# PORTS and HARBORS

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# PORTS and HARBORS

### FORUM ON PORT PROBLEMS



Mr. Dudley Perkins

(This speech was delivered September 6, 1967 in Montreal, Canada at a conference on the theme of "Man and Transportation", organized by the Transportation Research Forum.)

#### 1. Introduction

A Port is an essential link in the transportation chain, joining the point of origin of exports with their point of destination. The size of a port's trade depends both on its own efficiency and also on that of the efficiency of the whole transportation chain of which it forms a part. The route chosen for the carrying of any consignment will usually be that which minimises what economists call "the total system's cost". Although this has always been so, ports have usually in the past provided a huge range of services, such as warehousing, sampling, sorting, vatting, and bottling, and have also attracted traffics because of the auction markets available in close proximity to their ports. Hence, the significance of the total system's cost concept has not always been evident for general cargo, but in an age in which the majority of such cargo will travel in containers, the importance of the total system's cost concept cannot be denied.

The Port Director's View of The Importance of Research Into Flows of Sea-Borne Traffic

#### **By Dudley Perkins**

Director-General The Port of London Authority

#### 2. Total System's Cost

The total system's cost, as I define it, includes the inland transport cost on both sides of the ocean, the full cost incurred by the ship operator between ports, as well as the cost of carrying out ports operations at both ends. Some people have recently argued that in a small country, such as the United Kingdom, the inland transport cost associated with cargo flows will, in a container age, be unimportant, even though at present they cannot be ignored. I would question this. Clearly, the inland transport cost of carrying any given tonnage in a container will be markedly lower than that for carrying the same tonnage in break-bulk form, but at the same time, the great savings to be achieved on the sea part of the voyage must not be forgotten. It has been estimated, for instance, that the port-to-port cost of carrying containers by sea from North America to the United Kingdom could be only 35%-40% of carrying an equivalent amount of cargo in conventional ships. T would not expect the inland transport cost to fall as markedly as this ---at least not for many year----and hence there is good reason for thinking that inland transport costs may become an even more important part of total transport system's cost in a container age than in a conventional shipping age.

My aim in this paper is to discuss the research that the Port of London have carried out into the pattern of cargo flows, and to show how this research has helped us to examine the total transportation cost in a container age and the position of the Port of London in that age.

#### 3. The P.L.A. Study of Inland Traffic Flows

In my view, the starting point for determining the future of a port in a container age is to establish the cargo flows at the present time, and then to determine by economic analysis how these flows are likely to change with the advent of containers. When I first became Director-General of the Port of London Authority some three years ago, although great detail was known of the flows of cargo on the seaward part of their journey to and from the United Kingdom, very little was known about the destinations and origins of cargo within the United Kingdom. The extent and character of the Port of London's hinterland had not been established, and only vague estimates were available of the importance of any part of the country to that port. The absence of information of this sort was recognised by the Royal Committee of Inquiry into the major Ports of the United Kingdom (The Rochdale Committee) in 1962, and it was declared to be an important gap in the country's statistical knowledge. I hope I am not giving the impression that the United Kingdom and the Port of London were behind in this respect, for until the Port of London Authority commissioned their inland traffic flow study the only studies of this nature, to my knowledge, which had been done on a firm statistical basis, were those by the Port of San Francisco and the Port of Durban, and neither of these was a nationwide study, in the sense of covering all major ports.

The aim of the inland flows study carried out by Martech Consultants Limited on behalf of the Port of London Authority, in respect of trade flows in 1964, was to establish for the whole country the inland destinations of foreign imports, and the inland origins of overseas exports for all foreign dry cargo trades, except imports of iron ore and exports of coal (which were not of interest to the Port of London). It also established the overseas port of origin or destination but this was not entirely new information. The survey was conducted on a stratified sampling basis which ensured that all large establishments in Great Britain were covered, and that the probability of other establishments being covered declined as their size decreased. The response rate to the survey, as high as 90%, showed how seriously those businessmen from whom information was sought treated the enquiry. The returns received covered 62% of the total flows to and from British ports. The information arising from the survey was grouped into 41 geographical areas.

I am sure that many of you will find the conclusions interesting. It was found, for instance, that in 1964 some 2/5ths of all Britain's sea-going exports travelled less than 25 miles to their loading port and 2/3rds travelled less than 75 miles. For imports, the position was found more marked; almost 2/3rds of all imports travelled less than 25 miles from the point of unloading to destination defined as the point of breaking bulk, and some 4/5ths less than 75 miles, and it was quite clear that Britain's ports have concentrated on fairly well defined hinterlands.

Exports tend to travel rather

further than imports. The average distance travelled for exports in 1964 was about 66 miles, for imports it was about 36 miles, but generally, whether for imports or exports, the inland distance from a port appeared to be a major factor in determining which port was used.

