MONTREAL CONFERENCE JUNE 7-12 1971

The Publisher: The International Association of Ports and Harbors
Kotohira-Kaikan Bldg. 1, Kotohira-cho, Minato-ku,
Tokyo 105, Japan
Let us help you select a customized PACECO system for your present requirements, one that can grow in economical modules as your terminal volume increases. Write for our Terminal Systems Brochure or request a visit by PACECO engineers. (A PACECO Terminal Systems motion picture is available for group showing.)

PROVEN PERFORMANCE ON FOUR CONTINENTS

- Lower capital investment
- Lower operating costs
- Minimum yard development costs

PACECO's container terminal systems offer a broad choice of equipment for the fastest most profitable container handling. Whether requirements call for a single long-span PACECO Portainer to serve an entire terminal as in Waterford, Ireland, or a low-profile Portainer, two PACECO Transtainers and terminal trucks as in Oakland, California, PACECO offers the ultimate system for your terminal. Systems have been developed with selections from ten basic Portainer® (pierside crane) models, nine rail-mounted or rubber-tired Transtainer® (terminal crane) models, and several low cost conveyance systems.

Let us help you select a customized PACECO system for your present requirements, one that can grow in economical modules as your terminal volume increases. Write for our Terminal Systems Brochure or request a visit by PACECO engineers. (A PACECO Terminal Systems motion picture is available for group showing.)

PACECO is the only manufacturer offering a complete selection of container handling equipment, and world-wide manufacturing and service.

PACECO is a division of FRUEHAUF CORPORATION

TRANSPACIFIC
WEEKLY
CONTAINER
SERVICE

Japan Line
12, Marunouchi 3, Chiyoda-ku, Tokyo
Today's huge, ocean-going vessels require modern harbor protection that's 100% adequate. How about the facilities in YOUR port?

Unless it's designed and constructed to accommodate today's mammoth ships, don't automatically assume that YOUR home town port is a 100%-safe docking facility. If it's not doing an excellent job of protecting the ships that dock there, we'll tell you what steps to take in planning to MAKE it safe (and economically, too)!

Our TOSBAC-3400 computer system is ideally designed for analyzing various sea wave phenomena—such as the generation of sea waves, currents, mixed currents, shallow water, and so on. Practical application of this modern harbor equipment is exemplified in designing tide-block banks and in preparing computerized data for planning every type of antitide structure for marine facilities.

By putting the TOSBAC-3400 to work for you, your vital port facility can be efficiently and scientifically designed or modified, offering a truly appropriate and safe sanctuary for vessels that cost millions of dollars. And the tremendous manpower savings in planning simply can't be ignored!
While ordinary mooring buoys bob and weave, exposing their underside when pulled by a large vessel, our patented Non-inclining Buoys always keep an even keel regardless of the size of the tanker to which it is tied. This is because of an ingenious device in the buoy head. The buoy is equipped with a movable arm and hinge anchored at the center of gravity of the buoy. To this arm is attached a base chain which assumes the proper radius the ship & moored rope require. Thus the chain inclines in place of the buoy, keeping the buoy always even since the buoy always faces in the direction of the pulling force. Non-inclining buoys are designed, manufactured and installed by Hamanaka.

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

---

**HAMANAKA CHAIN MFG. CO., LTD.**

TOKYO OFFICE: YURAKUCHO BLDG., YURAKUCHO 1-5, TOKYO
Phone: (213) 8681
CABLE ADDRESS: "CHAINBEST" TOKYO
FACTORY: SHIRAHAMA, HIMEJI, JAPAN Phone: (0792) 45-5151

---

**SANKI ENGINEERING CO., LTD.**

SANSHIN BLDG., HIBIYA, TOKYO
Tel: TOKYO (502) 6111
BRANCHES: OSAKA, NAGOYA, FUKUOKA, SAPPORO, HIROSHIMA, SENDAI, TOYAMA,
FULL HOUSE!

but still plenty of room
to GROW!

Port Newark-Elizabeth
America’s Container
Capital in the
Port of New York

Yesterday—we
pioneered…

Today—we’re
pacesetters…

Tomorrow still
GROWING!
March, 1971 Vol. 16, No. 3

CONTENTS

Forum:
Address by Frank C. Sullivan, President, Los Angeles Board of Harbor Commissioners .................. 7

Topics:
The Legal Problems Posed by the Utilization of Barge-Carrying Vessels, Port Authority of Rouen .............. 10
The 7th International Seminar on Port Management in the Netherlands ........................................... 12
IHI Active in Kashima Harbor Construction................................. 17
List of Japanese Ports.................................................................. 20

Ports:
Singapore Moves Towards Containerisation................................. 14
The Port of Aden .................................................................By S. M. Khalifa.......................... 16
Statistics and Trade, Haven Amsterdam ................................. 19

Orbiter Probe (International News): ............................................ 24-44
IAPH News ................................................................. 24
Full-Container Service from Bremerhaven to Australia................. 39
Free Port of Hamburg, Its Functions and Its Significance............. 40

Appendix:
Present and Future Container Facilities in Major Ports
of the World (1) ......................... 45-52

The Cover:
Port Elizabeth and Port Newark (Port of New York Authority)

Price US$2.00 per copy airmailed
US$20.00 per year
We plan ahead

In 1827, a man called Johann Smidt, Mayor of Bremen, founded Bremerhaven. Bremen’s port on the open sea. Step by step we have built a modern seaport complex. Planned for the future, geared to modern sea transport.

Bremerhaven has a lot to offer. The Columbus Quay for giant passenger liners. Berths for sea-going ferries. The deep-water iron-ore port, Weserport. Non-tidal docks for efficient handling of both roll-on/roll-off vessels and full-container ships.

We have planned ahead, so that we can give you a service others dream of: two speedy, all-round ports; one of them direct on the sea.

And here we are now building berths on the deep-water channel. For the huge carriers of tomorrow.

We plan ahead.
To keep our service up-to-date.

for your benefit

The key ports of Europe

Bremen
Bremerhaven

For details write to: Bremer Lagerhaus-Gesellschaft, 28 Bremen, Überseehafen, Phone 3 89 61, Telex 2 44 840
Kajamstalt Bremerhaven der Bremer Lagerhaus-Gesellschaft, 285 Bremerhaven, Steubenstr., Phone 48 41, Telex 2 38 722
Gentlemen of the Nihonbashi Rotary Club, and guests:

It gives me a great deal of pleasure to speak to you today. I consider it a privilege to address members of Rotary, since they are leaders of business everywhere in the world, and I am grateful for this opportunity.

As Rotarians and businessmen you are constantly alert to changing trends in commerce, and are keenly aware of the ever-increasing pace of progress.

That pace is being felt everywhere throughout the world—in all nations, in every phase of business, and particularly in the shipping industry. And within that industry, gentlemen, a virtual revolution of change—an explosion—is taking place, affecting all the major seaports of the world.

The great nation of Japan, as one of the leading maritime nations of the world, is in the forefront of change. For example, oil tankers sailing the high seas today—and calling at the Port of Los Angeles—average from fifty to sixty thousand deadweight tons. Yet, as a leading builder of ships—and to meet the growing need—Japanese maritime architects have on your drawing boards, tankers of a half-million—and even a million—tons. These huge ships, with a draft of almost one hundred feet, will require major changes in harbors wherever they call throughout the world.

Another revolutionary change in shipping has been that of containerization, which in the very recent past, has resulted in the alteration of existing terminals and the construction of new ones at many major harbors. Container ships, and their sealed vans of cargo, are moving merchandise across the oceans faster and more efficiently than ever before. Again, you as shipbuilders, have produced many of those container ships, some of which carry as many as 800 to 1,000 containers in a single load.

The advent of containerization has brought with it several innovations, including the new container-handling method known as LASH, which means “Lighter Aboard Ship.”

The only two such vessels now in service are the “Acadia Forest” and the “Atlantic Forest.” Both were built here in Japan. Eleven more are now under construction and by the end of next year, there will be a total of 20 LASH ships in operation. We are, at this moment, building facilities for them at the Port of Los Angeles, where these vessels will begin their calls in 1971.

Basically, the LASH concept includes a ship or mother vessel, a crane aboard the ship, and barges. Each mother vessel has three sets of barges, one on board the ship, another at the point of origination and a third at the destination. The ship’s crane lifts each barge from the water at the stern high enough to clear the deck, then rolls forward with the barge to set it into the hold of the vessel. Each barge holds from 300 to 500 tons of containerized cargo.

Since each LASH vessel costs about $30 million and each of the barges—which might number as many as 73 for one ship—costs from $20,000 to $40,000, the investment in LASH is a sizable one.

This is only one of the many new concepts being introduced in ocean shipping. Each new concept requires special facilities at commercial ports throughout the world. These special accommodations also require major investments.

Farther ahead of us in the shipping industry—but possibly not too far ahead—are nuclear-powered ships and automated vessels, hydrofoils—and undoubtedly, even more advanced means of ocean shipping which cannot even be forecast at this time.

Our short-range forecast at the Port of Los Angeles is requiring an investment in the next two years alone of $23.5 million for the improvement of some of our present terminals and expansion of our cargo operations. We are now planning to issue $25 million in revenue bonds to finance these major capital improvements.

One of the projects is the facility for the new LASH vessels I spoke of. Another is the expansion of our bulk-handling operations, and a third is the expansion of our East-West Container Terminal, where four major Japanese shipping firms headquarter their containerized cargo operations for Southern California. The consortium sharing the East-West facility are Japan Line, Yamashita-Shinnihon, Mitsui O.S.K., and “K” Line. At the same time, Showa and N.Y.K. lines are still another container terminal at our port.

Our bulk facilities handle mainly iron ore and coal—the essential ingredients for steel; and Japan buys most of it.

Your country’s determination for
160 million tons of steel production by 1973, has ships bringing iron ore and coal from around the world. Today, Japan is the most important single factor in bulk and its movement across oceans is one of the reasons world trade is expanding at the rate of 10 to 12 per cent annually.

At the Port of Los Angeles, we expect our bulk-handling operations to expand from nearly 1.5 million tons annually to more than 3.5 million tons by 1974. And most of this expansion will be the result of your need for the ingredients of your steel industry.

The fact is, your country is our biggest—and I might say our best—customer. Nearly sixty per cent of the business at the Port of Los Angeles is our trade with Japan.

We know that while Japan is the second largest market for America (after Canada), the United States is Japan's number one world market. And the nucleus of that market is Los Angeles.

Out of the approximately $17 billion worth of goods exported by Japan last year, about 35 per cent went to the United States, and about 30 per cent of your imports, or some $5 billion worth, came from the United States. We were the biggest buyer of your steel, textiles, TV and radio sets, motor bikes and toys, and the second largest buyer of your marine products and footwear. And your Datsuns and Toyotas are the only real competition Volkswagen has ever had in the compact and imported automobile business in our country.

On the other hand, Japan provided the best market for American leather and hides, soya beans, lumber, pulp, cotton and steel scrap, and the second best market for American wheat, corn and coking coal. In addition, Japan bought 15 per cent of all office machines and instruments exported by the United States. This tremendous volume of trade between our two countries shows every indication of further growth in the future. Thus, the United States is not only by far the biggest buyer of Japanese goods, but a very favorable trading partner with Japan.

Let us consider why all of this is taking place. Perhaps most significant as a measure of progress—progress requiring change—is a brief reference to Gross National Product which, as you know, is the total value of all goods and services produced by a nation.

I have said that Japan is a leading maritime nation. Your country also stands high in Gross National Product, reflecting your own unprecedented progress in recent years.

In 1950, your GNP was $10.9 billion, the seventh highest in the free world. Three years later, in 1953, it had increased to $19 billion. This amounted to a little more than five per cent of the $365 billion United States GNP in the same year. By 1960, Japan's Gross National Product had grown to almost $41 billion, but it was still less than nine per cent of the U.S. GNP and your trade with the United States showed a deficit of more than $450 million. By 1961, Japan was still importing twice as much as she was exporting to the United States.

In the five-year period, 1960~1964, you exported to the United States nearly $7 billion worth of goods and imported about $10 billion of American goods for a deficit of $3 billion. However, during this period the Japanese people worked industriously to advance their economy at a rapid rate. Your GNP increased sharply as did the volume of your exports and imports.

The remarkable growth of your economy since 1964 is truly an economic miracle. By 1969 it raised Japan's GNP to $136 billion. Today, your GNP is the third highest in the world, exceeded only by the United States ($860 billion) and the Soviet Union ($400 billion). What will 1970, 1971—and the next decade record?

Along with such progress there are problems—problems we share as nations of the world. Foremost is the problem of inflation, now considered a worldwide crisis. Figures developed by the United Nations, and reported in a recent issue of our magazine, U.S. News and World Report, show that inflation in the United States has increased over six per cent in the past twelve months. In Japan, however, it has gone up 8.3 per cent.

In practically every country in the world, the pattern is much the same: spiraling wages and prices that now seem to defy control. Most experts believe that inflation will continue—but the rate is undetermined. Only with a vigorous effort in all of the major countries can inflation be contained within reasonable bounds.

A Swiss economist said recently that the greatest trouble for the world now is American inflation. He added: "If the United States, with its powerful economy and the world's leading currency cannot hold its rate of inflation below five per cent to six per cent annually, what hope is there for the rest of the world to restore stable conditions?"

Japan's heavy dependence on trade with the United States has made her economy subject to U.S. economic fluctuations. That fact, no doubt, partly explains some of Japan's dilemma. But the Japanese economy has for some time been treading an inflationary path, motivated by equipment investment, highway construction, increased housing construction and wage hikes. The vicious circle of prices and wages, both in the United States and Japan, has been continuing. We all hope that our nations, and the other leading countries of the world, will contain this fever of inflation, so that we may continue to move forward for the benefit of our citizens and the people of the world.

There has been some optimism reported recently in the press in our country. The Wall Street Journal is a newspaper published in the United States and considered by many to be our most authoritative business publication. Two weeks ago, an item on the appraisal of current trends in business and finance in the Wall Street Journal asked the question: "Can a mini-recession stop a maxi-inflation?"

The answer given was yes. If everyone can be more patient than everyone normally is, the great inflation that began in earnest in the late 1960s can be stopped without the pain of a full-blown recession, says the Journal.

If productivity strides can be maintained in coming months, we may find ourselves closer to an in—
flation-free economy than now seems likely. But it will still be a drawn-out, frustrating process.

In any case, we must plan and be ready for the future we hope for and believe in. When inflation is contained, when the danger of protectionism and its trade barriers of imposed quotas or high tariffs on foreign goods is over, and when more and more countries step into the ring of free people and free trade, we in the shipping industry must be prepared to meet the challenges and responsibilities that such events will impose on us.

At the Port of Los Angeles, we have been—and are today—preparing for those things to come. Already a half-billion-dollar facility, and the largest port on America's Pacific Coast, the Port of Los Angeles is pursuing an ambitious long-range expansion plan which will double our present port capability in 20 to 30 years. Already, the dredging has begun, and when our project is completed, we will have moved 80 million cubic yards of earth to create a 1300-acre land mass in our Outer Harbor at a cost of more than $200 million. We firmly believe we are going to need those additional acres of land and the terminals and facilities that will occupy them. Our project is, in many respects, similar to that of Kobe.

There are more than two billion people living on the rim of the Pacific Basin. Over the next 10 to 20 years, the developing countries will be needing many United States and California products, both for commerce and industrial development. In many ways, trading with California is almost like trading with a full-fledged country.

For example, if California were a nation it would be one of the economic giants of the world, according to figures recently released by the California State Department of Finance. California is the most populous state in the United States with some 20 million residents. This is almost the population of Canada, our neighboring country to the north.

Californians earn more and spend more than their counterparts in all but one country in the world. Our state’s per capita income is nearly $4,000. Among all the nations of the world, only oil-rich Kuwait, with a population of just 600,000, has a higher per capita income—$4,060.

California’s annual gross product is nearly $100 billion—seventh among gross national products in the world. The Los Angeles area alone produces a gross product of more than $48 billion, a total exceeded by only nine nations in the world. Our state carries on a foreign trade approximately equal to that of Denmark or Czechoslovakia—about $6 billion.

Californians generate and use twice as much electrical power as the 720 million Chinese and three times as much as the 512 million residents of India. Only seven nations use more electrical energy than the State of California—the United States, Russia, Great Britain, West Germany, Canada, France and your country—Japan.

We own and drive 13 million automobiles, compared with less than a million cars driven by 236 million Russians. Only the United States itself has more passenger vehicles than California. West Germany has the highest number with 11.3 million, followed by France and Great Britain with 10.5 million each; Canada, 5.7 million; and Japan, 3.9 million.

The undoubted capital of this “nation” of California, if we may call it a nation in this sense, is Los Angeles. The Los Angeles region has had a mushrooming growth during the last half-century, and particularly in the past 25 years. Today, it can claim:

The greatest concentration of advanced-technology industries in the world.

The highest percentage of mathematicians, scientists, engineers and skilled technicians in the United States.

Pre-eminence as the West's principal industrial and corporate headquarters.

International fame as one of the greatest tourist centers in the nation.

And leadership as an international seaport and the country's principal fishing port.

We are not boasting by quoting these facts and figures. They only indicate that California is an ever-growing area for mutual trade with Japan. We are aware that we are plagued with most of the same problems that are plaguing the world's industrialized countries and major cities in this modern, overpopulated and polluted age. But we are making every effort possible to solve those vexing problems. Many of the solutions may demand a re-appraisal of our very way of life, just as growth, progress and the changing trends in commerce and the shipping industry have forced us to re-appraise our ports, our cargo-handling methods and even some of our business concepts.

Such re-appraisals have been constant in recent years at the Port of Los Angeles. We have dredged channels for your supertankers, we have built facilities for your container ships and bulk carriers and we have even signed trade proclamations with nine of your prefectures over the past two years, in what we consider a challenging new concept in pledging our continuing friendship and trade relations with the people of Japan.

We were the first port to enter into these historic trade proclamations. Today we have such agreements with the prefectures of Nagasaki, Hokkaido, Miyagi, Okayama, Wakayama, Shizuoka, Aichi, Osaka and the City of Yokohama.

These prefectures have agreed to ship via the Port of Los Angeles cargo generated in their areas and destined for the United States. And the Port of Los Angeles has agreed to further promote trade between these prefectures and the United States. Although morally—rather than legally binding—these agreements are proving to be beneficial to the various Japanese communities as well as the many communities served by the Port of Los Angeles.

While we are separated by the widest of oceans, our two countries and our people are being brought closer and closer together. Not just by proclamations. Not just by new and faster methods of communication and transportation. But we have become bound together as friends by mutual trust and the common desire expressed in the

(Continued on Next Page Bottom)
The Institute of International Law of Transport organised on 16th October, 1970, at Rouen, a day of study of the legal problems raised by barge-carrier vessels. (Refer to Ports and Harbors, December 1970 page 26, news captioned “Symposium in Rouen”.)

This day is the first initiative of international dimension of the I.D.I.T., founded in Rouen in 1969. It was followed by over 150 persons including a good number from neighbouring countries.

Work was carried out under the patronage of the Transport Ministry and the Equipment and Housing Ministry, with in the chair M. RODIERE, Professor of Law and Economic Science at the Faculty of Paris, and Director of the Institute of Comparative Law at the University of Paris.

The congressmen were welcomed by M. VAUDOUR, President of the Regional Chamber of Commerce and Industry of Upper-Normandy, and President of the Institute. He was to thank in particular the Law and Economic Science Faculty of Rouen, the Port Authorities of Rouen and Le Havre, the Bar of the Rouen Court of Appeal, the Association of European Lawyers, the High School of Commerce of Rouen, who all contributed to the organisation of the talks.

Work started with an introduction by M. MASSON, Chief Engineer of the Ponts et Chaussées, Director of the CERLIC, on the technical aspect of barge-carrier vessels (the Journal de la Marine Marchande has already exposed the views of M. MASSON on this subject). Another introduction was by M. MERCADAL, Professor at the Faculty of Law and Economic Science of Rouen, dealing with the legal aspects.

In a remarkable explanatory statement, M. MERCADAL minutely and pertinently analysed the chronological order of the material operations in moving and transporting the barge, during the maritime and fluvial phases. Clearly exposing the legal problems which appear in parallel, he made it possible for the three commissions, maritime, fluvial and port, to commence their work under the best conditions.

M. POTIER, Director of the Chargeurs Réunis, was Chairman of the Maritime Commission, M. du PONTAVICE, Professor at the Faculty of Law of Paris, being Secretary.

M. J. SAIGOT, Director-General of the C.G.P.V.N., was Chairman of the Fluvial Committee, both M. PEYREFFITTE and M. MERCADAL, Professors at the Faculty of Law of Rouen, being Secretaries.

The Port Commission had M. LAROCHE, General Director of the N.C.H.P., in the Chair, M. PEYRONNET, General Engineer of the Ponts et Chaussées, and M. HUE, Head of the Commercial Service of the Marseilles Port Authority, being secretaries.

When the three Commissions and the Joint Committee had finished their work, M. RODIERE presented to the congressmen a very lively picture of the day. Giving the main points specially dealt with by the three Commissions, he tried not without humour to present the possible leading factors of new legislation applicable to barge-carrier vessels.

