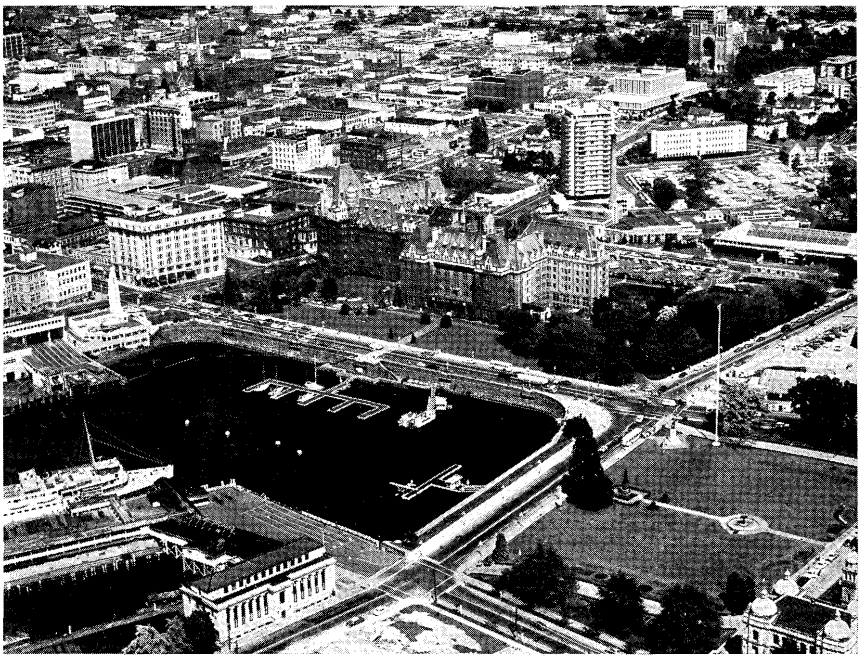
6 Banff and Lake Louise. Banff, about 80 miles west of Calgary, and Lake Louise, another 40 miles along the Trans-Canada Highway, are both in Banff National Park which encompasses 4200 square miles of wonderful mountain scenery. The jagged snow-capped peaks, lovely lakes, rushing streams, great stands of timber and a variety of wild animals in this area constitute a panorama of natural beauty unsurpassed anywhere in the world. Words cannot do justice to the scenic magnificence. It must be seen to be appreciated.

Port and City of Vancouver, B.C.

7 Vancouver is located on Burrard Inlet in south western British Columbia, in a natural setting that could scarcely be improved upon. Against a background of mountains of the Coast Range, their slopes covered by tall and stately fir trees, the city looks out on beautiful English Bay. The city is named after the British navigator, Captain George Vancouver who surveyed Burrard Inlet in 1792. The first settlers arrived there in 1862 but major development took place only after completion of the Canadian Pacific Railway's transcontinental line in 1885. The opening of the Panama Canal in 1914 gave further impetus to the city's phenomenal growth. Vancouver, including the recently constructed Roberts Bank, has a well equipped, efficient port which has become the busiest on the entire Pacific Coast of North America.

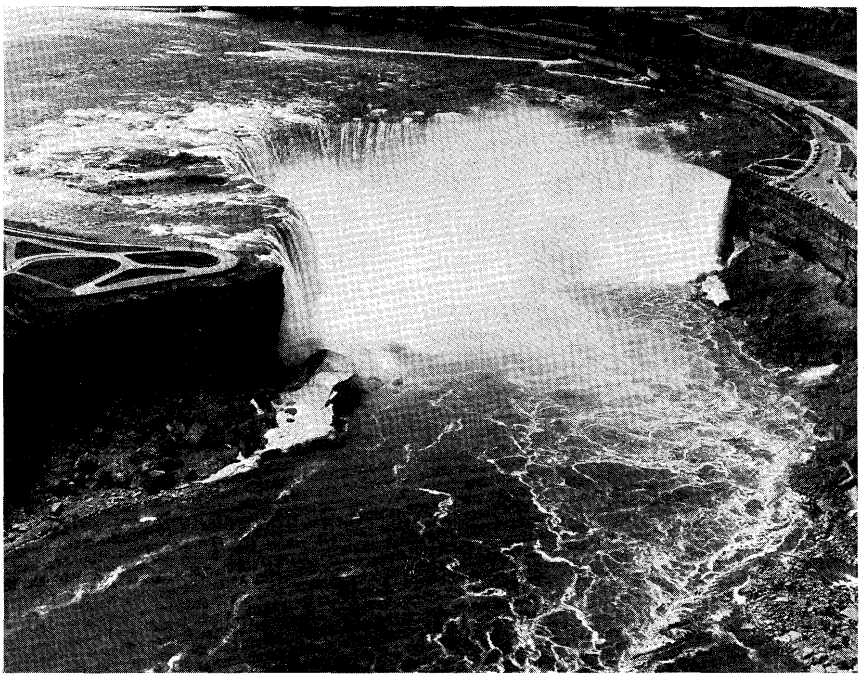
City of Victoria, B.C.

8 Victoria, the capital of British Columbia, is located on Vancouver Island which is separated from the mainland by the Strait of Georgia. Victoria possesses an atmosphere reminiscent of England. It is a city of beautiful parks and gardens and fine homes. Its famed Butchart's Gardens will long be remembered, like a jewel in a setting of great beauty.



Niagara Falls, Ont.

Niagara Falls is a scenic attraction that has drawn millions of visitors down through the years. It is located on the Niagara river which constitutes part of the boundary between Canada and the United States of America. The sight of a vast volume of water plunging over the precipice, then churning through the gorge below, is awe inspiring and beautiful. Niagara Falls is the site of large hydro electric plant and it was the reason for the construction of the Welland Canal which lifts ships a total of 326 feet between Lake Ontario and Lake Erie. The region around Niagara Falls is Ontario's finest fruit growing area. (Reprinted from "Invitation to Montreal".)



(Continued from Page 7.)

Minister of—

ate change in tolls and lockage fees."

On the matter of the Seaway's financial problem, the report states that "modifications in the financial structure to establish it on a more sound economic foundation would enhance the Seaway's prospects of becoming the self-liquidating public enterprise that is was designed to be."

In commenting on the report, Mr. Jamieson said that Dr. Carr's searching analysis of the St. Lawrence-Great Lakes waterway should make an important contribution to public understanding of the Seaway's role in Canada's transportation system and to the development of the Government policies respecting this important transport facility. Its proposals relating to the Seaway's toll and financial problem have wide ranging implications which will undoubtedly prompt considerable public discussion and require careful consideration by the Federal Government.

Construction of an Oil Terminal In the Seine Bay

Port Authority of Le Havre

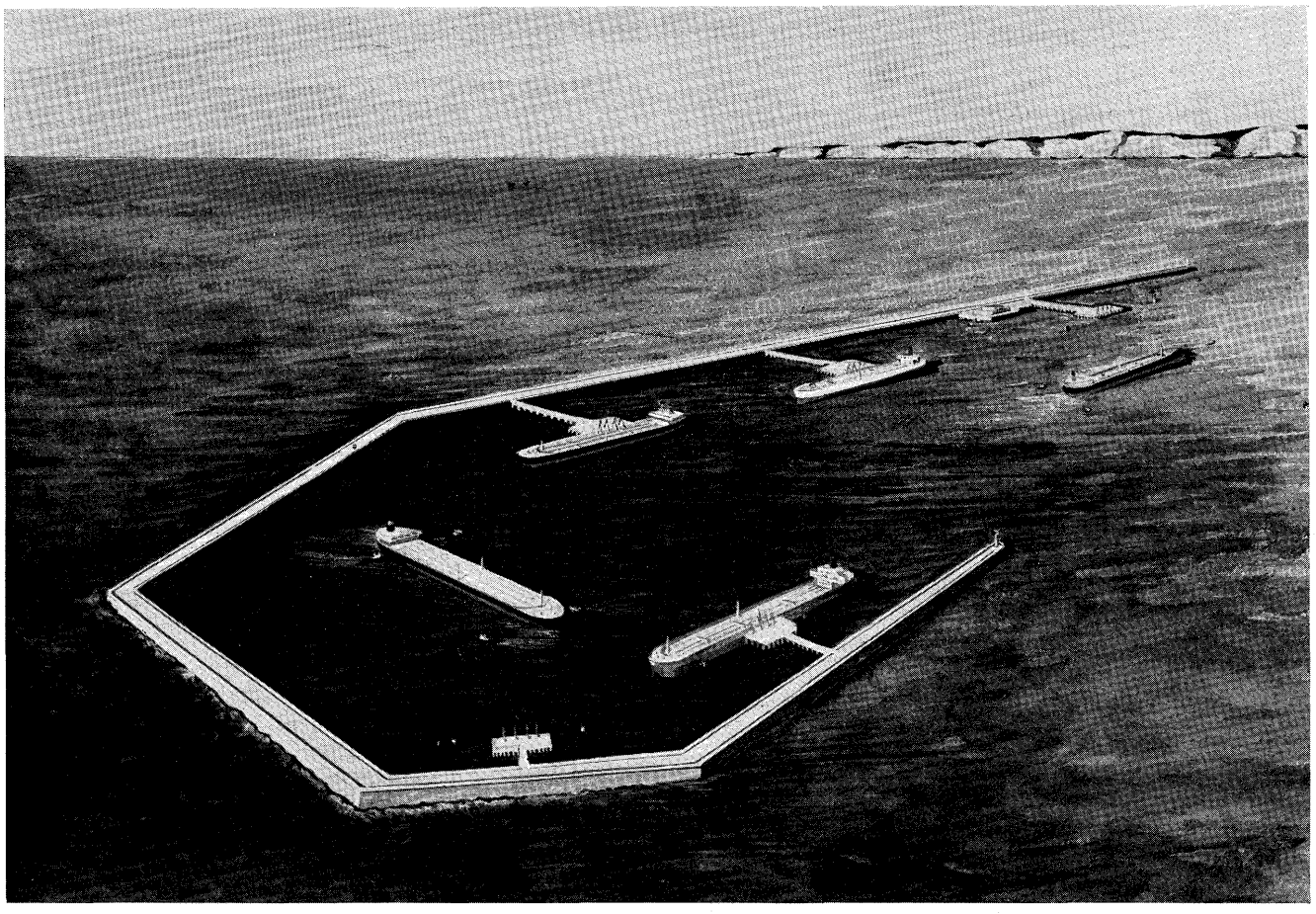
The consumption of oil products in Western Europe during 1969 was about 570 million tons. This will rise to 8 or 900 million in 1975 and to 1000 or 1300 million tons in 1980. We think that the annual consumption increase rate, which was about 12% per annum between 1960 and 1969 will be between 7 and 9% for the period 1969/1975 and between 5 and 6.5% for the period 1975/1980, thus approaching the power consumption and ready to fall below it, thanks to increasing use of L.N.G. and nuclear power during the final two decades of the century.

It is estimated that, on a total of 1 100 million tons of crude oil required in 1980, about 625 million tons will come from the Middle East, thus increasing its share in supplying Europe. This will cause a lengthening of the average distance covered by oil between the production area and the place of consumption.

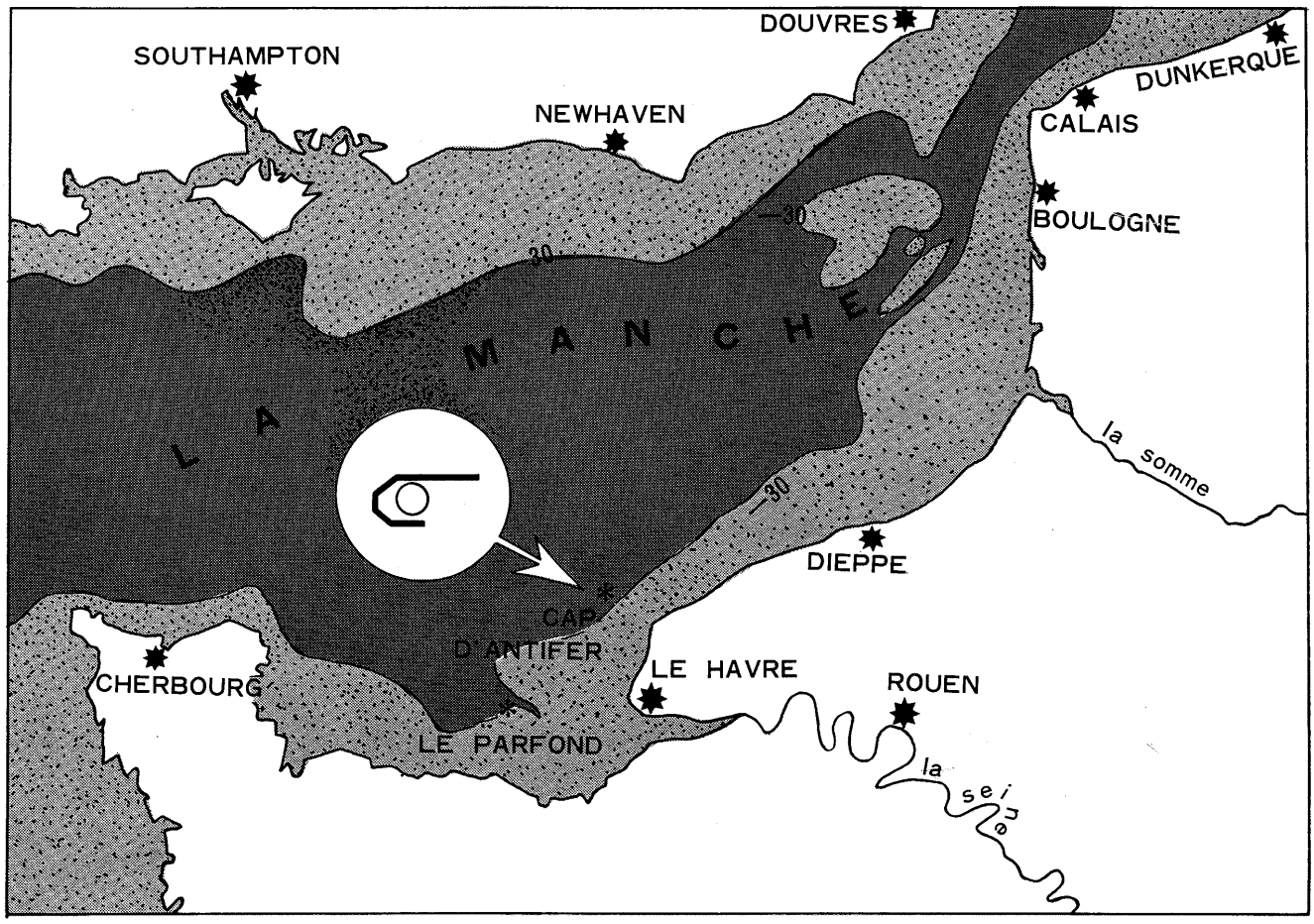
We can make several forecasts concerning the development of pipe-lines that will connect the oil fields of the Middle East and the loading ports of the Eastern Mediterranean Sea in 1980. In the most favourable of these, we can imagine that 315 million tons will be sent from the Mediterranean towards Europe. The remainder, viz 310 million tons, will take the Cape route. On the other hand, we would think that the traffic via the Cape of Good Hope will display an annual traffic of 445 million tons of crude oil.

In short, the tanker fleet that will supply Europe in the next ten years, will have to ship 500 million tons more oil than to-day over a greater average distance. In the near future, increased demand will necessitate an increase in the scale and size of the tankers employed.

It is interesting to recall that the tonnage of the first tanker put into service in 1890 was of 5 000 dwt, that in 1930, that is to say 40 years later, the tonnage of the largest tanker afloat was 22 000 dwt, and that in 1971, again 40 years later, it will be of 372 000 dwt. The progression has been particularly rapid during the past ten years, as in 1958 the most important order concerned a ship of 52 000 dwt. This



Project of tanker terminal at Antifer.



Future tanker terminal locations.

rush towards gigantism justifies itself by freight savings obtained by the increase in tonnage of the ships. These savings recently motivated the order and the launching of numerous ships of a tonnage between 200 and 250 000 dwt. A study concerning the port of Le Havre shows that the use of a 500 000 dwt ship instead of a 240 000 dwt tanker will save 4,5 F. per ton of oil for traffic from the Persian Gulf, 1,50 F. for traffic from Nigeria and 1,25 F. for traffic from the Eastern side of the Mediterranean.

Shipping Companies and Refiners cannot remain indifferent to such savings applied to traffic of several dozen, or even several hundred, million tons of oil.

The technological problems relating to the construction of 500 000 dwt tankers have been resolved. There are many shipyards in the world. It is therefore reasonable to think that the 250 000 dwt tankers at present in use will be succeeded by 500 000 dwt ships, whose construction will be undertaken within the next few years. Already a 372 000 dwt and a 400 000 dwt ship are under construction or on order. They will succeed under the title of the biggest ships in use in the world, the six 326 000 dwt tankers constructed by the Gulf Oil Co. to serve the redistribution port of Bantry Bay.

The tonnage evolution of tankers over 250 000 dwt is already widely undertaken. Experts feel that shipyards will be able to launch the first 500 000 dwt tanker in 1975. Furthermore, one can imagine that the evolution will not even then come to a halt, and that the construction of 1 000 000 dwt tankers will be undertaken in the fairly distant future.

Adaptation of Ports to the Oil Traffic Evolution

Problems Caused by the Increase in Ship's Draught

The great ports of Western Europe have adapted themselves to the increase in tankers dimension, as long as their deadweight tonnage remains below 100 000 dwt. In fact, the draught of these ships exceeds that of the liners and very large cargoships by only a few meters.

On the other hand, the present operation of ships of the 200/250 000 dwt class, and later of those of 500 000 dwt or more, raises another problem. The draught of 250 000 dwt ships is 20 m., that of 500 000 dwt is above 25 m. and that of 1 000 000 dwt could reach or exceed 30 m.

Works have been undertaken in some ports of Western Europe (Rotterdam, Milford Haven, Le Havre, . . .) in order to receive 250 000 dwt tankers. However, the natural depths, particularly at the Straits of Dover will hinder the navigation of 500 000 dwt ships in the future. These will be received only in some privileged places presenting depths of 30 m.

The French coasts of the Channel and of the Atlantic present such

possibilities. Two sites have been examined in the Seine Bay, close to the port of Le Havre: One in what is known as the "Parfond" zone, 25 km West of the existing port and at the same latitude, the other off the "Cap d'Antifer", about 10 km from the coast and 20 km from the port. The advantages of the Seine Bay, and particularly the fact that it is, among the various adaptable sites along the French coast, the nearest to the important oil consumption centre the Parisian District, justified the recent decision of the French Government to equip an oil terminal there, capable of receiving ships of 500 000 dwt or more.

The launching of ships of such a tonnage, the fact that they will be received in Europe in only a few ports, will lead to serious modifications in shipping routes. Persian Gulf-Le Havre shippings made by 500 000 dwt ships will be transferred to other shipping routes in use at present. The completion of the transport will be carried out either by pipe-lines towards Central Europe, or by ships of lower tonnage. Ships of 500 000 dwt might also partially unload in Le Havre before leaving for shallower harbours.

The Port of Le Havre Projects

An important programme of work in process of completion has been set up in order to make the port of Le Havre suitable to receive ships of 250 000 dwt. This programme includes the dredging of a new channel presenting a minimum depth of 21,50 m. for tankers calling at high tide.

The present harbour could be equipped to receive ships above 250 000 dwt. The channel would have to be deepened and widened again. However, below a 25 m. depth at high tide, dredging would reach layers of compact marl the digging of which would be very expensive. Furthermore, the entrance of the harbour would have to be widened and the embankment surrounding the tidal basin modified, in order to allow the swinging of 400 m. ships. This would necessitate extensive works without solving the problem due to the increase in ships' tonnage, as below a 25 m depth an even more expensive deepening would have to be undertaken. Thus, as we would progressively draw back the limits of the harbour accessibility, the cost of the works to be realized would rapidly increase.

These conditions have led the port of Le Havre to seek original solutions outside the harbour, comprising the construction of a terminal deep enough to receive ships of 500 000 dwt, and later of 1 000 000 dwt. One of these solutions is the project of an oil terminal in the Seine Bay, off the "Cap d'Antifer". The interest of such a project is illustrated by Illustration 3 which shows the position of Le Havre with regard to refineries of North-Western Europe. Bearing in mind the fact that 500 000 dwt ships will not be able to navigate in the Straights of Dover owing to insufficient depth, the map shows that these ships will have access, on the Western coast of Europe, to no terminal nearer to consumption areas than Le Havre. The map also points out the importance of the Seine Bay refinery plant, adjacent to the harbour. Besides, the map shows what might be, for instance—as nothing has yet been drawn up so far—the plan of a pipe-line towards Central Europe. This pipe-line could supply the North of France, part of Belgium, and could also reach Germany.

Illustration 2 shows the shape of the sea-bed around Le Havre, at the level (−30,00) providing a high tide depth of 36 m. The Antifer site is also shown. Considering that a 5 m keel clearance is needed for navigation on the high seas and that the navigation in the Straights of Dover and beyond lasts longer than the duration of a high tide, we see that the ship's draught in limited to less than 25 m at the Straights of Dover.

General Arrangements

In View of the Construction of a Pier in the Seine Bay

In the various seas of the world, there are many off-shore berths allowing the reception of big tankers. In some cases, tankers are moored alongside wharves constructed out at sea, several kilometers from the shore. In other cases, tankers are moored on mooring buoys. In the modern version of such a work, the ship is moored by a single mooring buoy and not by several as was generally the case ten years ago. In this way, the ship swings and offers the smallest possible surface perpendicularly to the swell. These berthing-places on buoys or alongside wharves are connected with the coast by means of submerged pipes, and tanks are built on shore.