Here are the main points of M. RODIERE’s statement:

I.—Conclusions of the Three Commissions

1 The Maritime Commission

The Maritime Commission studied two main questions:
— the problem of the qualification of the barge;
— the problem of the nature of the contract between the pusher and the barge-owner.

a) Qualification of the barge:

For the Maritime Commission, as long as the barge is on the carrier-vessel there is nothing particular in the transport: the ordinary rules of sea carriage will apply.

The real problem appears from the moment when the barge is cast-off from the mother-vessel until it is taken up again by this vessel.

What regime will prevail for the fluvial journey?

The reply appeared to be governed by the qualification given:
— for some, it is a vessel;
— for others, a craft;
— for even others, it is a floating container.

This last qualification was waived.

According to the Maritime Commission, the barge is not goods but a “floating machine”.

Three assumptions must therefore be considered:

First: the barge belongs to the vessel: there is no doubt that in this case it becomes an accessory of the vessel;

Second: the barge belongs to the Owner but not to the vessel: it then becomes an auxiliary to the vessel;

Third: the barge belongs to the Shipper: the situation is then identical to a lorry on a car-ferry, it is no longer an accessory to the vessel.

The Maritime Commission also interested itself with the status of the barge when pushed on the
river.

b) The nature of the contract passed between the pusher and the owner of the barge:

According to the Maritime Commission it is a contract for a supply of power, not a carriage contract.

2 The Fluvial Commission

The Fluvial Commission examined problems of private and trade laws.

A.—Problems of Private Law

1) Third-party liability of barge owners.

The Fluvial Commission engaged its discussion on this question as not having to determine the nature of the contract between the owner of the barge and the pusher, nor to qualify the barge, it seemed that this question could be easily solved. It concluded that in the event of damage caused by an inert object, or whether faultfinding would be sought. Nevertheless the problems of qualification could not be neglected particularly in the event of the barge colliding with a vessel or with a lighter (Maritime collision or Fluvial collision according to the status of the barge); 2) The legal nature of relations between the pusher and the barge.

For the Fluvial Commission, in view of the present state of positive law, of jurisprudence and of doctrine, this contract should be dealt with as a carriage contract. But this solving presents serious drawbacks: the regime of pusher contracts is not uniform on the whole of the French interior network: on the Rhine in particular non-responsibility clauses are tolerated.

B.—Problems of Trade Law

Above all it is the question of the access of American barges to the French fluvial network.

If in fact the ruling issued from the Act of 22nd March 1941, and the Order in Council of 29th June 1942, is to be such in its interpretation that American barge-carrier vessels forsake French ports, then it is certain that it will be of no advantage neither to the owners, the ports nor to the French economy in general.

The Commission limited itself to state that it depended on the Government to adopt an attitude reconciling at the same time the interests of bargees and those of the French Economy.

3 The Port Commission

1) Status of the Barge

For the Port Commission, the barge is neither a vessel, nor a packing: it is a craft.

It would not be reasonable to give different qualifications to a barge according to whether it belongs to the owner of the vessel or to the shipper. From a fluvial point of view a barge must be considered as a craft; consequently the situation becomes identical to a car-ferry carrying a lorry: the lorry does not become a vessel because it crosses the Channel. No consideration is therefore to be given to the fact that for a certain time the barge has travelled on a vessel.

But the Port Commission comes to the conclusion that the status covering river craft in France does not fit; it is therefore necessary to create for barges a “sul generis” legal status.

2) Fiscal matters

At what time will be collected the tonnage tax on the one hand, and the cargo tax on the other?

To solve this problem of taxation of the vessel and of the barges, the notion of services rendered by the port must be taken as the guiding principle.

a) Tonnage Tax

Three possibilities can be considered:

First: the vessel casts off barges outside of the limits of the port.

In such a case the vessel has no tonnage dues to pay.

Second: the vessel casts off barges whilst at anchor.

As the barge-carrier vessel is not making use of shore installations it would not be reasonable to expect the vessel to pay as much as if tied up to a berth. If the vessel must pay something it is only because she has entered port.

Third: If the vessel utilizes a quay.

The vessel makes use of the installations on the quai and must pay dues as an ordinary vessel.

b) Cargo dues

What is interesting here is to know whether the barge will be discharged at the sea port or at a river port.

If the barge is discharged at the seaport, it will have to pay the tax due on the discharge of an ordinary vessel.

If the barge is discharged at a river port, having left the sea-port, then double payment of dues must be avoided. No doubt the barge will have benefited of certain services in the sea-port, but such services appeared to the Port Commission to be secondary to those rendered by the fluvial port where the cargo is discharged.

The Port Commission also interested itself on two other matters: the handling of barges; and the natural law of towing barges inside the sea-port.

As for the handling of barges in the sea-port, this must be done by the port professionnels, therefore by the dockers.

Dealing with the legal nature of the towing of barges inside the sea-port, the Port Commission came to this conclusion: it is a hire of services or a commercial hire, but it is not a carriage contract.

II.—Guiding Principles for new Legislation

The Commissions considered that it will be shortly necessary to ask Public Authority to solve the problems directly. But what course to be pursued to solve them? What will be the legal guide-line?

If all the legal difficulties raised by the utilisation of barge-carrier vessels are thoroughly examined it is noticed that in fact they are due to the insistence in wanting to qualify the barge in which the cargo is carried, whereas it is really the cargo which is of interest.

A barge-carrier vessel has not been conceived to carry barges, but to carry goods in the most economical manners.

Therefore one must not lead from the idea that the barge is an accessory to the vessel but that it is an accessory to the goods. Having thus shifted the problem and bearing directly in mind the goods, all the problems of private law can be solved and a certain number of common law problems can be avoided by the use of proper through bills of lading. It is not by qualifying the barge as a vessel or as a craft, or by qualifying the (Continued on Next Page Bottom)
The 7th International Seminar on Port Management in The Netherlands

April 13—May 20, 1971

The Seventh International Seminar on Port Management in the Netherlands is to be held from 13th April—20th May, 1971 in Delft, Rotterdam and Amsterdam, according to an announcement dated 31st December 1970 by the NUFFIC (Netherlands Universities Foundation For International Co-operation, at Molenstraat 27, The Hague, The Netherlands).

The programme offers a lecture period of two weeks—the first and the final week of the seminar—which will take place in Delft as part of the training offered in the International Courses in Hydraulic and Sanitary Engineering.

During the remaining weeks, visits will be made to the Ports of Amsterdam and Rotterdam (two weeks) and several days will be spent in visiting ports in France and in the United Kingdom. During the last two years, participants will have the opportunity of visiting/studying specific aspects of the port management situation in the Netherlands.

Participation in the seminar is limited to 25 persons who preferably should have a university background and several years of experience in a port management setting.

The full particulars of the Prospectus are reproduced below.

Introduction

The speeding up of the turn-round of ships in ports has been referred to by the United Nations’ Conference on Trade and Development as being a vital problem in relation to world trade. Foreign port administrators, many coming through the intermediary of the United Nations, have spent observation periods in Dutch ports. It is doubtful whether these studies have always yielded good results. A theoretical basis was lacking. It was easy to observe the techniques, but difficult to understand why they were applied. Also, it often proved difficult to adapt the knowledge acquired in the Netherlands to the situation in the observer’s country.

For this reason, the need was felt to organise a special seminar. The International Technical Assistance Department of the Ministry of Foreign Affairs, which, served as an intermediary for study visits to the Dutch ports, took the initiative and established an international seminar, which handled individual requests. The Port Authorities of Amsterdam and Rotterdam which have frequently been approached by individual visitors, were pleased to give their full support to this idea.

The scientific and organisational responsibility for the seminar was given to the International Courses in Hydraulic and Sanitary Engineering at Delft. Eleven month post-graduate programmes in Hydraulic Engineering have been given by this institution, since 1957. This Institute has offered all-round training to its port and harbour engineers in its “tidal and coastal engineering branch”. It is obvious that the same ground cannot be covered in a five-week seminar as in a full eleven-month course; therefore, the seminar programme does not include a discussion of structural and hydraulic aspects, but rather is confined to a thorough treatment of the organisational and managerial aspects of ports.

The previous six Seminars on Port Management have brought together 153 port administrators from 56 different countries. The discussions between them proved to be very valuable. Therefore, each participant is expected to deliver a short statement on the problems that are of special importance of his work in his country. Candidate-participants are requested to bring material with them which they would like to present at Delft.

Subjects Taught in the Seminar

A. Lecture Parts:

1. General survey of problems of transportation and of navigation.

2. Port Management.

The international character of ports and port dependency on local political conditions. Coordination between ports. Diver-
sity of port organisation, the port area, and port function. Statistics and reports as tools of management. Operation and financing of a port.

3. Lay-out of port areas.
   Master plan and design features of general and specialised berths. Road and railway connections of ports. Operational research as a tool in port management.

4. Cargo Handling.
   Aids to quicker turn-round of ships. Causes of delay in output. Handling of roll-on roll-off and container cargoes.

5. Port labour, safety and health.

B. programme of visits to and around the ports of Amsterdam and Rotterdam

1. Amsterdam: April 19th—24th, 1971
   Introductory lectures on the ports, its history, organisation, operation, and future.
   Visits with explanatory lectures on:
   - The harbour entrance at IJmuiden and the locks and new breakwaters.
   - Theory and practice in handling general cargo from various types of ships.
   - Handling special cargoes such as cereals, soft and hard wood, containers, etc.

2. Rotterdam: May 3rd—8th, 1971
   Introductory lectures on the port, its history, organisation, operation, and future.
   Visits with explanatory lectures on:
   - Harbour entrance at Hoek van Holland with the construction of new breakwaters.
   - Various sections of the port with large port extension at Europort. Stevedoring enterprises and warehouses. Port training institute. Handling of containers and of unit loads.
   - Mechanical trans-shipment and storage of general cargoes and cereals. Navigational radar stations.

C. study visits to a few ports outside the Netherlands: April 26th—May 1st, 1971
   The organisers of the International Seminar on Port Management consider it of great importance that participants become acquainted not only with the ports of Amsterdam and Rotterdam, but also with a number of other ports. For the 1971 Port Seminar preparations are being made to visit a few other ports in France and Great Britain.

D. individual studies: May 18th and 19th
   Participants who are interested in special visits or business discussions might use the 18th and 19th of May for this purpose. As far as possible, the courses' management will make appointments for those participants who wish to have such individual discussions. For those participants who do not need those two days for this purpose, the course will arrange a visit to a port in the Northern part of the Netherlands on the 18th of May.

Application and Admission

The Seminar is open to government officials and other qualified candidates who in their daily activities have been confronted with problems of port management for a number of years. Preferably, candidates should have a university degree although in special cases experience can replace a university background. No simple formula can be given for the conditions of admission and for this reason applications will be considered individually. In order to enable the organisers to judge the applications properly, candidates should fill in the attached application form as completely and clearly as possible and return it to the Registrar. All candidates are required to submit a letter of recommendation from their employer. They are advised not to come to the Netherlands to attend the seminar before they have received notice of admission. In order to promote a close contact between the lecturers and participants and to stimulate discussions, the number of participants will be limited to 25.

Duration of the Seminar

The Seminar will be on Tuesday, April 13th, 1971 and close on Tuesday, May 18th, 1971. All participants are expected to arrive in the Netherlands on Monday, April 12th, 1971 and to take part in the entire programme of the seminar. Therefore, those participants who have other business to attend to in the Netherlands, are expected to arrive a few days prior to the Seminar, or to stay on after completion of the Seminar. All participants are advised to obtain visas for France and Great Britain before the Seminar begins.

Language

Since the course will be given in English, a good working knowledge of this language is a prerequisite.

Fees and Other Expenses

The participation fee is Dfl. 2200,—, which includes the tuition fee, travel costs for the field trips within the context of the course, and the cost of lodging and breakfast during the period of the course. Participants are required to pay lunch and dinner expenses. Unfortunately, it cannot be guaranteed that hotels will always have single rooms available. The participants' fee should be paid on or before registration day. Those preferring to pay in advance are requested to have the participation fee paid to the account of NUFFIC at the Amsterdam-Rotterdam Bank, 14 Wagenstraat, Den Haag.

Fellowships

It is expected that a number of participants will be granted fellowships by their employers or by national or international fellowship granting organisations, such as the United Nations, the International Labour Organisation (I.L.O.), or the Organisation for Economic Co-operation and Development (O.E.C.D.). Candidates who wish to receive information about financial facilities provided by the Netherlands to candidates coming from developing countries should apply to the Netherlands Diplomatic Representative in their countries. Netherlands Government fellowships do not include an amount for travel expenses from the country of origin to the Netherlands and v.v.

Insurance

Participants are expected to insure themselves against health, (Continued on Next Page Bottom)
Singapore Moves Towards Containerisation

The Port of Singapore Authority

The Port of Singapore today serves an extensive region in South-East Asia and is fast becoming a pivotal transshipment springboard engulfing wider regions around the Republic, reaching well beyond the confines of South-East Asia. Its responsibility as a leading Port is one of continuous development and improvement to cater for the demands of its many port users. The Port today provides a maximum range of efficient services meeting the requirements of commerce, industry and transportation at the lowest costs.

To meet this challenge and to keep up with its present and future requirements, the Port is to-day developing a Container Port costing $77.6 million which will provide adequate container terminal facilities to handle the anticipated container traffic through this region.

This PSA Container Port is being constructed with the confidence that with the upsurge of containerisation in the world, Singapore will with this project be ensured of a place in the ultimate global system of Container Ports. With construction well in progress, the Port forges ahead into the seventies with confidence to gain a new importance in international shipping as a major pivotal Port.

The PSA Container Port situated at the East Lagoon will have a terminal initially occupying 60 acres of land. The terminal will be comprised of two main Container Berths of length totalling 2,250 ft. with 44 ft. depth alongside at low water, a 700 ft. Cross-Berth with 34 ft. alongside at low water for feeder service vessels, one Freight Station at the Cross-Berth of 420 ft. by 150 ft., and two larger Freight Stations at the main Container Berths of 540 ft. by 150 ft. each. There will also be two weighbridges of 60-ton capacity and a 3rd of 40-ton capacity.

The terminal will cater for about 6,200 twenty-foot containers stacked 2-high at random and 106 twenty-foot refrigerated containers with plug-on facilities. The deck will also be capable of supporting 40-foot containers. The marshalling yard will cover an area of 26 acres. Initially, two single-lift 35 ton container cranes will be installed to operate along the main Container Berths.

The 700 ft. Cross-Berth originally due for completion at the end of 1970 has been completed 3 months of its many port users. The Port today provides a maximum range of efficient services meeting the requirements of commerce, industry and transportation at the lowest costs.

To meet this challenge and to keep up with its present and future requirements, the Port is to-day developing a Container Port costing $77.6 million which will provide adequate container terminal facilities to handle the anticipated container traffic through this region.

This PSA Container Port is being constructed with the confidence that with the upsurge of containerisation in the world, Singapore will with this project be ensured of a place in the ultimate global system of Container Ports. With construction well in progress, the Port forges ahead into the seventies with confidence to gain a new importance in international shipping as a major pivotal Port.

The PSA Container Port situated at the East Lagoon will have a terminal initially occupying 60 acres of land. The terminal will be comprised of two main Container Berths of length totalling 2,250 ft. with 44 ft. depth alongside at low water, a 700 ft. Cross-Berth with 34 ft. alongside at low water for feeder service vessels, one Freight Station at the Cross-Berth of 420 ft. by 150 ft., and two larger Freight Stations at the main Container Berths of 540 ft. by 150 ft. each. There will also be two weighbridges of 60-ton capacity and a 3rd of 40-ton capacity.

The terminal will cater for about 6,200 twenty-foot containers stacked 2-high at random and 106 twenty-foot refrigerated containers with plug-on facilities. The deck will also be capable of supporting 40-foot containers. The marshalling yard will cover an area of 26 acres. Initially, two single-lift 35 ton container cranes will be installed to operate along the main Container Berths.

The 700 ft. Cross-Berth originally due for completion at the end of 1970 has been completed 3 months of its many port users. The Port today provides a maximum range of efficient services meeting the requirements of commerce, industry and transportation at the lowest costs.

To meet this challenge and to keep up with its present and future requirements, the Port is to-day developing a Container Port costing $77.6 million which will provide adequate container terminal facilities to handle the anticipated container traffic through this region.

This PSA Container Port is being constructed with the confidence that with the upsurge of containerisation in the world, Singapore will with this project be ensured of a place in the ultimate global system of Container Ports. With construction well in progress, the Port forges ahead into the seventies with confidence to gain a new importance in international shipping as a major pivotal Port.

The PSA Container Port situated at the East Lagoon will have a terminal initially occupying 60 acres of land. The terminal will be comprised of two main Container Berths of length totalling 2,250 ft. with 44 ft. depth alongside at low water, a 700 ft. Cross-Berth with 34 ft. alongside at low water for feeder service vessels, one Freight Station at the Cross-Berth of 420 ft. by 150 ft., and two larger Freight Stations at the main Container Berths of 540 ft. by 150 ft. each. There will also be two weighbridges of 60-ton capacity and a 3rd of 40-ton capacity.

The terminal will cater for about 6,200 twenty-foot containers stacked 2-high at random and 106 twenty-foot refrigerated containers with plug-on facilities. The deck will also be capable of supporting 40-foot containers. The marshalling yard will cover an area of 26 acres. Initially, two single-lift 35 ton container cranes will be installed to operate along the main Container Berths.

The 700 ft. Cross-Berth originally due for completion at the end of 1970 has been completed 3 months of its many port users. The Port today provides a maximum range of efficient services meeting the requirements of commerce, industry and transportation at the lowest costs.

To meet this challenge and to keep up with its present and future requirements, the Port is to-day developing a Container Port costing $77.6 million which will provide adequate container terminal facilities to handle the anticipated container traffic through this region.

This PSA Container Port is being constructed with the confidence that with the upsurge of containerisation in the world, Singapore will with this project be ensured of a place in the ultimate global system of Container Ports. With construction well in progress, the Port forges ahead into the seventies with confidence to gain a new importance in international shipping as a major pivotal Port.

The PSA Container Port situated at the East Lagoon will have a terminal initially occupying 60 acres of land. The terminal will be comprised of two main Container Berths of length totalling 2,250 ft. with 44 ft. depth alongside at low water, a 700 ft. Cross-Berth with 34 ft. alongside at low water for feeder service vessels, one Freight Station at the Cross-Berth of 420 ft. by 150 ft., and two larger Freight Stations at the main Container Berths of 540 ft. by 150 ft. each. There will also be two weighbridges of 60-ton capacity and a 3rd of 40-ton capacity.

The terminal will cater for about 6,200 twenty-foot containers stacked 2-high at random and 106 twenty-foot refrigerated containers with plug-on facilities. The deck will also be capable of supporting 40-foot containers. The marshalling yard will cover an area of 26 acres. Initially, two single-lift 35 ton container cranes will be installed to operate along the main Container Berths.

The 700 ft. Cross-Berth originally due for completion at the end of 1970 has been completed 3 months
An aerial view of the Container Port, showing the completed Feeder Service Berth (Berth 48) and work in progress on the 2,250 ft. of deepwater berths for Container Vessels. (Port of Singapore Authority)

ahead of schedule, while the first Container Berth together with its ancillary services will be completed at the end of 1971 when Singapore will be able to take on its first container vessel. The second Container Berth and the entire, initial phase of Singapore's Container Port will however, be ready towards the end of 1972.

The siting of this Container Port at the East Lagoon was because of its proximity to the city's trading area, and its easy access to the industrial sites at Jurong. Other major considerations were the ease with which ships could enter the Port and approach the berth, the availability of deep water, the adequate shelter against the monsoons, the adequate space in manoeuvring the largest size vessels expected to use this port and the

(Continued on Next Page Bottom)
The Port of Aden
by S. M. Khalifa, A.A.C.C.A., A.A.I.A.
General Manager
Aden Port Trust
People’s Democratic Republic of Yemen

The Port of Aden in the People’s Democratic Republic of Yemen enjoys a most auspicious position at a cross-route between Europe, the Far East and Australia. Its location made it a focal point for ships sailing through the Suez Canal to bunker at Aden. The average net registered tonnage of ships entering the Port prior to the closure of the Suez Canal had reached 40,000-0 tons per annum and the number of vessels was approximately 6,000 per annum.

However, the number of ships entering the harbour, after the closure of the Suez Canal, totalled to nearly 1,600 per annum and the average net registered tonnage is nearly 9,000,000 tons per annum. This drastic fall in tonnage and ships had a temporarily adverse effect on the finances of the Port. The Management of the Port has, nevertheless, been busy studying and planning for the improvement of the existing facilities so that bigger ships could be accommodated in the Port. During 1970 a number of big tankers have entered the Port e.g., “HAMILTON LOPES”, and “HORTA BARBOSA”. Incidentally, the deepening of the harbour from 36 feet to 40 feet has already commenced and the first stage of deepening the entrance channel is nearly completed.

In addition to these plans, the Port Authority had been thinking very seriously of the ever increasing changing trend in the Ports industry and had envisaged studying the possibilities of using the Aden Harbour for transhipment of containers to serve nearby regions after the Suez Canal reopens.

Although the Port of Aden has been subjected to wild rumours after independence, yet the long standing tradition of the Port and the standing of the Port as a focal point for trade and commerce have been somewhat maintained in the past. The Port is fully operational it should be able to meet its demands as a major pivotal Container Port for the region.

The Port being forward-looking is now actively studying its requirements beyond 1972. The plan for the Port as she moves into the mid-seventies is therefore towards an even larger and better equipped Port to serve not only the region but international shipping calling at the Port as well.

adequate back-up land for full container yard operations.

About 50 acres of foreshore had to be re-claimed to provide the additional land area required for the marshalling yard. Final dredging to 44 ft. at the main container wharves will be completed by the middle of 1971.

The original plan to accommodate 3 container ships along 2,250 ft. of deep water berths are now to be amended with an extension to 3,250 ft. and construction of the additional 1,000 feet should follow the completion of the first phase at the end of 1972.

Shipping through the Port continues to grow and during the first 9 months of 1970 registered an increase of 16% over the corresponding period in 1969. During this period there was also an increase of 56% in the number of containers handled through the Port by conventional means. At the PSA temporary Container Yard/Freight Station, close to 6,000 containers were handled during the 9 months period. This increase reflects the trend of this fast growing concept of unitisation in the inter-modal movement of cargo. Singapore is receiving its share of containers and it is expected that when this Container Port is fully operational it should be able to meet its demands as a major pivotal Container Port for the region.

The Port being forward-looking is now actively studying its requirements beyond 1972. The plan for the Port as she moves into the mid-seventies is therefore towards an even larger and better equipped Port to serve not only the region but international shipping calling at the Port as well.

together with the application of new Management techniques have up-kept to the better the standard and efficiency of the Port during the past two years.

Vessels calling for bunkering or discharging cargo are given first-class services and despatched within the minimum turn-round time. Complaints, if any, are dealt with at the highest level possible and whenever time permits high rank officials of the Port board ships to improve the public relation of the Port with its customers.

It is worth mentioning here that independence has brought us one major advantage and that is the Aden Harbour has never remained closed, not even for one day during the past three years, due to strikes. This is a big achievement when compared with records of pre-independence days. However, it is admitted that a Port does not run without labour problems but the Port Authority manages to encircle and solve them without affecting the operation of the Port.

The Aden Harbour had a flourishing entrepot trade, which unfortunately had dwindled for reasons beyond our control. However, the Management is thinking seriously of introducing modern methods and more facilities to recover this aspect of trade.

It is interesting to observe that the Aden Harbour is still, as it has ever been, busy seeing dhows of different shapes and make plying between Aden and other Ports in the Red Sea, the Arabian Gulf and East Africa, as far away as Zanzibar. The Aden Port Management welcomes this type of crafts and has endeavoured to give better facilities to these crafts which have made structural revolution by fitting diesel engines to help their movements when their sail by wind fails. It is interesting in these days and era to see this type of crafts still using the high seas as they really indicate in the 20th century the glory of the Port of Aden, which used to be a focal point for trade for many countries around and across the high seas, by means of these crafts.

The Port of Aden used to welcome about 200,000 passengers yearly prior to the closure of the
Suez Canal. It is a fact that every passenger then looked forward to shopping in Aden instead of any other Port while en route from Europe to Australia and the Far East and vice versa. Although the closure of the Suez Canal had brought the passenger traffic to a standstill, the Port Trust Management is now planning to improve further and foster such facilities as to make it much more attractive to passengers coming to Aden. Moreover, the General Manager, in Management’s planned tour, visited different Shipping Companies with a view to answering questions on spot and, at the same time, pointing out the improved services of the Port and in particular canvassed for the return of passengers shipping to Aden.

Such attitudes on the part of the Management proved fruitful. One good example was the evolution of the jet-sea traffic which was embarked upon when in October, 1969, only a few hours before calling to another port, R.H.M.S. “Patris” diverted to Aden due to difficulties in air traffic rights in the other Port. As soon as news of the diversion were received, a high-powered Committee was immediately formed under the Chairmanship of a Minister and the membership of the General Manager of the Port, the Director of Immigration, Director of Civil Aviation, Director of Tourism, Commissioner of Police and Shipping Manager, and decisions were taken to waive all the normal requirements demanded from the passengers in the Port and the Airport. A welcoming Committee was appointed and the passengers entered the harbour under a welcoming musical band.

Fortunately, the arrival of “Patris” coincided with the Republic’s Independence celebration. The whole city was colourfully decorated with flags and illuminations. The operation was successful, turn-round of passengers from Port to Airport and vice versa was meticulously arranged and as a result the owners of the vessel have decided on their own accord to come back next time to their usual place of call—the Port of Aden—to which they have frequently called before the closure of the Suez Canal. The operation was repeated after eight months with the same success and zeal and about 3,500 passengers were transported between the Port and the Airport i.e. from the vessel to characterized aircrafts. The ship is expected to pay yet another visit sometime in 1971 and accordingly are now mushrooming at a fast pace to reflect the indomitable vigors of the nation’s 35 leading firm representing the iron and steel, petroleum refining, petrochemical, food manufacturing and other major industries.

Kashima Harbor was constructed in parallel with this industrial zone. It is situated at the center of an expansive sand beach which is constantly hit by severe climatic conditions. Here, the mountainous waves of the Pacific break thunderingly on the beach, and there are only about 100 days a year of placid sea when the waves measure only one meter high. It is far from being a good natural harbor, and its construction was achieved in the face of indescribable hardships.

For example, a long, southside breakwater extending 3,900 meters into the sea and a 1,050-meter northside breakwater had to be built. To secure the waterways and berthing places, some 80 million cubic meters of earth were excavated when the waves measure only one meter high. It is far from being a good natural harbor, and its construction was achieved in the face of indescribable hardships.

All factors point to the fact that the Japanese industries will continue their buildup during the ‘70s. In the wake of this trend, development of coastal industrial zones as well as industrial ports and harbors is assuming greater importance. And in sea-front civil engineering projects of this nature, a wide scope of special vessels for port and harbor construction service ships as well as other equipment supplied by IHI are playing leading roles.

Spurred by such urgency, a mammoth industrial zone encompassing 3,300 hectares of land area was constructed on the seacoast of Kashima, Ibaragi Prefecture. Here, new plants are now mushrooming at a fast pace to reflect the indomitable vigors of the nation’s 35 leading firm representing the iron and steel, petroleum refining, petrochemical, food manufacturing and other major industries.

Kashima Harbor was constructed in parallel with this industrial zone. It is situated at the center of an expansive sand beach which is constantly hit by severe climatic conditions. Here, the mountainous waves of the Pacific break thunderingly on the beach, and there are only about 100 days a year of placid sea when the waves measure only one meter high. It is far from being a good natural harbor, and its construction was achieved in the face of indescribable hardships.

For example, a long, southside breakwater extending 3,900 meters into the sea and a 1,050-meter northside breakwater had to be built. To secure the waterways and berthing places, some 80 million cubic meters of earth were excavated when the waves measure only one meter high. It is far from being a good natural harbor, and its construction was achieved in the face of indescribable hardships.

All factors point to the fact that
the Japanese industries will continue
their buildup during the ‘70s. In the
wake of this trend, development of
coastal industrial zones as well as
industrial ports and harbors is as-
suming greater importance. And in
sea-front civil engineering projects
of this nature, a wide scope of special
vessels for port and harbor construc-
tion service ships as well as other
equipment supplied by IHI are play-
ing leading roles.

Spurred by such urgency, a mam-
moth industrial zone encompassing
3,300 hectares of land area was
constructed on the seacoast of Ka-
shima, Ibaragi Prefecture. Here,
new plants are now mushrooming at
a fast pace to reflect the indomitable
vigors of the nation’s 35 leading
firm representing the iron and steel,
petroleum refining, petrochemical,
food manufacturing and other
major industries.

Kashima Harbor was constructed
in parallel with this industrial zone.

It is situated at the center of an
expansive sand beach which is con-
stantly hit by severe climatic con-
ditions. Here, the mountainous
waves of the Pacific break thunder-
ingly on the beach, and there are
only about 100 days a year of placid
sea when the waves measure only
one meter high. It is far from being
a good natural harbor, and its con-
struction was achieved in the face of
indescribable hardships.

For example, a long, southside
breakwater extending 3,900 meters
into the sea and a 1,050-meter
northside breakwater had to be
built. To secure the waterways and
berthing places, some 80 million
cubic meters of earth were excavated
when the waves measure only
one meter high. It is far from being
a good natural harbor, and its con-
struction was achieved in the face of
indescribable hardships.

All factors point to the fact that
the Japanese industries will continue
their buildup during the ‘70s. In the
wake of this trend, development of
coastal industrial zones as well as
industrial ports and harbors is as-
suming greater importance. And in
sea-front civil engineering projects
of this nature, a wide scope of special
vessels for port and harbor construc-
tion service ships as well as other
equipment supplied by IHI are play-
ing leading roles.

Spurred by such urgency, a mam-
moth industrial zone encompassing
3,300 hectares of land area was
constructed on the seacoast of Ka-
shima, Ibaragi Prefecture. Here,
new plants are now mushrooming at
a fast pace to reflect the indomitable
vigors of the nation’s 35 leading
firm representing the iron and steel,
petroleum refining, petrochemical,
food manufacturing and other
major industries.

Kashima Harbor was constructed
in parallel with this industrial zone.

It is situated at the center of an
expansive sand beach which is con-
stantly hit by severe climatic con-
ditions. Here, the mountainous
waves of the Pacific break thunder-
ingly on the beach, and there are
only about 100 days a year of placid
sea when the waves measure only
one meter high. It is far from being
a good natural harbor, and its con-
struction was achieved in the face of
indescribable hardships.

For example, a long, southside
breakwater extending 3,900 meters
into the sea and a 1,050-meter
northside breakwater had to be
built. To secure the waterways and
berthing places, some 80 million
cubic meters of earth were excavated
when the waves measure only
one meter high. It is far from being
a good natural harbor, and its con-
struction was achieved in the face of
indescribable hardships.

All factors point to the fact that
the Japanese industries will continue
their buildup during the ‘70s. In the
wake of this trend, development of
coastal industrial zones as well as
industrial ports and harbors is as-
suming greater importance. And in
sea-front civil engineering projects
of this nature, a wide scope of special
vessels for port and harbor construc-
tion service ships as well as other
equipment supplied by IHI are play-
ing leading roles.

Spurred by such urgency, a mam-
moth industrial zone encompassing
3,300 hectares of land area was
constructed on the seacoast of Ka-
shima, Ibaragi Prefecture. Here,
new plants are now mushrooming at
a fast pace to reflect the indomitable
vigors of the nation’s 35 leading
firm representing the iron and steel,
petroleum refining, petrochemical,
food manufacturing and other
major industries.

Kashima Harbor was constructed
in parallel with this industrial zone.
Cargoes Being handled at Japanese Ports

![Graph showing cargoes handled at Japanese ports from 1955 to 1975.](image)

IHI are being used. Use of the BWE's makes digging of earth and sand, their transportation and unloading continuous.

To date, reportedly 600,000 m$^2$ of land area comprising 13% of the Port Island project have been reclaimed. The land reclamation work of this project was initiated in 1966, and upon its completion in 1975, the total reclaimed land area will be 4,360,000 m$^2$. The site will become a world’s leading “Offshore Harbor City,” a superior example of ingeniously integrated land reclamation effort and a super-modernized harbor that will serve as a container terminal and fulfill other purposes as well.

IHI has developed earth moving systems combining the Bucket Wheel Type Unloader (BWU) and the Bucket Wheel Excavator (BWE) with conveyor lines for use in large scale land reclamation and readjustment works which are expected to become increasingly necessary henceforth. For such client needs, IHI is fully prepared to exert its unreserved efforts.

Apart from construction of seafront industrial zones and accompanying ports and harbors, various marine civil engineering works as exemplified by the Aomori-Hakodate...
Statistics And Trade

Haven Amsterdam

(19th October, 1970)

Statistics, like Caesar's wife, are all things to all men. Happily figures recently released by the port's Havens en Handelsinrichtingen indicate that sea-going traffic moving through the port of Amsterdam in the first six months of 1970 has surpassed that of the same period last year by 16 per cent.

Culled from the records of Amsterdam's Municipal Office for Statistics which are based on data obtained from the declaration of seaport dues by shipowners or agents, the figures reflect a significant growth in sea-going traffic:

...and if this trend continues, sea-going traffic in 1970 should exceed 22 million tons, considerably higher than the 19.72 million tons recorded in 1969.

Interestingly, the municipal figures do not agree with those published by the Central Bureau for Statistics in The Hague, as those figures are based on data supplied by the customs authorities. Since that authority does not register arrival of goods until the goods reach their final destination, the CBS statistics do not reflect such a rise as yet.

The reason the municipal figures are so much higher is that they include the temporary storage of bulk cargoes—such as grain, ore and coal—and all these scored a record high in 1970. The total tonnage of sea-going cargo in the first six months of 1970 reached 10.5 million tons, compared to 9.02 million tons in the same period in 1969.

Much of this increase was reflected in ore and mineral oils which registered gains of 64 and 16 per cent respectively. The introduction of modern cargo handling techniques is seen in Amsterdam very well, with the result that while the total number of ships handled in the port fell slightly to 3,873, total capacity of the ships handled rose again (to 37.01 million cubic metres).

Port traffic based on trade

Amsterdam is first and foremost a trading city. Trade has made the city what it is today and deep in the heart of every true Amsterdammer lies the barterer, the trader who derives his pleasure as well as his means of living from exchange of goods. And this keen interest in trade is reflected in the port statistics as well.

Amsterdam got its start by trading in fish, beer and salt, during the 17th Century—the city's Golden Age—beaver fur, skins and hides, stockfish, pepper and nutmeg were vital to the city's commerce. Amsterdam still trades in stockfish today and there remains a Stockfish Guild Fund from which widows and orphans receive their sustenance.

The city trades in coffee and cocoa. The former commodity was first received in 1616 when the first coffee plant was brought from Moccha to Amsterdam. From the municipal botanical garden, Louis XIV got a cutting of a coffee tree, from there coffee went to Martinique and in 1767 Brazil got its first coffee plant: a descendant of the first Amsterdam planting.

Amsterdam's trading history ties in with the history of the city itself and there are thousands of fascinating histories which can be told of the inter-relationship of the two. In the next pages, we talk with the people from Julius Hollander, Amsterdam's leading hide importer. Its history and its current dealings are typical of Amsterdam itself.

Norway's most pleasant export is Thor Heyerdahl, therefore, we include a few words on him and his latest vessel "Ra II" which came to Amsterdam aboard a KNSM ship last month; presumably the 12 ton "Ra" and the 50 tons of sea-water which had soaked into the papyrus craft will be reflected in the port statistics for the second half of 1970.

Passengers, too, are important to Amsterdam and 450 of them, aboard the Swedish-America Line's Kungsholm recently paid Amsterdam a visit. They are only a part of the more than 125,000 passengers who pass through port facilities each year, but read on and learn why they brought along the world's oldest firing cannon.
## List of Japanese Ports

**as of October 1, 1970**

(Source: Bureau of Ports and Harbours, Ministry of Transport, Japan)

Rearranged in English by Takuji Nakanii, Under Secretary, IAPH

### I. SPECIALLY DESIGNATED MAJOR PORTS:

<table>
<thead>
<tr>
<th>Name of Port</th>
<th>Governing Body (In brackets: Name of Prefecture in which the Port is located)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muroran</td>
<td>Muroran City Gov't (Hokkaido)</td>
</tr>
<tr>
<td>Chiba</td>
<td>Chiba Prefectural Gov't (Chiba)</td>
</tr>
<tr>
<td>Tokyo</td>
<td>Tokyo Metropolitan Gov't (Tokyo)</td>
</tr>
<tr>
<td>Yokohama</td>
<td>Yokohama City Gov't (Kanagawa)</td>
</tr>
<tr>
<td>Kawasaki</td>
<td>Kawasaki City Gov't (Kanagawa)</td>
</tr>
<tr>
<td>Niigata</td>
<td>Niigata Prefectural Gov't (Niigata)</td>
</tr>
<tr>
<td>Shimizu</td>
<td>Shizuoka Prefectural Gov't (Shizuoka)</td>
</tr>
<tr>
<td>Nagoya</td>
<td>Nagoya Port Authority* (Aichi)</td>
</tr>
<tr>
<td>Yokkaichi</td>
<td>Yokkaichi Port Authority* (Mi'ei)</td>
</tr>
<tr>
<td>Osaka</td>
<td>Osaka City Gov't (Osaka Pref.)</td>
</tr>
<tr>
<td>Sakai-Sempoku</td>
<td>Osaka Prefectural Gov't (Osaka)</td>
</tr>
<tr>
<td>Kobe</td>
<td>Kobe City Gov't (Hyogo)</td>
</tr>
<tr>
<td>Himeji</td>
<td>Hyogo Prefectural Gov't (Hyogo)</td>
</tr>
<tr>
<td>Wakayama-Shimotsu</td>
<td>Wakayama Prefectural Gov't (Wakayama)</td>
</tr>
<tr>
<td>Shimonomo-seki</td>
<td>Shimonomo-seki City Gov't (Yamaguchi)</td>
</tr>
<tr>
<td>Tokuyama-Kudamatsu</td>
<td>Yamaguchi Prefectural Gov't (Yamaguchi)</td>
</tr>
<tr>
<td>Kitakushu</td>
<td>Kitakushu Port Authority* (Fukuoka)</td>
</tr>
</tbody>
</table>

--- 17 ports in total

### II. MAJOR PORTS:

<table>
<thead>
<tr>
<th>Name of Port</th>
<th>Governing Body (In brackets: Name of Prefecture in which the Port is located)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wakanai</td>
<td>Wakanai City Gov't (Hokkaido)</td>
</tr>
<tr>
<td>Tomakomai</td>
<td>Tomakomai Port Authority* (Hokkaido)</td>
</tr>
<tr>
<td>Hakodate</td>
<td>Hakodate City Gov't (Hokkaido)</td>
</tr>
<tr>
<td>Otaru</td>
<td>Otaru City Gov't (Hokkaido)</td>
</tr>
<tr>
<td>Kushiro</td>
<td>Kushiro City Gov't (Hokkaido)</td>
</tr>
<tr>
<td>Rumoe</td>
<td>Rumoe City Gov't (Hokkaido)</td>
</tr>
<tr>
<td>Tokachi</td>
<td>Hiro'o Town Gov't (Hokkaido)</td>
</tr>
<tr>
<td>Aomori</td>
<td>Aomori Prefectural Gov't (Aomori)</td>
</tr>
<tr>
<td>Hachinohe</td>
<td>Aomori Prefectural Gov't (Aomori)</td>
</tr>
<tr>
<td>Ohminato</td>
<td>Aomori Prefectural Gov't (Aomori)</td>
</tr>
<tr>
<td>Miyako</td>
<td>Iwate Prefectural Gov't (Iwate)</td>
</tr>
<tr>
<td>Ohfunato</td>
<td>Iwate Prefectural Gov't (Iwate)</td>
</tr>
<tr>
<td>Kamaishi</td>
<td>Iwate Prefectural Gov't (Iwate)</td>
</tr>
<tr>
<td>Shiobi</td>
<td>Miyagi Prefectural Gov't (Miyagi)</td>
</tr>
<tr>
<td>Ishinomaki</td>
<td>Miyagi Prefectural Gov't (Miyagi)</td>
</tr>
<tr>
<td>Akita</td>
<td>Akita Prefectural Gov't (Akita)</td>
</tr>
<tr>
<td>Funakawa</td>
<td>Akita Prefectural Gov't (Akita)</td>
</tr>
<tr>
<td>Sakata</td>
<td>Yamagata Prefectural Gov't (Yamagata)</td>
</tr>
<tr>
<td>Onahama</td>
<td>Fukushima Prefectural Gov't (Fukushima)</td>
</tr>
<tr>
<td>Hitachi</td>
<td>Ibaraki Prefectural Gov't (Ibaraki)</td>
</tr>
<tr>
<td>Kashima</td>
<td>Ibaraki Prefectural Gov't (Ibaraki)</td>
</tr>
<tr>
<td>Kisarazu</td>
<td>Chiba Prefectural Gov't (Chiba)</td>
</tr>
<tr>
<td>Yokosuka</td>
<td>Yokosuka City Gov't (Kanagawa)</td>
</tr>
<tr>
<td>Ryoju</td>
<td>Niigata Prefectural Gov't (Niigata)</td>
</tr>
<tr>
<td>Naoetsu</td>
<td>Niigata Prefectural Gov't (Niigata)</td>
</tr>
<tr>
<td>Fushiki-Toyama</td>
<td>Toyama Prefectural Gov't (Toyama)</td>
</tr>
<tr>
<td>Nanao</td>
<td>Ishikawa Prefectural Gov't (Ishikawa)</td>
</tr>
<tr>
<td>Kanazawa</td>
<td>Ishikawa Prefectural Gov't (Ishikawa)</td>
</tr>
</tbody>
</table>