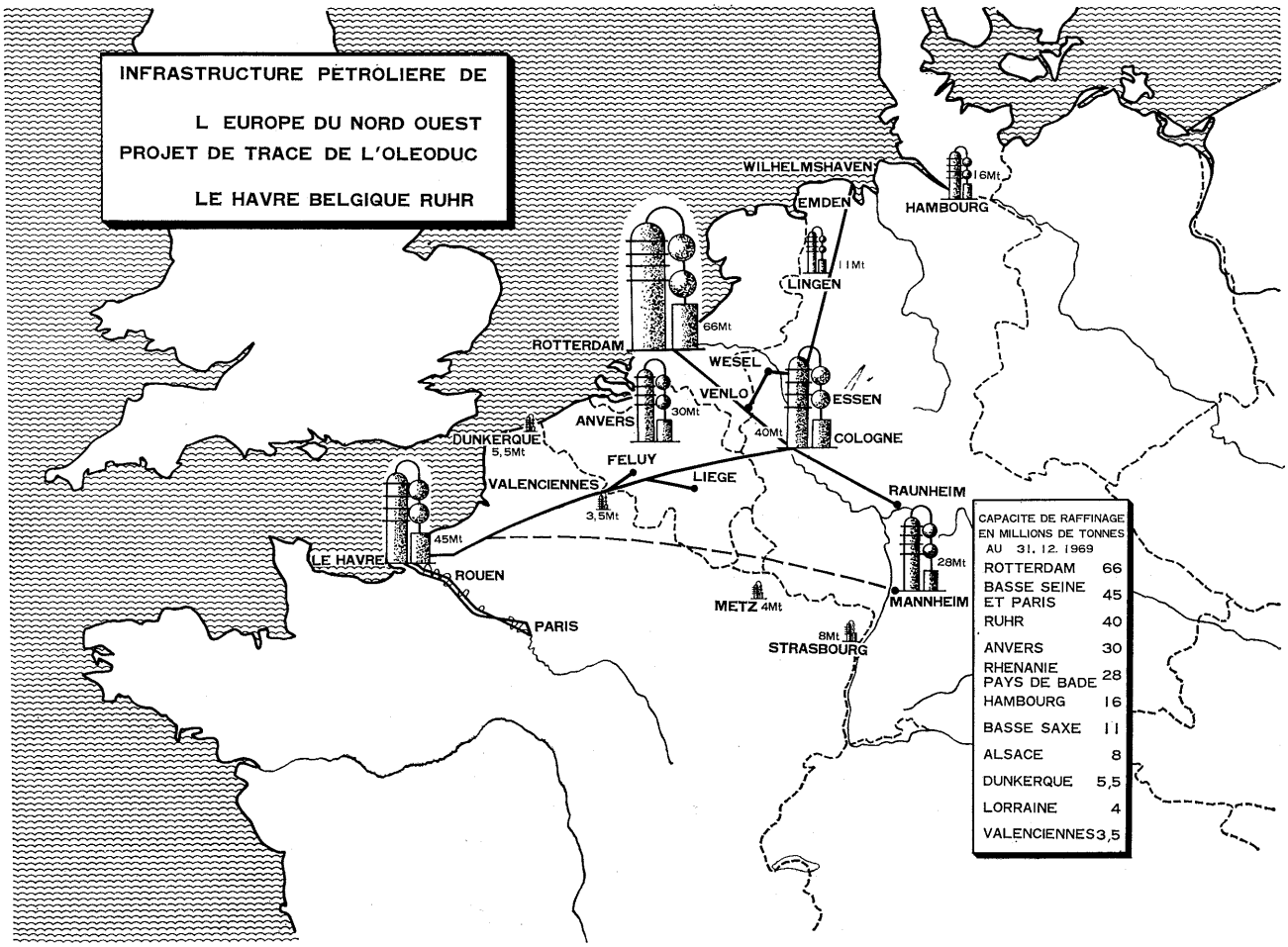
Such realizations are particularly frequent in the Persian Gulf and in the Mediterranean Sea. In fact, this solution is very suitable for the reception of ships in waters where the swell is infrequent.

Unsheltered berths situated off-shore are considered to be unworkable when the swell exceeds 2,00 m the action of tugs and harbour crafts is almost impossible over this limit. In the Mediterranean or in the Persian Gulf the number of days when the swell exceeds 2,00 m is low. On the other hand, it is slightly higher on the coasts of the Atlantic and of the Channel, so that, with the present technical conditions, it would appear to be advisable in the construction of an off-shore berth in the Seine Bay, to forecast a protective structure within whose shelter moring berths should be installed and connected with the shore by submerged pipes.

Numerous theoretical and model studies have been carried out by the Port of Le Havre Authority to determine the optimal position of maritime structures and to know the evolution conditions of a 500 000 dwt tanker under wave, current and wind effects. These studies have been carried out with the assistance of specialized laboratories.

These tests showed the effect of currents on a tanker's motion while mooring at low speed.

To bring to a halt a 500 000 dwt tanker in a 1 n. current, one must sustain an effort of 400 t. when the current is perpendicular to the ship, and of 200 t. when it forms an angle of 45° to the ship's sailing. It would necessitate the help of numerous tugs to equilibrate such efforts when the ship's speed is reduced to zero. Moreover, under the action of an oblique or perpendicular current, the drift of the ship is all the more important as her speed is de-



creasing. It therefore became apparent that the terminal would have to be conceived in such a way as to allow ships to face the current when approaching and mooring. It appeared also that it would be necessary to establish with accuracy the direction of currents and to avoid any eddying ones.

Finally, the terminal must be conceived so that tugs may use of swell-sheltered waters for towing and swinging.

These are the main principles that have directed the Port of Le Havre in the study of these works.

Description of Projects

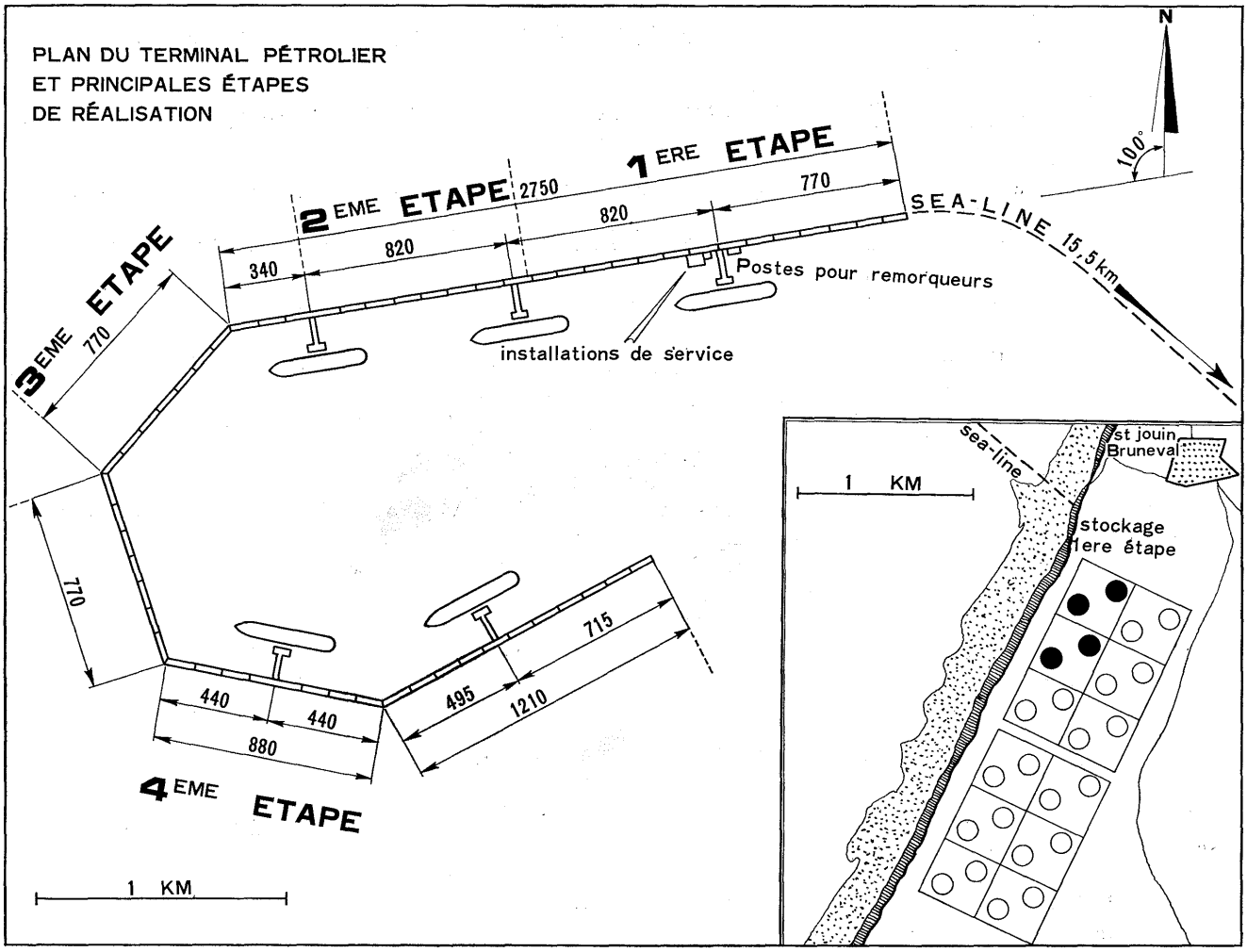
Observations carried out on the Antifer site showed that currents have a well established direction, alternating according to time of tide. This direction is S-W/N-E. The direction of the most important swell above 2,00 m (that is to say inconvenient to tugs) is between North-West and North-East.

These results allowed us to consider, at an early stage, a very simple solution, conforming with the general principles of development stated above. At this early stage, the project merely requires the construction of a break-water, built in direction of the current axis and presenting shelter against the most frequent swells. The ship, having changed her course, (her turning radius would be of about 1 500 m., or approximately four times the length of the ship) will move against the stream and parallel to the break-water. She will then stop and, under cover of the break-water, will be towed towards her wharf. The manoeuvre zone would have to be wide enough for the ship, having checked her way, not to encounter any difficulty. The length of the break-water will be limited to 1 500 m. This will be sufficient to provide sheltered waters allowing both the revolution of tugs and the berthing of ships. At that stage, just one break-water will be constructed. Situated in depths of more than 30 m. (the break-water will have a height exceeding —40 m.) it will allow the mooring of ships up to 500 000 dwt and will be conceived in a way that, in the future, dredging can be carried out at the foot of the structure to allow ships up to 1 000 000 dwt to remain moored at low tide. This break-water will ensure a 40 million tons traffic (on the basis of 100 calls a year for ships up to 400 000 dwt.).

At a second stage, the break-water will be lengthened by 1 000 m., so as to bring the length of sheltered waters to 2 500 m. It will then be possible to consider the building on the Western side of this break-water, of a return extension which will help to improve the protection of this site against swell. The plan of this structure has been specially conceived so that currents run along the break-water without producing eddies or small streams of water.

Three new berths will be constructed next, both for unloading and for reloading ships of lower tonnage leaving for other ports.

If one agrees, for instance, that two berths should be assigned to unloading and two to reloading of 200 000 dwt ships, the traffic corresponding to this second stage



may be estimated at:

Inwards ..... 100 M/t a year
Outwards ..... 40 M/t a year

For the third step, the shelter-harbour will be completed by a new structure further South, extending the return structure, so as to close up the break-water whose shape will be defined in such a way as to provide enough sheltered water.

At Antifer the shipments will be kept in on-shore storage tanks unless the break-water can be used as a storing area as well. The connection between terminal and shore will be made by submerged pipes. Pipe-lines will carry crude oil either towards the refineries of the "Basse Seine", or towards the hinterland. In both cases there will be reserve storage on the terminal, in order to prevent an accidental interruption in the pumping operation. At the first stage, reshipment will be made from the port of Le Havre but, as soon as the traffic level justifies it, special reloading wharves will be constructed on the terminal.*

The Port Authority Board has retained the Antifer site which, at equal cost, presents the following advantages:

—More regular current direction during the tides.
—better indication of this general line of currents, and therefore of the prospective structure regarding prevailing swell; thus the establishment of a better shelter with the same length of structure.
—better depths close to the terminal, which means that a ship, having misjudged her manoeuvres, could resume her speed, unhindered, before starting over again, while at the Parfond she would find herself trapped.

Financial Lay-Out

We mention below the cost of the works to be undertaken, according to traffic development, should the Antifer site be chosen. The investment to be made at the first stage will be 300 million F.; the arrangements will include a 1 500 m. protective structure and one berth. A 48 in. sea-line will connect the terminal with the shore, where a 600 000 m³ storage will be constructed, unless the break-water can provide storage space as well. A pipe-line, 34 in. in diameter, will be laid between the terminal and the oil port of Le Havre. Transport towards the hinterland will be effected from Le Havre, by means of existing pipes. The capacity of this equipment corresponds to a traffic of 40 million tons a year, as already said.

New equipment will be acquired according to traffic evolution after this first stage. The cost of this

*Beside the off-shore terminal, other plans have been studied by the Technical Department of the Port of Le Havre Authority (single buoy mooring —artificial harbour). The competition just issued to the contractors for the construction of the structure leaves a choice between the various ideas.

equipment is expected to be 240 million F. to raise the terminal capacity from 40 to 80 million tons a year, and 620 million F. to pass from 80 to 160 million tons a year.

The construction and maintenance of the break-water works would be assumed by the Port Authority, while the construction and operation of the other works would be committed to a concessionary. The latter would support the cost of building and maintaining the berths, sea-lines and connecting pipe-lines. He would be invited to pay an assistance fund to the Port Authority in view of the carrying out of the break-water works.

The traffic likely to be provided by the oil terminal has been studied according to:

—The present hinterland of the port of Le Havre (Parisian district) supposing that, gradually depending on the evolution of the oil fleet, half the traffic of this hinterland (corresponding to the Persian Gulf—Le Havre shippings) would be ensured by ships up to 500 000 dwt or more.
—Enlargement possibilities of this hinterland thanks to forwarding by pipe-lines or reshipment on ships of lower tonnage.

The results of these studies are the following:

(in million tons a year)

	1974	1980	1985	1990
Lowest forecast:	22	67	90	124
Highest forecast:	36	83	114	150

The main conclusions of the financial research carried out in order to establish the profit-earning potential of this terminal are the following:

—Revenue from the lessee installations will be rapidly attained for traffic which will be under 20 million tons a year in a realistic estimate of traffic distribution according to ships' dimensions and allowing for a 10% return on invested capital. We can therefore think out tariffs that will correctly ensure the yield on the capital invested by the lessee, at that traffic level, while allowing to the owners and refiners a proportion of the profit realized on shipping cost in order to persuade them to make use of the terminal.
—In general terms of economy, the rate of profitability is nearing 13% for a traffic that can be attained as early as in 1974. This rate is very rapidly increasing. It will be about 45% for a traffic of some 40 million tons and will reach 50% for a 80 million tons traffic.

Beginning of the Work

In December 1969 the French Government confirmed the oil vocation of the Port of Le Havre in deciding to retain the Seine Bay site for receiving very large tankers, when the time comes.

At the end of research studies that have lasted two years, the Port Authority has brought into focus the preliminary plans of the installations to be set up for the reception of these ships. It is intended to choose a concessionary and specialized Public Works Companies at the end of this year. As a result, work will begin immediately, in order to make, at the end of 1973, the oil terminal and its complementary installations serviceable.

The growth in the number of ships of 300 000, 400 000, 500 000 dwt or more, together with the needs of France and North-Western Europe for crude oil encourage the use of the planned terminal, advantageous both to the national economy and the private investments.

Activities Since 1967 of Port Development Authorities

And some features of port construction in Japan

By Kisaburo Enomoto, Counsellor

Keihin (Tokyo-Bay) Port Development Authority

In the issue of May 1970 of IAPH magazine I have written a short article titled "a brief description of Japanese policy on Port/Harbour constructed in recent years'. In the above article I gave some explanation particularly having focus on establishment of Port Development Authorities in Tokyo and Kobe respectively in October, 1967.

Now taking this opportunity I am very glad to describe actual construction works conducted by the two Port Development Authorities since October, 1967.

1) General pattern of P.DA.'s construction covering from 1967 to 1975
   a) General scheme of construction of port facilities. The general scheme of construction of port facilities are as follows. (This was once revised after their start.)

KEIHIN P.D.A.

Container berth	
Tokyo	11
Yokohama	6
Conventional Line Berth	
Tokyo	10
Yokohama	12

HANSHIN P.D.A.

Container Berth	
Kobe	9
Osaka	7
Kobe	21
Osaka	7

   b) Total amount of budget to cover the general scheme shown above is as follows. (draft as yet)

KEIHIN P.D.A.

¥101 billion
(approx. US$280 million)

HANSHIN P.D.A.

¥96.5 billion
(approx. US$268 million)

Out of the above mentioned total drafted amount of budget the following amount has been allocated annually since their establishment. (In million yen)

KEIHIN P.D.A.

1967	2,100
1968	5,000
1969	6,500
1970	9,000
1971	13,750

HANSHIN P.D.A.

1967	2,900
1968	5,000
1969	7,000
1970	9,250
1971	13,250

In connection with the way that how these annual amount to be financed actually from various sources, you are kindly requested to refer to previous article of May 1970 of this magazine.

2) General picture of construction works conducted by P.D.A. during these 3 years.

With the budget allocated annually as above, the two authorities, K.P.D.A. and H.P.D.A. have been strenuously worked in construction of port facilities, actually container wharves they are, in order to cope with striking rapid trend of containerization pertaining to foreign trade to and from four main ports in Japan.

a) Result of the first (January, 1969) and the second (August, 1970) invitation for subscribers.

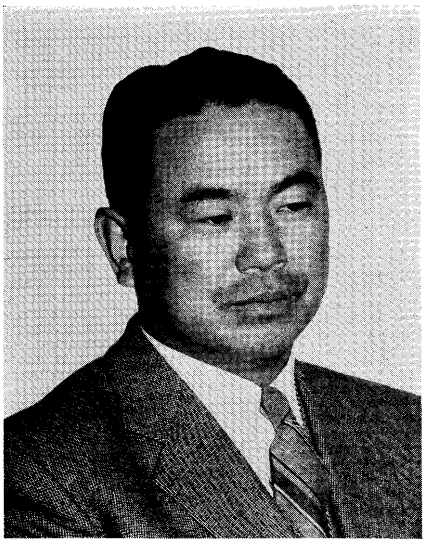
K.P.D.A.

Container berth

Exclusive user

Tokyo
- No. 1
  Kawasaki Line
- No. 2
  —ditto—
- No. 3
  Mitsui O.S.K. Lines
- No. 4
  —ditto—
- No. 5
  —ditto—
- No. 6
  N.Y.K. Line
- No. 7
  —ditto—
- No. 8
  Japan Line/Y.S. Line (Joint use)

Yokohama
- No. 1
  Kawasaki Line/Japan Line (Joint use)
- No. 2
  N.Y.K. Line/Mitsui O.S.K. Line/Y.S. Line/Showa Line (Joint use)
- No. 3
  Sea-Land Service
- No. 4
  Sea-Land Service/U.S. Line (Joint use)



Mr. K. Enomoto

Conventional Liner berth

Tokyo
- No. 1
  5 terminal operators (Joint use)
- No. 2
  3 terminal operators (Joint use)
- No. 3
  4 terminal operators (Joint use)
- No. 4
  4 terminal operators (Joint use)

H.P.D.A.

Container berth

Kobe
- No. 1
  Sea-Land Service
- No. 2
  Japan Line/Y.S. Line (Joint use)
- No. 3
  N.Y.K. Line
- No. 4
  —ditto—
- No. 5
  A.P.L./A.M.L. (Joint use)
- No. 6
  U.S.L.
- No. 7
  Mitsui O.S.K. Lines
- No. 8
  —ditto—

Osaka
- No. 1
  Kawasaki Line
- No. 2
  N.Y.K. Line/Mitsui O.S.K. Lines/Y.S. Line (Joint use)
- No. 3
  Kawasaki Line

Conventional Liner berth

Kobe
- No. 1, No. 2, No. 3
  Not decided yet at the time of this writing as more than 15 applicants appeared for these 3 berths.

b) Present Status of the construction works of the berths.

K.P.D.A.

No. 1, 2 and 3 container berths in Yokohama have been completed already and put in service. No. 4 and 5 container berths in Tokyo will be completed within 1971 fiscal year to be used mainly for European service which will be inaugurated in autumn of 1971 and for New York Service. All other rest will be completed within 1972 and 1973 fiscal year.

H.P.D.A.

No. 1 container berth in Kobe has been already completed and put in service. This is being used by Sea-Land Service and U.S.L. (under wing of SLS) for mainly P.S.W., P.N.W., New York Service and for feeder operation.

H.P.D.A.

No. 2 and 3 container berths in Kobe will be completed by autumn of 1971 and will be used mainly for Europe and New York Service.

No. 1 and 2 container berths in Osaka have been already completed and they are mainly being used for Australian Service.

All other rest will be completed within 1972 and 1973 fiscal year.

3) Another project to construct port and harbour facilities following the Port Development Authority

Following the establishment of Port Development Authorities in Keihin (Tokyo Bay) and Hanshin (Osaka Bay), there appeared another new conception named "Project to finance to constructive body of port facility", under which the following two schemes stand on the stage:

a) Financing to container berth company in Nagoya and Yokaichi.

b) Financing to the ferry berth company in 18 main ports.

a) Container berth company in Nagoya and Yokkaichi:

According to the view expressed by an authorized committee which is working as an advisory body for the Ministry of Transport, it was decided to construct 4 container berths in Nagoya and 2 in Yokkaichi (both ports are located adjacently in the central part of Japan: "Ise Bay") in 5 years, from 1970 to 1974. (Some explanation was given in the aforesaid May issue of IAPH magazine)

The drafted total amount is ¥13,800 million for Nagoya and ¥6,000 million for Yokkaichi, of which as for the first year budget the following amount was recognized in 1970's national budget:

Nagoya	¥1,700 million
Yokkaichi	¥700 million

This amount will be financed in the following way;

10%—To be financed by the Central Government to the company without interest in long term as a loan. (for 3 years no refund will be made and in the following 17 years the whole amount will be refunded in equally devided amount.)

10%—To be given as capital of the company by the shipping companies who will associate with each other in the company. (Presently 6 major container operating companies.)

10%—To be given as capital of the company by the local authorities concerned.

30%—To be financed by the Central Government to the company through Bond issued with interest.

40%—To be financed by city banks on commercial basis.

At the end of 1970, "Nagoya Container Wharf Company" was established but for Yokkaichi any company has not yet been formed by the time of this writing. And as for the budget of 1971, about ¥3,200 million in total was allocated for the two ports.

b) Ferry berth company in 18 main ports;

In order to cope with the present ambitious scheme of operating big ferry boats in various parts of Japan, this project appeared in recent years in the shipping circles concerned.

The necessity of construction of many ferry berths in a rapid step is widely recognized and in the draft of 1971's Ministry of Transport budget, the amount of ¥29 billion has appeared to construct 45 ferry berths in 18 main ports within 5 years of 1971 to 1975. In each port, one ferry boat company will be established. As for the budget of the first year, 1971, ¥5 billion was allocated to start their construction in 5 ports out of the 18 ports at the outset, and this amount will be financed in the following way;

20%—To be financed by the central government to the company without interest.

20%—To be given as capital of the company by the local authorities concerned.

30%—To be financed by the central government to the company through local authorities in the form of Bond issued with interest.

30%—To be financed by city banks on commercial basis.

4) Some words for Conclusion

As the readers may have understood from this article, Japanese policy for port and harbour construction has in recent years experienced several great changes. However I should give some remarks to you before ending this writing in spite of the fact that the new organizations have been established in order to meet the requirement of the present shipping situation, still as a whole the construction works conducted by the local authorities for the public use are occupying the greater portion of the national budget for port and harbour construction. Nevertheless as we recognized, the several new organizations established under independent laws are showing the future direction of the government policy, to which we would have to pay our further attention.

Port of Osaka Present and Future

Port and Harbor Bureau Osaka City Government

(Adapted and translated by Takuji Nakanii, IAPH Under Secretary)

The total number of ships that visited Osaka Port during 1970 was approximately 106 thousands, and their total tonnage was nearly 70 million gross tons. The total cargo tonnage passed through the Port was estimated to have amounted to 54 million tons during the same period.

In April 1970, "The National Economic and Social Development Plan" (established by the Economic Planning Agency of Japanese Government) was revised, so that it should include a new plan covering the coming period 1970~1975. According to this new National Economic Plan, "The 4th 5-year Plan of Japanese Ports" was framed by the hand of the Ministry of Transport, and in it total cargo tonnage to be handled through all Japanese ports in 1975 was estimated at 3,380 million tons approximately.

In such a situation, "The 4th 5-year Plan for Development of Osaka Port" has been started by Osaka City Government to cover the period of 1971 to 1975, in which an estimation and an aiming are made that total cargo tonnage through Osaka Port in 1975 would be as large as 100 million tons.

I. THE OBJECTS AND OUTLINE OF "THE 4TH 5-YEAR PLAN FOR DEVELOPMENT OF OSAKA PORT"

The objects of this new plan are:

1. To prepare for the expected large increase of cargo,

2. To meet the aggrandizement of ships,
3. To meet containerization, and
4. To meet the demand for facilities for long-cruise ferries.

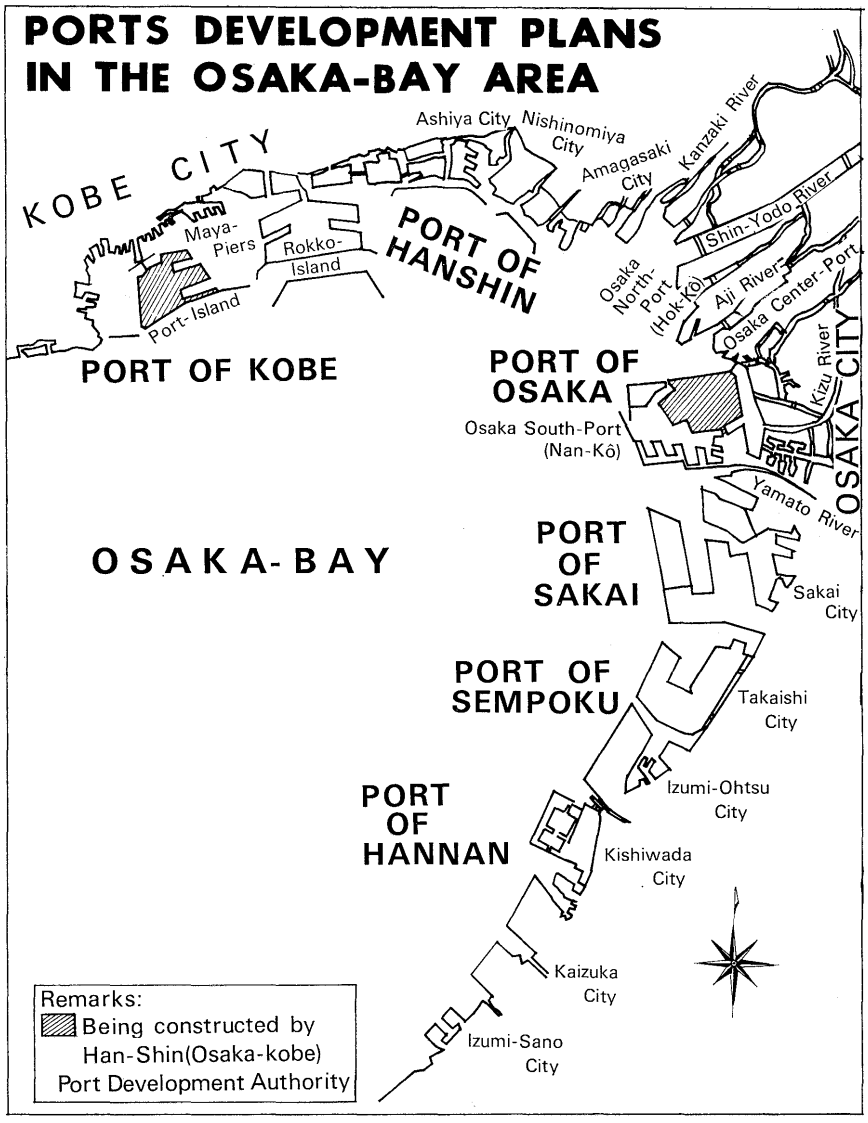
Planning for physical facilities described in this 5-year Plan can be summed up as follows:

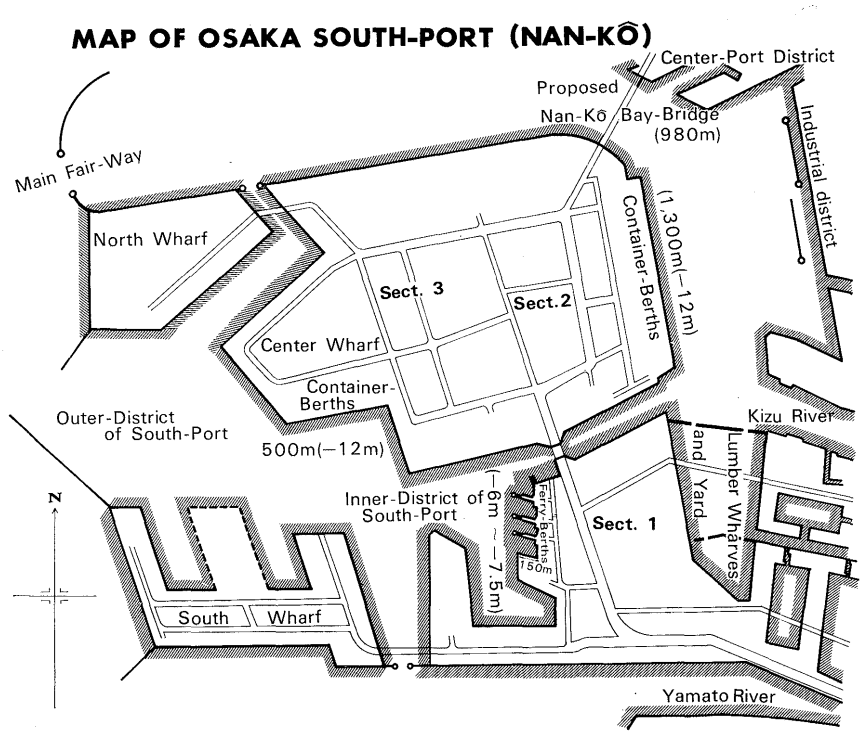
1. Existing wharves:
   Improvements are to be given towards higher efficiency.
2. South-Port (Nan-Kô):
   (1) Outer-District . . . Container berths, general liner berths and tramper berths will be developed.
   (2) Inner-District . . . Domestic general cargo berths and ferry berths will be developed.
3. Tsuneyoshi-cho District (North-port (Hok-Kô), Konohana-Ku): Berths for storage of construction materials and facility for oil pollution prevention will newly be constructed.

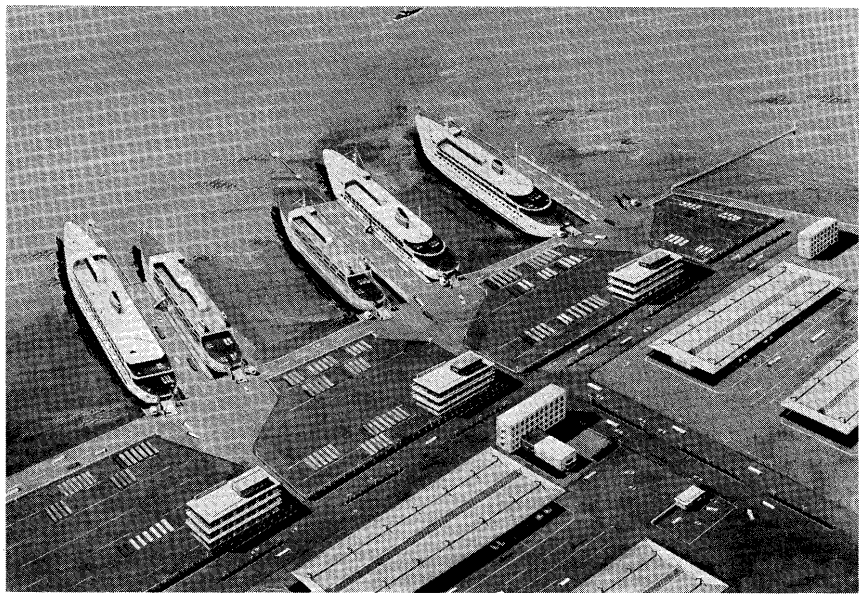
As you have found in the above items, the development programme of the South-Port (Nan-Kô) is playing the most important role in the 5-year Plan.

II. DEVELOPMENT PLAN OF OSAKA SOUTH-PORT (NAN-KÔ)

1. Outer-District of Osaka Nan-Kô:
   (1) Container berths:
   Han-Shin (Osaka-Kobe) Port Development Authority is designing 7 container berths in total in the Port, of which two berths are already completed. Berth-No. 1 is used by A.N.L., K-Line, and Flinders Shipping Co. cooperatively, and Berth-No. 2 by Mitsui-O.S.K., N.Y.K., Y.S. Line and A.J.C.L. also cooperatively.
   The Authority is reported to have received much demand that container berths to be constructed in the future should have the design of each length of 300 meters or more to meet incoming larger container ships.
   (2) Nan-Kô Bay-Bridge:
   The Bridge was designed to shorten the way between the Nan-Kô and the urban district of Osaka City by connecting the former with Osaka Center-Port District. The construction







work has been started since July 1970 by Han-Shin (Osaka-Kobe) Highway Public Corporation. Its completion is expected in 1973.

The specifications of the Bridge design are as follows:

- Type of bridge: Truss type (The 3rd largest, following the bridges of Quebec in Canada and Forth in Scotland)
- Shape: Double-decked
- Clearance under the bridge above sea-level: 51 m or more, enabling a ship of 40,000 DWT to pass thereunder
- Length: 980 m (235+510+235), and the total length is 2.85 km including approachways.
- Breadth: 19.25 m (4 lanes) at one deck
- Total construction costs estimated: Approx. 25,000 million yen (including approachways' costs)

2. Inner-District of Osaka Nan-Kô:

(1) Cargo berths:

Irregular intermixture of berths for foreign route with those for domestic route at present will be improved and rearranged. Most of conventional berths will be redeveloped for general liner berths for foreign trade.

Domestic route cargo berths will be developed to be a domestic transportation and processing terminal, arranged by routes and by sorts of cargo.

(2) Ferry berths:

6 ferry berths were designed here in total, including 3 berths for 8,000 GT ships (−7.5 m, 165 m each) and the other 3 for 3,000 GT ships (−6.0 m, 130 m each). One berth each of the former and the latter 3 berths will be finished and expected to be opened for use in June 1971.

III. THE DIRECTION OF FUTURE DEVELOPMENT OF OSAKA PORT

Urban problems can be foreseen to arise in the Port, relating to citizens' life, in the not too long future.

In this connection, the 5-year Plan contains the following concepts to meet and cope with the needs and problems:

1. Development of Port to make it a comprehensive terminal handling necessary goods for urban life and activities:

(1) Improvement and modernization of the Port:

(a) Improvement and modernization of existing facilities and development of efficient equipments, including container facilities

(b) Strengthening exporting ability of this Port

(c) Redevelopment of the berths by rearranging them by sorts of goods imported, eg. foodstuff, construction materials and so on

(d) Arrangement of domestic liner berths of general cargos

(2) Development of physical facilities and establishment of systems for the intermodal and integrated transportation

2. Construction of a new urban district on the sea:

It is wished that the development of Osaka Nan-Kô should be "the creating of a human-life space". The Nan-Kô is to be a new town containing a population of 50,000 at night and 70,000 in the daytime. Multiple-storeyed housing district, business district, and parks (approx. 220,000 sq.m) will appear in this future port town.

Orbiter Probe

IAPH News :

Announcement by S.G.

In compliance with the provision of Section 37, Article VIII of the By-Laws of the Association, Mr. V. G. Swanson, President of our Association, appointed on March 20, 1971, the following 9 persons to serve as members of the Ways and Means Committee for the Montreal Conference of IAPH.

1. Mr. Bernard J. Caughlin, General Manager, Port of Los Angeles, U.S.A.
2. Mr. G. Beaudet, Port Manager of Montreal Harbour, National Harbours Board, Canada
3. Mr. Louis C. Purdey, Executive Director, Toledo-Lucas County Port Authority, U.S.A.
4. Mr. Gengo Tsuboi, Managing Director, The Japanese Shipowners' Association, Japan
5. Mr. R. C. F. Savory, C.B.E., F.I.O.B., Chairman, Auckland Harbour Board, New Zealand
6. Mr. Howe Yoon Chong, Chairman/General Manager, The Port of Singapore Authority, Singapore
7. Mr. Dudley Perkins, M.A., M. Inst. T., Director General, The Port of London Authority, U.K.
8. Mr. Robert L. M. Vleugels, General Manager, City of Antwerp-General Management of the Port, Belgium
9. Mr. Edward J. Wesley, Deputy Port Director, Monrovia Port Management Co., Ltd., Liberia (West Africa)

Travelers

• A reception sponsored by Port of Houston was held Wednesday, March 24, 6:30–8:30 p.m. in the Sky Room of the Imperial Hotel, Tokyo. Mr. George W. Altvater, Deputy Director, and Mr. Henry M. Broadnax, General Sales Manager, of Port of Houston, called at the IAPH Head Office that day at 2:30 p.m., accompanied by Mr. H. Matsumoto, Director, Japan Trade Development, Port of New Orleans. The two gentlemen representing Port of Houston arrived in Tokyo March 19 on a business mission to Japan, to meet Japanese clients of the Port in Tokyo, Osaka and Nagoya, and to solicit more use of Gulf ports, the Port of Houston in particular. Mr. Altvater said Mr. J. P. Turner, Executive Director of Houston, as well as himself, will be present at the Montreal Conference.

• A 4-man party from Port of Le Havre arrived in Japan on Saturday March 27. The leader was Mr. Maurice Thieullent, President du Conseil d' Administration du Port Autonome du Havre. Other members were Mr. Paul Bastard, Directeur General, Mr. Rene Genin, Directeur de l'Exploitation Commerciale, and Mr. Christian Guary, Directeur du Bureau de New York. In the absence of the Secretary General, who was away on business trip to Europe, the IAPH Head Office, represented by Dr. Hajime Sato, Deputy Secretary General, and a few IAPH staff members invited the party to a lunch Monday at Rikyu Hanten, a Chinese restaurant on

INFORMATION WANTED

This Head Office received a request, dated 20th February, 1971, from Mr. K. Milburn, Director of Marine Department, Hong Kong, for information on the policy towards pleasure craft dues and charges in the world ports.

A paragraph from his letter is cited as hereunder:

"I am seeking information on the policy in other ports and countries towards pleasure craft dues and charges. Many ports must be faced with problems caused by the expanding interest in recreation afloat, such as the need to provide sheltered anchorages landing piers and other facilities.

As indicated in the paragraph, the demand for "recreational use of ports" seems to be on the increase, fomenting a new problem of importance in the field of ports and harbors.

We would think it of considerable significance that information be exchanged among our Association members now, on problems, policies and regulations relevant to handling recreation craft in ports, assessment of port charges and development of port facilities for these craft.

The purpose of this announcement is to invite you to send in your information on this subject from time to time, for publication in this Association's monthly.

A suitable space of this organ shall be spared for this purpose in the form of open replies to an open inquiry.

All your information in response to Mr. Milburn's request is desirous of being arranged briefly in compliance with the following items:

1. Is your Port Authority providing any facilities for recreation craft in your Port? If so, how are the pleasure craft dues and charges assessed by your Port Authority (Port administration/management body)? How are the navigation of those craft regulated there? How have the navigation of those craft regulated there? How have the facilities been developed?
2. Has your Port Authority any plan for providing facilities for recreational craft in the near future? If so, how are you proposing about the afore-mentioned port dues and charges, regulations and development of facilities?
3. Is there any organization in your Port (at present or scheduled in the near future), to which a part of your Port site is leased for recreational use? In the affirmative case, what are your policy, terms and rent for the lease to the organization, and how are the regulations made by your Port Authority to their navigation in the Port?

IAPH Head Office

the 38th floor of the WTC Building, Tokyo. On Tuesday evening the party held a cocktail party at Hotel Okura, Heian Room, 6:00–8:00 p.m. On Wednesday noon a dejeuner was given at the French Embassy, Tokyo in the name of Mr. Jean Francois Noiville, Minister Counsellor, for the benefit of the Le Havre party, with about ten local Japanese and French gentlemen of shipping interests being also invited. The party is scheduled to visit ports of Yokohama and Kobe, and inspect the oil unloading facilities at Kiire, Kyushu, before departing for home on April 8.

Containerisation Show

Paris:—(The First) Salon International de la Containerisation (Equipment et Services) is scheduled May 12-19, 1971 at Palais de la Defense, Paris/Puteaux, France. For further information refer to Madame Sekretev, Salon de la Containerisation, 40, rue du Colisee 75, Paris 8e, France (Tel. 225-77-50).

T.M. Bryson, MBE

Ottawa, March 22: — The appointment of Thomas M. Bryson, MBE, as a Member of the National Harbours Board of Canada has been announced by Transport Minister Don Jamieson.

Mr. Bryson, 60, was Executive Assistant to the late C. D. Howe, then Minister of Munitions and Supply, during much of the Second World War and has been a senior NHB executive since 1947, most recently the Board's Executive Director. He has been employed by the Government of Canada since 1930.

Born in Northern Ireland, he came to Canada with his family at the age of 10 and lived Thunder Bay Ont. (then Fort William) until 1930.

He was named Secretary of the National Harbours Board in 1953 after having served as assistant secretary for six years. In 1964 he became senior adviser to the Board and was appointed Executive Director in June 1970.

Mr. Thomas M. Bryson, MBE

Mr. Bryson is a past president of the Gyro Club of Ottawa, the Ottawa Hunt and Golf Club and the Ottawa District Golf Association. He is married and has two daughters. (National Harbours Board)

N.H.B. Ports in 1970

Ottawa, March 9:—Total cargo tonnage at ports administered by the National Harbours Board reached a record high in 1970 with seven of the 10 ports setting individual records.

The 10 ports handled a total of 86,779,333 weight tons of 2,000 pounds compared with 74,099,525 in 1969 and the previous record of 74.1 million tons in 1966.

The seven ports with record tonnages were Vancouver, Montreal, Halifax, Quebec, Saint John, N.B., Trois-Rivières, Que., and Churchill, Man.

Tonnages handled by the seven record-setting ports (with 1969 figures bracketed) were: Vancouver 27,158,913 (23,080,469); Montreal 25,047,299 (20,538,174); Halifax 11,577,000 (10,553,997); Quebec 8,859,884 (7,439,871); Saint John 6,359,144 (6,282,729); Trois-Rivières 5,364,914 (3,733,060), and Churchill 804,111 (720,044).

The three ports showing declines were St. John's, Nfld., to 772,304 tons from 879,793 in 1969; Chicoutimi, Que., to 616,735 from 641,772, and Belledune, N. B., to 219,029 from 229,616.

A total of 32,587 ships called at the ports, a drop from 35,144 in 1969, but they represented total net registered tonnage of 72,213,746 against 66,743,440, indicating larger ships in service.

Deliveries through grain elevators at the 10 ports and at Prescott and Port Colborne, Ont., totalled 590,687,676 bushels in 1970 against 398,048,837 bushels in 1969.

Vancouver elevators delivered 215,712.297 bushels compared with 162,292,838 in 1969 and Montreal was up to 158,338.703 bushels from 86,771,535. The other ports showed similar increases in grain handling. (National Harbours Board)

PACECO Cranes on Order

Alameda, Calif., March 17: — Construction of container handling equipment for six seaports in both Europe and the Far East has been announced by PACECO, a Division of Fruehauf Corporation, Alameda, California. The cranes are being built by PACECO Licensees: Paceco International Limited, London, England, Mitsui Shipbuilding and Engineering Co., Tokyo, Japan; and Fruehauf, S.A., Madrid, Spain.

The Port of Genoa, Italy will have two new PACECO Low-Profile model Portainers, making a total of three for that Port since 1968. All three cranes, for ship loading and unloading, have a 40 metric ton capacity.

In Holland, the Port of Flushing will get a 41 MT Portainer, and four 35 LT Portainers will go to the British Transport Docks Board, Southampton, England, through Paceco International Limited, London. The first job for Fruehauf, S.A. in Madrid, is the construction of two PACECO Shipstainers, container handling cranes which are mounted aboard ships.

PACECO's Far East Licensee, Mitsui Shipbuilding and Engineering Co., Ltd., is installing a Portainer with an articulating boom, to conform to height limitations, at the Port of Tokyo. In addition, they are building two 30 LT Transtainers for the Port of Osaka and three 30 LT Transtainers for the Port of Kobe. The Transtainers have a 77-foot span to handle six container rows, plus carriers on a roadway, in the port terminal area. (PACECO News)

Grain Elevator

Baltimore, Md.:—Central Soya, a Fort Wayne (Ind.)-based firm, has acquired the Canton grain elevator here from Northern Central Railway Company, a subsidiary of Penn Central Company.

The elevator, Central Soya's first coastal facility, has a 4 million bushel capacity and is used primarily for the transfer of grain and products into bulk carriers for export.

Central Soya will use the facility for exporting grain and soybean meal to Japan and other international markets.

William H. Yochum, Jr., most recently assistant plant manager at Central's Belmond, Iowa, facility has been named to manage the elevator. Penn Central will continue to serve the elevator.

Under the new set up the port facility will be operated as the Canton elevator division of C.S.Y. Finance, Inc. (Port of Baltimore News Release)

PACECO Bulk Unloader

Baltimore, Md.: — Handling powdery alumina, the basic raw material in the production of aluminum, seems easy when handled by highly automated equipment like the new PACECO Unloader at Baltimore Port Authority's Hawkin's Point Marine Terminal, Baltimore.

The new 105-ft. high unloader was specially designed by PACECO to expedite the supply of alumina for the new Eastalco production facilities near Frederick, Maryland. It is capable of unloading 1,000 tons of material per hour without loss of the powdery material in the form of dust. This is accomplished with an elaborate dust collecting system over the hopper, and sealed clamshell bucket.

The PACECO Unloader, in semi-automatic cycles, transfers the alumina from the ship to a belt which conveys the material to two 30,000 ton capacity silos to await shipment on specially designed 100-ton hopper railroad cars to the Eastalco Buckeystown plant, eight miles south of Frederick.

PACECO supplied the unloader under a contract with Bechtel Corporation, prime contractor for the Eastalco project.

Eastalco Aluminum Company, a joint venture of Howmet Corporation and Pechiney Enterprises, Inc., expects to produce 90,000 tons of aluminum a year at the new 1,400 acre Buckeystown site. (Port of Baltimore News Release)

Cargo Preference Laws

Miami Fla., March 25:—Duluth Port Director C. Thomas Burke warned Great Lakes longshore leaders here Thursday that their members face a serious work shortage unless major revisions are made in governmental "cargo pre-

ference" laws.

Burke, guest speaker at the annual convention of the International Longshoremen's Association (ILA) Great Lakes District, said federal regulations controlling exports of U.S. foreign aid cargoes are "no longer in the best interests of our country."

He specifically attacked a regulation requiring that at least 50 per cent of foreign aid cargoes be carried by U.S.-flag ships.

Service into the Great Lakes by U.S.-flag vessels in recent years has been negligible, Burke said, and consequently thousands of tons of foreign-aid cargo have been diverted to other coastal areas.

He said a Senate Foreign Relations Committee study of cargo preference restrictions in 1965 concluded that the 50 per cent requirement did not benefit the American merchant marine or the national economy. Further, he said, the committee determined that the requirement "is a self-defeating device which hurts the interests of the maritime industry, farmers and taxpayers."

"And now," Burke said, "six years later, the Nixon Administration through its 'Ship American' program gives every indication that the archaic cargo preference laws will be enforced even more stringently, thereby reducing our Great Lakes cargoes and ILA man-hours drastically."

As alternatives to the present policy, he said the government should either allocate a specific amount of U.S.-flag ship operation subsidies to build Great Lakes service, or should permit non-strategic government cargoes to be shipped on commercial foreign-flag lines.

Burke said federal agencies such as the Agency for International Development (AID) and the Department of Agriculture require that rate quotations for shipments through Great Lakes ports be accompanied by quotations through one or more other coastal ports. Meanwhile, he said, these agencies do not require coastal ports to offer Great Lakes quotations for the movement of the same cargoes.