---

Tsuruga   | Fukui Prefectural Gov't (Fukui)  
Tagonoura  | Shizuoka Prefectural Gov't (Shizuoka) 
Kino'ura   | Aichi Prefectural Gov't (Aichi)  
Mikawa     | Aichi Prefectural Gov't (Aichi)  
Owase      | Mi'c Prefectural Gov't (Mi'e)    
Maizuru    | Kyoto Prefectural Gov't (Kyoto)   
Han'nan    | Osaka Prefectural Gov't (Osaka)   
Amagasaki-Nishino-miya-Ashiva | 
Higashi-Harima | 
Sakai-ko   | Hyogo Prefectural Gov't (Hyogo)    
Hamada     | Sakai-ko Port Authority* (Tottori & Shimane) 
Saigo      | Shimane Prefectural Gov't (Shimane) 
Uno        | Shimane Prefectural Gov't (Shimane) 
Mituzuma   | Okayama Prefectural Gov't (Okayama)  
Okayama    | Okayama Prefectural Gov't (Okayama)  
Fukuyama   | Hiroshima Prefectural Gov't (Hiroshima) 
Onomichi-Itosaki | Hiroshima Prefectural Gov't (Hiroshima) 
Kure       | Hiroshima Prefectural Gov't (Hiroshima) 
Iwakuni    | Yamanashi Prefectural Gov't (Yamanashi) 
Mitajiri   | Yamanashi Prefectural Gov't (Yamanashi) 
Ube        | Yamanashi Prefectural Gov't (Yamanashi) 
Onoda      | Yamanashi Prefectural Gov't (Yamanashi) 
Komatsujima | Tokushima Prefectural Gov't (Tokushima) 
Tachibana  | Tokushima Prefectural Gov't (Tokushima) 
Takamatsu  | Kagawa Prefectural Gov't (Kagawa)    
Sakaide    | Sakaide City Gov't (Kagawa)         
Matsuyama  | Ehime Prefectural Gov't (Ehime)    
Uwajima    | Ehime Prefectural Gov't (Ehime)    
Niihama    | Niihama Port Authority** (Ehime)   
Imabari    | Imabari City Gov't (Ehime)         
Yawata-hama| Yawata-hama City Gov't (Ehime)     
Toh'y'yo   | Ehime Prefectural Gov't (Ehime)    
Kochi      | Kochi Prefectural Gov't (Kochi)    
Fukuoka    | Fukuoka City Gov't (Fukuoka Pref.) |
Kanda      | Fukuoka Prefectural Gov't (Fukuoka Pref.) |
Karatsu    | Saga Prefectural Gov't (Saga)        
Imari      | Saga Prefectural Gov't (Saga)        
Nagasaki   | Nagasaki Prefectural Gov't (Nagasaki) 
Izuhara    | Nagasaki Prefectural Gov't (Nagasaki) 
Gohnoura   | Nagasaki Prefectural Gov't (Nagasaki) 
Fukue      | Nagasaki Prefectural Gov't (Nagasaki) 
Sasebo     | Sasebo City Gov't (Nagasaki)        
Misumi     | Kumamoto Prefectural Gov't (Kumamoto) 
Yatsushiro  | Kumamoto Prefectural Gov't (Kumamoto) 
Minamata   | Kumamoto Prefectural Gov't (Kumamoto) 
Oita       | Oita Prefectural Gov't (Oita)       
Tsukumi    | Oita Prefectural Gov't (Oita)       
Beppu      | Oita Prefectural Gov't (Oita)       
Saheki     | Oita Prefectural Gov't (Oita)       

---

20 PORTS and HARBORS
III. LOCAL PORTS:

<table>
<thead>
<tr>
<th>Number of Ports (Names omitted)</th>
<th>Name of Prefecture in which the Ports are located</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>Hokkaido</td>
</tr>
<tr>
<td>8</td>
<td>Aomori</td>
</tr>
<tr>
<td>2</td>
<td>Iwate</td>
</tr>
<tr>
<td>6</td>
<td>Miyagi</td>
</tr>
<tr>
<td>3</td>
<td>Akita</td>
</tr>
<tr>
<td>2</td>
<td>Yamagata</td>
</tr>
<tr>
<td>6</td>
<td>Fukushima</td>
</tr>
<tr>
<td>6</td>
<td>Ibaraki</td>
</tr>
<tr>
<td>15</td>
<td>Chiba</td>
</tr>
<tr>
<td>4</td>
<td>Tokyo</td>
</tr>
<tr>
<td>8</td>
<td>Kanagawa</td>
</tr>
<tr>
<td>1</td>
<td>Niigata</td>
</tr>
<tr>
<td>9</td>
<td>Toyama</td>
</tr>
<tr>
<td>4</td>
<td>Ishikawa</td>
</tr>
<tr>
<td>13</td>
<td>Fukui</td>
</tr>
<tr>
<td>12</td>
<td>Shizuoka</td>
</tr>
<tr>
<td>19</td>
<td>Aichi</td>
</tr>
<tr>
<td>4</td>
<td>Mi'ê</td>
</tr>
<tr>
<td>3</td>
<td>Shiga</td>
</tr>
<tr>
<td>4</td>
<td>Kobe</td>
</tr>
<tr>
<td>25</td>
<td>Osaka</td>
</tr>
<tr>
<td>14</td>
<td>Hyogo</td>
</tr>
<tr>
<td>4</td>
<td>Wakayama</td>
</tr>
<tr>
<td>75</td>
<td>Tottori</td>
</tr>
<tr>
<td>47</td>
<td>Shimane</td>
</tr>
<tr>
<td>47</td>
<td>Okayama</td>
</tr>
<tr>
<td>40</td>
<td>Hiroshima</td>
</tr>
<tr>
<td>20</td>
<td>Yamaguchi</td>
</tr>
<tr>
<td>10</td>
<td>Tokushima</td>
</tr>
<tr>
<td>66</td>
<td>Kagawa</td>
</tr>
<tr>
<td>47</td>
<td>Ehime</td>
</tr>
<tr>
<td>17</td>
<td>Kochi</td>
</tr>
<tr>
<td>4</td>
<td>Fukuoka</td>
</tr>
<tr>
<td>7</td>
<td>Saga</td>
</tr>
<tr>
<td>65</td>
<td>Nagasaki</td>
</tr>
<tr>
<td>48</td>
<td>Kumamoto</td>
</tr>
<tr>
<td>19</td>
<td>Oita</td>
</tr>
<tr>
<td>12</td>
<td>Miyazaki</td>
</tr>
<tr>
<td>146</td>
<td>Kagoshima</td>
</tr>
</tbody>
</table>

Remarks:
The classification of "Major Ports" and "Local Ports" is in compliance with Paragraph 2, Article 2 of Port and Harbor Law of Japan, and that of "Specially Designated Major Ports" with Paragraph 2, Article 42 of the same Law and with Article 1-3 of Enforcement Regulations for Port and Harbor Law. Besides the above-categorized there are a great many small coastal ports, eg. fishery, shelter, etc., which are not opened to foreign trade.

Notes *: Port Authority based on Local Autonomy Law of Japan.

Notes **: Port Authority based on Port and Harbor Law.
Sail on time all the time with Seiko.

Time sails on like the wind. It changes. And Seiko has changed time.
They made it more dependable. More modern. With up-to-the-minute features. And with precision jeweled-movements.
In fact, Seiko is the world's largest manufacturer of jeweled-lever watches.

Plus, Seiko has been the "Official Time" at international events such as the 1964 Tokyo Olympics and EXPO'70.

If you come to Sapporo, Japan for the 1972 Winter Olympics, you will find Seiko keeping Official Time there, too.

Naturally. Seiko timepieces have special features for special moments. And they're sold, serviced and guaranteed around the world.
Wherever you go, take along a Seiko watch. You'll love every minute of it.
IAPH News:

Statement by
Mr. Ben E. Nutter
Chairman, IAPH Committee on Containerization (Executive Director, Port of Oakland, Calif., U.S.A.)

The IAPH Committee on Containerization held a committee meeting in Oakland, California to discuss committee activities. It was concluded that coordinating the dissemination of information for each port having container facilities—either in operation, under construction or planned—could be helpful to other ports now in the planning stage for container terminal facilities as well as ports having existing container terminal facilities. Ports in the planning stage for new container facilities would know of these developments, and in this way a port could obtain more detailed information by contacting that port directly to aid in their planning.

A questionnaire form was developed and copies sent to all member ports of IAPH requesting they supply the requested information and submit directly to Ports and Harbors for publication.

Following the publication of the information for container facilities now in operation, under construction or being planned at the time of the initial request, we request all ports to submit information directly to Ports and Harbors as plans are finalized for new container terminal facilities. It is anticipated that at annual intervals, all the information previously submitted will be updated and published.

On behalf of the Containerization Committee of IAPH, I thank the ports involved for supplying the information on their container facilities. We are hopeful the publication of this information will be of value to all ports. This is a new endeavor and may require modification to make it fully effective and useful. If you have any suggestions, I would appreciate receiving them.

ICC 23rd Congress

Paris:—The XXIIIrd biennial Congress of the ICC (International Chamber of Commerce) will be held in Vienna, Austria from 17th to 24th April 1971.

New Tonnage Record

Baltimore, Md., December 23:—The Port of Baltimore set a new tonnage record during 1970, as projected totals for the first year of the new decade surpassed all previous annual figures in the port's history, a study by the Maryland Port Authority revealed today.

In announcing the 1970 totals, Joseph L. Stanton, Executive Director of the state agency, noted that the projected figure exceeded the previous record—set 13 years ago—by more than two million tons.

According to estimates by the Port Authority's Statistical Department, 33,152,000 tons of foreign commerce will have been loaded and discharged in Baltimore by the end of the current calendar year. The old record was set in 1957, when 31 million tons were handled.

The 1970 figure also represents a dramatic increase over total foreign commerce tonnage of 26,150,455 recorded last year in the port of Baltimore.

Value of the export and import shipments was tentatively set at $2,600,000,000, compared to the 1969 total of $1,939,070,254.

The record tonnages were carried on some 4,670 vessels, 3,200 of which gained access to the port via the Chesapeake & Delaware Canal. (Maryland Port Authority News Release)

Port Handbook


Designed to be used as a sales tool in attracting additional waterborne commerce to Maryland harbors, the Handbook is being distributed to shipping interests and international business houses throughout the world. It will serve as the port of Baltimore encyclopedia during the next 24 months.

The current issue is the seventh MPA printing of the biennial publication. A total of 15,000 copies have been prepared for distribution.

The Port Handbook is divided into four sections: background and description of the state's maritime commerce; statistical data; directory of services and advertising. Advertisements purchased by the private business enterprises in and around the Port of Baltimore made this publication self-supporting.

Copies of the new Port of Baltimore Handbook are available on request from the MPA Communications Department; Pier 2, Pratt Street; Baltimore, Maryland 21202 (Telephone: 383-5721). (Maryland Port Authority News Release)
Congratulations to the International Association of Ports and Harbors for taking a leadership role in assisting new, and developing ports throughout the world, from the Port of Oakland “The Shipping Machine.”

Oakland Board of Port Commissioners
66 Jack London Square, Oakland, California 94607
Peter M. Tripp, President
Y. Charles Soda H. Boyd Gainor
Thomas L. Berkley Ted Connolly
Robert E. Mortensen William Walters
Ben E. Nutter, Executive Director
New Rescue Boat

Boston, Mass., Dec. 29.—Construction of a new and unique 78-foot fire/rescue boat for use in Boston Harbor and adjacent waters has been authorized by the Massachusetts Port Authority (MPA).

The $477,190 craft, which will augment the City of Boston fireboats, is scheduled for delivery in November 1971 and will be paid for completely by the Port Authority, at no cost to the City of Boston or other municipality. The operating expense of the boat, including the salaries of its five man crew, will also be completely paid for by Massport. The boat will be named the F. V. Howard W. Fitzpatrick, after the late Sheriff of Middlesex County who served as a member of the MPA from 1964 until his death in February 1970.

Massport Chairman John Larkin Thompson described the new steel-hulled craft as being “essential for the maximum protection of lives and property along the Boston, Chelsea, Everett, Winthrop, Quincy and other communities as well as in the harbor itself”.

The design of the diesel-powered boat incorporates several features which will give it the flexibility and capability to perform a wide variety of fire/rescue operations, including:

Remotely controlled, dual nozzles located at the bow just above the waterline to help extinguish under-pier chemical or conventional fires:

A hydraulically-powered 54-foot boom with a 45-foot reach to fight fires either in ship holds or on piers:

A water curtain, or sprinkler washdown system, to protect the vessel and crew from intense heat:

A 6,000 gallon per minute pumping capacity, the largest capacity and most complete foam system of any fireboat in the harbor:

Its speed—up to 15 miles per hour—shallow draft design, complete all-weather navigation, communications and rescue equipment, combined with SCUBA (Self Contained Underwater Breathing Apparatus) equipment and platform, make it an extremely valuable craft for nearly all harbor rescue requirements. There are also provisions for 10, 15-man life rafts, resuscitator, and a 13 foot Boston Whaler tender.

The boat was designed by John W. Gilbert Associates, Inc., marine architects of Commercial Wharf, Boston, and it will be constructed by the Grafton Boat Co., Inc., Grafton, Illinois, builders of special purpose and other utility craft. Grafton was awarded the contract as low bidder. (News from Massport)

Season’s Record

Duluth, Minn., December 30.—Faced by a record-setting year in grain shipping, the Port of Duluth-Superior established a season’s record for export-import cargo in 1970, the Seaway Port Authority of Duluth announced Saturday.

International cargoes totaled 4,709,363 tons, the Port Authority reported, breaking the port’s previous record of 4.2 million tons set in 1966.

On a comparative basis, the 1970 tonnage outstripped 1969 by 68.8 per cent. The 1969 total was 2,789,560 tons.

This was Duluth-Superior’s 12th year as a world port and, since the 1959 opening of the St. Lawrence Seaway, the port now has moved 36.7 million tons of export-import cargo.

A major increase in grain exports—triggered by a 38-million bushel sale of government-owned export barley in the spring and a flurry of fall activity in exports of wheat, corn and oats—accounted primarily for the big tonnage year.

Grain shipments for the season, including domestic movements to other U.S. Great Lakes ports, were at an all-time high of 230,032,000 bushels, or 6.06 million tons. This included 4.1 million tons moving in export, another port record.

The old record for grain exports was 4.03 million tons set in 1966, and the 1969 total was 2.4 million. Thus, grain exports for 1970 were up by 84.7 per cent compared with the previous year.

Included in the grain exports were 2,933,360 tons carried to St. Lawrence River ports for transhipment overseas (an increase of 129 per cent over the 1,279,086 tons moved in 1969) and 1,166,858 tons shipped on oceangoing vessels directly overseas (an increase of 24 per cent over the 940,690 tons in 1969).

Indicative of the late-season spurt in grain exports, the total number of oceangoing ships to call at the port through August was 81, compared with 100 for the same period a year ago. By season’s end, the port had handled 185 oceangoing ships, compared with 172 in 1969.

In other commodity areas, tonnage increases were recorded in exports of grain by-products (up 27. per cent, from 237,922 tons to 244,300) and miscellaneous bulk products (up 45.1 per cent, from 123,904 tons to 179,831) and in grain imports (up 93.7 per cent, from 14,160 tons to 27,432).

All exports were up 70.2 per cent (from 2,716,666 tons to 4,626,206) and all imports were up 14 per cent (from 72,894 tons to 83,159).

Decreases were recorded in exports of general cargo (down 26.9 per cent, from 98,718 tons to 72,183) and bulk liquids (down 18.4 per cent, from 36,346 tons to 29,674) and in general cargo imports (down 5.2 per cent, from 58,734 tons to 55,727).

Final figures for domestic cargo movements have not yet been compiled, but preliminary statistics indicate the port’s combined domestic-international traffic for 1970 will exceed 40 million tons for the second year in a row. (Seaway Port Authority of Duluth)

Public Container Terminal

Long Beach, Calif.—Transocean Gateway Corporation, which operates the only public container terminal on the Pacific Coast at Pier J in the Port of Long Beach, is being assigned Berth 245 adjacent to its present facilities at Berths 246 and 247 to bring total terminal acreage to 32 acres.

In addition, the Long Beach Harbor Department will construct a 60,000 square foot addition to Transocean’s container freight station on Berth 246.

Under terms of an agreement approved October 19 by the Long
Transocean begins operating out of
Berth 245 the first of the year,
Thomas J. Thorley, general man-
ger of the Port, indicated. Orient
Overseas Container Line is the
present tenant of the Transocean
container terminal. (Port of Long
Beach)

Crescent Terminals, Inc.

Long Beach, Calif.:—Crescent
Terminals, Inc. has just signed a
ten-year lease of Berths 206 and 207,
Pier F, with the Harbor Depart-
ment, involving 200,000 square feet
of transit sheds, nearly 15 acres of
paved open area and 1,200-feet of
wharf.

Announcement of the agreement,
which is effective immediately, was
made jointly by Crescent president
John A. Hyland and Thomas J.
Thorley, General Manager for
The Port of Long Beach.

The facility, described as the
newest and most modern in the
port, will accommodate the eight-
ship fleet of Tokyo Kaiun Kaisha of
Tokyo, which is represented on the
Pacific Coast by Fritz Maritime
Agencies.

Toko is a leading steel carrier
between Japan and The Port of
Long Beach, and plans on berthing
100 ships at the facility during the
coming fiscal year. (Port of Long
Beach)

Sunkist Lemons Exported

Long Beach, Calif.:—Just six
months after opening its Far East-
ern export terminal at Berth 1,
Pier A. Sunkist has shipped two
million crates of oranges, lemons
and grapefruit from the Port of
Long Beach to Kobe, Yokohama
and Hong Kong, representing a de-
ivered value of some $10-million.

On hand to mark the occasion of
the two-millionth crate being
loaded aboard the “Golar Tryg”
were T. L. Dukatz, asst. export
sales manager with Sunkist, and K.
Erik Baur, vice-president and gen-
eral manager of Salen-Interoce-
Inc., shipping agent for the packer.

Salen Reefer Services operate a
fleet of 135 refrigerated vessels
worldwide, with weekly departures
here.

Representing The Port of Long
Beach were H. E. Ridings, Jr., Har-
or Commission president, and Har-
bor general manager Thomas J.
Thorley. Miss Harbor, Candy Hi-
roto, was given the honor of label-
Rempground shipment.

Dukatz noted that with each
crate weighing some 40 pounds and
containing an average citrus count
of over 100, the first half of 1970
saw one-fifth of a billion pieces of
fruit shipped to the Orient from
Southern California Sunkist grow-
ers. He added that Orientals are
great consumers of fruit all over the
world, with nearly 20 countries
shipping oranges to Japan.

The Norwegian-flag vessel is
taking on a typical load of 108,000
 crates of oranges and lemons before
departing on the Westward voyage.

Sunkist also exports citrus fruit
to Tahiti, Honolulu, New Zealand,
Australia, Okinawa, Singapore and
Taiwan. The Singapore sailing re-
quires 30 days at sea, but the fruit
suffers less than three percent spoil-
age, thanks to modern refrigeration
and handling techniques, Dukatz
added.

Last year’s 4.4 million Sunkist
export total is expected to near the
5 million level in 1970, he predicted.
(Port of Long Beach News)

Car Import

New Orleans, La., January 25,
1971:—A $2,000,000 terminal facili-
y for handling automobiles imported
through the Port of New
Orleans will be placed in operation
this month. The facility includes
the former Ford Motor Company
plant in St. Bernard parish.

This announcement was made by
E. S. Reed, executive port direc-
tor and general manager; L. B.
Wilkes, chief operating officer of
Southern Service Company, terminal
operator, and St. Bernard Parish
sheriff Jack Rowley.

Wilkes said his company has
renovated the Ford plant and is ad-
ding other planned improvements,
including wharves and storage
areas. The terminal is expected to
handle about 70,000 automobiles in
1971, mainly from continental
Europe, Japan and the United
Kingdom, with a projected capacity
of more than 100,000 units an-
nually, Wilkes said.

The port in 1968 handled 59,900
imported cars. In 1969, the total
amounted to 68,866; and in the
first nine months of 1970 a total of
56,471 units were accommodated.

Reed said there is great need in
the port for the new terminal to
meet growing importation of auto-
mobiles in this area. He praised
Service Company for investing its
private funds in the enterprise, and
expressed appreciation to the St.
Bernard parish officials for their
“splendid cooperation and assis-
tance in helping bring this impor-
tant port facility to fruition.”

Reed said the new terminal will
enable the port to handle all fore-
seeable demands for storage, serv-
icng and shipment of imported
automobiles. He said the terminal
is a good example of a private enter-
prise project that carries no port
operations and the state’s eco-
y. (Port of New Orleans)

Public Bulk Terminal

New Orleans, La., January 14:—
Again the Public Bulk Terminal at
the Port of New Orleans has shown
a sharp increase in yearly tonnage
handled.

According to port statistics, the
versatile bulk cargo facility handled
1,797,059 tons in 1970, a 51 per
cent increase over 1969. The aver-
age annual per cent growth since
the terminal opened in 1961 is 79.5
percent, making this one of the
fastest growing port facilities any-
where.
Bulk cargoes such as coke, sugar, coal, manganese, alumina, and many others, can be transferred to the terminal between ships, barges, rail cars, trucks and open or closed storage areas. The Public Bulk Terminal is located on the port’s Gulf Seaway near its junction with the Industrial Canal. This area had been marked as the major locality of the port’s 30-year, $400 million Centroport re-development plan.

Among vessels and vehicles whose cargo was unloaded at the Public Bulk Terminal were 114 ships, 145 barges and 3,000 rail cars. Cargo was loaded aboard 102 ships, 532 barges and 4,435 rail cars.