"If the Administration continues this purely discriminatory policy of forcing cargoes from our Great Lakes ports to other coastal port ranges simply because of U.S.-flag availability, perhaps they might also consider reimbursing Great Lakes ILA locals for the loss of wages and benefits as a result of this intentional diversion."

Burke asked the ILA leaders for assistance in rescinding the cargo preference laws and urged that they participate in a U.S. Department of Transportation seminar to review Great Lakes shipping policies in Cleveland, Ohio, May 10–11. (Seaway Port Authority of Duluth)

SS Seawise University

Hollywood-Fort Lauderdale, February 24:—Port Everglades' most publicized and long-time tenant, SS Seawise University, formerly the Queen Elizabeth, sailed for the Orient Feb. 10.

The 83,000-ton liner, here since December, 1968, steamed out of the harbor for Hong Kong for refitting in a new role as a floating university. Originally brought to the Port as a tourist attraction and future convention center, the ambitious plans for the world-renowned liner failed to materialize. Last fall the Queen was sold to C. Y. Tung, Chinese shipping magnate, for $3.2 million. (Port Everglades News)

Annual Report Available

Hollywood-Fort Lauderdale, Fla., March 24:—Annual Report of Port Everglades for 1970 will be available in April. The 24-page booklet contains a summary of the principal developments of the year in waterborne commerce and cruise activity, along with financial and port statistical information. Copies may be obtained by writing to: J. H. Ferris, Jr., Port Director, Port Everglades, Florida 33316. (Port Everglades News)

Status Report

Galveston, Texas, March 11: — On the first anniversary of the affirmative vote by Galvestonians to issue tax obligation bonds for container and other port improvements on the Galveston waterfront, Port Director C. S. Devoy yesterday issued a status report on the progress of new construction.

His report, accompanied by a progress chart, showed planning and construction well ahead of schedule on the new container terminal. (See next page.)

First phase of the East End Container Terminal at Piers 10-11 is on target, with completion of the initial 1,000-foot-long dock set for December, 1971. As of March 1, work was about 17 per cent complate, with $3.6 million of construction contracts signed. In addition to the new 45 foot draft 1,000-foot-long dock the first of three container cranes to be used at the East End Terminal was ordered. A 450,000 cubic yard contract to fill the Pier 10-11 slip has also been signed. The next step is selection and bidding out on yard and handling equipment for the terminal

Foundation improvement work has been completed on the bulkheads and aprons on Piers 34 and 35 in preparation for construction of the first Covered Barge Loading/Unloading and Interchange Terminal facilities in the Gulf. The new facility is designed to provide all-weather working conditions for LASH and Seabee barges. (News from The Port of Galveston)

New Matson Terminal

Los Angeles, Calif., February 26:—The $10 million, 50-acre Matson container facility on Terminal Island was officially turned over to Matson Navigation Company today by the Port of Los Angeles.

Gordon Bart, president of Matson terminals, officially accepted the new terminal on behalf of the shipping line.

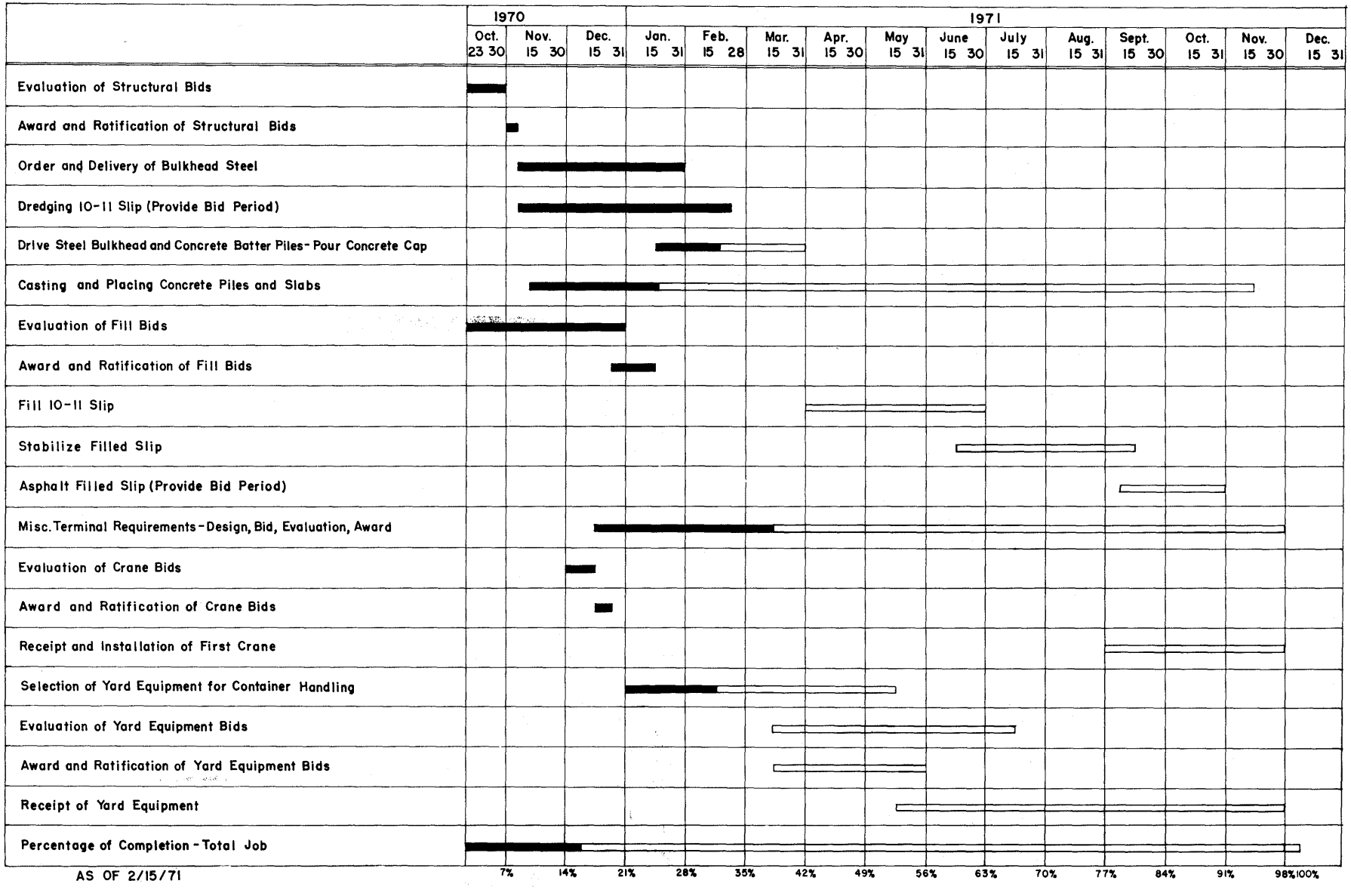
The ceremonies, attended by more than 100 guests and Matson and Los Angeles Harbor Department officials, also marked dedication of the ultra-modern cargo handling yard. Los Angeles Deputy Mayor Joe Quinn represented Mayor Sam Yorty during the festivities.

While hosts and guests were marking the occasion with a lunch, two ships were working container

(Continued on Page 28)

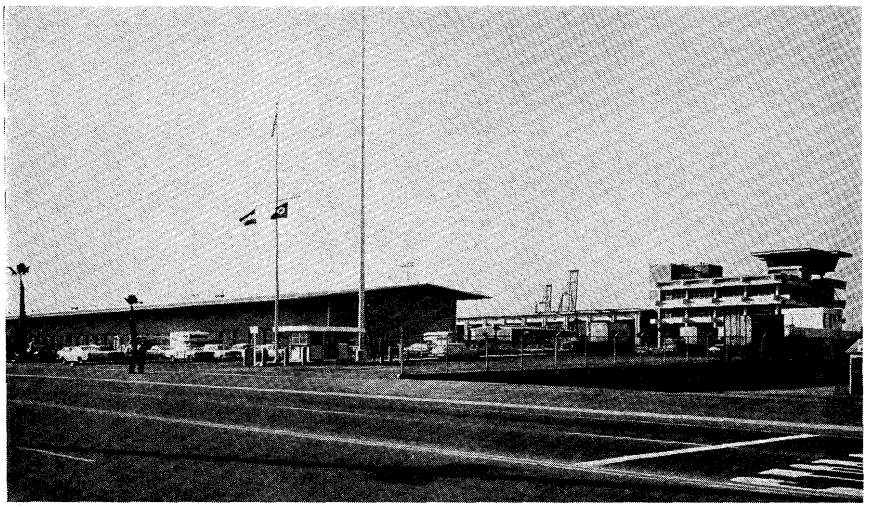
Port of Galveston

CONTAINER TERMINAL - PROGRESS CHART

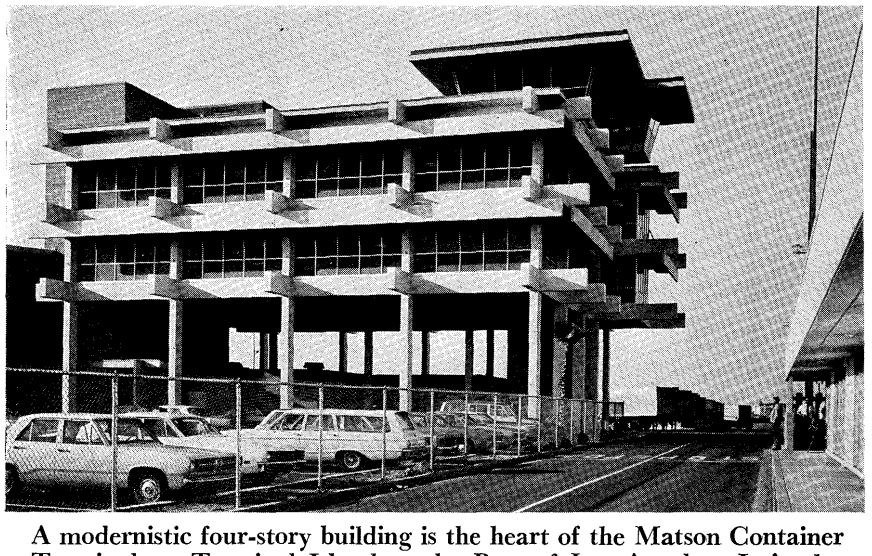


AS OF 2/15/71

Matson Terminal, L.A.



The Matson flag now flies on Terminal Island, where Matson's new container terminal is in full operation. This is the New Dock Street entrance to the 50-acre, $9 million facility. In the background, two huge cranes, one 200 feet tall and 400 tons, the other only 168 feet tall and 360 tons, appear on the skyline. The cranes were barged to the island from the older Matson passenger-freight terminal in Wilmington.



A modernistic four-story building is the heart of the Matson Container Terminal on Terminal Island at the Port of Los Angeles. It is also the center of the terminal's modern communications network. Opened for the start of 1971, the 50-acre, $9 million facility quickly went into full operation.

cargo at the almost 1,600-foot slip, Berths 207, 208 and 209.

Among the day's speakers was Los Angeles Harbor Commission President Frank C. Sullivan, who noted the importance of foreign and domestic trade to Southern California's economy. He also pointed out the new container terminal was built with harbor funds and at no expense to taxpayers. Master of ceremonies was Harbor Department General Manager Bernard J. Caughlin.

Following luncheon there was a nostalgic note as guests toured the yard and watched operations from a restored "red car," equipped now with rubber tires.

Visible directly across the Inner Harbor's East Basin from the new yard is the passenger terminal at Berths 195-199, where, a decade ago, Matson moved the first containerized cargo at the Port of Los Angeles.

Much has changed since then. The new container yard features inventory control and ship stability calculations by computer. On hand, however, from an earlier day are two giant container cranes that once handled cargo across the basin at what had been a Matson facility there. Earlier this year they were barged to their present site aboard a sea-going crane even larger than themselves.

Matson, which recently discontinued passenger operations to concentrate on Pacific Coast—Hawaii cargo traffic, has similar terminals at two other ports, plus a much larger facility in Hawaii. (Port of Los Angeles)

LASH Wharf

Los Angeles, Calif., March 3:—An $88,000 engineering design services contract for construction of a 1,000-foot LASH (Lighter Aboard Ship) wharf on Terminal Island was approved today (Wednesday, March 3) by the Los Angeles Board of Harbor Commissioners.

Under terms of the contract, the firm of Moffatt & Nichol, Engineers, Long Beach, will provide necessary soils engineering.

The contract covers preparation of the design, construction drawings and specifications, and supply of construction support services for the wharf.

The firm was selected from among six consulting firms submitting design work proposals for the 65-foot-wide wharf at Berths 233-235, where the port's LASH terminal is expected to be in operation later this year. (Port of Los Angeles)

Agent in London

Los Angeles, Calif., March 3:—A. Keith F. Kerr was today (Wednesday, March 3) named director of European Trade Development, with offices in London, for the Port of Los Angeles.

The Los Angeles Board of Harbor Commissioners made the appointment on the recommendation of Kermit R. Sadler, the port's traffic manager. The post has

been vacant since January 31, following the resignation of Robert T. W. Halliday.

Kerr, 43, is a British subject with a business background in shipping and international trade in Europe, North America and the Far East. He speaks French, Japanese, and Italian.

In his representation of the port in Europe, Kerr will call on steamship lines, freight forwarders, government officials and others to promote cargo shipments through Los Angeles Harbor.

The address of the Port of Los Angeles' European office is: Ling House, Dominion St., London E. C. 2, England. The port also maintains trade promotion offices in Tokyo and Taipei, and has a public relations agent in Hong Kong. (Port of Los Angeles)

More Foreign Commerce

New Orleans, La., March 9: — Foreign commerce tonnage through the Port of New Orleans increased 21 per cent and exceeded $3 billion for the first time during 1970, according to new U.S. Department of Commerce figures.

"The port's contribution to the local as well as the national economy is remarkable", said Port Director Edward S. Reed. "Considering the fact that some 37,000 persons in the area are engaged in port-related work, with an annual payroll of over $200 million, a 21 per cent increase in foreign trade is indeed significant."

Total import-export tonnage for calendar 1970 was nearly 23 million, some four million tons above the port's 1969 total. The average annual growth rate during the sixties was five per cent.

New Orleans exports in 1970 totaled 15 million tons, an increase of three million tons or 28 per cent over 1969—an all-time high. The annual New Orleans increase rate for exports during the sixties was 4.5 per cent.

Imports totaled 7.5 million tons in 1970, representing a nine per cent increase over 1969, increasing by 60,000 tons. Average yearly growth of imports during the sixties at New Orleans was 6.3 per cent.

The dollar value of this cargo passed the $3 billion mark for the first time, amounting to $3.2 billion, an increase of $600 million or 23 per cent over the preceding year. New Orleans is the perennial second port in the nation in the value of its foreign commerce. It leads Gulf ports in both tonnage and value.

Exports in 1970 were valued at $2 billion, an increase of 31 per cent, and imports were worth $1.2 billion, an increase of 12 per cent. Both export and import values reached all-time highs.

The average New Orleans annual increase in value during the sixties amounted to five per cent for total exports and imports; 3.4 per cent for exports and 7.7 per cent for imports.

The figures, taken from U.S. Department of Commerce reports, apply to cargo crossing both public and private facilities of the port. An analysis by country and commodity will be available later. (Port of New Orleans)

Nation's Leading Seaport

New York, N.Y., February 26:— A statistical analysis of vessel activity at the eleven leading ports in the United States during 1970, recently released by the Maritime Association of the Port of New York, reveals that the Port of New York strengthened its historically dominant position as the nation's leading seaport. The study emphasizes the fact that in 1970, as in previous years, the New York-New Jersey Port continues to remain far ahead of any other American port in terms of vessel activity, its share of total volume of ship traffic amounting to 20%, down slightly from the 21.1% recorded in 1969.

The 20,750 arrivals and departures of ocean-going vessels, a gain of 530 over 1969, represented just about twice the activity shown at any other United States port. An analysis of the figures on a month-to-month basis indicates that vessel arrivals and departures at the Port of New York were fairly constant throughout the year, averaging nearly nine-hundred in each category a month. The month of January 1970 showed the greatest activity, with a high of 916 arrivals and a total of 964 departures. The study further revealed that of the 20,750 vessels using the Port of New York in 1970, 69.4% were foreign-flag vessels representing fifty-four nations throughout the world.

Vessels of the Japanese merchant marine fleet were once again numbered among the leaders in ship activity at the Port of New York during 1970. With 359 arrivals and 361 departures, ships flying the flag of Japan continued their uninterrupted trend of increased activity at the bi-state port. In fact, vessels of Japanese registry must now be included among the

GOLDEN GATER HONORED San Francisco, Calif., March 4:— A maritime leader was recently singled out by the maritime industry in San Francisco for special recognition: William C. Brigham (right), general manager of Bethlehem Steel Corporation's San Francisco shipbuilding facilities, was awarded the Exchange's commendation for his performance as a director of the 122-year-old service agency, prior to his departure to assume new corporate duties in Bethlehem, Pa. as assistant vice president for shipbuilding. Chris Blom (left), Exchange president and head of Overseas Shipping Co., San Francisco, made the presentation at a recent World Trade Club ceremony. (Marine Exchange, S.F. Bay Region)

San Francisco, Calif., March 4:—EXECUTIVES WHO WILL DIRECT GOLDEN STATE NAVIGATIONAL IMPROVEMENTS have been selected by the new California Marine Affairs and Navigation Conference. Resulting from consolidation of the two principal statewide groups active in harbors and channel projects, the C-MANC's origins date to 1956. New executive committee members and officers are (left to right): Leonard W. Pores; Victor Adorian; Kenneth L. Sampson—vice president; Lawrence L. Whiteneck—president; Carl F. Reupsch; Paul Sorensen—treasurer; Lester M. Peterson and William Kerrigan. (Not pictured is new executive director, Robert H. Langner, San Francisco Marine Exchange manager.) Accelerated federal funding of port improvements, creation of harbors-of-refuge, and studies on coastal resources and the environment are among studies on coastal resources and the environment are among the group's prime objectives. Annually, the conference will present its recommendations to the Congress and to the Office of Management and Budget, and will conduct programs to expand public awareness of the importance of both commercial navigation and recreational boating facilities.

top half dozen in total number of arrivals and departures at the Port of New York — continuing a trend which has been increasingly evident the past few years. (News from The Port of New York Authority)

Advertising Agency

San Diego, Calif., March 9: — Franklin & Associates, Ltd., has been named advertising agency for the San Diego Unified Port District, Port Director Don L. Nay announced today.

The agency takes over April 1, to begin planning for the 1971–72 fiscal year, beginning July 1. Involved will be business publication advertising, direct mail, and sales literature. According to William L. Dick, Director, Trade and Community Relations for the Port, the anticipated budget may run slightly more than the $25,000 appropriated for the current year.

A factor in the selection of F&A was the personal maritime experience of principal Phil F. Franklin, a graduate of the California Maritime Academy and former merchant marine officer, Dick said. Franklin will supervise the account, assisted by account representative David L. Hathaway, vice president Glenn W. Michel, writer James C. Frampton, and art director, Joe McChesney. (Port of San Diego News Release)

Agent in Chicago

San Diego, Calif., March 9: — A veteran in international commerce has been added to the aggressive sales team for the Port of San Diego.

Port Director Don Nay announced today that Robert A. Mercer has been appointed to represent the Unified Port District in the Midwest. He will be headquartered in Chicago.

Mercer is widely experienced with a broad background in ocean freight traffic and a wide acquaintance among the shipping fraternity's exporters, importers, freight forwarders, and others allied with the transportation industry.

He began with Pacific Transport Lines (later acquired by State Steamship Company) in 1952 in traffic management and progressed to owner representative roles in key cities throughout the U.S., including San Diego, and in Tokyo. (Port of San Diego News Release)

Safety of Navigation

San Francisco, Calif., February 19:—The Association of Bay Area Governments and the Marine Exchange of the San Francisco Bay Region will establish a technical committee to look at immediate ways to improve the safety of navigation in San Francisco Bay.

This ad hoc committee will identify technically feasible steps to improve safety and will be specifically concerned with San Francisco Bay and river system and its approaches.

Supervisor John McInnis of Marine County said that many questions of maritime accident prevention must be addressed at national and international levels. However, the recent oil spill and the concern of local governments to prevent reoccurrences make the issue urgent.

Mr. Chris Blom, President of Marine Exchange, an organization of maritime interests, agreed to form the ad hoc committee including the responsible federal agencies.

ABAG's Executive Committee at its regular meeting, February 18, 1971, reaffirmed its support of the ad hoc committee until its work comes to a successful conclusion. (Association of Bay Area Governments)

"Combi Line"

Savannah, Ga., March 24:—Two great Dutch and German steamship lines are combining April 1st to provide greatly improved shipping services to and from Savannah and Brunswick to North Continental Europe.

Hapag-Lloyd AG and Holland-America Line have just announced they will jointly operate their present cargo services between U.S. Gulf and South Atlantic Ports and the Continent. The new combined service will operate under the trade name "Combi Line".

The century-old Holland-America Line has offered service to and from Savannah and Brunswick for more than eight years. Sailings have averaged better than three each month to the ports of Le-Havre, Antwerp, Rotterdam, Bremen and Hamburg. Inbound arrivals have been kept on a two weeks basis.

Hapag Lloyd, with its fleet of 111 vessels, will be a powerful addition to the Savannah and Brunswick "Port Family". Up until the present time, the German flag line has been confining its activity principally to the North Atlantic and Gulf.

By integrating shipping schedules, these two long established steamship lines will be in position to offer vastly improved service.

Combi Line will provide increased container facilities on fast, modern vessels, which are also equipped to carry general and reefer cargo as well as heavy lifts. Inbound service direct from United Kingdom will also be offered.

Next year, the Line will provide a LASH type service with two 43,000 ton barge carriers presently under construction in Belgium. Bill & Company, Inc., have been appointed general agents in the USA for Combi Line. Hohenstein Shipping Company are the agents in Savannah and Brunswick. (Georgia Ports Authority News Release)

Lumber Cargo

Tampa, Fla., March 12:—More than a million-and-a-half board feet of lumber was off-loaded in Tampa with the arrival from Vancouver, British Columbia, of the Motor Vessel "CONON FOREST" March 2nd. The shipment inaugurated a movement which is expected to be more than 15 million board feet of lumber annually from Canada and the U.S. Northwest.

The lumber, unloaded at Kreher Terminal, public docks of the Tampa Port Authority, was consigned to Dant & Russell, Inc., which has home offices in Portland, Oregon. Shipper was Eacom Timber Sales, Ltd., Vancouver. Stevedore was Eller & Company, Inc., which was recently licensed as a stevedore and terminal operator in the Port of Tampa by the Port Authority.

It was reported that additional shipments of lumber would come from Dant & Russell's own operation at Astoria, Oregon.

The "CONON FOREST", of British registry, is one of the largest lumber carriers in the world. She is 575 feet long with a beam of 85 feet and a draft of 35½ feet when fully loaded. Charterer is Anglo-Canadian (Westship), Ltd., Vancouver. Wilford and McKay, Inc. is general agent and A. R. Savage & Son, is local agent.

The ship is equipped with five 12-ton cranes for self-unloading and it arrived in Tampa as the first port of call after leaving Vancouver. The vessel was carrying more than 16.5 million board feet of hemlock, fir and cedar. Other ports of call will include Port Everglades, Baltimore, Camden, Providence, New Haven and Boston.

Although lumber from the Pacific Northwest is not a new cargo in Tampa, the extent to which it now will be brought in adds a new dimension to the Port of Tampa. Dutton & Company, a Florida concern, has been importing lumber and unloading at Gulf Florida Terminal Company for several years. (News from the Tampa Port Authority)

14 Mil. Tons Passed

Melbourne:—Australia's buoyant trade activities, both within the nation and in overseas markets, was reflected in the Port of Melbourne during the year 1970, when the cargo volume exceeded 14 million tons for the twelve months.