Among new cargoes handled at the terminal in 1970 was salt shipped to New Orleans for use by Carey Salt Company, which last year leased a facility adjacent to the Public Bulk Terminal and converted it to a salt processing plant. Port authorities are encouraging other industries to set up operations in the port and to make use of port facilities such as the Public Bulk Terminal. (Port of New Orleans)

1970, A Good Year

New Orleans, La., Jan. 4.—It’s been a good year for the Port of New Orleans.

Tonnage of cargo moving over facilities increased by about 15 percent. Work on the new France Road container terminal is well underway, using State funds provided in 1969. The new executive port director and general manager, E. S. Reed, is getting into full stride on a number of important programs. The Interstate Commerce Commission has approved a change in railroad rates that puts New Orleans and other Louisiana ports in a vastly improved competitive position among other Gulf and Atlantic ports. The first two LASH (lighter aboard ship) vessels in operation anywhere in the world established regular sailings from here. New trade development offices were opened in Brussels, London and Panama. Port and city efforts resulted in plans for the construction of a new flour mill on the Industrial Canal.

All this puts the port well on the way—for the time being—into its 30-year CENTROPORT redevelopment plan. Getting the $400 million necessary to finance the enormous project will not be easy, however, and despite the pluses listed above, 1970 was not entirely a bed of roses for the port. When the Louisiana public rejected 53 proposed constitutional amendments this year, included in the lot were two port proposals—one dealing with the sale and leasing of port properties, and another dealing with the establishment of port industrial districts.

Getting back to statistics, U.S. Department of Commerce figures for the entire port show 21.5 million tons, a 15 percent increase over 1969. This is based on actual nine months and a projected three months period for 1970.

The first berth of the France Road container terminal is expected to be ready for use by late 1971. More berths of the projected nine-berth facility are already well along in the planning and site preparation stages.

Work continues on additions to the Public Bulk Terminal and on improvements to existing wharves. New port tariff rates put into effect this year will help this work to continue. Reconstruction has always been of major importance to this, one of the oldest ports in the country and the nation’s number two port. (Port of New Orleans)

NDT Conference

New Orleans, La., December 29:—Allen V. Junkin, Far East Trade Director for the Port of New Orleans, has been named conference chairman for the upcoming Third Far Eastern International Transportation Conference.

The conference is sponsored by the Yokohama-Tokyo Chapter of the National Defense Transportation Association and will be held at the Hilton Hotel in Tokyo April 18-21.

This is the only conference of its kind in Asia. Speakers and some 300 delegates will come from the United States, Japan and key Far Eastern countries. They represent industrial, commercial and military transportation interests in these areas.

“Our idea for this coming conference is to stress the relationship between the Far East and the United States,” said Junkin. “Our coverage will not go beyond this sphere. We feel this will provide an element of expertise to this special regional conference.”

Tentative plans for the four-day meeting include the following topics and panels:

- International Symposium—Trade trends between the United States and the Far East.
- Protectionism Panel—Effect of nationalism and economic protectionism on trade patterns.
- Personal Property Panel—Trends associated with the transient world society.
- Intermodal Panel—Reactions in the Far East to rail, motor, air, water transportation systems in the intermodal era.
- Land, Sea and Air Panel—Importance of these transportation systems to Southeast Asia.
- Shippers’ Symposium—Viewpoint of shippers on future transportation trends.

Col. Robert H. Campbell of the 65th Military Airlift Support Group, Yokota Air Base, is conference program chairman.

There will also be various exhibits, a separate ladies’ program, and social activities such as luncheons, a cocktail party and a banquet.

“We expect action to be born from the meeting,” Junkin continued. “This is not just a speaker’s forum. We plan to issue communications to the press on conclusions and ideas put forth by the panel.”

Junkin has headed the Port of New Orleans Far East Trade Development office in Tokyo since 1967. He is a native of St. Paul, Minnesota, and prior to his transfer to Japan, he served in New Orleans’ trade development office in Chicago.

Junkin’s participation as chairman for the third conference is another landmark in the close trade relationship between New Orleans and the Far East. At last year’s
conference, one of the principal speakers was Robert R. Barkerding Sr., then executive director of the Port of New Orleans. Among world nations, Japan is the port's number one customer in value and tonnage of both exports and imports. (Port of New Orleans)

List of Ship Services

New York, N.Y., Jan. 19:—The 1971 edition of the Port of New York Steamship Services Directory has been issued by The Port of New York Authority for use by importers, exporters, freight forwarders and other business organizations and government agencies.

The 16-page Directory, published annually since 1955, lists the names, addresses, telephone numbers and pier locations of 184 steamship lines and their agents offering regularly scheduled services from the New Jersey-New York port on international, intercoastal and coast-wide routes. It also contains a listing of some 300 world ports in 130 countries and an index, by country, of steamship services available from the Port of New York to those ports.

Copies of the new Directory may be obtained without charge from the Port Promotion Division, The Port of New York Authority, 111 Eighth Avenue, New York, New York 10011. (News from The Port of New York Authority)

More Rail Facilities

New York, N.Y., Jan. 14:—The rail freight handling facilities at the Brooklyn-Port Authority Marine Terminal will be expanded to speed the dockside movement of export-import cargo, according to an announcement today by James C. Kellogg III, Chairman of The Port of New York Authority, following the monthly Board meeting of the bi-state agency.

The expanded rail facilities will consist of a 220-foot-long and 24-foot-wide covered steel platform at rail car elevation, to be built in the upland area of Piers 4 and 5, now leased to Universal Terminal & Stevedoring Corp. The new platform will permit more efficient use of existing New York Dock Railway tracks at the site. The car-floor height of the platform will enable mechanical equipment to enter the cars for fast, uninterrupted loading and unloading operations in all kinds of weather.

This improved rail facility, to cost an estimated $133,000, will be served by the New York Dock Railway carfloat station on the north side of Pier 4. It will complement the rail freight handling service that has been available on New York Dock Railway trackage at Pier 11 for the past 18 months. Last year 440 rail cars carrying some 13,000 tons of oceanborne cargo were handled at Pier 11. (News from The Port of New York Authority)

Annual Report

Norfolk, Va., December, 7:—The first Foreign Trade Annual Report for the Ports of Virginia has been published by the Virginia Port Authority. Reflecting in the report is Virginia's leadership in World Trade.

Highlighted in the Annual Report are trade statistics covering bulk, general, export and import cargo, as well as a description of advantages that place the Ports of Virginia in a favorable position to meet shipping needs.

An impressive increase in foreign waterborne commerce handled at the Ports of Virginia during the year 1969 was indicative of Virginia's trade importance. Total trade amounted to over 48.6 million tons during the year, an increase of 13.8 percent over the 42.7 million tons handled the previous year. Virginia's 1969 total amounted to approximately 10 percent of the nation's foreign trade for this period.

Bulk cargo increased by 14.1 percent during 1969. General cargo, which includes goods of high value and produces the most economic benefit to the region, moved ahead by a substantial 9.3 percent.

The container revolution found the Port of Hampton Roads ready to meet the growing demand for specialized container equipment and facilities. During 1969, the Port's second full year of handling container traffic by specialized facilities, 41,790 containers were handled, compared to 23,485 container handlings during 1968, a 78 percent increase.

The 1970 Foreign Trade Annual Report for the Ports of Virginia is available upon request from the Virginia Port Authority. (Virginia Port Authority)

Potash in Vans

Oakland, Calif., January 14:—A bulk shipment of 138 tons of potash transported from the Port of Oakland recently bound for Hawaii normally would have aroused little curiosity.

But the fact that the bulk product was moved for the first time in container vans made the shipment revolutionary.

Traditionally, bulk commodities like potash have been considered economical for shipment only in extremely large quantities and have been transported primarily by barges or bulk ships.

But a new business along the Oakland waterfront may be a force in changing that theory. Don Vandeberg in July founded Bulk Transfer Inc. near Port of Oakland marine terminals facilities and announced that the company would provide the intermodal service of transferring rail or truck bulk shipments into ocean containers.

While a small number of concerns in several other U.S. port cities handle a limited number of commodities in this manner, Vandeberg's company is believed to be the nation's only firm transferring a wide range of products.

The company can move 60 tons per hour of any dry flowable product from hopper equipment into freight vans. Other services offered by the firm include arranging for container drayage, fumigation and agricultural inspection.

Shipping bulk goods in vans has several advantages, but simply stated it "offers the protection of the container package, yet allows the economics of bulk handling," Vandeberg says.

The recent shipment of potash provides a good example.

Normally the product would arrive at a port from Kaiser Chemi-
The potash arrived at Bulkacknowledged gross lead facilities in Wendover, Utah, be off-loaded from a truck or rail car and loaded by mechanical bulk handling equipment aboard a barge. Upon reaching Hawaii, bulk handling equipment would again be needed to discharge the potash before it could be put into a truck for movement to its ultimate inland destination.

Previous to Vandeberg's system, the only available alternative method was to bag the product and ship it in the same manner one would any general cargo, but at a higher, non-bulk rate.

Containerization eliminates several costly steps in either operation. When the potash arrived at Bulk Transfer, equipment rapidly moved it from rail cars into containers. The vans were trucked the short distance to the Oakland docks where giant cranes loaded them aboard the Matson containership Hawaiian Enterprise. Similar cranes were used to discharge the vans upon the ship's arrival in Honolulu. The potash remained in the same container for the entire journey from Vandeberg's facility to Hawaii distributors.

"Because of containerization, handling costs at the destination end are virtually eliminated and distribution costs are reduced sharply," Vandeberg says.

"Our system allows companies to operate with a minimum of inventory because they no longer need to ship large lots to qualify for bulk rate status," he says. "And as container space increases in the shipping industry, rates quoted on bulk commodities in vans is becoming quite competitive with "bulk aboard ship" rates.

Vandeberg sees a bright future for his new operation. He feels that a wide range of bulk commodities will be shipped more frequently in containers. High-value ores, specialty clays and a host of agricultural products are all well-suited for containerization, he feels.

"I think there has been a need for this system ever since the container age began," Vandeberg says. "People are just beginning to realize how versatile a container can be." (Port of Oakland)

**Operations Manager**

Portland, Oregon, January 25—Garry Whyte has been named Operations Manager of the Marine Department at the Port of Portland, according to Keith Hansen, department director.

Whyte replaces Curtis Smith, who held the job for 14 years under the old Commission of Public Docks. Smith becomes Industrial Marketing Director of the consolidated CPD-Port agency.

Operations Manager oversees all functioning of the three marine cargo terminals of the Port.

Other Operations changes include Don Aspros, formerly Superintendent at Terminal 1, becoming Asst. Operations Manager; Carl Leach, Asst. Superintendent at Terminal 1 replacing Aspros and Bob Driscoll, Asst. Terminal 4 Superintendent being named Terminal 2 Superintendent.

Hansen also announced that Ray Bader, former Terminal 2 Superintendent, has been named to the newly created position of Manager of the Container Terminal at T-2. He will be assisted by Dick Boyle and Richard Artle as Superintendents of the Container Yard and Container Freight Station respectively.

Over-all Terminal 2 Superintendent Driscoll is in charge of all berthing at the five berth Terminal 2 and will oversee handling of all cargo except containers.

Whyte joined the Dock Commission as a Berth Agent in 1951. He was Superintendent of Terminals 2 and 4 before becoming Assistant Operations Manager. (The Port of Portland News Release)

**PFEL Manager's View**

San Diego, Calif., January 20—The maritime industry is waging a war for survival in this country against all other nations of the world and losing, it was declared last night by Robert D. Kleist, regional manager in the southwest for Pacific Far East Line, Inc.

Kleist, a veteran sales executive for West Coast marine shipping interests, told members of the San Diego Propeller Club that the gross national product of most nations in the world is increasing "by at least 7 or 8 per cent, Japan's is 12 per cent", as compared to less than 4 per cent in the U.S. last year.

"Japan is the acknowledged leader today in maritime shipping throughout the free world and growing stronger," he noted after briefly reviewing his experiences in that country for the last few months as a temporary representative of his firm there. An international trade war is being waged against the U.S. by all free nations "not to mention those behind the Iron Curtain," he said, and described this country's trade position today as "precarious".

He expressed concern about American business and its overseas investments of in excess of $100 billion, tracing these to "efforts to help the rest of the world. Now we find ourselves trying to compete with this Frankenstein we created." He said a trip through Southeast Asia convinced him that Japan, not the U.S., is now the world's most dominant international trade force. "They know what is going on. Japanese trading companies are active everywhere. I couldn't even get an audience with the manager of the U.S. Trade Center in Japan, despite excellent credentials and introductory letters from the Los Angeles Chamber of Commerce. But it's no problem chatting with Japanese trade center managers."

He said there is concern throughout Southeast Asia about U.S. protectionist policies. Noting this is an era now of high competition for international trade he stated flatly that "isolationist policies are not going to work."

Kleist also said that the first LASH (lighter aboard ship) vessel owned by his firm is scheduled for a maiden voyage to San Diego the latter part of August. These ships feature large cargo combinations of containers and barges. The barges can be floated to and from the mother ship, picking up shipments anywhere along the waterfront—much like box cars from a train—which will be good for ports like San Diego, he explained. Advan-
tages of loading and unloading times of these barges were cited too, by Kleist. The new concept is not without its problems, he noted, "labor required is now being debated" but expressed optimism that a fair settlement will be worked out.

He told the San Diego marine representatives too that the U.S. Maritime Administration has approved purchased by his company of the Oceania Steamship lines and its cruise and freight vessels, along with the two containership vessels now under construction. (Port of San Diego News Release)

**Bulk Loader Tonnage**

San Diego, Calif., January 14:— Bulk loader operations at the 10th Avenue Terminal of the Unified Port District reflect the uneven economic trends of 1970, according to statistics released today.

Revenue received by the District from tonnage passing through the bulk loader totaled $166,668.70. In 1969 tonnage totaled $203,958.35 in revenues to the District.

The second half total for 1970, however, increased dramatically over the first six months: from $71,548.90 to $95,119.80 "and we are keeping our two-man marketing team constantly on the go in promotion attempts to assist all marine operations oriented businesses at the Port", according to William L. Dick, Director, Trade and Community Relations. (Port of San Diego News Release)

**Holland Terminal**

Tampa, Fla., Jan. 12:—Tampa Port Authority will dedicate the site of its proposed new general and bulk cargo terminals on East Bay Channel and Turning Basin and name it Holland Terminal in honor of Florida's retired Senator Spessard L. Holland of Bartow.

A resolution providing for the dedication and naming was adopted by the Authority at its regular monthly meeting January 12.

The resolution pointed out that Sen. Holland worked long and hard while a member of the U.S. Senate to obtain Congressional Authorization for deepening the Tampa Harbor Channels from their present 34 feet to 44 feet. The authorization was contained in the Omnibus River and Harbor Bill which was signed by President Nixon on January 2.

Several of Sen. Holland's former colleagues in the Senate and members of the House of Representatives have been invited to attend the dedicatory ceremonies which will be held at 3:30 p.m. Sunday, February 7. Those who have accepted include Sen. Jennings Randolph of West Virginia, chairman of the Senate Public Works Committee and Rep. Jamie Whitten of Mississippi, a member of the House Appropriations Committee and of the Subcommittee on Public Works. Also to be present are Sen. Lawton Chiles, recently elected to Holland's seat in the Senate; Rep. Sam Gibbons of Tampa, and Florida's Lt. Gov. Tom Adams.

State Sen. Louis de la Parte will make the dedicatory address.

The 589th Air Force Band of MacDill Air Force Base will be present to provide music.

Many of the VIP's will remain in Tampa on Monday, Gasparilla Day, to view the parade and to take part in social activities.

A special souvenir program, containing information about the new terminal and the port will be distributed to those attending. The program will feature a history of Tampa Bay compiled by Tampa historian Tony Pizzo, author of the book, Tampa Town.

Construction of new cargo facilities on the East Bay Channel and Turning Basin has long been a dream of the Tampa Port Authority. The most modern in cargo handling facilities are planned. The new terminal will have the effect of removing general cargo terminals from the perimeter of downtown. Tampa. These terminals are now cramped for space due to the expanding traffic of the port. Relocation will also aid in relieving traffic congestion in the downtown port area.

The terminal will be located on the west side of the new East Bay Channel and Turning Basin which was constructed by the Port Authority at a cost of approximately $5 million. Already on the east side of the channel is located the most modern phosphate-loading complex in the world, built by private interests at a cost of more than $30 million. This complex is now in operation.

The public is invited to the dedication ceremonies. Access to the site is just off 22nd Street near the 22nd Street Causeway. Signs will be erected to direct members of the public.

The entire port community of the Port of Tampa is expected to be on hand for the event. (Tampa Port Authority)

**New Container Terminal**

Melbourne.—A second all-container terminal is being established in the Port of Melbourne at a cost of $3.6 million, to cater for the extension and expansion of cellular container shipping services out of the port, particularly to the north American continent.

Work has started on the terminal which will be owned by ACTA Pty. Ltd., the Australian subsidiary of the British ACT shipping consortium, and it will be located on a 20 acre area leased from the Melbourne Port Authority immediately behind two new berths under construction on the east side of the Swanson Dock container complex.

The other all-container terminal is owned and operated on the west side of Swanson Dock by Seatainer Terminal Pty. Ltd., which is partly owned by OCL, the other British container shipping consortium. This terminal lies behind Berths Nos. 1 and 2 West Swanson Dock.

ACTA is already involved in container and unit-load depot operations through its subsidiary Freightbases Pty. Ltd., and with the establishment of the terminal will be directly involved in both types of container handling.

Both the terminal and depot are expected to operate and exploit business opportunities independent­ly.

The new terminal is being established principally to cater for five
ships of the new container service known as the Pacific America Container Express Service (PACE Line), which will come into operation about next April between Australian and New Zealand ports and the east coast of North America.

The service will be run by five cellular container ships, three of which will be owned by ACT, one by the Australian National Line, and one by OCL.

Negotiations are in progress at the moment for the new Line to be admitted to the Australia, US, Atlantic, and Gulf Conference and to the Australia, Canada East Coast, St. Lawrence and Lakes Conference of which the individual shipping companies of the ACT consortium and the other Pace Line partners are already members.

Companies in the existing conferences are Maritime Fruit Carriers, Reefer Express, Atlanttrafik, New Zealand Shipping Company, Farrel Line, Port Line, Ellerman and Bucknall, Blue Star and Columbus Line.

Four of the 715 ft. long ships on order for the new service will have a total capacity of 1,067 containers, while the fifth and the third to be owned by ACT will have a capacity for 1,400 containers.

As is customary in the North American service there will be a greater proportion of refrigerated containers, and Pace Line is also catering for a larger number of 40 ft. containers which will give a break-down on board the 1,067 container ships of 556 refrigerated containers below deck, 52 40-ft. general cargo containers below deck, with 423 20-ft. and 36 40-ft. containers carried on deck.

A feature of the Pace Line will be a heavy lift hold served by a 40-ton deck crane in the forward portion of the vessels, but which can also be converted to take containers if required. This hold is designed for 168,000 cu. ft. of heavy lift cargo or 30 containers.

The new container handling terminal is being designed to give the maximum open stacking area possible with a minimum of administration and control office space. The terminal will be worked on the “container park” principle in which full containers are stacked to a maximum of two high, probably on a 1.22:1 basis.

The terminal will also have a container cleaning and repair facility while the administration and amenities block will be basically a two-storey building with a control centre on a third storey overlooking both the terminal and the adjoining 20 acre depot of Freightbases Pty. Ltd (Melbourne Harbor Trust Port Gazette, Dec., 1970)

**Liners Withdrawn**

Melbourne:—The growing impact of containerisation on a number of activities associated with the transportation of cargo by sea was again evident last month (November) in the announcement of the British Shipping company Shaw Savill that three cargo/passenger ships would be withdrawn from the UK-Australia-New Zealand service.


The Shaw Savill Line, in a comment on the announcement, said that when it was decided to introduce the three vessels in 1968, it appeared their cargo carrying capacity would be required in the short term, pending containerisation development, as well as boosting the Line’s passenger carrying capacity.

However, the advance in the container service between the UK and Continent and Australia had caused a drop in the anticipated requirements for conventional tonnage in the trade. (Melbourne Harbor Trust Port Gazette, Dec., 1970)

**Australian Ports**

**Container Terminal Ports:**
Brisbane, Sydney, Melbourne, Fremantle, Burnie

**Roll-on, Roll-off**

**Unit Load Ports:**
Brisbane, Mackay, Townsville, Cairns, Darwin, Sydney, Melbourne, Geelong, Adelaide, Port Lincoln, Kingscote, Hobart, Bell Bay (Launceston), Devonport, Burnie, Narracoopa (King Id.)