For the calendar year of 1970—which is also the financial year for the Port—a total of 14,119,927 tons of cargo passed across the wharves, an increase of 936,812 tons over the previous year. In addition there were 153,161 tons of transhipment cargo, 63,825 tons more than in 1969.

The year's cargo volume emphasises the Port of Melbourne's status as the major Australian general cargo port as the total volume of 14.1 million tons was comprised of 9.1 million tons of general cargo—an increase of 1.3 million tons—and 5.0 million tons of bulk cargo—a drop of .46 million tons.

Despite the usual fluctuations in the various cargo categories and classifications, the overall trend continued upwards and the breakdown of the year's trade is as follows:

Overseas Imports: 5,269,617 tons, down 881,030 tons.

Coastal Imports: 3,629,595 tons, up 1,065,991 tons.

Overseas Exports: 3,329,528 tons, up 472,538 tons.

Coastal Exports: 1,891,187 tons, up 279,313 tons.

The big drop in the overseas imports figure and the big increase in the coastal imports for 1970 compared with 1969 are principally due to crude oil cargo. In 1970 just over 1 million tons LESS of crude oil was imported from overseas while nearly 1 million tons MORE crude oil was imported from Australian sources. This trend can reasonably be expected to continue in future years, as crude oil from Australian sources supplies an increasing amount of the total national demand.

Variations in the major cargo classifications for the year 1970 compared with 1969 were as follows:—

OVERSEAS IMPORTS

CRUDE OIL, 1,470,925 tons, down 1,096,865 tons; NEW MOTOR CARS, 361,859 tons, up 1,221 tons; CHEMICALS, 261,977 tons, down 2,456 tons; MACHINERY, 252,884 tons, up 7,306 tons; PHOSPHATIC ROCK, 208,529 tons, down 108,657 tons; PAPER, 199,515 tons, up 1,820 tons; MOTOR CAR PARTS, 162,825 tons, up 56,295 tons; TIMBER, 161,153 tons, up 30,211 tons.

COASTAL IMPORTS

CRUDE OIL, 1,155,447 tons, up 943,853 tons; IRON AND STEEL, 223,937 tons, up 21,058 tons; SUGAR, RAW, 215,718 tons, down 20,435 tons; FUEL OIL, 211,384 tons, up 29,756 tons; TIMBER, 203,424 tons, up 20,192 tons; PAPER, 178,706 tons, up 1,288 tons; TOURING PASSENGER CARS, 157,356 tons, up 50,444 tons; CHEMICALS, 120,502 tons, up 36,306 tons; COAL, 38,785 tons, down 101,192 tons.

OVERSEAS EXPORTS

WOOL, 822,913 tons, up 40,176 tons; MEATS, 263,788 tons, up 88,326 tons; MALT, 186,357 tons, up 63,775 tons; SCRAP METALS, 173,623 tons, up 7,757 tons; HIDES AND SKINS, 162,476 tons, down 71,100 tons; FRUIT, PRESERVED, 146,986 tons, up 28,689 tons; MILK AND CREAM, 122,781 tons, up 13,945 tons; FRUIT, FRESH, 105,304 tons, up 27,199 tons; FLOUR, 101,503 tons, down 17,805 tons.

COASTAL EXPORTS

MOTOR SPIRIT, 315,052 tons, up 57,720 tons; NEW CARS AND PARTS, 235,161 tons, up 92,857 tons; TOURING PASSENGER CARS, 145,410 tons, up 20,098 tons; FUEL OIL, 69,949 tons, down 18,448 tons; GROCERIES, 49,903 tons, up 16,355 tons; FRUIT, FRESH, 35,720 tons, up 1,107 tons.

The 1970 cargo statistics for the Port of Melbourne are of particular interest as they include the first full year of container operations in the overseas trade.

Melbourne has been the key Australian port in the development of unit-load and container cargo operation in the coastal trade from the late 50's onwards, but container operation in the overseas trade really only began in April 1969 with the arrival of the first overseas container ship.

Of the total general cargo of 9,116,701 tons which passed through the port in 1970, 2,751,567 tons or 30.2 per cent. was containerised. This compares with a total container cargo volume of 1,134,194 tons or 14.7 per cent. out of a total general cargo volume of 7,719,804 tons in 1969.

On the basis of imports and exports, a slightly higher volume of cargo of 1,510,488 tons was exported, compared with the 1,241,079 tons imported in containers. This cargo volume was carried in a total of 158,127 containers, which involved 78,843 in the import trade —48,685 from overseas and 25,158 from other Australian origins— and 84,284 in the export trade — 59,754 to overseas destinations, and 24,530 to other Australian destinations.

With container throughout in 1969 totalling 88,239 containers, the increase in containers in 1970 was 77 per cent. While this is not terribly significant, as it does not actually compare full years of operations, it does show, however, a very rapid and somewhat faster rate of increase in container operations than had been anticipated in earlier forward planning.

Melbourne, one of four overseas container terminals on the Australian coast, has, since the inception of the overseas container trade, also handled all containerised cargo to and from Adelaide, the South Australian capital, 440 odd miles west of Melbourne. This container cargo has been moving by rail directly between the Port container terminal and South Australia.

The year 1970 showed a volume of 232,952 tons of Adelaide container cargo compared with 76,829 tons which flowed through Melbourne in 1969.

Again, the export cargo showed a very marked increase in volume, and was substantially greater than the import cargo. The 232,952 total in 1970 comprised 74,760 tons of imports, carried in 4,446 containers, and 158,192 tons of exports, carried in 7,524 containers.

While an increase in the container cargo volume between Melbourne and Adelaide had been anticipated, the actual increase again was somewhat higher than expected. (Melbourne Harbor Trust Port Gazette, February)

2 Container Cranes

Sydney, 26th February: — The Maritime Services Board, at its meeting held in Newcastle on Thursday, 25th February, 1971, accepted a $2 million tender by A.S.E.A. Electrics Pty. Ltd., for the supply and erection of two 35-ton single lift, wharf mounted container cranes.

This was announced today by Mr. W. H. Brotherson, President of the Maritime Services Board, who said that the cranes are capable of moving along the entire length of the wharf face of the two container berths under construction at Glebe Island, and can be used either singly or together on each of the berths.

In making the announcement, Mr. Brotherson said the contract will provide for the cranes to be erected and in operation before the end of next year when the second of the two container berths will be completed.

He pointed out that the cranes are similar in concept to the crane now operated by the Board at its common-user container berth at No. 4 White Bay but are an updated version providing additional and more sophisticated features.

Mr. Brotherson re-iterated that the Board intended to relocate its common-user terminal at Glebe Island when the development is completed. (The Maritime Services Board of N.S.W.)

Dredge in Newcastle

Sydney, 26th February: — The Maritime Services Board has let a $506,000 contract to Westminster Dredging Aust Pty. Ltd., for the widening of the Steelworks Channel at Newcastle.

This was announced in Sydney today by Mr. W. H. Brotherson,

President of the Maritime Services Board, following the meeting of the Board held in Newcastle on 25th February, 1971.

Mr. Brotherson said the Channel will be dredged to a minimum width of 450 ft. to enable the passage of vessels up to 800 ft. long to the B.H.P. Steelworks. In the past, the maximum length of ships has been restricted to 750 ft.

He said the Company would use its large trailer suction dredge "W.D. Seven Seas". The contract also provides for some maintenance dredging work at the entrance to the harbour.

Mr. Brotherson said work will be commenced on the dredging in approximately six weeks time. (The Maritime Services Board of N.S.W.)

Port of Colombo

(Extracted from the "1967-68 ANNUAL REPORT" published by Colombo Port (Cargo) Corporation, Ceylon, by IAPH Under Secretary T. Nakanii)

PORT STATISTICS OF COLOMBO (During August 1967—July 1968)

I. Vessels Handled in the Port:
Total number 2,388
Total gross-tonnage 17,074,929

II. Tonnage of Cargo Discharged and Loaded (including Coal) according to Quay and Stream:
Discharged:
Alongside Quay ..1,450,411
Stream 680,880
Total 2,131,291
Loaded:
Alongside Quay 404,684
Stream 328,924
Total 733,608
Total:
Alongside Quay ..1,855,095
Stream 1,009,804
Total 2,864,899

III. Commodity-wise Tonnage of Cargo Handled:
1. Imports:
(1) Food 773,092
Rice 259,933
Flour 264,163
Sugar 248,996
(2) General 1,193,523
Cement 111,556
Fertilizers 312,463
Potatoes 1,929
Onions 22,200
Chillies 7,405
Other bag cargo ..120,976
Case cargo 10,884
General 533,918
Ex-buggalows 72,192
(3) Coal (in bulk) 164,676
Total Imports 2,131,291
2. Exports:
(1) Tea 317,101
(2) Rubber 137,191
(3) Coconut products ..240,278
Desiccated coconut .66,740
Fibre 117,457
Copra 19,290
Coconut oil (in drums) 36,791
(4) General 37,677
(5) Per-buggalows 1,361
Total Exports 733,608
3. Grand-Total of Imports and Exports: 2,864,899

Film Library

Kobe March 1:—The Port Film Library established in Port Promition Section of the Port and Harbor Bureau, Kobe City Government is lending out cinema films to the public on request, which introduce present situations and future plans of Kobe Port, of Seattle Port and Rotterdam Port, two sister ports of Kobe, and of Los Angeles Port, with which Kobe Port has been in a friendly affiliation since last year.

The names and details of the films available, all in color and 16 m/m, are as follows:—

1. "Port of Seattle"
(1) Narration: Japanese
(2) Time: 20 minutes
(3) Contents: Introduction of the Port and its facilities
2. "Port of Rotterdam"
(1) Narration: no narration, music only
(2) Time: 20 minutes
(3) Contents: Introduction of the Port and its facilities
3. "Port of Los Angeles"
(1) Narration: Japanese
(2) Time: 30 minutes
(3) Contents: Introduction of the Port and its facilities
4. "Port of Kobe"
(1) Narration: English, Japanese
(2) Time: 30 minutes
(3) Contents: Present situation and future plans of Kobe Port as well as the introduction of port facilities
5. "The Active Port, Kobe"
(1) Narration: English
(2) Time: 15 minutes
(3) Contents: Introduction of newly built facilities of the Port
6. "Maya-O'hashi Bridge"
(1) Narration: Japanese
(2) Time: 30 minutes
(3) Contents: Record of its construction work process
7. "Kobe-O'hashi Bridge"
(1) Narration: Japanese
(2) Time: 30 minutes
(3) Contents: Record of its construction work process

(Port and Harbor Bureau, Kobe City Government)

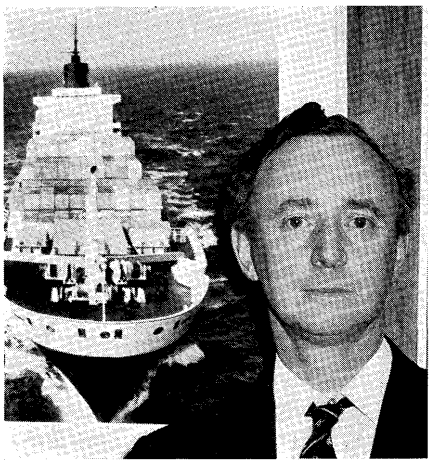
OCL in Far East

Tokyo, March 16:—Mr. W. G. (Bill) Raper, General Manager of Overseas Containers Limited's Far East Trade Division, left Tokyo, Tuesday after a five-day visit to study preparations for OCL's door-to-door through-transport container service between Europe and the Far East.

He had discussions here with Swire Mackinnon, the OCL representatives in Japan. His next stops are Hongkong, Singapore and Kuala Lumpur. Mr. Raper (44) is no stranger to the Far East. "It's like coming home," he said, "I'm back to my old happy hunting ground."

An understandable statement when one considers he spent 15 years with Mansfield & Co. (Pte.) Ltd.—Blue Funnel Line's Singapore agents—before being called back to the U.K. in 1966, shortly after the formation of the OCL consortium and the commencement of the period of development for the U.K./Australia container service. For the last five years prior to his departure from Singapore he was Manager of Mansfield's shipping department.

Mr. Raper became the Far East Trade Division's Deputy General Manager upon the formation of the division in May, 1969, and General Manager in October of last year. Prior to that he was, as Commercial Manager, deeply involved in

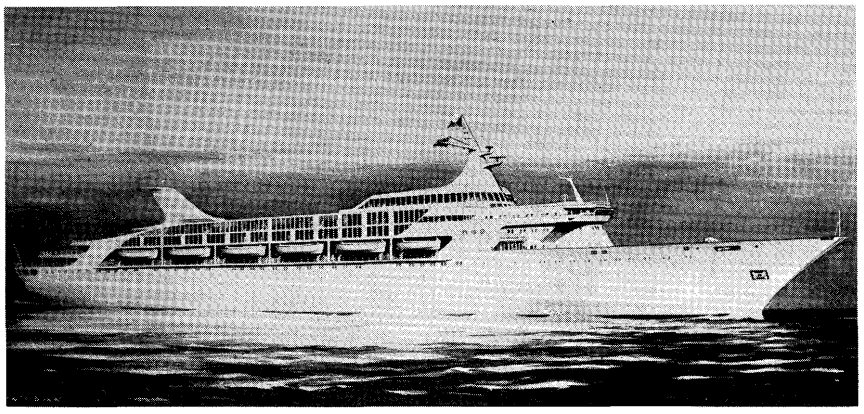


Mr. W. G. Raper

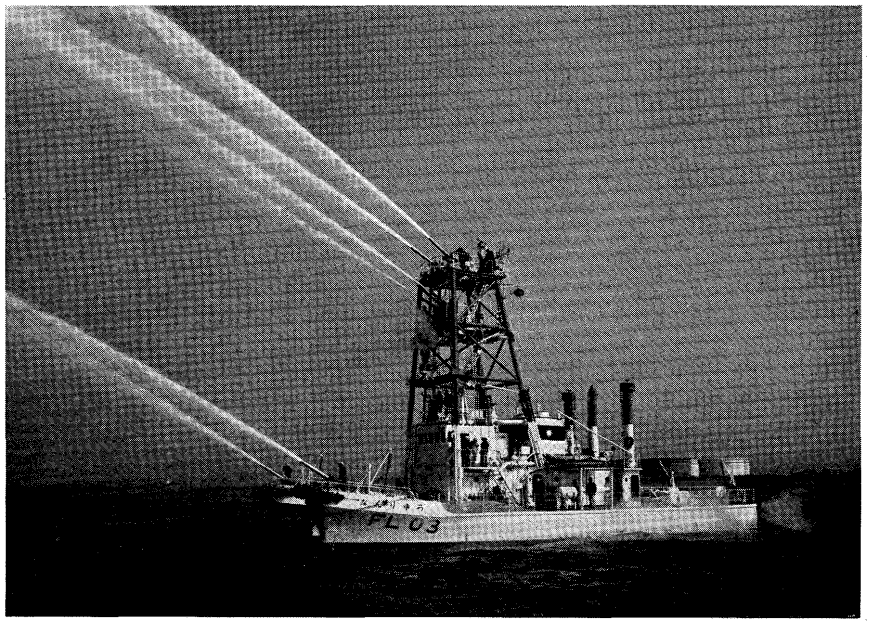
the development of the commercial systems and tariff policy for the U.K./Australia service being, in fact, one of the progenitors of the tariff now operating on that route.

In July, 1969, Mr. Raper made the first of what are now fairly frequent visits to the Far East. Since then he and his team have been deeply involved in the full field of planning for the Far East service, co-ordinating the activities of OCL's technical and specialist resources, establishing and guiding the agency network, and preparing the Far East Trade Division for its principal role as managers of OCL's Far Eastern service.

Referring to OCL's entry into the trade, Mr. Raper says: "In about ten months from now the OCL container service between the Far East and Europe will move into gear. The challenge posed by serving such a large and competitive trade route is at the same time both exciting and awesome. Undoubtedly we have a lot to learn but we are quietly confident that the hardwon experience in other trades over the last two years will stand us in good stead, and that we shall be able to provide a smooth and reliable through-transport system. Once we have demonstrated this I know that our customers in the East will quickly realize its unique possibilities to our mutual benefit." (OCL Press Release)



Tokyo:—P & O Lines of U.K. has recently purchased a 15,000-ton new passenger ship (photo). The boat is now under construction in Italy and is scheduled to be delivered in June, 1972. It is designed exclusively as a cruiser, sailing at a speed of 20.5 knots, and will have luxurious cabins, dance-halls, movie house and a large dining hall (for 400 guests). (Falcon News Release)



Tokyo, March 2:—A 200 gross-ton catamaran fire-fighting ship "Nanryu", (Photo) completed at the Tsurumi Yard of Nippon Kokan Kabushiki Kaisha, is to be delivered to the Maritime Safety Agency on March 4. The ship will be commissioned to the Fifth District in and around Osaka Bay. Two other ships of the same type have already been commissioned in Tokyo-Yokohama and Yokkaichi areas. The ship is equipped with the most up-to-date and powerful chemical fire-fighting devices. (Nippon Kokan)

8,000t/h Shiploader

Tokyo:—One of the world's largest 8,000 T/H iron ore shiploader ordered by Compannia Vale do Rio Doce (CVRD) was recently completed at Tubarao Port, Brazil.

The U.S., Japan and West Germany are the major destinations of iron ore that is shipped out of this port. Japan is expected to import about 7,000,000 tons of iron ore annually by 1973.

The shiploader was manufactured for use in loading iron ore onto bulk carriers up to the 200,000-DWT class which can dock at the port in anticipation of increased iron over shipments from this port in the future.

The latest CVRD order fol-

lows those from the Brazilian firm for the 6,000 T/H iron ore shiploader and the 6,000 T/H stacker which were manufactured by IHI and which are currently in operation at Tubarao. IHI workmanship was attributable to receipt of the order for the 8,000 T/H shiploader. (IHI Bulletin, December)

"Berita Pelabohan"

"Berita Pelabohan" is the Malaysian name of the 4-page newsletter inaugurated in January 1971 with No. 1, Volume 1 issue, from whose front page are quoted the following:

MESSAGE FROM
Dato Laksmana Haji Mohamed Razalli bin Haji Mohamed Ali Wasi, S.P.M.P., J.M.N., P.J.K., J.P., CHAIRMAN OF THE PENANG PORT COMMISSION

As Chairman of the Penang Port Commission, I am happy to send this message on the occasion of the first issue of the "Berita Pelabohan". I understand that the Editorial Board responsible for this publication has as its main objective, the dissemination of information on the activities of the Port and its development. The proposals for initiating this publication demonstrates the progressive spirit of the Penang Port Commission as nothing can be so timely as the present when the Commission's expansion programme is in full swing.

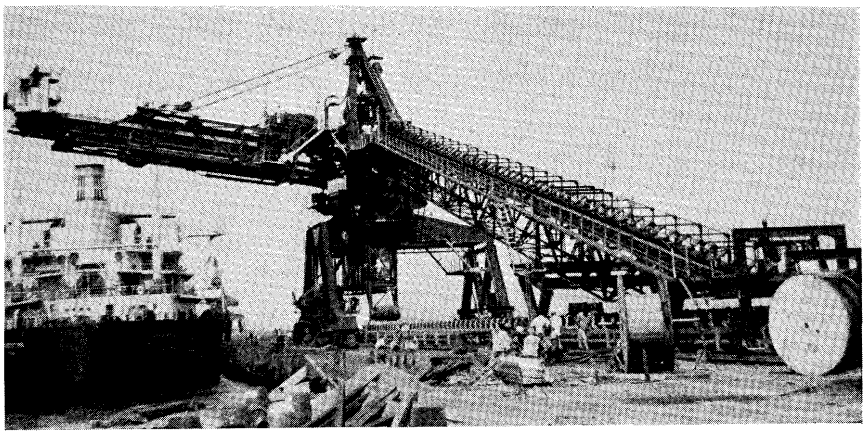
With the accelerated pace of industrialisation in Malaysia resulting in increased imports of machinery and raw materials, and the current shipping trends towards containerized and unitised cargo, more sophisticated methods of handling will have to be adopted to achieve greater efficiency. The Commission's plans to adapt itself to these changes in the form of improved facilities, services and equipment will be projected through the medium of this publication. I firmly believe that the "Berita Pelabohan" will serve as an excellent medium to publicise to the users of the Port, the employees of the Commission and the public generally, the activities of the Penang Port Commission. This effort to establish and maintain understanding between the Port Authority and the public will further enhance the Commission's Public Relations activities.

I would like to take this opportunity to congratulate the persons responsible for initiating this publication and to wish them every success. To the readers, I wish them happy and enjoyable reading.

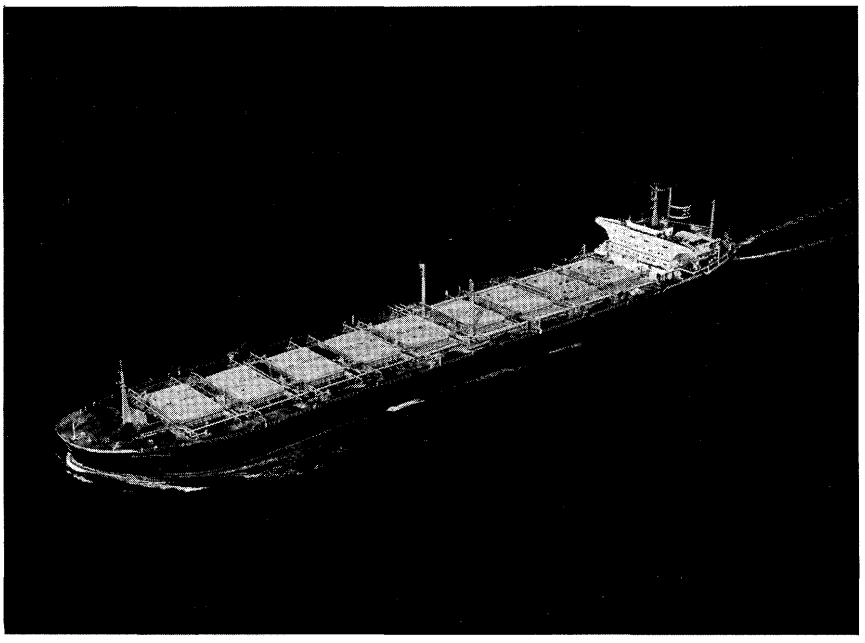
EDITORIAL

This "Newsletter" is being launched with two aims:—

(i) To keep all the staff members of the Commission informed of all the developments and activities which are going on around them. For a long time the lack of a medium through which staff members could be kept informed of "happenings" within the Commission has been deeply felt. The Penang Port Commission has a staff population of over 1,600. The staff members work in different Departments and in different places, in Bagan Dalam, in Prai, in Butterworth and in Penang. Often times it does happen that one's awareness is circumscribed by the place he works in, and one becomes unaware of goings-on in other Departments and of the Com-



8,000 ton/hour shiploader (IHI)



Tokyo, March 9:—"Avon Bridge" (photo) is a 142,801 dwt ore/bulk/oil carrier completed at the Uraga Yard of Sumitomo Shipbuilding & Machinery Co., Ltd. The ship is to be delivered to H. Clarkson and Co., Ltd. of U.K. tomorrow. (Sumitomo Shipbuilding & Machinery Co., Ltd.)