**Ports (Potential):**
Newcastle, Port Kembla, Whyalla, Kwinana

**Bulk Loading Ports:**
Brisbane, Weipa, Hay Point, Gladstone, Mackay, Cairns, Darwin, Groote Eylandt, Gove, Lucinda Point, Sydney, Newcastle, Adelaide, Ardrossan, Point Giles, Ballast Head, Rapid Bay, Port Lincoln, Port Pirie, Wallaroo, Whyalla, Thevenard, Stenhouse Bay, Fremantle, Kwinana, Dampier, Port Hedland, Koolan Island, Bunbury

**Port Huon, Port Latta**
(Cargo Handling Quarterly, Melbourne, December 1970)

**ICHCA Australia**

Melbourne:—The ICHCA Australian National Committee’s third 2-Day Symposium was held at the New South Wales Maritime Services Board’s headquarters building, Circular Quay, Sydney, on October 14 and 15. Chaired by Mr. D. J. G. Strange (Chairman of the Australian National Committee of ICHCA) the Symposium was attended by Lt. Col. Charles Earle, D.S.O., O.B.E., Secretary-General for ICHCA, London.

Officially opened by Mr. W. H. Brotherson, C.B.E., President of the New South Wales Maritime Services Board, the Symposium was moderated by Sir Gordon Wallace, Q.C., of the New South Wales Supreme Court, who, at the conclusion of proceedings, reviewed the discussions and summarised the Symposium’s findings.

When officially opening proceedings, Mr. Brotherson said his Board was particularly pleased to have ICHCA members and delegates present at its headquarters. It was important that the Port of Sydney should identify itself with
any activity calculated to improve efficiency in transportation, particularly that which concerned trade by sea with other countries.

As a background to the Symposium, Mr. Brotherson submitted that in October, 1968—less than two years ago—there were no container facilities in the Port of Sydney. Today, there were two large container terminals and roll-on, roll-off berths as well, all handling large volumes of interstate and overseas cargo.

“At the 30th of June last,” Mr. Brotherson said, “1.2 million tons of general cargo in the previous twelve months had moved through the port in containers. This represented 20 per cent of the general cargo trade, and 90 per cent, of it had moved through the container terminals. Conventional wharves received the remaining 10 per cent.”

Mr. Brotherson pointed out the extent to which the Port of Sydney is expected to service the needs of containerised cargoes by the end of 1971. This was indicated by the fact that the overseas container ships calling at Sydney then will comprise 33 cellular ships of substantial size. Added to these were the three Australian coastal container ships which have been operating for some appreciable time.

After recounting this situation, Mr. Brotherson revealed that in order to accommodate the increased traffic with maximum efficiency, the Maritime Services Board will construct a new “common user” container ship terminal at Glebe Island where 22 acres are now available with provision for another 10 acres to be developed later. The first Glebe Island berth would be available to shipping in June, 1972.

This would mean that the Maritime Services Board would vacate its present common user container ship terminal at White Bay, the President explained, and the facilities there would be offered on lease to private operators—possibly Seatainer Terminals would use it as an extension of their adjoining White Bay facility.

Before officially declaring the Symposium open, Mr. Brotherson also outlined the progress in developing Botany Bay as an ancillary to the Port of Sydney. Already there was a heavy demand there for industrial land. Seventeen of the nineteen applicants represented bulk industries requiring the use of sea transport.

“The theme of the ICHCA Symposium is commendable,” Mr. Brotherson said, “container operations have been beset with industrial disturbances, and the success of the system depended upon close programming which can only work with continuity of operations.” (Cargo Handling Quarterly, December 1970)

Automobile Shed

Kobe, January 20:—The picture shows the conception of the proposed “Shed of Automobiles for Export”, which has been under construction at the Maya-Piers of Kobe Port since October 1970 towards the completion in October 1971.

Though the number of automobiles exported from the Kobe Port was only 16,000 during 1966, it has shown a remarkable increase to be 63,000 in 1969, and is expected to reach as many as 100,000 in 1972. To cope with such a situation, the Shed has been designed for an exclusive use for this cargo.

The specifications of the Shed...
Berths Leased

Kobe, January 4:—The Han-Shin (Osaka-Kobe) Port Development Authority, which is constructing the Port-Island in Kobe Port towards its completion in 1975, announced on December 22, 1970, that it had determined the lessees of proposed container berths No. 2 to No. 8 in the Port-Island for their exclusive use. As you are aware, the Berth-No. 1 is already in use of Sea-Land Services, Inc. and U.S. Lines, Inc.

They were chosen out of many applicants, whose subscription had been invited publicly by the Authority since July 2, 1970.

The names of proposed tenants for the respective berths are as follows:

Berth-No. 2 . . . Cooperative use of Japan Line and Yamashita-Shin-nihon Line
Berth-No. 3 . . . Nippon Yusen Kaisha (N.Y.K.)
Berth-No. 4 . . . ditto
Berth-No. 5 . . . Cooperative use of American President Lines and American Mail Line
Berth-No. 6 . . . United States Lines
Berth-No. 8 . . . ditto

(News Release from Port and Harbor Bureau, Kobe City Government)

Containerships for OCL

Tokyo, January 18:—The keel of the first OCL (Overseas Containers Ltd., England) fully cellular containership for the Far East service was laid recently at the Hamburg Yard of Howaldtswerke Deutsche Werft A.G., the biggest shipbuilding firm in West Germany. She is due to be delivered and placed into service by January 1972 between Japan and Europe. Four other containerships, which OCL have ordered from the same shipbuilder, will have their keels laid within the year and they are all scheduled to join the Japan-Europe service before the end of 1972.

These vessels, each of 58,000 gross tons with a capacity in the region of 2,000 twenty-foot containers, will operate at a service speed of 26 knots, which will give them a sealeg transit time between Japan and Europe of 22 days via Panama.

OCL already have six containerships in service between U.K. and Australia. (OCL Press Release)

Test Container Shipment

Tokyo, January 12:—OCL (Overseas Container Ltd.) carried out the first test container shipment to England of canned salmon, the biggest item in exporting foodstuff from Japan to England, recently at Yokohama Port in preparation for the start of full-scale container
Asia-Oceania

Tokyo, December 7:— Shibata Industry Co. at 2-6 Kanda Awajicho, Chiyoda-ku, Tokyo, has introduced to the market new Circular Rubber Fenders of original designs. Because of the circular structure, the Circular Fenders have omni-directional strength. They have superior durability as they have no sharp edges.

The test revealed the need of some improvement in accommodation concerning loading container-van with cartons,” the shipper disclosed.

The canned salmon of 4,400 cartons, about 45 tons, were loaded into two 20 foot container-vans and taken aboard respectively two conventional vessels, Glen Line’s PEMBROKESHIRE and Blue Funnel’s PRIAM.

“Although we can expect some advantages in container transportation over conventional way such as little injury of the loads, as a whole that does not bring shippers outstanding benefit at least under the existing circumstances, because the freight is more expensive than conventional way. But I think the containerization of shipment of foodstuff as well as other items is inevitable from now on for the consignees generally desire it earnestly since in container transportation unloading and delivery will be done in absolutely effective and economical manners. Actually we took part in the test shipment partly because the consignee, John West Foods Ltd., the biggest foods trading firm in England, has asked for it.” commented Mr. Ken Komatsu, Foodstuff Department of Mitsui & Co., Ltd., who is the shipper of the test container loads.

Mr. Yoshimi Kumon, First Foodstuff Department Of Mitsubishi Shoji Kaisha, Ltd., the other shipper, pointed out the problem related to loading process as follows.

“The process of loading container-van with cartons took rather long time and much labour since it was done by hand. It is to be desired that the facilities related to loading process is improved and the loads of the cartons on pallets will be shoved in the containers by fork-lifts.” (OCL Press Release)

Reefer Service

Tokyo, January 26:— Federal Steam Navigation Company Limited, a member of the P&O Group, announced in London yesterday that it would take delivery of the first of a series of fast fully refrigerated ships in November this year.

Building contracts have been taken over or placed with yards in Norway and West Germany. Other contracts may follow. As they are delivered through to May 1974, the ships will operate an entirely new world-wide service carrying refrigerated goods. The decision to start this service was announced recently (17 December).

Chairman of Federal Steam, H. T. Beazley, said the ships would have a capacity of between 360,000 cu. ft. and 475,000 cu. ft. and a speed of 22 knots.

“We expect to take delivery of two ships, each of 475,000 cu. ft. capacity and 10,000 dwt from A/S Bergens Mekaniske Verksteder

Tokyo, January 28:— “Golden Clover”, a 162,039 dwt (89,000 gross ton) ore/oil/coal carrier, is to be delivered to the Liberian Clover Transports, Inc. at the Yokohama Yard of Mitsubishi Heavy Industries Co. on January 29, 1971.
of Bergen, Norway in November 1971 and July 1972.” Mr. Beazley said. “This is an existing contract we have taken over.”

Federal Steam has signed a contract with Lubecker Flenderwerke A.G. of Lubeck, West Germany, for two ships each of 450,000 cu. ft. capacity and 9,600 dwt. They will be delivered in February and June 1973. (P&O Information Service)

**Challenge of Sea Trade**

Antwerp:—In the frame of the Norwegian Week in Antwerp, on 21 October last, a symposium was held, the theme of which was: “The challenge of the sea-borne trade of tomorrow”. The opening statement of the symposium was delivered by Mr. E. Amlie, Consul General of Norway in Antwerp, who introduced the speakers and the panel members to the audience.

First speaker was Mr. A. Stromme Svendsen, Professor, Director of the Institute of Shipping Research (The Norwegian School of Economics and Business Administration). In his lecture dealing with the topic: „The prospects of world trade, ship types and port requirements“, lecturer pointed out the enormous evolution of sea-borne traffic during the past ten years. This evolution created bottle-necks in the ports which i.a. can be removed by:

—larger vessels (especially bulk cargo vessels)
—bigger turn-round of the vessels
—adaptation of the port equipment
—larger areas behind the quays
—better social conditions
—better education for port-labour.

Consequently this evolution is a challenge to shipping, which only can be met by internationalisation and integration of the shipping companies, by better planning based on research instead of on casual work based on tradition.

Second speaker was Mr. L. Johnson, Principal Surveyor—Det norske Veritas. Topic of his lecture: „New concepts in the design of ships“. Mr. Johnson said that the three main demands made by both shipowner and shipbuilder upon a ship’s design are reliability, feasability and low costs. These criteria also apply to the mammoth tankers and mammoth bulk carriers, on order or already built, requiring a rationalisation of the shipbuilding process (use of computers).

Mr. A. Hoie, Director—Fred Olsen & Co Shipowners, was the third speaker. The topic he dealt with was: „Norwegian shipping meets the challenge of changed circumstances“. 

—Norwegian shipping must pay primary attention to satisfying that part of the world demand for shipping services which can use labour saving (= capital intensive) ships;
—The Norwegian shipping industry must put a strong emphasis on all sorts of rationalizing devices on board and ashore (technical novelties);
—Norway must realise that it cannot remain competitive in the more traditional forms of shipping (high crew costs).

This changed circumstances in Norwegian shipping resulted into a trend towards joint ventures in recent years (on a national as well as on an international level). In view of the fact that 93% of the Norwegian fleet never calls at Norwegian ports, it is obvious that Norway is vulnerable to any flag discrimination.

The lectures were followed by a discussion led by a panel, presided over by Mr. A.S. Svendsen. Norwegian panel members were Mr. G. Fredrikssen (Det Bergenske Dampskibsselskap), Mr. O.A. Larsen (Det norske Veritas) and P. Meyer (Shipowner), whereas from the Belgian side the panel members were Mr. C. Evrard (Manager of „Compagnie Maritime Belge”), Mr. F.A. Van Dycke (Technical Manager of „Boelwerf”) and Mr. R. Jacobs (General Manager of the Antwerp Shipping Federation). During the discussion a particular interest was paid to the influence and the evolution of the new techniques in sea-borne traffic (containers, unit loads, lash etc.).

It was the task of Mr. Walter H. Oosterlieth, President of the Port of Antwerp Promotion Association, to close the debate. After giving a summary of the various lectures, he thanked the speakers and the panel. He also expressed his gratitude for the opportunity offered to broaden the information on the Norwegian flag (ranking fourth in Antwerp). Speaker said to be convinced that the entry of Norway into the E.E.C is a feature not to be underestimated for the defense of free trade and the freedom of the seas.

After the discussion the film: „Ships of Norway“ was shown and a reception was offered by the „Norwegian Shipowners’ Association“. (Antwerp Port News, November)

**New General Manager**

Edinburgh, 5th January:—Mr. John H.D. Sutton, M. Inst. T., has to-day taken up his appointment as General Manager of the Forth Ports Authority. Based at Tower Place, Leith, Edinburgh, he is now responsible for all aspects of the administration of docks Headquarters and the ports of Leith, Grangemouth, Granton, Methil, Burntisland and Kirkcaldy and the former Forth Conservancy Board.

Mr. Sutton, aged 47, was born in Lancashire, and after serving at sea as a navigating officer in the merchant navy during the war, he joined the overseas staff of the John Holt and Company (Liverpool) group of companies. Throughout his service in the former French and British Territories in Africa, Mr. Sutton was engaged in the shipping agency and forwarding business of the group. For the last six years, before his return to the United Kingdom for family reasons, he was General Manager and a Director of Holts Transport Ltd. which operated its own port and inland water transport service in Nigeria. After his return to the United Kingdom in 1961 Mr. Sutton became Assistant General Manager of the Blyth Harbour Commissioners and for the last five years he has been General Manager of Cork Harbour Commissioners. (Forth Ports Authority)
New Zealand Meat Trade

Liverpool, 17th December:-The Port of Liverpool has mounted a concentrated marketing drive in England and New Zealand over the past three months in close co-operation with shipping lines, stevedoring firms, cold storage companies, meat hauliers and trade interests.

The conclusion of an investigation in the U.K. into the streamlining of meat discharge and distribution methods by the New Zealand Meat Producers’ Board could have resulted in the loss of this trade to Liverpool, with substantial losses of other allied New Zealand imports.

All interests involved in New Zealand meat importation at Liverpool made sacrifices and eliminated their traditional rivalries in the over-riding need to retain the business for the Mersey.

It was considered that the co-operative efforts of all the Liverpool interests combined with the natural advantages of Liverpool as a New Zealand meat importing, storage and distribution centre were entirely suited to the new distribution planning, and additionally were most likely to enable high quality New Zealand meat to continue to be sold at a competitive price to the 16 million consumers living within a 100 mile radius of Liverpool.

Unions concerned with stevedoring and other firms involved are being kept fully informed of the efforts to retain this meat trade at Liverpool in view of the threatened adverse effect on their members should it have been lost to the Port.

The Chairman of the Mersey Docks and Harbour Board, Mr. John G. Cuckney, commented at Liverpool today: “We are confident that the Port of Liverpool will play its full part in the new streamlined distribution pattern for New Zealand meat. We are very impressed with the co-operative spirit of all concerned in the meat trade through this great Port.

“We would stress, however, to all concerned that the ships new scheduled for Liverpool must maintain the programme, particularly over the next year if the New Zealand meat trade is to continue at Liverpool and the planned increases on present schedules are to be achieved.” (Mersey Docks and Harbour Board)

Management Changes

Liverpool, 16th December:-Mr. James Mundy, Joint General Manager of the Mersey Docks and Harbour Board, is to be retired on December 31st.

Aged 61, Mr. Mundy has served with the Board for some 45 years and was appointed Joint General Manager in 1969. Following the war, when he was engaged on special work connected with the emergency arrangements for the port, he spent some time in the Traffic Department as Assistant Chief Traffic Manager acquiring detailed experience of port work.

He was appointed Assistant General Manager in 1963 and became Joint General Manager in December, 1969, when the present Director General Mr. R.S.F. Edwards, took over as Chief Executive of the Board.

Mr. Mundy is married and lives in Gayton, Wirral.

By reason of this, Mr. G.W. Brimyard, B.A., aged 45 years, who was appointed Joint General Manager in March, 1970, will assume the title of General Manager.

Educated at Wolstanton Grammar School, Staffsordshire and Selwyn College, Cambridge, he entered the service of London Transport Executive in 1949 and took charge of the Southern Section of London Transport’s Public Relations Office.

He joined British Railways in 1957 as Public Relations Officer, Great Eastern Line, and in 1960 became District Commercial Officer, Norwich.

Mr. Brimyard was promoted to be District Passenger Manager, Manchester, 1962 and Divisional Freight Manager, Manchester, in the following year. He returned to London in 1965 to become Freight Marketing Manager, Euston, and in 1967 was appointed Regional Passenger Manager, Euston, becoming Freight Manager, London Midland Region, in the following year.

Mr. Brinnyard is married with a son and a daughter and lives in Gayton, Wirral.

Completing the Management will be Mr. Benjamin Holt, aged 54 years, who has spent his working life in the service of the Board. He was appointed Assistant General Manager in January, 1969, and will continue in that capacity. (Mersey Docks and Harbour Board)

Mr. Gifford Speaks

London, 15th January: — More than 40 of Britain’s most senior port executives attended a conference in London to discuss the use of work study at ports as a means of improving cargo handling performance.

The conference was organised jointly by the National Ports Council and A.I.C. management consultants. It was attended by representatives both of port authorities and of leading private cargo handling companies operating in ports.

The Conference chairman was Mr. Morris Gifford, Director-General of the National Ports Council. He said that the aim of the conference was to convince management at the highest level that the application of work study to cargo handling was a practical proposition.

“This is the area in which I believe there is the greatest scope for improvement, to the benefit of the entire port industry”, he declared.

Mr. Gifford said that work study was already used extensively by ports in areas other than cargo handling, but many ports managers did not believe that it could be applied to cargo handling operations, because of the great variety and range of cargoes which had to be dealt with.

Two ports—Felixstowe and the Tees—had now found that it could be done. The purpose of the conference was to use the experience of these ports to illustrate what could be done.

“At both ports work measurement was an integral part of agreements with the dockworkers, and is the basic yardstick by which the agreements are monitored”, he said. “In
The photo shows the whole Container-Terminal project at Bremerhaven. The “Terminal on the Sea” lies open to the river estuary so that the ships do not have to pass through the lock. The completion of the first berth is planned for the beginning of 1971 (approx. 140,000 sqm) while the second berth will be available during the year 1971. The final construction of the new river-quay will contain three berths for full-container ships and will be equipped with container bridges or special cranes for container handling (450,000 sqm). Furthermore it is possible according to traffic requirements to extend the container marshalling yard up to 2,000,000 sqm. Depth of water 41’, which will later be deepened to 46’. The special characteristic of this plant is, that it can be entered from all sides as there will be direct connection between the Nordhafen and the riverquay.

both ports the results have been good”.

Mr. Gifford pointed out that a great advantage of work study was that it was a means of bringing about an improvement without the necessity for heavy capital investment.

“It does require investment in people, in the form of training and education—an area of investment which is sometimes neglected, less heavy than that required by major new capital installations but which can prove equally if not more rewarding”.

Mr. Gifford added that the acceptance of work study clearly depended on the attitude of the workers, and an important aspect of the conference was consideration of the development of mutual trust between management and men. He welcomed Mr. Tim O’Leary, of the Transport and General Workers’ Union, who addressed the conference on ‘The Trade Union View of Work Study’.

Representatives of the Felixstowe Dock and Railway Company and the Tees and Hartlepool Ports Authority addressed the conference and also took part in an open forum which closed the proceedings.

A.I.C. management consultants were consultants to the Tees and Hartlepool Port Authority in the introduction of work study at the port; the National Ports Council have acted in a similar capacity at Felixstowe and assisted in the work at the Tees. (National Ports Council)

(Continued on Next Page Bottom)
Full-Container Service
from Bremerhaven to Australia
Via Bremen Bremerhaven

Just as the last decade ended favourably, there has been a promising beginning to the seventies for the Ports of Bremen. The choice of specialized transport services has been widened. The LASH service and the former six full-container services, which have been in operation on the route between Bremen/Bremerhaven and the U.S.A., have been joined by a fully containerized liner service to Australia. This service was officially started with the

New Container Crane

London, 18 December:—Sections of the £226,000 transporter crane ordered by the British Transport Docks Board for their container berth at Queen Elizabeth Dock, Hull, from Clyde, Crane and Booth, Ltd., have now begun to arrive on site. Delivery of all the parts will be completed by the end of January.

Erection of the crane, which will lift a 35-ton payload, will commence immediately and is expected to take 15 weeks. After testing the crane should become operational by the end of May. The crane will be capable of handling 40 containers per hour.

The Docks Board have also provided five straddle carriers and other shore handling equipment for the container berth which is situated in the south east corner of Queen Elizabeth Dock. A 41-acre marshalling area has also been provided adjacent to the berth.

The terminal will be operated on a common-user basis, but the first service to use the berth will be a container service between Hull and Rotterdam to be operated by North Sea Ferries five times a week in each direction. This service will commence as soon as the crane is operational. (British Transport Docks Board)

turnover of the “Melbourne Express” of the Hapag-Lloyd AG shipping Line.