Auckland, N.Z.:—Mr. R. C. F. Savory, chairman of the Auckland Harbour Board, receives the $1 million Portainer Crane, built for the board by Vickers Hoskins Pty, of Western Australia. The crane was commissioned by Mr. A. P. Wiskens, director in charge of overseas interests, Vickers, London, who was accompanied by his wife, left. Mrs. Savory, right, listens to her husband.

mission's development plans generally. This "Newsletter", we hope, will remedy this lack and provide a suitable medium through which each and everyone of us who work in the Penang Port Commission can be kept aware of developments generally, and in touch with happenings in other areas of work than our own.

(ii) Secondly also, we hope that this "Newsletter" will perform a similar function via-a-vis port users and other organisations which have a close association with the Penang Port Commission by keeping them aware of the developments within the Commission. We hope we will, by this means, make new friends too.

The Editorial Board therefore, takes great pride in presenting this first "Newsletter" to our readers. It is intended that this "Newsletter" will be issued on a quarterly basis.

In closing, the Editorial Board would like to state that comments from readers on ways and means for making this publication more interesting would be especially welcome.

Attack and Defence

New Plymouth, N.Z.:—Alleged inadequacies in New Plymouth's coastal shipping links, particularly with South Island Ports, have been refuted by shipping officials.

The general manager of Tolley Industries Ltd., Mr. S. C. Fisher, said recently his company had to use the railways for many of its deliveries to the South Island. He preferred shipping as it was quicker and less damage resulted but he was usually unable to obtain space in vessels.

"We could offer 100 tons a month to the South Island," he said. Tolley Industries also had big contracts to fill for equipment for the Bluff aluminium smelter project, but much had to be railed, althoug hs hipping would have been more convenient.

But local manager of the Union Steam Ship Co., Ltd., Mr. R. Harris-Daw, said Holm Co. vessels (which were managed by his company at New Plymouth) now maintained a 10-day service. On recent voyages many good-sized cargoes had been discharged and loaded at Port Taranaki but invariably there was space available for more.

The 930-ton Storm was the regular vessel on the run, he said, supplemented by the slightly smaller Peteke.

Statistics kept by the Taranaki Harbours Board indicate that since May the Pateke had visited the port on seven occasions, the Storm eight times, the Pukeko twice and the Holmdale once.

"Services have not fallen off," the board's general manager, Mr. J. G. Boddy said. In the 12 months to September 30, 89 coastal ships called at New Plymouth, compared with 69 the previous year. Both inward and outward general cargo tonnages had increased. (Taranaki Harbours Board Port News, November, 1970)

Northerly Weather

New Plymouth, N.Z.:—It was unfortunate that a spell of vile weather coincided with the arrival of the first bulk wheat shipment in the coaster Maunganui. Everybody was anxious to give her a good turnaround. "However," said, harbourmaster Captain John Flett, "someone had different ideas and although it did not rain for 40 days and 40 nights it did delay the ship more than four days."

Nobody could remember such a long spell of continuous northerly weather, but despite the fact that the Maunganui was in port for seven days her cargo of 1020 tons of wheat was discharged in 13½ working hours. (Taranaki Harbours Board Port News, November, 1970)

Port Taranaki, New Plymouth N.Z.

Trade Returns for Five Years

(Taranaki Harbours Board Port News, November, 1970)

	1970 Tons	1969 Tons	1968 Tons	1967 Tons	1966 Tons
OVERSEAS IMPORTS					
Manures	220,494	259,179	196,560	206,045	252,920
Salt	4,135	3,413	4,091	2,570	3,595
Benzine	—	—	—	18,383	12,854
Fuel Oil	—	—	3,438	2,158	4,303
General	10,880	31,247	35,270	12,785	13,457
	235,509	293,839	239,359	241,941	287,129
OVERSEAS EXPORTS					
Meat	49,944	54,113	46,789	44,898	45,551
Butter	15,477	27,427	21,411	19,526	16,410
Cheese	53,313	61,948	61,487	68,378	68,166
Wool	2,845	3,315	3,264	3,654	4,787
Tallow	3,763	3,166	3,523	3,488	3,503
Milk Products	18,048	17,978	15,656	19,700	9,711
Fuel Oil	4,821	7,033	4,405	6,256	4,534
General	10,731	11,519	11,628	2,761	4,405
	178,584	189,951	172,113	172,185	160,415
Coastal Imports	201,122	208,056	188,178	164,184	191,930
Coastal Exports	39,127	4,838	3,383	4,485	6,243
Trans-Tasman Imports	17,043	11,706	8,249	7,839	9,286
Trans-Tasman Exports	314	360	805	303	94
TRADE TOTALS					
Imports	453,674	513,601	435,786	413,964	488,345
Exports	218,025	194,789	176,301	176,973	166,752
	671,699	708,390	612,087	590,937	655,097

(All figures for years ended September 30, 1970 figures not yet final)

Schedule for Lorries

London, 16th March:—The first vehicle appointments scheme for general import cargo in the Royal Docks, London, is being introduced by PLA and P & O on 1st April, 1971 for import shipments of the line. The first vessels under the scheme will be the cargo liners 'STRATHARDLE' and 'PANDO COVE' to unload from April 7th. P & O Lines Ltd., were the first shipping company to introduce, in conjunction with the Port Authority, export vehicle appointments for Far East traffic at the Royals which has proved such a success.

The new 'first' will enable importers or hauliers to make loading appointments for collection of general import goods from berths 9 and 11 King George V Dock and so reduce costly delays to lorries, ease cargo congestion at the berths, and enable importers to take full advantage of the Transit Charge arrangements by early collection of goods.

Vehicle appointments should be made as soon as possible after PLA notification of HM Customs clearance of goods. The procedure will be for importers or hauliers to telephone 01–476 1986 during the hours 1030–1715, Monday to Friday, when every endeavour will be made to meet particular preferences for appointment periods. These periods will be 0700–0800, 0800–1100, 1100–1400, 1400–1700 and 1700–2100. Vehicles should arrive as early as possible in the appointment period but to avoid vehicle congestion arrivals will not be accepted earlier than 30 minutes before that period. Vehicles failing to keep their appointments will only be dealt with after those with the priority of appointments and PLA draw attention to the effect this might have on charges, as the benefits of immediate delivery under Transit charge conditions could be at risk. The appointments clerk will need to know from the importer or haulier the name of the ship, date of arrival, Bill of Lading, numbers, marks, number of packages and weight of consignment.

William Caunter, PLA Marketing Manager, commented, "It is clear from our previous experience of vehicle appointment schemes for exports, and import schemes at other of our docks, that this type of system leads to far better utilisation of transport for the contractor and a far more efficient flow of goods to the benefit of all concerned, right down to the consumer."

Mr. J. E. Playfair, General Manager of P & O Lines Ltd., commented, "Our customers already know the benefits of the vehicle appointments system from the scheme which P & O Lines was the first company to introduce into the Royals for Far East Exports. We are confident that our new scheme for imports will also provide them with the same extra efficiency and productivity." (News from PLA)

New Scheme at Tilbury

London, 24th March:—The very successful vehicle appointment schemes now operating in the Port of London are being further extended with a new scheme about to be introduced into Tilbury Docks by the Port of London Authority. It will be for general export cargo at conventional berths but container terminals, unitised cargo terminals and groupage will not be in the scheme.

Beginning with receiving periods starting on 1st April the scheme will develop in three stages during the

month to cover all export general cargo berths at Tilbury which are Nos: 5 to 24, 31 to 33 and 36/38. The stages will be:—

1. West African Shipping Services from April 1st.
2. India and Pakistan Shipping Services from April 13th.
3. All other shipping services from remaining conventional berths from April 19th.

Shippers or hauliers will then be able to make appointments for export vehicle loads between 0800 and 1800 Mondays to Fridays by telephoning:

TILBURY 5577 (3 lines) for general cargo.

TILBURY 3444 Extension 236 for heavy lifts (5–40 tons).

Vehicles will be timed to arrive within a specified period agreed from these four:—0700–1100, 1100–1400, 1400–1700 and 1700–2100. While every endeavour will be made to meet particular preferences of shippers or hauliers experience has shown that this can more easily be done if applications are made early in receiving periods. The appointments clerk will need to know the name of the ship, destination port, details of shipper or carrier and consignment. For West African export cargo he will also require the Cargo Booking Reference given by the line.

Freight space bookings should be made separately with the shipping company concerned or their agents.

In instances of containerised cargo routed through these conventional berths it will be necessary for appointments to be made and the clerk will need to be advised of the number of the container.

The scheme is beginning before the completion of the Lorry Reception Park at Tilbury Docks which is under construction and expected to come into operation this summer. It has been decided to begin vehicle appointments earlier to meet user demand and provide the benefits such schemes have produced at other PLA docks; these are, dramatic reductions in lorry waiting time and consequent higher vehicle utilisation for the haulier, and smoother flow of cargo through the export berths.

Published closing dates for export ships will be strictly adhered to so that prompt sailings can be made. (News from PLA)

Sir Clifford in New Zealand

London, 23 March:—Sir Clifford Dove, C.B.E., E.R.D., Chairman of the British Transport Docks Board, leaves London from Heathrow tomorrow (11.45 hrs., Wednesday, 24 March), accompanied by Lady Dove, to attend the centenary celebrations of the Auckland Harbour Board in New Zealand next week.

Sir Clifford has accepted the Harbour Board's invitation to be the guest speaker at a dinner being held to mark the centenary next Wednesday (31 March), to be attended by the Governor-General of New Zealand, Sir Arthur Porritt, Bt. At the conclusion of the centenary conference on Friday week (2 April) Sir Clifford will remain in New Zealand for a further week to visit Wellington and Christchurch. During this time he will pay calls on Government Ministers and the producers' boards, as well as touring harbour installations.

On his return journey Sir Clifford will pay a two-day visit to Singapore as guest of the Port of Singapore Authority and will tour the container installations which will be used by ships operating the OCL/ACT services out of the Docks Board's terminal at Southampton.

Sir Clifford is due to arrive back in London on Thursday, 15 April. (British Transport Docks Board)

Cardiff, General Cargo

London, 8 March:—A re-development scheme expected to cost more than £350,000 is being carried out by the British Transport Docks Board at Queen Alexandra Dock, Cardiff, to cater for an expected substantial increase in the port's fruit and general cargo trade.

The project, to develop an area on the north side of the dock, involves the construction of a new 90,000 sq ft single-storey transit shed and ancillary office accommodation adjacent to 'A' Shed, new rail sidings, and extensive vehicle parks. Three existing sheds, 'F', 'G' and 'H', which are old unsuitable for modern port operations, have been demolished.

The existing open berth adjacent to 'A' Shed, used for the shipment of motor cars, will be replaced by a berth at the western end of the North Side, which will be resurfaced to provide an open berth of over 500 ft with extensive back areas.

The new transit shed will have a 65 ft 6 in quay apron and be served by 7½-ton electric quay cranes. At the rear a 30 ft canopy will extend the full length of the building to permit the reception and delivery of cargo in all weathers. Other features of the development include a 30-ton weighbridge and a battery charging station for cargo handling equipment.

The work is being carried out in three stages under the control of the Docks Engineer, Cardiff, Mr. W. H. Lloyd. The first stage, demolition of the old sheds, is already completed and work on the second stage, surfacing the open berth, due to start this month, is scheduled for completion by the end of May. The main contract for the construction of the new shed will then begin immediately.

During recent years Cardiff has gained a reputation for the fast and efficient handling of fruit imports. During 1970 the port handled more than 110,000 tons, but through shortage of suitable shed accommodation was forced to turn away at least 10 vessels with a total of some 50,000 tons of cargo.

Port officials estimate that the new shed when complete in early 1972 will enable the port to deal with a further 90,000 tons of fruit and general cargo a year.

Total traffic through Cardiff in 1970 was 3,678,149 tons, of which imports, at 3,169,054 tons, were the highest dealt with at the port since the first docks were opened in 1839. (British Transport Docks Board)

Hull/Esbjerg Service

London, 10 March:—A new roll-on/roll-off service between Hull

and Esbjerg operated jointly by Ellerman's Wilson Line and United Steamship Company is due to commence in April. This is the sixth roll-on/roll-off service to run between Hull and Northern European ports.

Temporary accommodation is being provided by the British Transport Docks Board at a cost of over £29,000 in the north-east corner of King George Dock for the vessel which has been specially chartered for the start of the service. A concrete ramp is being constructed on the quay onto which the vessel's stern door will rest and the containers will then be moved off the vessel to an adjacent paved standage area. Thirty refrigeration points will be provided for the bacon containers which will form part of the cargo.

The terminal in King George Dock will also be used for dealing with Government supply ships.

The Docks Board has a scheme under consideration for the provision of a permanent roll-on/roll-off terminal in the north-east corner of Queen Elizabeth Dock to cater for the Hull/Esbjerg service. The scheme would include a hydraulically operated shore bridge connecting to two decks of a vessel and would be scheduled for completion at the end of 1972, when the purpose-built container ship ordered by Ellerman Wilson and United Steamship Company for the service comes into commission. When oprational this new service is expected to carry about 200,000 tons of traffic a year. (British Transport Docks Board)

Port of Cherbourg

Cherbourg, France, November 13, 1970:—The Cherbourg Chamber of Commerce and Industry and Cherbourg Port Authority wrote to the IAPH as follows in the name of Mr. J. Vaur, President of the Chamber:

Everybody talks about today's new container ships. But nobody has yet achieved optimum economy in ocean transportation.

Technological development of ships has not been matched everywhere by creation of efficient port facilities. Ship operators are still expected to blithely accept narrow channels, shallow water, contrary tides, river fog and other dangers and costly delays as the natural hazards of seafaring.

That big, fast, freight carriers should cross the Atlantic in less time than the great passenger liners of yesteryear, only to waste hours and hours awaiting favorable tides, manoeuvering slowly through cramped straits, along silted ditches, in and out of docks designed for smaller, slower ships, is intolerable. Or it should be intolerable.

Cherbourg, with an operating depth of 40 feet at low spring tides, and two-way traffic in all weather, is Europe's fastest turnaround port. Less than an hour will get the biggest ship from open sea to the main ship terminal, berthed, undocked, and back to sea again.

A modern distribution complex links Cherbourg with depots on the outskirts of Paris and brings the port closer than ever to industrial-commercial centers. Special, preferential, low rail and highway rates undercut overland freight costs at other Continental ports. Low-priced warehousing adds further savings for Cherbourg's customers. Don't hesitate to write for further information. And come to Cherbourg for a view of the future.

We will be delighted to show you what we can do to help you reduce costs and increase earnings in your operations.

Port of Copenhagen

Port Statistics during 1969:

1. Ships that entered:
   - Number 35,631
   - Total net registered tonnage 21,382,715
2. Total number of seaborne passengers in the district of Copenhagen 12,600,000
3. Goods traffic:
   - Incoming:
     - Inland 3,861,394
     - Foreign 6,256,397
     - Total 10,117,791
   - Outgoing:
     - Inland 705,008
     - Foreign 1,063,697
     - Total 1,768,705
   - Total 11,886,496

(Extracted from "Port of Copenhagen Biennial Report, 1968 & 1969" by T. Nakanii, IAPH Under Secretary)

Sister Ports

Amsterdam: — Recently officials from the Port of Amsterdam met with Indonesian officials to celebrate the "sister-port" relationship between Amsterdam and Tandjung Priok, port for Indonesia's capital, Djakarta and the archipelago's largest export port.

Mr. Maskur Effendi, Port Director of Tandjung Priok and Mr. J. Budiardjo, Directors of Ports and Dredging of the Indonesian Ministry of Sea Communications came to the Dutch capital to meet with Amsterdam officials and discuss the relationship which signifies the technical and operational assistance given to the Indonesian port. Assistance is on governmental and municipal levels and extends as well to private enterprise. (Amsterdam Newsletter)

New Link with Bilbao

Amsterdam: — A new weekly shipping service between Amsterdam and Bilbao will be operational on 1st April. The service, to be operated by KNSM Royal Netherlands Steamship Company, the German Hansa Line and two Spanish lines, Euromar and Maritima del Norte, will make use of the facilities at CTA, Container Terminal Amsterdam.

The service will be carried out with special drive-on/drive-off container ships which can accept refrigerated cargo in trucks and carry 20 tons of wine in four tanks. A second service will operate between Bilbao and Bremerhaven later in the year.

The announcement of the new service comes shortly after the establishment of a weekly service between Amsterdam and the U.S. East Coast by United States Lines. This service, which began in December, connects with U.S. Lines' Far East services. In addition, American Export Isbrandtsen Lines' Felixstowe-U.S. run is connected with CTA by a feeder service to Felixstowe.

CTA is also the terminal for several container ship services between Amsterdam and the British Isles. (Amsterdam Newsletter)

Containers in Russia

Bremen:—This is the first container year for the Soviet Union. In the new 1971–75 five-year plan for the USSR merchant fleet, the introduction into the container trade will take priority. At the end of 1970 Radio Moscow announced that theorder has already been given for construction of the first container-freighters in the shipyards of the D.D.R. Meanwhile construction of container-handling plants has commenced in 1970 in several ports in the east-block countries. (Bremen Air Mail, January, 1971)

Express Container Trains

Bremen: — Emerging from the first European express container goods-train 'Delphin' (which in 1968 ran from Bremen into the interior) are—already up to the end of 1970–1560 so-called night-bound connections, which have been instituted by the German Federal Railways; who have truly experienced a container boom. Whereas the container traffic to and from Bremen in 1967 represented only 18% of the railway's inland container carryings, it increased, firstly, to 35% in 1968, to 53% in 1969 and has, in the meantime, exceeded the 60 percent mark. Meanwhile Bremen/Bremerhaven remains, as hitherto, the centre of container manipulations. According to German Federal Railway information sources, the over 28,000 containers in the first half of 1970 were proportioned with 8,000 from Hamburg and a good 20,000 from Bremen/Bremerhaven. A spokesman of the German Federal Railways, speaking in December 1970 on the further container impetus said: In the long run the present 1560 night-bound connections will prove insufficient and express container goods-trains will have to be scheduled around the clock:—and generally well-informed people are of the opinion that 'in the long run' can well mean, in the near future. (Bremen Air Mail, January, 1971)

Traffic in 1970

Rouen, January 1971:—Here are the first statistics results of the traffic in 1970.

No. of ships: 4,809 or 4% more than in 1969
Net tonnage of ships entered: 7,600,000 ton or 7% more than in 1969
Tonnage of merchandise in: 6,670,000 ton or 19% more than in 1969
Tonnage of merchandise out: 6,376,000 ton or about the same tonnage as in 1969.
Total tonnage of Port of Rouen: 13,046,000 ton or 8.4% more than in 1969 (1 million tons more)

Record variations in the principal traffics are as follows:

Merchandise	Tonnage 1970	Tonnage 1969	Variation absolute value	Variation relative value
In:				
Oils & derivatives	1,884,454	970,907	913,547	+94%
Hydrocarbons & derivatives	1,548,591	1,571,054	22,463	− 1%
Phosphates, nitrates, sulphur	1,344,363	1,185,167	159,216	+13%
Wines & beverages	220,595	131,300	89,295	+68%
Out:				
Flour & semola	255,732	146,329	109,403	+75%
Fertilizers	110,947	59,739	51,208	+86%
Hydrocarbons & derivatives	3,159,644	3,090,869	68,775	+ 2%
Cereals	1,081,465	1,722,481	641,016	−37%
Gypsum	503,702	336,792	166,910	+50%

(Rouen Port News)

Bremen Keeps Pace

Bremen: — The Director of the Bremen Port Authority, Beier, announced to the press, at the end of 1970, that port investment from 1963 to 1971 (including the planning of the current year) amounted to DM 200 millions; the bulk of which being devoted to Bremerhaven. Europe's largest container installation is under construction there—one section of which being already now in operation, Beier stated: The Bremen/Bremerhaven port-group is keeping pace with universal trade growth. An instance of this is given in the increase from 1969 to 1970 of over 50% in the Bremen/Bremerhaven container tonnage. Beier continued: This also speaks for the attractiveness of our container ports. He made known the fact that further gigantic investments in the Bremen ports will be necessary in the 1971~1975 period, in order to meet the demands of the "explosive type growth in world trading." (Bremen Air Mail, January)

"Containerization '70"

Bremen:—The international container exhibition in Munich (21st to 25th Oct. 1970)— well away from all seacoasts—has once again shown the European industry the significance which has to be paid to this new mode of transportation. The Bremen/Bremerhaven port-group—leading Europe in the trans-ocean container trade—was appropriately represented in Munich; not least by the President of the Senate (Minister President of the Federal State of Bremen), Koschnick and the Bremen port senator, Dr. Borttscheller. Radio Bremen sent its mobile studio "Bremer Container" to Munich. During a press conference Koschnick gave an impressive example of the significance of 'containerization': "Recently the costs for transporting a machine plant, weighing 22 tons, from Munich to

New York, in non-containerized fashion, amounted to DM 11,971; by utilizing containers — naturally over Bremen—the cost for this movement is reduced to DM 7,340. If, in addition, onetakes into account that with each increase in the container trade", continued Koschnick in Munich, "and with the final production of a fully integrated container system, the costs and efficiency structure will improve considerably; it will become clear that the actual future of container traffic has only now just begun". It is for this reason that Bremen/Bremerhaven is now building, with the large new 'Terminal on the Sea', the first container plant, in Germany, to be located on deepsea water.

If the Bremen/Bremerhaven port-group leads in the overseas container traffic, so is it the Federal Railways which are the most important pillar of the container trade in the interior of Germany. It already possesses more than 50 modern special-handling railway stations for containers; and showed at the Munich-fair a transportable loading crane which can be dispatched at short notice to locations requiring an increase in the handling capacity. The exhibition "Containerization '70" received unusually large approbation from the European economy and the number of visitors exceeded all expectations. It is to be a regular event every four years. (Bremen Air Mail, December)

Quick Container Handling

Bremen: — Such was the report from the Bremen/Bremerhaven port-group on the occasion of the dispatch of the first full-container ship on the Australian trade; the "Jervis Bay", on the 1st November 1970. Seven full-container and eight semicontainer lines are currently trading via the Bremen/Bremerhaven port-group. More than 250,000 containers (some 400,000 on the 20-foot basis) containing over 2.7 million tons—both incoming and outgoing—chose to take the route over Bremen/Bremerhaven between May 1966 and the end of 1970. Up to now nothing like this volume-figure has been approached by any other European port involved in transocean container trading. (Bremen Air Mail, January, 1971)

More Iron Ore

Lourenço Marques:—Each year that passes shows an increase of traffic in the handled. It is continuously difficult to make forward forecasts because the movement has always turned out to be greater than calculated.

There is naturally an explanation for this—it is in the development of the hinterland areas of the port, which for years has been so bewilderingly rapid as to make an accurate forecast impossible, even by the governments of the countries in those areas.

Recently, just after a contract had been closed with Germany for the supply of some millions of tons of irons ore, there arose an agreement between the Swaziland Mines and Japan for the delivery of 7,500,000 tons of the same ore over

and above that already contracted.

In this way, Lourenço Marques, from the middle of next year, will see yet another substantial increase in traffic. (Boletim Portos, Caminhos de Ferro e Transportes de Moçambique, April, 1970)

Mediterranean Ports

Barcelona: — In 1947 the co-ordinating committee of the ports of Genova and Marseilles was created, and it later grew to include Livorno.

The aim of this committee is to exchange information relating to the needs and uses of the different ports. The importance which the valley of the Rhone is aquiring as a route of access to industrial Europe has made advisable the consolidation of the mediterranean maritime front.