The introduction of this new service of the Australia Europe Container Service is seen by the Ports of Bremen as proof of their particular efficiency and also as the result of an ambitious policy in the ports. The development of container transport to and from the United States, which took place within only 4½ years in a way that was hardly predictable beforehand, is being logically and systematically continued on the Europe/Australia route. After all, the Ports of Bremen can point out that since the introduction of transcontinental container transport in May 1966 more than 250,000 containers (approx. 400,000 on a 20-ft basis) with over 2.7 million tons have been moved to and from the Ports of Bremen and Bremerhaven so far. This volume of overseas traffic, which has indeed so far not even nearly been achieved by any other European port, can be classified as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Container absolute</th>
<th>Turnover Figures on a 20'-basis</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1966 (from May)</td>
<td>8 335</td>
<td>16 670</td>
<td>72 462</td>
</tr>
<tr>
<td>1967</td>
<td>35 358</td>
<td>51 258</td>
<td>318 310</td>
</tr>
<tr>
<td>1968</td>
<td>46 873</td>
<td>69 848</td>
<td>464 553</td>
</tr>
<tr>
<td>1969</td>
<td>73 334</td>
<td>118 001</td>
<td>822 129</td>
</tr>
<tr>
<td>1970 (9 months)</td>
<td>79 500</td>
<td>138 408</td>
<td>965 417</td>
</tr>
<tr>
<td>1970 (estimated)</td>
<td>110 000</td>
<td>180 000</td>
<td>1 300 000</td>
</tr>
</tbody>
</table>

This is a very satisfactory record on the U.S. route for both the container shipping lines and the Ports of Bremen, which can be shown with pride. For it is a fact that Bremen/Bremerhaven hold in this branch of commerce the top position not only with regard to the movement of containers but also with regard to the number of full-container lines: Hapag-Lloyd Container Lines, Sea-Land Service Inc., American Export Isbrandtsen Lines

Bremerhaven is fully guaranteed by reason of the efficient handling facilities and a smoothly running organisation is confirmed not only by the high turnround speeds, which have been achieved for years on the U.S. route, but also by the loading and unloading of the first full-container vessel on the Australian route, the "Jervis Bay", on the 1st November, 1970. 227 incoming and outgoing containers in only five-and-a-half hours are evidence enough of
the efficiency of this port.

It will be possible to improve these achievements still further in the future. For, after the completion of the "Terminal on the Sea", which is direct on the outer River Weser and only a few nautical miles from the North Sea, the Ports of Bremen will be in position to control the movements of containers, both inwards and outwards, even better. This terminal is already an example of a port policy which is definitely directed at the future. After all, computers, radio supervision, loud-speaker systems and television installations will belong to the everyday equipment of this terminal as much as all the other technical installations which are necessary for the smooth running of a modern port. Thus a further step towards the industrialisation in the Ports of Bremen will be taken.

The ports of the future must be highly mechanized in order to make the excellent performance of today gradually the normal performance of tomorrow. Also the profitability of the more modern vessels with increasing capital intensity must be taken into consideration. The Ports of Bremen are making every effort to achieve this aim. The investments of the Ports of Bremen already characterize these efforts towards thinking in terms of the future in the development of vessels and ports.

The new container service between Bremerhaven and Australia will indeed have a decidedly positive influence on the total amount of goods handled by the Ports of Bremen. Because of this, the Ports of Bremen can be very optimistic when forecasting the total port turnover for 1970. 17.7 million tons moved in the first nine months of this year give good reason to forecast a figure of about 24 million tons for this year. This is a result, about which nobody need not be at all disappointed, especially because well over 50%, namely about 12.5 million tons, will be general goods.

Bremen, 24th November, 1970

Free Port of Hamburg
Its Functions and its Significance
Reprinted from "Ship via Hamburg" May/June 1970

For more than eight decades, the Free Port of Hamburg has been an international concept for a liberal and universal trade policy. Its foundation goes back to the Customs Union Agreement signed on 25. 5. 1881 by the German Empire and the Free and Hanseatic City of Hamburg. Through this agreement, Hamburg, with the exception of a section of its port which became designated as "Free Port", was integrated into the customs territory of the German Empire. This was the first step in the transition from a Free Port City, as it was originally, to a city with a Free Port. Inaugurated on 15. 10. 1888, the Free Port has meanwhile stamped the character of the Port of Hamburg and in particular, has significantly strengthened its function as a commercial, transit and traffic centre.

Today, the Free Port of Hamburg consists of the larger, "old" Free Port and—separated by an arm of the River Elbe—of the Waltershof Free Port which was set up in 1910. An area of ca. 15 sq.kms., it forms the nucleus of the port. It comprises practically all the transit sheds, the entire warehouse area and numerous industrial plants.

The land in the Free Port is owned wholly by the Hamburg State. In this way, speculation, with its undesirable consequences for cost and price structure in the port, is prevented and those industries, warehousers, quay operators or other enterprises, which appear particularly suitable from the point of view of port policy, can be located here. Privately owned firms have the possibility of entering into long-term lease agreements.

The most important customs regulations for the German free ports are compiled in the Customs Act of 14. 6. 1961 and in the General Customs Regulations of 29. 11. 1961. According to these, free ports are duty-free areas which serve the transhipment and storage of commodities for foreign trade purposes and also shipbuilding.

Within the Free Port, there are no restrictions of any kind through customs formalities for shipping and goods traffic. Goods can be transshipped, transported, traded, stored for any length of time and in unlimited quantities, inspected, sampled and, to a certain degree, undergo warehouse handling, i.e., repacking, refilling, splitting, etc., insofar as no tariff advantages result, that is, the tariff burden is not reduced through such handling, without customs clearance and the attendant costs. Only when the goods are moved out of the Free Port across the customs boundary into the customs territory must they be presented for examination at one of the exit points and either be cleared or subjected to a special customs procedure. Moreover, treatment and processing of commodities for commercial purposes is allowed in the "Old Hamburg Free Port" without customs restrictions.

Advantages of the Free Port

The Hamburg Free Port offers advantages particularly for import and export, transit traffic, commission storage and the treatment and processing of foreign, unentered commodities. Briefly, these advantages are as follows:

...for import and export...

If a commodity is imported via the Free Port, it does not mean that entrance taxes (customs duties, import turnover tax, other excise duties) are waived wholly or in part. But the advantage to the importer is that that section of the German Customs Law which applies when the customs boundary is crossed is not put into effect. Thus, for example, a shipment of coffee can be discharged at the quayside without customs formalities and transferred to a transit shed. The coffee can
be sampled, repacked, taken to a Free Port warehouse and stored there—all without customs formalities and without any intervention whatsoever on the part of the customs authorities. As no limits are imposed for the duration of warehousing or for the amount which may be stored in the Free Port, the importer is able to store his coffee—to keep to this example—without paying duty until it crosses the customs boundary for selling inland. Only then do the entry taxes for each quantity become due for payment. In this respect, the Free Port proves to be, for the import trade in particular, an instrument for delaying customs payments indefinitely and indeed, without having to provide security. Less capital is tied, there is no loss of liquidity or interest. The importer can keep extensive stocks; at the same time, this can have a regulating effect on the domestic market.

The Free Port also facilitates export to a considerable extent in that—apart from exist clearance—it allows goods to be forwarded to the ship and be freely moved about.

...for transit traffic...

The Free Port affords unrestricted freedom for transit traffic in the widest sense. Here too, goods can be transhipped or stored in transit sheds or warehouses without being subject to customs formalities. The transit merchant can transship from one seagoing vessel to another, to inland waterways craft or to road or rail vehicles or vice versa without being bound by any restrictions.

...for commission storage...

The customs facilities in the Free Port create a favourable basis for commission business, i.e. storage of commodities which are uncertain of selling. The possibility of having unrestricted access at all times to goods stored in the Free Port is a consideration of great importance for the German importer or the foreign exporter. Prompt delivery from the warehouse combined with the possibility for prior inspection of the goods by the purchaser is a definite advantage which increases sales prospects and strengthens the market position of the buyer. All this adds up to the fact that besides German importers, overseas exporters are taking increasing interest in using the advantages of storage in the Hamburg Free Port for the sale of their products in Europe.

...for treatment and processing...

Beyond the normal functions of German free ports, the treatment and processing of commodities for commercial purposes is allowed without any customs restrictions in the old Free Port of Hamburg. This legal position offers a favourable prerequisite for the location of industries primarily interested in export. The Free Port is particularly beneficial for industries who obtain their raw materials and primary products from overseas and then re-ship the manufactured products. Within easy reach of shipping facilities, they avoid transport costs, customs formalities and costs for customs supervision.

The main industry in the Free Port is shipbuilding which, together with sub-contractors and suppliers, comprises 50 firms employing ca. 23,000 persons.

Modern Facilities for Transhipment and Storage

The Free Port of Hamburg offers special handling facilities for all commodities in world trade. At present, 69 transit sheds with a total area of 720,000 sqm. and a large number of warehouses with a storage area of 607,000 sqm. are available for the transhipment of general cargo. In addition, there are modern handling facilities for bulk goods, grain silos with stationary and floating grain elevators and special-purpose transit sheds among which the banana shed and the “Overseas Centre” for consolidated export cargo are worth special mention. The terminals for container and roll-on/roll-off traffic are also situated in the Free Port.

14,000 trained dock workers are available. If necessary, loading or discharging can take place “round the clock”, i.e. 3 or 4 shifts within 24 hours. Experienced firms—warehouses, etc.—ensure proper storage and careful handling of goods entrusted to them.

Moderate Control

In contrast to customs law, the Free Port occupies no special position in foreign trade law (legal basis: Foreign Trade Act of 28. 4.

MARCH 1971
Following the decision by the N.S.W. State Government to develop the northern foreshore of Botany Bay as a port/industrial estate, the Maritime Services Board has finalised developmental proposals and the initial construction work for the first major reclamation and armoured embankment associated with the complex will commence early in 1971. This stage, when completed, will be orientated towards the accommodation of deep-draft vessels, but port facilities to serve all trades will be constructed as demand dictates.

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

Botany Bay Developments

alise in the clearance of those commodities which require specialised knowledge and examination facilities or which have to undergo a particular clearance procedure. The largest customs offices, comprising 30 or more clearance stations and a staff of ca. 150, are among the most modern of their kind in the Federal Republic.

In its territorial expansion and original legal form, the Free Port of Hamburg has remained virtually unaffected by the political and economic changes of the past decades: clear proof of its valuable function and necessity. In Hamburg it will continue to be regarded as the suitable solution for ensuring maximum facilities for overseas trade and traffic. No other customs system can offer greater advantages, can be freer than the Free Port of Hamburg.

5th Port in Europe

Le Havre, January 11:—The merchandise traffic that passed through Le Havre in 1970 rose nearly to 60,000,000 tons, marking an increase of 17% compared with the figure registered in 1969.

It must be underscored that this increase was attained not only in bulk merchandise but also in general merchandise. The port traffic has doubled in 4 years.

Having passed Genoa, Le Havre now holds the fifth place among European ports. (Port Authority of Le Havre)

Biggest Tanker in Fos

Marseilles, January 1971:—At the year’s debut, the oil port of Fos has had an important date in its history.

In putting in fully loaded at Berth No. 3 on January 9, the Greek tanker “Andros-Orion”, 247,000 dwt, broke the record held until then by “King Alexander The Great”.

Coming from the Persian Gulf (Djebel Djana), the tanker has unloaded its crude oil cargo at the rate of 10,000 ton/hour. Let us point out also that it was her inaugural voyage.

The greatest tanker ever received at the Fos port installations will take to the sea again on a new voyage for a destination in the Persian Gulf.

Let us recall that, since the South European Pipe Line went into service, the capacity of refineries of the Berre-Fos region has increased from 14 million tons in 1962 to 34 million tons in 1970. The projected capacity of expansion is 45 million tons.

Along with the remarkable fact that a tanker of 250,000-ton generation called, the set of basins of the Port Authority of Marseilles is characterized by the permanent occupation of the berths at piers. (Port Authority of Marseilles)

New Containerships

Bremen:—A new epoch is now commencing of the just as short as it was quick and, indeed—sensational—development, occurring in the transocean container trade between the USA and Europe—after
the four year constitution-phase from 1966: this will now undoubtedly be marked by larger and faster ships; a concentration and extension of the liner services; and a computer-guided operation system. The Bremen ports, which enjoy the longest and richest experience in the USA-Europe container trade, are prepared for the new chapter of container-development. An extensive ‘Terminal on the Sea’ is at present in course of being produced at Bremerhaven, direct on the Outer-Weser, only a few miles distant from the Northsea. It is on this terminal that the full-container ships of the so-called ‘third generation’, having a capacity of from 1,800 to 2,000 containers, a length of from approx. 300 metres and a speed of up to 33 knots—will berth:—ships which have already been ordered for the USA and far east trades. These super—containerships can practically only be serviced in the immediate vicinity of the coast, as the risks involved in maneuvering in the closed waters of rivers are no longer acceptable—and such passages for these expensive units (approx. DM 100 millions) are no longer profitable. It is for this reason that Bremerhaven’s ‘Terminal on the Sea’ is the terminal of the future: for the computer, the VHF, the tanoy-relay system, are all integral, natural parts of the installation, as is the T.V. screen, enabling its monitors to keep control over all movements in the terminal. (Bremen Air Mail, December)

Containers, A Salvation

Bremen:—The Bremen Senator for Ports, Shipping and Traffic, Dr. Georg Borttscheller, writing in the latest issue of the North-German paper “Wirtschafts-Correspondent”, made the point that the considerable impetus in the field of international cargo-handling in recent years was only at all possible of being coped with, because of the real saving achieved in time, men and berths with the container form of traffic. It is often not realised that in boom periods it is not only the industry which has to combat with long delivery times and increased prices, but also that the maritime economy is faced with problems which are not always easy to overcome. It would be fruitless to calculate—wrote the senator under the heading “The Seaports in Times of Boom”—just how many more berths, shed-space, cranes and other port installations would have been necessary, if the containerized goods would have had to be handled by conventional means. On the other hand Bremen/Bremerhaven is doing everything to ensure that also the conventional methods of cargo-handling—which still account for 90 percent of the general cargo—are kept up to standard, allowing them to perform satisfactorily in the face of constantly increasing demands. Thus DM 200 millions have been invested in new harbour installa-
Yes, all Duty & Tax Free!

THE WORLD'S FINEST GIFT ITEMS
at TOKYO INTERNATIONAL AIRPORT

DUTY & TAX FREE SHOP

- Here, you can save money 20-60%.
- Liquors, Perfumes, Cigarettes, Radios, Watches, etc., and only the best from every country.
- And it's so convenient... open always and many varieties.
- Let Tokyo International Airport DUTY & TAX FREE SHOP solve your gift shopping headaches.

TOKYO INTERNATIONAL AIRPORT
DUTY & TAX FREE SHOP
Managed by
JAPAN AIRPORT TERMINAL CO., LTD.

Portions, cranes and sheds from 1960 to 1966, 40 new floating and shore cranes, 150 new localised conveyance appliances, a new switch-tower and additional port construction will have required a further DM 55 millions by 1971. In Bremen and Bremerhaven there is always a receptive ear for all types of traffic and innovations—and one will, also in the future, be keeping well in step with technical development.

(Bremen Air Mail, December)

Longer Wharf

Lourenço Marques: — Work is going on at good speed to add a further 380 metres to the length of the “Gorjão” wharf at the port of Lourenço Marques. It must be finished in February 1971 and will cost Esc. 97.000.000,00. The completion of this project will take about 660 days and over 200 people—technicians and labour—are working on it.

The structure is essentially a metallic one in as much as approximately 2,200 tons of piles—made in Japan and imported from there—24 metres long and 40 centimetres wide will be used.

It consists of a main face built of piles displayed in concertina fashion. This will be topped with a concrete wall and trussed on to a second pile face at a distance of 30 metres.

The filling with soil will be made by pumping in some half million cubic metres of sand ejected directly from a dredger that can handle about six thousand cubic metres a day.

The quantity of concrete used to build the above mentioned topping wall is somewhere around 6,000 cubic metres.

The construction was preceded by dredging which cleared approximately 270 thousand cubic metres of mud, substituted by a bed of sand and rocks that will form the foundation of the construction. This preparation was supervised by a driver.

The fixation of this face will be made by means of a floating caisson that weighs over 1,500 tons and measures 18.5×10×16.5 metres, that is successively sunk and re-floated and acts as a working platform bearing the 50 ton hoisting derrick which fixes the piles.

When the building is finished, the caisson will be integrated in the wall of the pier.

The building, which is being carried out by “Construções Técnicas”, is supervised by Engineer Rui de Sousa and planning is made by the “PERT” method.

In the end, the depth of water alongside the wharf will be 12 metres and those further 380 metres will allow the berthing of three medium sized ships. (Boletim Portos, Caminhos de Ferro e Transportes de Moçambique, February, 1970)
Present and Future Container Facilities in Major Ports of the World (1)

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

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

Oakland, Calif., U.S.A.

<table>
<thead>
<tr>
<th>OPERATOR OF TERMINAL</th>
<th>DESIGNATION OF TERMINAL</th>
<th>DATE:</th>
<th>PORT OF:</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARINE TERMINALS CORPORATION</td>
<td>OAKLAND CONTAINER TERMINAL</td>
<td>DECEMBER 8, 1970</td>
<td>OAKLAND</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TERMINAL</th>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of berths</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Length of each berth</td>
<td>706 feet</td>
<td>710 feet</td>
<td></td>
</tr>
<tr>
<td>Number of container cranes</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Lifting capacity of each</td>
<td>40 long ton</td>
<td>40 long ton</td>
<td>40 long ton</td>
</tr>
<tr>
<td>Reach on waterline from front edge of berth</td>
<td>115 feet</td>
<td>115 feet</td>
<td>115 feet</td>
</tr>
<tr>
<td>Reach on landside from deck rail</td>
<td>82 feet</td>
<td>82 feet</td>
<td>82 feet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NODE OF MANAGEMENT</th>
<th>1. Exclusive lease for specified users</th>
<th>2. Preferential use</th>
<th>3. Open to all callers</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>NODE OF OPERATION</th>
<th>Transshipment operation</th>
<th>Straddle Carrier operation</th>
<th>Ochos operation</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>OPERATIONAL PROPERTIES AT TERMINAL</th>
<th>Dimensions</th>
<th>(50,000 \text{ square feet} )</th>
<th>(61,000 \text{ square feet} )</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>RAILROAD CONNECTION TO TERMINAL</th>
<th>Yes</th>
<th>Yes</th>
</tr>
</thead>
</table>

Signature: [Signature]

---

Oakland, Calif., U.S.A.

<table>
<thead>
<tr>
<th>PORT OF:</th>
<th>OAKLAND</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>OPERATOR OF TERMINAL</th>
<th>DESIGNATION OF TERMINAL</th>
<th>DATE:</th>
<th>PORT OF:</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEA-LAND SERVICE, INC.</td>
<td>OAKLAND CONTAINER TERMINAL</td>
<td>JANUARY 5, 1971</td>
<td>OAKLAND</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TERMINAL</th>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of berths</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Length of each berth</td>
<td>700 feet</td>
<td>700 feet</td>
<td>700 feet</td>
</tr>
<tr>
<td>Number of container cranes</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Lifting capacity of each</td>
<td>20 long ton</td>
<td>20 long ton</td>
<td>20 long ton</td>
</tr>
<tr>
<td>Reach on waterline from front edge of berth</td>
<td>115 feet</td>
<td>115 feet</td>
<td>115 feet</td>
</tr>
<tr>
<td>Reach on landside from deck rail</td>
<td>82 feet</td>
<td>82 feet</td>
<td>82 feet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NODE OF MANAGEMENT</th>
<th>1. Exclusive lease for specified users</th>
<th>2. Preferential use</th>
<th>3. Open to all callers</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>NODE OF OPERATION</th>
<th>Transshipment operation</th>
<th>Straddle Carrier operation</th>
<th>Ochos operation</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>OPERATIONAL PROPERTIES AT TERMINAL</th>
<th>Dimensions</th>
<th>(30,000 \text{ square feet} )</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>RAILROAD CONNECTION TO TERMINAL</th>
<th>Yes</th>
</tr>
</thead>
</table>

Signature: [Signature]

---

Oakland, Calif., U.S.A.

<table>
<thead>
<tr>
<th>PORT OF:</th>
<th>OAKLAND</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>OPERATOR OF TERMINAL</th>
<th>DESIGNATION OF TERMINAL</th>
<th>DATE:</th>
<th>PORT OF:</th>
</tr>
</thead>
<tbody>
<tr>
<td>OAKLAND CONTAINER TERMINAL</td>
<td>OAKLAND</td>
<td>JANUARY 5, 1971</td>
<td>OAKLAND</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TERMINAL</th>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of berths</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Length of each berth</td>
<td>300 feet</td>
<td>300 feet</td>
<td>300 feet</td>
</tr>
<tr>
<td>Number of container cranes</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Lifting capacity of each</td>
<td>30 long ton</td>
<td>30 long ton</td>
<td>30 long ton</td>
</tr>
<tr>
<td>Reach on waterline from front edge of berth</td>
<td>100 feet</td>
<td>100 feet</td>
<td>100 feet</td>
</tr>
<tr>
<td>Reach on landside from deck rail</td>
<td>99 feet</td>
<td>99 feet</td>
<td>99 feet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NODE OF MANAGEMENT</th>
<th>1. Exclusive lease for specified users</th>
<th>2. Preferential use</th>
<th>3. Open to all callers</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>NODE OF OPERATION</th>
<th>Transshipment operation</th>
<th>Straddle Carrier operation</th>
<th>Ochos operation</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>OPERATIONAL PROPERTIES AT TERMINAL</th>
<th>Dimensions</th>
<th>(22,000 \text{ square feet} )</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>RAILROAD CONNECTION TO TERMINAL</th>
<th>Yes</th>
</tr>
</thead>
</table>

Signature: [Signature]

---

MARCH 1971
### Oakland, Calif., U.S.A.

<table>
<thead>
<tr>
<th>TERMINAL</th>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATOR</td>
<td>CITIES TERMINAL</td>
<td>ORDOIN</td>
<td>SEATTLE TERMINAL</td>
</tr>
<tr>
<td>NUMBER OF BERTHS</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LENGTH OF EACH BERTH</td>
<td>600'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAND AREA OF EACH TERMINAL</td>
<td>100 Acres</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEPTH OF WATER AT BERTHS</td>
<td>30' MLW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPERATING TIME</td>
<td>24 HRS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NUMBER OF CONTAINER CRANES</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIFTING CAPACITY OF EACH</td>
<td>40 long tons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REACH ON WATERSIDE FROM FRONT EDGE OF BERTH</td>
<td>40'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REACH ON LANDSIDE FROM EACH FALL</td>
<td>20'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE OF MANAGEMENT:**
1. Exclusive lease for specified users
2. Preferential use
3. Open to all callers

**METHOD OF OPERATION:**
- Container operation
- Straddle Carrier operation
- Chassis operation

**CONNECTIONS OR PRE-SHIPMENT FACILITIES:**
- Dimensions

**DETAILED CONNECTOR TO TERMINAL (Year-End):**
- No

**SIGNED:**
- [Signature]

### Anchorage, Alaska, U.S.A.

<table>
<thead>
<tr>
<th>TERMINAL</th>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATOR</td>
<td>CITY OF ANCHORAGE</td>
<td>CITY OF ANCHORAGE</td>
<td>CITY OF ANCHORAGE</td>
</tr>
<tr>
<td>NUMBER OF BERTHS</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LENGTH OF EACH BERTH</td>
<td>600' x 400'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAND AREA OF EACH TERMINAL</td>
<td>20 Acres</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEPTH OF WATER AT BERTHS</td>
<td>30' MLW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPERATING TIME</td>
<td>24 HRS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NUMBER OF CONTAINER CRANES</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIFTING CAPACITY OF EACH</td>
<td>20 tons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REACH ON WATERSIDE FROM FRONT EDGE OF BERTH</td>
<td>60'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REACH ON LANDSIDE FROM EACH FALL</td>
<td>20'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE OF MANAGEMENT:**
1. Exclusive lease for specified users
2. Preferential use
3. Open to all callers

**METHOD OF OPERATION:**
- Container operation
- Straddle Carrier operation
- Chassis operation

**CONNECTIONS OR PRE-SHIPMENT FACILITIES:**
- Dimensions

**DETAILED CONNECTOR TO TERMINAL (Year-End):**
- Yes

**SIGNED:**
- [Signature]

### Savannah, Ga., U.S.A.

<table>
<thead>
<tr>
<th>TERMINAL</th>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATOR</td>
<td>CITY OF SAVANNAH</td>
<td>CITY OF SAVANNAH</td>
<td>CITY OF SAVANNAH</td>
</tr>
<tr>
<td>NUMBER OF BERTHS</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LENGTH OF EACH BERTH</td>
<td>992'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAND AREA OF EACH TERMINAL</td>
<td>20 Acres</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEPTH OF WATER AT BERTHS</td>
<td>980' x 1600'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPERATING TIME</td>
<td>24 HRS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NUMBER OF CONTAINER CRANES</td>
<td>1 plus 2 30-ton Oris-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIFTING CAPACITY OF EACH</td>
<td>45 tons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REACH ON WATERSIDE FROM FRONT EDGE OF BERTH</td>
<td>1157'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REACH ON LANDSIDE FROM EACH FALL</td>
<td>1157'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE OF MANAGEMENT:**
1. Exclusive lease for specified users
2. Preferential use
3. Open to all callers

**METHOD OF OPERATION:**
- Container operation
- Straddle Carrier operation
- Chassis operation

**CONNECTIONS OR PRE-SHIPMENT FACILITIES:**
- Dimensions

**DETAILED CONNECTOR TO TERMINAL (Year-End):**
- Yes

**SIGNED:**
- [Signature]
**New York, N.Y., U.S.A.**

**PORT OF:** New York

**DATE:** December 29, 1970

**DESIGNATION OF TERMINAL:** Universal Terminal - Port Newark, New Jersey

**OPERATION OF TERMINAL:** Universal Terminal & Straddle Carrier

### TABLE 1: New Jersey Designation of Terminals

<table>
<thead>
<tr>
<th>TERMINAL</th>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NUMBER OF CONTAINER CRANES</strong></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LIFTING CAPACITY OF EACH CONTAINER CRANE</strong></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>REACH ON WATERLINE FROM FRONT EDGE OF BERTH</strong></td>
<td>135'</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>REACH ON LANDLINE FROM DECK RAIL</strong></td>
<td>60'</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TYPE OF OPERATING</strong></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TRANSLANDER OPERATION</strong></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>STRADEE CONTAINER OPERATION</strong></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CHASSIS OPERATION</strong></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DIMENSIONS OF FACILITY AREA</strong></td>
<td>50' x 50'</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL CONTAINER AREA OF TERMINAL</strong></td>
<td>35,000 sq. ft.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SIGNATURES:** **May** 31, 1970

---

**New York, N.Y., U.S.A.**

**PORT OF:** New York

**DATE:** December 29, 1970

**DESIGNATION OF TERMINAL:** International Terminal Operations, Elizabeth, New Jersey

**OPERATION OF TERMINAL:** International Terminal Operations

### TABLE 2: New Jersey Designation of Terminals

<table>
<thead>
<tr>
<th>TERMINAL</th>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NUMBER OF CONTAINER CRANES</strong></td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LIFTING CAPACITY OF EACH CONTAINER CRANE</strong></td>
<td>105 tons</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>REACH ON WATERLINE FROM FRONT EDGE OF BERTH</strong></td>
<td>100 ft.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>REACH ON LANDLINE FROM DECK RAIL</strong></td>
<td>81.6 ft.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TYPE OF OPERATING</strong></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TRANSLANDER OPERATION</strong></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>STRADEE CONTAINER OPERATION</strong></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CHASSIS OPERATION</strong></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DIMENSIONS OF FACILITY AREA</strong></td>
<td>123.3 x 80'</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL CONTAINER AREA OF TERMINAL</strong></td>
<td>9,920 sq. ft.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SIGNATURES:** **May** 31, 1970

---

**New York, N.Y., U.S.A.**

**PORT OF:** New York

**DATE:** December 29, 1970

**DESIGNATION OF TERMINAL:** Chemical Export Terminals, Elizabeth, New Jersey

**OPERATION OF TERMINAL:** Chemical Export Terminals

### TABLE 3: New Jersey Designation of Terminals

<table>
<thead>
<tr>
<th>TERMINAL</th>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NUMBER OF CONTAINER CRANES</strong></td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LIFTING CAPACITY OF EACH CONTAINER CRANE</strong></td>
<td>30 tons</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>REACH ON WATERLINE FROM FRONT EDGE OF BERTH</strong></td>
<td>80 ft.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>REACH ON LANDLINE FROM DECK RAIL</strong></td>
<td>660 L.F.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TYPE OF OPERATING</strong></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TRANSLANDER OPERATION</strong></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>STRADEE CONTAINER OPERATION</strong></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CHASSIS OPERATION</strong></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DIMENSIONS OF FACILITY AREA</strong></td>
<td>1,053,040 sq. ft.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL CONTAINER AREA OF TERMINAL</strong></td>
<td>280,000 sq. ft.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SIGNATURES:** **May** 31, 1970

---

**Port Containerization ... Worldwide**

**MARCH 1971**
### Marine Terminal

**DESTINATION OF TERMINAL:** Port Newark - Battery 55

**OPERATOR OF TERMINAL:** Port Authority of New York

#### TERMINAL

<table>
<thead>
<tr>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of berths</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Length of each berth</td>
<td>750'</td>
<td></td>
</tr>
<tr>
<td>Land area of each terminal</td>
<td>70 acres</td>
<td></td>
</tr>
<tr>
<td>Dimensions of each terminal</td>
<td>35' (MLW)</td>
<td></td>
</tr>
<tr>
<td>Depth of water at berths</td>
<td>90' (MLW)</td>
<td></td>
</tr>
</tbody>
</table>

#### CONTAINER OPERATIONS

<table>
<thead>
<tr>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of container cranes</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Lifting capacity of each crane</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Reach on waterside from front edge of berth</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Reach on landside from dock rail</td>
<td>Unknown</td>
<td></td>
</tr>
</tbody>
</table>

#### AREA OF MANAGEMENT

<table>
<thead>
<tr>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exclusive lease for specified users</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Preferred use</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Open to all callers</td>
<td>Unknown</td>
<td></td>
</tr>
</tbody>
</table>

#### AREA OF OPERATION

- Transshipper operation
- Straddle Carrier operation
- Chassis operation

#### MAINTENANCE SHED

- Dimensions
- Maintenance connection to terminal

#### SIGNATURES

- Port Authority
- Tenant

---

### Port Authority

**DESTINATION OF TERMINAL:** Elizabeth-Port Authority Marine Terminal

**OPERATOR OF TERMINAL:** Port Authority of New York

#### TERMINAL

<table>
<thead>
<tr>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of berths</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Length of each berth</td>
<td>800'</td>
<td></td>
</tr>
<tr>
<td>Land area of each terminal</td>
<td>75 acres</td>
<td></td>
</tr>
<tr>
<td>Dimensions of each terminal</td>
<td>25' (MLW)</td>
<td></td>
</tr>
<tr>
<td>Depth of water at berths</td>
<td>90' (MLW)</td>
<td></td>
</tr>
</tbody>
</table>

#### CONTAINER OPERATIONS

<table>
<thead>
<tr>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of container cranes</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Lifting capacity of each crane</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Reach on waterside from front edge of berth</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Reach on landside from dock rail</td>
<td>Unknown</td>
<td></td>
</tr>
</tbody>
</table>

#### AREA OF MANAGEMENT

<table>
<thead>
<tr>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exclusive lease for specified users</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Preferred use</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Open to all callers</td>
<td>Unknown</td>
<td></td>
</tr>
</tbody>
</table>

#### AREA OF OPERATION

- Transshipper operation
- Straddle Carrier operation
- Chassis operation

#### MAINTENANCE SHED

- Dimensions
- Maintenance connection to terminal

#### SIGNATURES

- Port Authority
- Tenant

---

### Philadelphia, Pa.

**DESTINATION OF TERMINAL:** Tioga and Packer Avenue Marine Terminal

**OPERATOR OF TERMINAL:** Delaware River and Bay Authority

#### TERMINAL

<table>
<thead>
<tr>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of berths</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Length of each berth</td>
<td>600' plus 30 acres for each berth</td>
<td></td>
</tr>
<tr>
<td>Land area of each terminal</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Dimensions of each terminal</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Depth of water at berths</td>
<td>Unknown</td>
<td></td>
</tr>
</tbody>
</table>

#### CONTAINER OPERATIONS

<table>
<thead>
<tr>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of container cranes</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Lifting capacity of each crane</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Reach on waterside from front edge of berth</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Reach on landside from dock rail</td>
<td>Unknown</td>
<td></td>
</tr>
</tbody>
</table>

#### AREA OF MANAGEMENT

<table>
<thead>
<tr>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exclusive lease for specified users</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Preferred use</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>Open to all callers</td>
<td>Unknown</td>
<td></td>
</tr>
</tbody>
</table>

#### AREA OF OPERATION

- Transshipper operation
- Straddle Carrier operation
- Chassis operation

#### MAINTENANCE SHED

- Dimensions
- Maintenance connection to terminal

#### SIGNATURES

- Delaware River and Bay Authority
- Tenant

---

**Port Containerization ... Worldwide**

---

**PORTS and HARBORS**

48
### Kobe, JAPAN

#### PORT OF: Kobe

**DESIGNATION OF TERMINAL:** Port Island

**OPERATOR OF TERMINAL:** Kawasaki Kisen Kaisha, Ltd.; National Container Line; Kobe Container Line

<table>
<thead>
<tr>
<th>TERMINAL</th>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of berths</strong></td>
<td>3</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td><strong>Length of each berth</strong></td>
<td>390 m (1,276 ft)</td>
<td>390 m (1,276 ft)</td>
<td></td>
</tr>
<tr>
<td><strong>Land area of each terminal</strong></td>
<td>786,000 m² (20,436,000 ft²)</td>
<td>800,000 m² (2,080,000 ft²)</td>
<td></td>
</tr>
<tr>
<td><strong>Dimensions of each terminal</strong></td>
<td>300 x 350 m (984 x 1,148 ft)</td>
<td>300 x 350 m (984 x 1,148 ft)</td>
<td></td>
</tr>
<tr>
<td><strong>Depth of water at berths</strong></td>
<td>7.55 m (24 ft 9 in.)</td>
<td>7.55 m (24 ft 9 in.)</td>
<td></td>
</tr>
</tbody>
</table>

### Osaka, JAPAN

#### PORT OF: Osaka

**DESIGNATION OF TERMINAL:** Osaka Port Development Authority

**OPERATOR OF TERMINAL:** Osaka Port Development Authority

<table>
<thead>
<tr>
<th>TERMINAL</th>
<th>IN OPERATION</th>
<th>UNDER CONSTRUCTION</th>
<th>FUTURE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of berths</strong></td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>Length of each berth</strong></td>
<td>250 m (820 ft)</td>
<td>250 m (820 ft)</td>
<td></td>
</tr>
<tr>
<td><strong>Land area of each terminal</strong></td>
<td>105,000 m² (26,000,000 ft²)</td>
<td>105,000 m² (26,000,000 ft²)</td>
<td></td>
</tr>
<tr>
<td><strong>Dimensions of each terminal</strong></td>
<td>200 x 350 m (656 x 1,148 ft)</td>
<td>200 x 350 m (656 x 1,148 ft)</td>
<td></td>
</tr>
<tr>
<td><strong>Depth of water at berths</strong></td>
<td>6.50 m (21 ft 4 in.)</td>
<td>6.50 m (21 ft 4 in.)</td>
<td></td>
</tr>
</tbody>
</table>

### Note

- Data of Osaka Nanko marked * are duplicated presented both by Hanshin Port Development Authority and Osaka, Japan.
Osaka, JAPAN

PORT OF: OSAKA

DESIGNATION OF TERMINAL: OSAKA PORT CONTAINERIZATION VENTURE

OPERATOR OF TERMINAL: Nippon Kisen Kaisha, Ltd.

Number of berths
Length of each berth
Land area of each terminal
Dimensions of each terminal
Depth of water at berths

IN OPERATION

Number of berths
Length of each berth
Land area of each terminal
Dimensions of each terminal
Depth of water at berths

UNDER CONSTRUCTION

Number of berths
Length of each berth
Land area of each terminal
Dimensions of each terminal
Depth of water at berths

FUTURE PLAN

Number of berths
Length of each berth
Land area of each terminal
Dimensions of each terminal
Depth of water at berths

OPERATION UNDER CONSTRUCTION

Date: January 6, 1973

Signature: Director, Division of Marine

Nagoya, JAPAN

PORT OF: NAGOYA

DESIGNATION OF TERMINAL: NAGOYA PORT CONTAINERIZATION VENTURE

OPERATOR OF TERMINAL: Nippon Kisen Kaisha, Ltd.

Number of berths
Length of each berth
Land area of each terminal
Dimensions of each terminal
Depth of water at berths

IN OPERATION

Number of berths
Length of each berth
Land area of each terminal
Dimensions of each terminal
Depth of water at berths

UNDER CONSTRUCTION

Number of berths
Length of each berth
Land area of each terminal
Dimensions of each terminal
Depth of water at berths

FUTURE PLAN

Number of berths
Length of each berth
Land area of each terminal
Dimensions of each terminal
Depth of water at berths

OPERATION UNDER CONSTRUCTION

Date: January 31, 1973

Signature: Director, Division of Marine

Port Containerization...Worldwide

HITACHI

PORTS and HARBORS
### Antwerp, Belgium

**Port of:** Antwerp, Belgium  
**Assessment of Terminal:** Container Terminal, Quay 600  
**Operator of Terminal:** Antwerp Docks & Harbours.

#### IN OPERATION | UNDER CONSTRUCTION | FUTURE PLAN
--- | --- | ---
**Terminal**
- Number of berths: 4  
- Length of each berth: total 1,405 m  
- Land area of each terminal: 159,000 m²  
- Dimensions of each terminal: irregular shape  
- Depth of water at berths: 15,25 m  

#### OPERATIONS
- Number of container cranes: 2  
- Lifting capacity of each crane: 45 tons  
- Reach on water side from front edge of berth: 45,50 m  
- Reach on land side from deck: 75,00 m

#### DESIGNATION OF TERMINAL
- Container Terminal, Quay 600

#### PORT OPERATOR OF
- Section: Rail Road Connection to Terminals
  - Number of berths: 2  
  - Length of each berth: total 1,509 m  
  - Land area of each terminal: irregular shape  
  - Dimensions of each terminal: 130,000 m²  
  - Depth of water at berths: 15,25 m

#### Future Plan
- Signature: [Signature]

---

### Antwerp, Belgium

**Port of:** Antwerp, Belgium  
**Assessment of Terminal:** Container Terminal, Quay 600  
**Operator of Terminal:** Antwerp Docks & Harbours.

#### IN OPERATION | UNDER CONSTRUCTION | FUTURE PLAN
--- | --- | ---
**Terminal**
- Number of berths: 5  
- Length of each berth: total 724 m  
- Land area of each terminal: irregular shape  
- Dimensions of each terminal: 91,000 m²  
- Depth of water at berths: 15,25 m  

#### OPERATIONS
- Number of container cranes: 1  
- Lifting capacity of each crane: 45 tons  
- Reach on water side from front edge of berth: 45,50 m  
- Reach on land side from deck: 75,00 m

#### DESIGNATION OF TERMINAL
- Container Terminal, Quay 600

#### PORT OPERATOR OF
- Section: Rail Road Connection to Terminals
  - Number of berths: 2  
  - Length of each berth: total 1,509 m  
  - Land area of each terminal: irregular shape  
  - Dimensions of each terminal: 130,000 m²  
  - Depth of water at berths: 15,25 m

#### Future Plan
- Signature: [Signature]
### Antwerp, BELGIUM

**Port of:** Antwerp, Belgium  **Date:** December 1970

**Designation of Terminal:** Container Terminal - Churchill Dock

**Operator of Terminal:** Churchill Dock Exclusive

<table>
<thead>
<tr>
<th>Terminals</th>
<th>In Operation</th>
<th>Under Construction</th>
<th>Future Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Berths</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of each berth (m)</td>
<td>940</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land area of each terminal (m²)</td>
<td>86,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth of water at berth (m)</td>
<td>10.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conveyor Lines</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of container cranes</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifting capacity of each crane (tons)</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reach on waterline from front edge of berth (m)</td>
<td>30.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reach on landline from front edge of berth (m)</td>
<td>22.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mode of Handling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Exclusive lease for specified users</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Preferential use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Open to all callers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mode of Operation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transhipper operation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chassis operation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Container operation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions in the Unit Station (m)</td>
<td>10.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Container Capacity in the Unit Station (m³)</td>
<td>2,500</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signature: [Signature]

### Helsingborg, SWEDEN

**Port of:** Helsingborg, Sweden  **Date:** December 23, 1970

**Designation of Terminal:** Public Container Terminal

**Operator of Terminal:** Helsingborg Container AB

<table>
<thead>
<tr>
<th>Terminals</th>
<th>In Operation</th>
<th>Under Construction</th>
<th>Future Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Berths</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of each berth (m)</td>
<td>395</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land area of each terminal (m²)</td>
<td>99,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth of water at berth (m)</td>
<td>11.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conveying Dock</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of container cranes</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifting capacity of each crane (tons)</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reach on waterline from front edge of berth (m)</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reach on landline from front edge of berth (m)</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mode of Handling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Exclusive lease for specified users</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Preferential use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Open to all callers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mode of Operation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transhipper operation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chassis operation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Container operation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions in the Unit Station (m)</td>
<td>10.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Container Capacity in the Unit Station (m³)</td>
<td>2,500</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signature: [Signature]

---

**Port Containerization ... Worldwide**

**52 PORTS and HARBORS**
Boom with us?

Portland, Seattle and Yokohama do!


And a word to the wise. Check out our patented “semi-rope” trolley gantry cranes. They eliminate shock and sway of cargo. We have also developed high speed container cranes which employ our most recent control technology. Put both in your port and see for yourself. You will be busy... but happy.

~HITACHI

6-2, 2-chome, Otemachi, Chiyoda-ku, Tokyo 100
Canada:

What a place to see.
And what a way to go.

This is home to CP Air. From the towering Pacific forests to the cosmopolitan excitement of Montreal.

And every day our big jets wing home as Canada’s flag carrier from Europe, North and South America, from the Orient and from Australia and the South Pacific. And we fly across Canada many times every day.

So if you’re going to the 1971 Conference of the International Association of Ports and Harbours, come home with us to Montreal. We’ll spoil you with international service. Superb meals. Vintage wines. And we’ll introduce you to any part of our country.

CP Air is an officially designated carrier to the Ports and Harbours Conference. And you’ll find a CP Air office in almost every major city in the world. Ask them or your travel agent about the airline that knows Canada best.

Travel with CP Air is a global affair

CP Air
Canadian Pacific