As a result of this, and at the initiative of M. Leon Betous, President of the autonomous port of Marseilles, a meeting was held on the 16th of June last between the representatives of that port, of Genova, the respective chambers of commerce and the Chamber of Commerce and Port Authority of Barcelona, with the object of studying the possibility of broadening the work of the said committee to cover other ports which will constitute the mentioned maritime organisation. For the moment, the ports of Genova, Marseilles, Livorno and Barcelona are considered as essential elements of this.

Messrs. Betous and Dagnino, president of the consortium of the port of Genova, were received in Barcelona where they visited our installations and took part in the cordial meeting already mentioned.

Next October this committee will be formally constituted and will begin its work, which we hope will represent an important advance in the co-ordination of traffic through the mediterranean accesses to Europe. (Puerto de Barcelona Boletin Informativo, July 1970)

Oil Wharf

Barcelona: — Petrol tankers are berthing at the new CAMPSA wharf, which was recently inaugurated by the Chief of State, although having been in operation for several months, at an ever increasing rate. This remarkable piece of engineering, which cost 250 million Pesetas, now enables six tankers of up to 50,000 tons displacement to be loaded at the same time. It is 800 mts. long and is constructed of re-inforced concrete supported by 563 concrete pillars of prestressed concrete, 25 metres high, which are sunk 15 metres below sea level. 14 pipelines of 40 cm. diameter run along it to carry the products to the storage tanks. This work was carried out by the Port Authority. Previously the discharge of petrol products was undertaken at the Costa wharf, which could only accommodate three tankers of 20,000 tons. The new installations guarantee the supply of these products to Barcelona and its hinterland at the rate at which demand increases. (Puerto de Barcelona Boletin Informativo, July 1970)

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Rather than sit back and wait for business to come to us from a monopoly of companies, we go out and get it. (Hopefully yours.)

Your cargo will never be shoved aside by bigger companies. In fact, you will have first priority on our ships.

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Because we want to be on our toes to give you the best in shipping service there is.

All this is our pioneering spirit. It has vaulted us "up" to the number three spot in world shipping.

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And not only can you save on freight "weight" charges, you can save on freight "handling" costs, too.

You see, our big 40 foot aluminium containers are six inches higher than conventional containers. You can pack more into them yet pay the same freight handling bill.

But if you have small shipments, our 20 foot containers (8′ × 8′ × 20′) may be what you need. And for extra small cargo, our compact 10 foot folding containers (8′ × 8′ × 10′) will do the job, too. Plus they collapse when you don't need them but are around when you do.

All our containers meet ISO standards in size, strength and safety.

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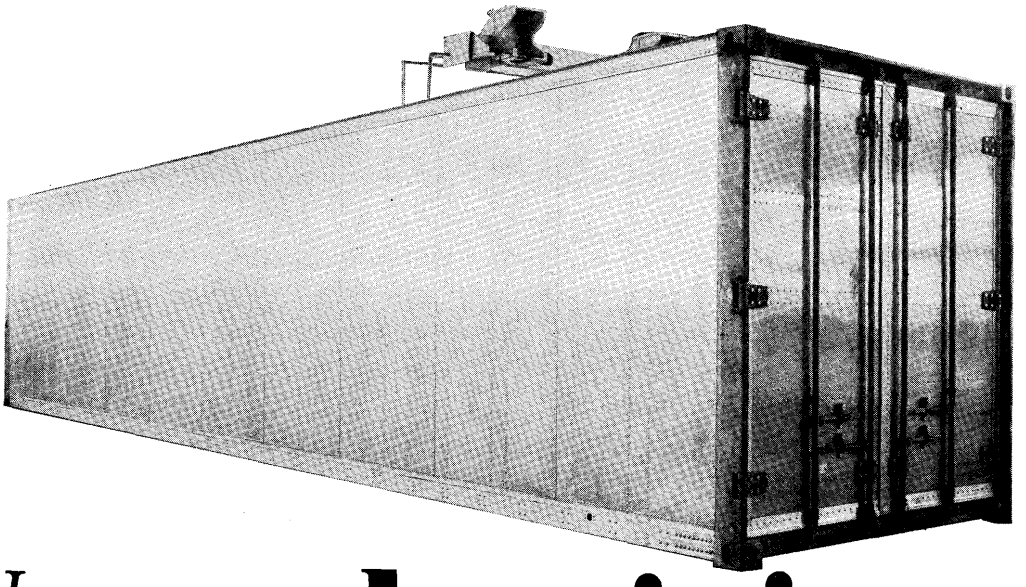

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Present and Future Container Facilities in Major Ports of the World (3)

- Supervised by Mr. Ben E. Nutter, Chairman of the Committee on Containerization of IAPH
- Compiled by Miss Kimiko Takeda, Under Secretary of IAPH Head Office

(This series shall last until the June issue. Presented roughly in the order of arrival.)

Boston, Mass., U.S.A.

PORT OF: Boston DATE: December 14, 1970

DESIGNATION OF TERMINAL: East Boston

OPERATOR OF TERMINAL: Massachusetts Port Authority (Massport)

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		1
Length of each berth			900 ft.
Land area of each terminal			16 acres
Dimensions of each terminal			
Depth of water at berths			40 ft.
CONTAINER CRANE			
Number of container cranes			1 plus 1
Lifting capacity of each			40 tons
Reach on waterside from front edge of berth			115 ft.
Reach on landside from deck rail			60 ft.
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers			Open all callers
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation			Straddle Carrier
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions			Pier Shed 300' x 600'
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)			Yes

Signature: Thomas Houlis

Boston, Mass., U.S.A.

PORT OF: Boston DATE: December 14, 1970

DESIGNATION OF TERMINAL: Mystic Public Container Terminal

OPERATOR OF TERMINAL: Massachusetts Port Authority (Massport)

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1	1	1
Length of each berth	700 ft.	900 ft.	1000 ft.
Land area of each terminal	7 acres	21 acres	18 acres
Dimensions of each terminal			
Depth of water at berths	35 ft.	40 ft.	40 ft.
CONTAINER CRANE			
Number of container cranes	Mobile Cranes (2)	1	(on order) 1 + 2
Lifting capacity of each	30 tons	70 tons	40 tons
Reach on waterside from front edge of berth	60 ft.	115 ft.	115 ft.
Reach on landside from deck rail	60 ft.	115 ft. from inner rail	60 ft.
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers	Open all callers	Open all callers	Open all callers
MODE OF OPERATION			
Transtainer operation		Transitainer	Transitainer
Straddle Carrier operation			
Chassis operation	Chassis-Fork Lift Operation		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions		180' x 220'	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	Yes	Yes	Yes

Signature: Thomas Houlis

Boston, Mass., U.S.A.

PORT OF: Boston DATE: December 14, 1970

DESIGNATION OF TERMINAL: Castle Island

OPERATOR OF TERMINAL: Wiggin Terminals

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	700 ft.		
Land area of each terminal	10 acres		
Dimensions of each terminal			
Depth of water at berths			
CONTAINER CRANE			
Number of container cranes	(2) Rubber-tired Cranes		1
Lifting capacity of each	30 tons		
Reach on waterside from front edge of berth	65 ft.		
Reach on landside from deck rail	65 ft.		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers	Open to all callers		
MODE OF OPERATION			
Transtainer operation	Fork Lift		
Straddle Carrier operation			
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	Pier Shed adjoining 150' x 400'		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	Yes		

Signature: Thomas Houlis

Boston, Mass., U.S.A.

PORT OF: Boston DATE: December 14, 1970

DESIGNATION OF TERMINAL: Castle Island - Sea-Land

OPERATOR OF TERMINAL: Sea-Land

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		1
Length of each berth	600 ft.		600 ft.
Land area of each terminal	10 acres		10 acres
Dimensions of each terminal	600' x 800'		
Depth of water at berths	35 ft.		35 ft.
CONTAINER CRANE			
Number of container cranes	1		1
Lifting capacity of each	27.5 tons		
Reach on waterside from front edge of berth			
Reach on landside from deck rail	No reach inside of inner leg		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	Exclusive lease		x
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation			
Chassis operation	Chassis operation		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	None		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	Yes, but not presently used		

Signature: Thomas Houlis

Los Angeles, Calif., U.S.A.

PORT OF: Los Angeles DATE: January 27, 1971

DESIGNATION OF TERMINAL: East-West Terminal (Berth 131)

OPERATOR OF TERMINAL: Los Angeles Container Company

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	750' (total quay length 2600' is available for container operations)		
Land area of each terminal	25 acres		
Dimensions of each terminal	1800' x 535'		
Depth of water at berths	35' MLLW		
CONTAINER CRANE			
Number of container cranes	1 - twin lift		
Lifting capacity of each	45 ton		
Reach on waterside from front edge of berth	106.5'		
Reach on landside from deck rail	91'		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	x		
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation	x		
Straddle Carrier operation			
Chassis operation	x		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	60,000 sq.ft. (not presently in operation due to labor difficulties)		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	Yes		

Signature:

Los Angeles, Calif., U.S.A.

PORT OF: Los Angeles DATE: January 27, 1971

DESIGNATION OF TERMINAL: Johnson Line (Berth 142)

OPERATOR OF TERMINAL: Ocean Terminals, Inc.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	679'		
Land area of each terminal	11.7 acres (container land area)		
Dimensions of each terminal	28,000' x 540' dimensions include area used for break bulk general cargo		
Depth of water at berths	35' MLLW		
CONTAINER CRANE			
Number of container cranes	-0- (This company has their own shipboard container cranes.)		
Lifting capacity of each	--		
Reach on waterside from front edge of berth	--		
Reach on landside from deck rail	--		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use	x		
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation and forklift Chassis operation	x		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	-- (within transit shed only)		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	yes		

Signature:

Los Angeles, Calif., U.S.A.

PORT OF: Los Angeles DATE: January 27, 1971

DESIGNATION OF TERMINAL: Overseas Terminal (Berths 228 D&E and 229

OPERATOR OF TERMINAL: Overseas Shipping Company

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	2		
Length of each berth	1088' and 719'		
Land area of each terminal	12 acres		
Dimensions of each terminal	about 10 acres available for containers		
Depth of water at berths	35-39 MLLW		
CONTAINER CRANE			
Number of container cranes	1		1
Lifting capacity of each	33		33
Reach on waterside from front edge of berth	81'		81
Reach on landside from deck rail	20'		20
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use	x		
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation	x		
Straddle Carrier operation	x		
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	--		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	yes		

Signature:

Los Angeles, Calif., U.S.A.

PORT OF: Los Angeles DATE: January 27, 1971

DESIGNATION OF TERMINAL: Consolidated Marine Terminal (Berths 87-93 ABC)

OPERATOR OF TERMINAL: Consolidated Marine Inc.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	2	1	
Length of each berth	525' each	800'	
Land area of each terminal	15.6 acres		
Dimensions of each terminal	24,000' x 900' irregular shape	(used for both containers and break-bulk general cargo)	
Depth of water at berths	35' MLLW	35' MLLW	
CONTAINER CRANE			
Number of container cranes	0	0	1
Lifting capacity of each	--	--	30 tons
Reach on waterside from front edge of berth	--	--	N/A
Reach on landside from deck rail	--	--	N/A
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use	x	x	
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation	x	x	
Straddle Carrier operation & forklift Chassis operation	x	x	
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	—	—	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	yes	yes	

Signature:

Los Angeles, Calif., U.S.A.

PORT OF: Los Angeles DATE: January 27, 1971

DESIGNATION OF TERMINAL: Matson Terminal (Berth 200A)

OPERATOR OF TERMINAL: Matson Terminals Inc.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	738'		
Land area of each terminal	30 acres		
Dimensions of each terminal	very irregular in shape		
Depth of water at berths	36-38' MLLW		
CONTAINER CRANE			
Number of container cranes	container cranes (2-28 tons capacity) moved to new facility at Berths 207-209 in December 1970 from Berth 200A		
Lifting capacity of each			
Reach on waterside from front edge of berth			
Reach on landside from deck rail			
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	x		
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation	The container operations at this facility has been transferred to the new facility at Berths 207-209. The future use of the container facility at Berth 200A has not been revealed by Matson.		
Straddle Carrier operation	x		
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	50,000 sq.ft.		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	yes		

Signature:

Los Angeles, Calif., U.S.A.

PORT OF: Los Angeles DATE: January 27, 1971

DESIGNATION OF TERMINAL: Matson Terminal (Berths 207-209)

OPERATOR OF TERMINAL: Matson Terminal Inc.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	2		
Length of each berth	750		
Land area of each terminal	50 acres		
Dimensions of each terminal	1,500' x 1,500'		
Depth of water at berths	35' MLLW		
CONTAINER CRANE			
Number of container cranes	2		2
Lifting capacity of each	28 tons each		28 tons each
Reach on waterside from front edge of berth	102'		102'
Reach on landside from deck rail	74.5'		74.5'
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	x		
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation	x		
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	--	70,000 sq.ft.	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	yes		

Signature:

Los Angeles, Calif., U.S.A.

PORT OF: Los Angeles DATE: January 27, 1971

DESIGNATION OF TERMINAL: LASH (Berths 232-235)

OPERATOR OF TERMINAL: Pacific Far East Line. Inc.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths			1
Length of each berth			1008' sq. ft.
Land area of each terminal			30 acres
Dimensions of each terminal			1200' x 1500 irregular shape
Depth of water at berths			35' MLLW
CONTAINER CRANE			
Number of container cranes		All container on and off loading will be handled by shipboard cranes for the immediate future. There is a provision for installing a shoreside container gantry crane, but its dimensions are indefinite at this time.	
Lifting capacity of each			
Reach on waterside from front edge of berth			
Reach on landside from deck rail			
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			unknown at this time
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation			unknown at this time
Straddle Carrier operation			
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions			60,000 sq.ft.
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)			yes

Signature:

Los Angeles, Calif., U.S.A.

PORT OF: Los Angeles DATE: January 27, 1971

DESIGNATION OF TERMINAL: West Basin Terminal

OPERATOR OF TERMINAL: N/A

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths			2
Length of each berth			900'
Land area of each terminal			140 acres
Dimensions of each terminal			2000' x 4000' irregular shape
Depth of water at berths			35' MLLW
CONTAINER CRANE			
Number of container cranes			indefinite
Lifting capacity of each			
Reach on waterside from front edge of berth			
Reach on landside from deck rail			
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			indefinite
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Trapstainer operation			indefinite
Straddle Carrier operation			
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions			CFS is planned but the dimensions are not definite
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)			yes

Signature:

Portland, Ore., U.S.A.

PORT OF: Port of Portland DATE: 1/25/71

DESIGNATION OF TERMINAL: #1 - Terminal 2, Berth 6 #2 - Terminal 4, Berth 1, Pier 2

OPERATOR OF TERMINAL:

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	2		3
Length of each berth	1. 671 ft. 2. 700 ft.		800 ft.
Land area of each terminal	1. 6 acres 2. 15 acres		60 acres
Dimensions of each terminal	1. 700' x 1000' 2. 800' x 400'		1600' x 1100'
Depth of water at berths	1. 40' MLW 2. 35' MLW		40 MLW
CONTAINER CRANE			
Number of container cranes	2		5
Lifting capacity of each	1. 40 short tons 2. 33 short tons		50 short tons
Reach on waterside from front edge of berth	113 ft.		113 ft.
Reach on landside from deck rail	72 ft.		100 ft.
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use	x		x
3. Open to all callers	x		x
MODE OF OPERATION			
Transtainer operation			x
Straddle Carrier operation	x		
Chassis operation	x		?
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	225' x 100'	450' x 94'	2 - 450' x 94' ea.
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	Yes		Yes

Signature:

Nassau, BAHAMAS

PORT OF: FREEPORT- BAHAMAS. DATE: 21st January, 1971

DESIGNATION OF TERMINAL: RO-RO and Containers

OPERATOR OF TERMINAL: GRAND BAHAMA PORT AUTHORITY, LTD., HARBOUR DIVISION.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
1 Number of berths	1.5 RO-Ro; 1-Container 2. RO-Ro: 2@600' 3@250' container-950'		
2 Length of each berth	3. Total 12 acres		
3 Land area of each terminal	4. 1000'x200';500'x 200' 250'x450';200x200' 150'x200';200x200'		
4 Dimensions of each terminal	5a. Ro-Ro: 3-15ft, 1-28ft; 2-30ft.		
5. Depth of water at berths	b. Container -30'		
CONTAINER CRANE			
Number of container cranes	NONE		
Lifting capacity of each			
Reach on waterside from front edge of berth			
Reach on landside from deck rail			
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers	YES		
MODE OF OPERATION			
Transtainer operation	Fork Lift Truck 62,000 lbs Capacity with 20' container attachment.		
Straddle Carrier operation			
Chassis operation	Yes.		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	80,000 sq.ft.		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	No.		

Signature: Capt. A. Nalecz-Tyminski

Port Director

Guam, U.S.A.

PORT OF: GUAM DATE: March 8, 1971

DESIGNATION OF TERMINAL: COMMERCIAL PORT OF GUAM

OPERATOR OF TERMINAL: GOVERNMENT OF GUAM

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	2		
Length of each berth	658' & 659'	-----	-----
Land area of each terminal	12.011 acres		
Dimensions of each terminal	592 x 1377' (irregular shape)		
Depth of water at berths	35' MLLW		
CONTAINER CRANE			
Number of container cranes	1		
Lifting capacity of each	30 Long Ton		
Reach on waterside from front edge of berth	113'6"	-----	-----
Reach on landside from deck rail	80'		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use	X	-----	-----
3. Open to all callers	X		
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation	X	-----	-----
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	24,000 sq. ft.	-----	-----
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	No	-----	-----

Signature:

JOSE B. SARMIENTO, Manager

Guayaquil, ECUADOR

PORT OF: GUAYAQUIL DATE: JANUARY 11, 1971

DESIGNATION OF TERMINAL: TERMINAL MARITIMO (Wharf with 5 berths)

OPERATOR OF TERMINAL: AUTORIDAD PORTUARIA DE GUAYAQUIL

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	607 feet		
Land area of each terminal	71,5 acres		
Dimensions of each terminal	3035 feet x 800 feet (in regular shape)		
Depth of water at berths	35 feet (MLLW)		
CONTAINER CRANE			
Number of container cranes	------		
Lifting capacity of each	------		
Reach on waterside from front edge of berth	------		
Reach on landside from deck rail	------		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	------		
2. Preferential use	------		
3. Open to all callers	X		
MODE OF OPERATION			
Transtainer operation	------		
Straddle Carrier operation	------		
Chassis operation Fork-Lift	X		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	400 feet x 180 feet 51750 square feet		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	NO		

Signature:

Sydney, AUSTRALIA

PORT OF: SYDNEY DATE: 30.12.1970

DESIGNATION OF TERMINAL: GLEBE ISLAND.

OPERATOR OF TERMINAL: M.S.B of N.S.W

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths		2	
Length of each berth		750	
Land area of each terminal		22 AC	
Dimensions of each terminal		(500 x 1500) (+ 160 x 130)	
Depth of water at berths		42 FT ISLW	
CONTAINER CRANE			
Number of container cranes		2	
Lifting capacity of each		35 T	
Reach on waterside from front edge of berth		110	
Reach on landside from deck rail		85	
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers		YES.	
MODE OF OPERATION			
Transtainer operation		YES.	
Straddle Carrier operation			
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions		REMOTE FROM TERMINAL	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)		YES.	

Signature:

Sydney, AUSTRALIA

PORT OF: SYDNEY DATE: 30.12.1970

DESIGNATION OF TERMINAL: No 4 WHITE BAY.

OPERATOR OF TERMINAL: M.S.B of N.S.W.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	900 FT.		
Land area of each terminal	9 AC		
Dimensions of each terminal	425 FT x 900 FT		
Depth of water at berths	38' (ISLW) (46' FUTURE)		
CONTAINER CRANE			
Number of container cranes	1		
Lifting capacity of each	45 T (TWIN LIFT)		
Reach on waterside from front edge of berth	100 FT		
Reach on landside from dack rail	39 FT		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers	YES.		
MODE OF OPERATION			
Transtainer operation	YES.		
Straddle Carrier operation			
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	REMOTE FROM TERMINAL		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	YES.		

Signature:

Sydney, AUSTRALIA

PORT OF: SYDNEY. DATE: 30.12.1970.

DESIGNATION OF TERMINAL: Nos. 5 AND 6 WHITE BAY.

OPERATOR OF TERMINAL: SEATTAINER TERMINALS LTD.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	2		
Length of each berth	650'		
Land area of each terminal	12 ACRES (TOTAL)		
Dimensions of each terminal	368 x 1300 FT		
Depth of water at berths	38 FT (ISLW) (46' FUTURE)		
CONTAINER CRANE			
Number of container cranes	2		
Lifting capacity of each	45 T (TWIN LIFT)		
Reach on waterside from front edge of berth	100 FT		
Reach on landside from deck rail	39 FT		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	YES.		
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation	STACK 5 HIGH BENEATH O.H.T GANTRY		
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	REMOTE FROM TERMINAL		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	YES		

Signature:

Kuching, MALAYSIA

PORT OF: Kuching DATE: 21st December, 1970.

DESIGNATION OF TERMINAL: Public

OPERATOR OF TERMINAL: Kuching Port Authority

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	-	1	
Length of each berth	-	800'	
Land area of each terminal	-	20 acres	
Dimensions of each terminal	-	60' x 800'	
Depth of water at berths	-	25'	
CONTAINER CRANE			
Number of container cranes	-	No, Ships should provide own cranes.	
Lifting capacity of each	-	-	
Reach on waterside from front edge of berth	-	-	
Reach on landside from deck rail	-	-	
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	-	-	
2. Preferential use	-	-	
3. Open to all callers	-	Yes, Open to all callers.	
MODE OF OPERATION			
Transtainer operation	-	-	
Straddle Carrier operation	-	-	
Chassis operation	-	Intended to use chassis operation.	
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	-	Approx. 40,000 sq.ft.	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	-	No	

Signature:

Townsville, AUSTRALIA

PORT OF: Townsville DATE: December, 1970.

DESIGNATION OF TERMINAL: A.N.L. Searoad Terminal : No. 3 Berth

OPERATOR OF TERMINAL: Australian National Line : Townsville Harbour Board.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1	1	
Length of each berth	226 ft.	840 ft.	
Land area of each terminal	5 acres	5 acres	
Dimensions of each terminal	Irregular shape 1,000 ft. x 400'	800' x 200'	
Depth of water at berths	28' L.W.O.S.T.	40' L.W.O.S.T.	
CONTAINER CRANE			
Number of container cranes	1	1	
Lifting capacity of each	25 long tons	40 long tons	
Reach on waterside from front edge of berth	87 ft.	115 ft. (proposed)	
Reach landside from deck rail	90'	112'	
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	x		
2. Preferential use			
3. Open to all callers		x	
MODE OF OPERATION			
Transtainer operation	20T Fork Lift	20T Fork Lift	
Straddle Carrier operation			
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	NIL	NIL	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	NO	YES	

Signature:

Townsville, AUSTRALIA

PORT OF: Townsville DATE: December, 1970.

DESIGNATION OF TERMINAL: Columbus Line Terminal

OPERATOR OF TERMINAL: Columbus Overseas Services Pty. Ltd.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths		1	
Length of each berth		700 ft.	
Land area of each terminal		1 acre 2 r. 21.5 p.	
Dimensions of each terminal		Irregular Shape 641' x 120'	
Depth of water at berths		32 ft L.W.O.S.T.	
CONTAINER CRANE			
Number of container cranes		Shipboard Cranes	
Lifting capacity of each			
Reach on waterside from front edge of berth			
Reach on landside from deck rail			
MODE OF MANAGEMENT			
1. Exclusive lease for specified users		x	
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation		20T Fork Lift	
Straddle Carrier operation			
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions		NIL	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)		YES	

Signature:

Wellington, NEW ZEALAND

PORT OF: WELLINGTON NEW ZEALAND DATE: 21-12-70

DESIGNATION OF TERMINAL: THORNDON CONTAINER BERTH No1

OPERATOR OF TERMINAL: CONTAINER TERMINAL OPERATORS (NZ) LTD.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths		1	
Length of each berth		950'	
Land area of each terminal		26 ACRES	
Dimensions of each terminal		IRREGULAR 1150' X 1000'	
Depth of water at berths		45' MLW.	
CONTAINER CRANE			
Number of container cranes		1	
Lifting capacity of each		45 LONG TON TWIN LIFT	
Reach on waterside from front edge of berth		105' 8"	
Reach on landside from deck rail		35'	
MODE OF MANAGEMENT			
1. Exclusive lease for specified users		X	
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation		X	
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions		REFRIG. STACK 5 HIGH 82,500 SQ FT DRY CARGO 26,000 + SQ FT	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)		YES	

Signature

Wellington, NEW ZEALAND

2

PORT OF: WELLINGTON - NEW ZEALAND DATE: 21-12-70

DESIGNATION OF TERMINAL: THORNDON CONTAINER BERTH No 2

OPERATOR OF TERMINAL: MARITIME CONTAINER TERMINALS LTD.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths			
Length of each berth			
Land area of each terminal	7.8 ACRES		
Dimensions of each terminal	IRREGULAR 750' X 500'		
Depth of water at berths	40'-43' MLW		
CONTAINER CRANE			
Number of container cranes	1		
Lifting capacity of each	45 LONG TON TWIN LIFT		
Reach on waterside from front edge of berth	105' 8"		
Reach on landside from deck rail	35'		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers	X		
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation	X		
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	REEFER PLUG POINTS = 218 DRY CARGO SHED 33,000 Sq. FT		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	YES		

Signature:

Inchong, KOREA

PORT OF: Inchon DATE: January 10, 1971

DESIGNATION OF TERMINAL: 2nd TIDAL BASIN CONTAINER TERMINAL

OPERATOR OF TERMINAL: HAN JIN TRANSPORTATION Co, LTD, & KOREA EXPRESS Co, LTD.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths		5	
Length of each berth		742 feet	
Land area of each terminal		23,200 square meters	
Dimensions of each terminal			
Depth of water at berths		-12.5 m	
CONTAINER CRANE			
Number of container cranes			1
Lifting capacity of each			30 ton
Reach on waterside from front edge of berth			
Reach on landside from deck rail			
MODE OF MANAGEMENT			
1. Exclusive lease for specified users		x	
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation			
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions		56,000 square meters	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)		No	

Signature: Kim Jong Wook

Pusang, KOREA

PORT OF: Pusan DATE: January 10, 1971

DESIGNATION OF TERMINAL:

OPERATOR OF TERMINAL: Ministry of Transportation

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	374 feet		
Land area of each terminal	2,000 square meters		
Dimensions of each terminal			
Depth of water at berths	-8 m		
CONTAINER CRANE			
Number of container cranes			
Lifting capacity of each			
Reach on waterside from front edge of berth			
Reach on landside from deck rail			
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers	x		
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation	x		
Chassis operation	x		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions			
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	Yes		

Signature: Kim Jong Wook

HONG KONG

PORT OF: HONG KONG DATE: 16TH DECEMBER, 1970.

DESIGNATION OF TERMINAL: HONGKONG & KOWLOON WHARF & GODOWN CO. LTD. COMMON USER TERMINAL

OPERATOR OF TERMINAL: HONGKONG & KOWLOON WHARF & GODOWN CO. LTD.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1	1	1
Length of each berth	700 feet	800 feet	Extend 800 ft. berth to 1050 ft
Land area of each terminal	15 acres	-	+ 3 acres = 18 acres
Dimensions of each terminal	-	-	-
Depth of water at berths	32' MLLW	-	36' MLLW
CONTAINER CRANE			
Number of container cranes	-	1	1
Lifting capacity of each	-	25 long ton (under spreader)	30 long ton (under spreader)
Reach on waterside from front edge of berth	-	104 feet	114 feet
Reach on landside from deck rail	-	(Pier Mounted)	(Pier Mounted)
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers	✓	✓	✓
MODE OF OPERATION			
Transtainer operation	✓	✓	✓
Straddle Carrier operation	-	-	-
Chassis operation	✓	✓	✓
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	3 = 120,000 sq.ft.	-	5 = 180,000 sq.ft.
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	No	No	No

Signature:

HONG KONG

PORT OF: HONG KONG DATE: JANUARY 1971

DESIGNATION OF TERMINAL: North Point Wharves Container Terminal

OPERATOR OF TERMINAL: North Point Wharves Ltd:/China Provident Co. Ltd.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	495		
Land area of each terminal	2 acres		
Dimensions of each terminal	495' x 145' N.P.		
Depth of water at berths	30' at N.P.		
CONTAINER CRANE			
Number of container cranes	2	1	
Lifting capacity of each	35 tons	35	
Reach on waterside from front edge of berth	125' 6"		
Reach on landside from deck rail	155'		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use	✓		
3. Open to all callers	✓		
MODE OF OPERATION			
Transtainer operation	✓	1	
Side Loader	✓		
Straddle Carrier operation	✓		
Chassis operation	✓		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	10 acres		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	No		(3)

HONG KONG

PORT OF: HONG KONG DATE: 13th JANUARY 1971

DESIGNATION OF TERMINAL: # 1 Berth Container Terminal, Kwai Chung

OPERATOR OF TERMINAL: Modern Terminals Ltd.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths		1	
Length of each berth		1,000 ft.	
Land area of each terminal		25 acres	
Dimensions of each terminal		Irregular size	
Depth of water at berths		42 ft.	
CONTAINER CRANE			
Number of container cranes		2	
Lifting capacity of each		35 tons	
Reach on waterside from front edge of berth		110 ft.	
Reach on landside from deck rail		231 ft.	
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use		✓	
3. Open to all callers		✓	
MODE OF OPERATION			
Transtainer operation		-	
Straddle Carrier operation		✓	
Chassis operation		-	
CONTAINER PACKING OR FREIGHT STATION			
Dimensions		180,000 sq. ft.	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)		No	

HONG KONG

PORT OF: HONG KONG HONG KONG DATE: JANUARY 1971

DESIGNATION OF TERMINAL: # 2 Berth Container Terminal Kwai Chung

OPERATOR OF TERMINAL: Kowloon Container Warehouse Co., Ltd.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths		1	
Length of each berth		1,000 feet	
Land area of each terminal		25 acres	
Dimensions of each terminal		Irregular	
Depth of water at berths		42'	
CONTAINER CRANE			
Number of container cranes		2	
Lifting capacity of each		30	
Reach on waterside from front edge of berth		110	
Reach on landside from deck rail		231	
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use		✓	
3. Open to all callers		✓	
MODE OF OPERATION			
Transtainer operation		✓	
Straddle Carrier operation			
Chassis operation		✓	
CONTAINER PACKING OR FREIGHT STATION			
Dimensions		No information	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)		No	

HONG KONG

PORT OF: HONG KONG DATE: JANUARY 1971

DESIGNATION OF TERMINAL: # 3 Berth Container Terminal, Kwai Chung

OPERATOR OF TERMINAL: Sealand - Orient

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths		1	
Length of each berth		1,000 ft.	
Land area of each terminal		36 acres	
Dimensions of each terminal		Irregular	
Depth of water at berths		42'	
CONTAINER CRANE			
Number of container cranes		2	
Lifting capacity of each		30 tons	
Reach on waterside from front edge of berth		110 ft.	
Reach on landside from dock rail		231 ft.	
MODE OF MANAGEMENT			
1. Exclusive lease for specified users		✓	
2. Preferential use		-	
3. Open to all callers		-	
MODE OF OPERATION			
Transtainer operation		✓	
Straddle Carrier operation		-	
Chassis operation		✓	
CONTAINER PACKING OR FREIGHT STATION			
Dimensions		No information available	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)		no	

Keelung, CHINA

PORT OF: Keelung DATE: Dec. 31, 1970

DESIGNATION OF TERMINAL: Public Container Terminal

OPERATOR OF TERMINAL: Keelung Harbour Bureau

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths		6	
Length of each berth		560'-800'(each) (3770' Total)	
Land area of each terminal		5-7 acre (each) (35 acre Total)	
Dimensions of each terminal		(560'-800)x400' (irregular shape)	
Depth of water at berths		36'-42' MLW	
CONTAINER CRANE			
Number of container cranes		3	
Lifting capacity of each		30 long Ton	
Reach on waterside from front edge of berth		115'	
Reach on landside from deck rail		82'	
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers		X	
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation		X	
Chassis operation		X	
CONTAINER PACKING OR FREIGHT STATION			
Dimensions		380,000 square feet	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)		Yes	

Signature: K. C. Tsao

Belfast, U.K.

PORT OF: BELFAST DATE: 29 DEC 1970

DESIGNATION OF TERMINAL: BALLAST QUAY

OPERATOR OF TERMINAL: BELFAST STEAMSHIP CO. LTD.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	2		
Length of each berth	402 feet and 500 feet.		
Land area of each terminal	5.23 acres		
Dimensions of each terminal			
Depth of water at berths	18 feet and 16 feet.		
CONTAINER CRANES (DERRICK)			
Number of ~~container~~ cranes	4 (Derrick)		
Lifting capacity of each	3 @ 25 tons, 1 @ 16 tons.		
Reach on waterside from front edge of berth	80 feet radius		
Reach on landside from deck rail	80 feet radius		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	-		
2. Preferential use	YES		
3. Open to all callers	-		
MODE OF OPERATION			
Transtainer operation	NO		
Straddle Carrier operation	NO		
Chassis operation	YES		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	NO		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	NO		

Signature: (Signed) W. McKINNEY Commercial Manager

Belfast, U.K.

PORT OF: BELFAST DATE: 29 DEC 1970

DESIGNATION OF TERMINAL: DONEGALL QUAY

OPERATOR OF TERMINAL: BELFAST STEAMSHIP CO. LTD.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	390 feet		
Land area of each terminal	2.19 acres		
Dimensions of each terminal			
Depth of water at berths	14 feet		
CONTAINER CRANE			
Number of container cranes Lifting capacity of each Reach on waterside from front edge of berth Reach on landside from deck rail	None - Drive-on/ Drive-off Vessels.		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	YES		
2. Preferential use	-		
3. Open to all callers	-		
MODE OF OPERATION			
Transtainer operation	NO		
Straddle Carrier operation	NO		
Chassis operation	YES		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	NO		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	NO		

Signature: (Signed) W. McKINNEY Commercial Manager

Belfast, U.K.

PORT OF: BELFAST DATE: 29 DEC 1970

DESIGNATION OF TERMINAL: DONEGALL QUAY

OPERATOR OF TERMINAL: BRITISH RAILWAYS

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	540 feet		
Land area of each terminal	3 acres		
Dimensions of each terminal			
Depth of water at berths	14 feet		
CONTAINER CRANE			
Number of container cranes Lifting capacity of each Reach on waterside from front edge of berth Reach on landside from deck rail	None - Drive-on/ Drive-off Vessel.		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	YES		
2. Preferential use	-		
3. Open to all callers	-		
MODE OF OPERATION			
Transtainer operation	YES		
Straddle Carrier operation	NO		
Chassis operation	YES		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	NO		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	NO		

Signature: (Signed) W. McKINNEY Commercial Manager

Belfast, U.K.

PORT OF: BELFAST DATE: 29 DEC 1970

DESIGNATION OF TERMINAL: DONEGALL QUAY

OPERATOR OF TERMINAL: BURNS & LAIRD LINES, LTD.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	395 feet		
Land area of each terminal	2.87 acres		
Dimensions of each terminal			
Depth of water at berths	14 feet		
CONTAINER CRANE			
Number of container cranes Lifting capacity of each Reach on waterside from front edge of berth Reach on landside from deck rail	None - Drive-on/ Drive-off Vessel.		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	YES		
2. Preferential use	-		
3. Open to all callers	-		
MODE OF OPERATION			
Transtainer operation	NO		
Straddle Carrier operation	NO		
Chassis operation	YES		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	NO		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	NO		

Signature: (Signed) W. McKINNEY Commercial Manager

Belfast, U.K.

PORT OF: BELFAST DATE: 29 DEC 1970

DESIGNATION OF TERMINAL: GOTTO WHARF

OPERATOR OF TERMINAL: BRITISH RAILWAYS

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	724 feet		
Land area of each terminal	7 • 39 acres		
Dimensions of each terminal			
Depth of water at berths	21 feet		
CONTAINER CRANE			
Number of container cranes	2		
Lifting capacity of each	30 tons		
Reach on waterside from front edge of berth	54 feet		
Reach on landside from deck rail	80 feet		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	YES		
2. Preferential use	-		
3. Open to all callers	-		
MODE OF OPERATION			
Transtainer operation	YES		
Straddle Carrier operation	-		
Chassis operation	YES		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	330'x62'= 2,300 sq. yds.		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	NO		

Signature: (Signed) W. McKINNEY Commercial Manager.

Belfast, U.K.

PORT OF: BELFAST DATE: 29 DEC 1970

DESIGNATION OF TERMINAL: HERDMAN CHANNEL

OPERATOR OF TERMINAL: CARGOODS CONTAINERS LTD.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	436 feet		
Land area of each terminal	6.29 acres		
Dimensions of each terminal			
Depth of water at berths	18 feet		
CONTAINER CRANE			
Number of container cranes	1		
Lifting capacity of each	30 ton		
Reach on waterside from front edge of berth	45 feet		
Reach on landside from deck rail	50 feet		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	YES		
2. Preferential use	-		
3. Open to all callers	-		
MODE OF OPERATION			
Transtainer operation	NO		
Straddle Carrier operation	YES		
Chassis operation	YES		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	2 acres		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	NO		

Signature: (Signed) W. McKINNEY Commercial Manager.

Belfast, U.K.

PORT OF: BELFAST DATE: 29 DEC 1970

DESIGNATION OF TERMINAL: HERDMAN CHANNEL

OPERATOR OF TERMINAL: TRANSPORT FERRY SERVICE

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	436 feet		
Land area of each terminal	6,29 acres		
Dimensions of each terminal			
Depth of water at berths	18 feet		
CONTAINER CRANE (travelling gantry)			
Number of container cranes	1		
Lifting capacity of each	30 ton		
Reach on waterside from front edge of berth	56 feet		
Reach on landside from deck rail	160 feet		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	YES		
2. Preferential use	-		
3. Open to all callers	-		
MODE OF OPERATION			
Transtainer operation	YES		
Straddle Carrier operation	NO		
Chassis operation	YES		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	NO		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	NO		

Signature: (Signed) W. McKINNEY Commercial Manager.

Marseilles, FRANCE

PORT OF: MARSEILLES DATE:

DESIGNATION OF TERMINAL: FOS

OPERATOR OF TERMINAL: Port of Marseilles Authority

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		1
Length of each berth	250 m		-
Land area of each terminal	6 ha		250 ha
Dimensions of each terminal			
Depth of water at berths	15 m		
CONTAINER CRANE			
Number of container cranes	1		
Lifting capacity of each	40 T		
Reach on waterside from front edge of berth	56 m		
Reach on landside from deck rail	28 m		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers	+		+
MODE OF OPERATION according to the stevedor	Presence in the terminal		
Transtainer operation	1		
Straddle Carrier operation	1		
Chassis operation	8		
CONTAINER PACKING OR FREIGHT STATION			
Container packing Station - Freight stations Dimensions	2 900 m2		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	yes		yes

Signature:

Gothenburg, SWEDEN

PORT OF: Gothenburg, Skandia Harbour DATE: 1970.01.12

DESIGNATION OF TERMINAL: Skandia Harbour

OPERATOR OF TERMINAL: Skandia Terminal Co. (Three ro/ro terminals operated by the users)

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	12	3	The berths are not limited in length and land area is used according to the demand for each customer.
Length of each berth	1 900 metres	550 metres	
Land area of each terminal	700 000 square metres	600 000 sq metres	
Dimensions of each terminal	700 metres x 1000 m (irregular shape)	600 m x 1000 m (irregular shape)	
Depth of water at berths	7-11 metres MW	10-12 metres MW	
CONTAINER CRANE			
Number of container cranes	3(nr1, 2 and 3)		
Lifting capacity of each	nr1 = 27 long ton		
Reach on waterside from front edge of berth	32 metres		
Reach on landside from deck rail	nr 1 = 24 metres nr 2,3 = 41 metres		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	4 berths on lease for 3 users (RO/ro)		
2. Preferential use			
3. Open to all callers	X	X	
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation	X		
Chassis operation	X		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	In eight diffrent buildings 57 000 square metres		Yes, but not specified yet
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	Yes		

Signature:

Malmo, SWEDEN

PORT OF: Malmö DATE: 1 februari 1971

DESIGNATION OF TERMINAL: Frihamnen, public container terminal

OPERATOR OF TERMINAL: Malmö Frihamns AB

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		1
Length of each berth	250 m		500 m
Land area of each terminal	8.000 m^2		130.000 m^2
Dimensions of each terminal			
Depth of water at berths	9,2 m		9,2 m
CONTAINER CRANE			
Number of container cranes	2		2
Lifting capacity of each	32 ton och 20 ton		40 ton and 20 ton
Reach on waterside from front edge of berth	26 m 14		26 m and 20 m
Reach on landside from deck rail	38 m 26 m		38 m and 20 m
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers	x		x
MODE OF OPERATION			
Transtainer operation	sideloader		
Straddle Carrier operation			
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions			
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	Yes		Yes

Signature: (A. Waldemarson)

Stockholm, SWEDEN

PORT OF: Stockholm DATE: January 22nd, 1971

DESIGNATION OF TERMINAL: Container Terminal Stockholm

OPERATOR OF TERMINAL: Free Port Company, Svea Line (Baltic) AB, Rederi AB Transatlantic

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		1
Length of each berth	360 feet		575 feet
Land area of each terminal	13 acres	6 acres	6 acres
Dimensions of each terminal			
Depth of water at berths	34 feet		34 feet
CONTAINER CRANE			
Number of container cranes	2		
Lifting capacity of each	24 tons		
Reach on waterside from front edge of berth	55 feet		
Reach on landside from deck rail	30 feet		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers	x		
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation	x		
Chassis operation	x		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	115,00 sq. ft.		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	Yes		

Signature:

Amsterdam, NETHERLANDS

PORT OF: AMSTERDAM DATE: 19th January, 1971

DESIGNATION OF TERMINAL: Container Terminal "Amsterdam"

OPERATOR OF TERMINAL: Container Terminal "Amsterdam"

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1 ocean going and 1 feeder ship		
Length of ~~each~~berth	280 m (920')		
Land area of ~~each~~ terminal	115000 m2 (28 acres)		
Dimensions of ~~each~~ terminal	abt. 1700' x 820' (±520 m x 250 m)		
Depth of water at berths	10,50 m(34') notides		
CONTAINER CRANE			
Number of container cranes	2		
Lifting capacity of each	50 metric tons incl spreader		
Reach on waterside from front edge of berth	33 m (108')		
Reach on landside from deck rail	44 m (145')		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers	x		
MODE OF OPERATION			
Transtainer operation	x		
Straddle Carrier operation	x		
Chassis operation	x		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	3000 m2(±32300 sq.feet)		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	yes		

CEA/HdJ

Signature:

Hamburg, GERMANY

PORT OF: Hamburg DATE: January 6, 1971

DESIGNATION OF TERMINAL: Container Terminal Burchardkai

OPERATOR OF TERMINAL: Hamburger Hafen und Lagerhaus AG.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	5	2	
Length of each berth	1+2 : 1248 feet 3+4 : 1608 feet 5 : 984 feet	6+7 : 2100 feet	
Land area of each terminal	c. 106 acres	c. 83 acres	
Dimensions of each terminal	3840 x 1148 feet (irregular shape)		
Depth of water at berths	1-3 : 33 feet 4 : 36 feet 5 : 43 feet	6+7 : 46 feet	
CONTAINER CRANE			
Number of container cranes	4	3	
Lifting capacity of each	2 each 52 long t. 1 37 long t. 1 41 long t.	each 52 long t.	
Reach on waterside from front edge of berth	118 feet	each 118 feet	
Reach on landside from deck rail	2 each 108 feet 2 each 91 feet	each 108 feet	
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers	X	X	
MODE OF OPERATION			
Transtainer operation	X	X	
Straddle Carrier operation	X	X	
Chassis operation	X	X	
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	7,4 acres	5 acres	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	yes	yes	

Signature:

Hamburg, GERMANY

PORT OF: Hamburg DATE: January 6, 1971

DESIGNATION OF TERMINAL: Eurokai Terminal Predöhlkai

OPERATOR OF TERMINAL: Euro-Kai KG. a.A.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	2	2 - 3	
Length of each berth	1+2 : 876 feet	3 - 5:1050 feet	
Land area of each terminal	c. 12,5 acres	c. 25 acres	
Dimensions of each terminal	876 x 591 feet (ifregular shape)		
Depth of water at berths	36 feet	42 feet	
CONTAINER CRANE			
Number of container cranes	1		
Lifting capacity of each	52 long tons		
Reach on waterside from front edge of berth	117 feet		
Reach on landside from deck rail	122 feet		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers	X	X	
MODE OF OPERATION			
Transtainer operation	X	X	
Straddle Carrier operation	X	X	
Chassis operation	X	X	
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	1,1 acres	2,1 acres	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	yes	yes	

Signature:

Hamburg, GERMANY

PORT OF: Hamburg DATE: January 6, 1971

DESIGNATION OF TERMINAL: Europakai

OPERATOR OF TERMINAL: Lager- und Speditionsgesellschaft mbH.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	4	2	
Length of each berth	1-4 : 2133 feet	5-6 : 1312 feet	
Land area of each terminal	c. 17,5 acres	c. 12,5 acres	
Depth of each terminal	c. 308 feet		
Depth of water at berths	35 feet	36 feet	
CONTAINER CRANE			
Number of container cranes			
Lifting capacity of each			
Reach on waterside from front edge of berth			
Reach on landside from deck rail			
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers	X	X	
MODE OF OPERATION			
Transtainer operation	X	X	
Straddle Carrier operation	X	X	
Chassis operation	X	X	
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	4,5 acres	3 acres	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	yes	yes	

Signature:

Bergen, NORWAY

PORT OF: BERGEN DATE: January, 25th, 1971

DESIGNATION OF TERMINAL: Public Conteiner Terminal

OPERATOR OF TERMINAL:

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths			1
Length of each berth			296'
Land area of each terminal			12000 sq.metres
Dimensions of each terminal			
Depth of water at berths			27' M.W.
CONTAINER CRANE			
Number of container cranes			1 Autocrane
Lifting capacity of each			40 ton
Reach on waterside from front edge of berth			40 feet
Reach on landside from deck rail			
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			x
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation			x
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions			
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)			Yes

Signature: O. Simonsen
Traffic inspector

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昭和四十四年十一月十五日第三種郵便物認可　誌名「ポーツ　アンド　ハーバース」　五月号　第十六巻第五号　昭和四十六年四月二十日発行（毎月一回二十日発行）　発行所　東京都港区琴平町一番地　〒一〇五　国際港湾協会　国内価格五〇〇円