The fact that United Kingdom exports tend to travel rather further than imports can be explained both by the fact that exports are generally of higher value than imports, and also by the fact that, for exports, a very important attraction of a major port is the availability of sailings to carry exports to all parts of the world. In terms of frequency of sailings, the Port of London offers a greater frequency to each major world zone than any other major United Kingdom Port, and this is an important factor explaining why over 1/3rd of United Kingdom's general cargo exports go through the Port of London. The table below shows the frequency of sailings from London as compared with other U.K. ports.

Another conclusion which came out of the report was the very favourable location of the Port of London in relation to the United Kingdom's trade. For instance, 55% of the tonnage of all general cargo imports coming to the United Kingdom were destined for places within 150 miles of London, and

48% of the country's exports originated within 150 miles of London. In terms of value of goods, this concentration was found more marked. 60% of U.K. imports by value went only 150 miles from London and the same proportion of exports originated in the area. The high degree of concentration of the United Kingdom's imports and exports within a small radius of the Port of London must be an essential feature in planning the strategy of shipping companies in a container age, since container operators will be concerned with minimising their total system's cost not just their shipping cost.

Before leaving this subject perhaps I should mention that the concentration of cargo about Britain's main liner terminal is not unique. I understand for instance that for New York over half of all the imports travel less than ten miles.

#### 4. Economies of Containers

Before I discuss this, perhaps I should say something about the economies likely to be achieved with the advent of the container revolution. These economies will benefit both the shipowner and the shipper.

The time container ships spend in United States ports is only 1/5th of that of conventional ships, hence enabling higher ship utilisation.

Departures of Vessels Carrying Britain's Exports to Main World Zones from The Port of London and U.K. Port with Next Best Sailing Frequency, 1965

	Number of Departures with Cargo (excl. tankers)		
World Zone	Port of London	Port with next most frequent service	
Northern Europe*	1,853	946 (Hull)	
EEC Countries	6,114	2,972 (Dover)	
Europe (Atlantic & Mediterranean)	1,335	599 (Liverpool)	
South and West Africa	232	196 (Liverpool)	
East Africa, Persian Gulf and India	332	257 (Liverpool)	
Eastern Asia, Pacific Islands and			
Australasia	411	223 (Liverpool)	
North America	372	284 (Southampton)	
South & Central America	374	243 (Liverpool)	
*Outside British Isles	Serv	vice: Compiled from N.P.C	

Service: Compiled from N.P.C's. Digest of Port Statistics, 1966 Table 156-163

				Imp	orts	Exp	orts
	Distar fron Londe	nce n on		Cumulative percentage U.K. im- ports by ton- nage	Cumulative percentage of U.K. im- ports by value	Cumulative percentage of U.K. ex- ports by tonnage	Cumulative percentage of U.K. ex- ports by value
25	miles	or	less	21.9	25.2	11.4	14.8
50	.,	.,	••	32.3	40.1	20.4	28.8
75	,,		,,	34.6	42.7	23.0	33.2
100	,,	,,	,,	37.6	45.8	30.6	44.6
125	,,	,,	,,	46.8	55.1	39.4	54.9
150	,,	,,	,,	54.5	60.4	47.6	60.4
175	,,	,,	,,	84.8	90.9	83.8	86.5

The Location of U.K. Overseas Trade With Reference to Distances from London

Stevedoring costs are said to be roughly 1/5th of those of noncontainer cargo. Other savings, such as packaging, insurance and quick service, etc., can also be expected to result. In addition, although a container berth at a port will be more expensive to provide than a conventional berth, some people expect one such berth to handle in a year over 1 million tons. With a modern conventional berth a throughput of 100,000 tons per vear would be more normal. Against these savings must be set the capital cost of the containers, the expensive handling equipment and the higher capital cost of the vessel itself. It should not be forgotten that each container costs some  $\pm 800$ , and that the number of containers in a system is expected to be somewhere between twice and three times the container carrying space of the ships used.

Nevertheless, there are substantial cost savings on balance through using containers as opposed to break-bulk cargo. For the sea routes serving the United Kingdom, for instance, our research indicates that container shipping costs (which includes port costs) may be some 40% below those through using conventional ships. As the most important saving in the container system is the reduction in the time a ship spends in port, it is generally true that the shorter the route the greater the saving through using container ships. The extent of the potential saving will, in my opinion, be an important, if not the most important, factor in determining which routes serving the United

Kingdom are containerised first. On the relatively short U.K./North American route, I expect that the saving through container ships could be over 60% of existing portto-port costs. To Africa, the saving may be slightly less than this. At the other end of the scale come the longer routes, such as Australia and the Far East, and here the saving may be not more than 30%-40%. As I have already indicated, there will be savings on the inland transport side, additional to this, but there will also be extra costs associated with the cost of the container moving inland.

On coastal routes, and shorter sea routes (for instance, those joining the United Kingdom with the Continent) one would expect the economies through using containers to be even greater and, to my mind, it is no accident that containerisation developed first on the coastal routes of North America and Australia, and at a slightly later date on the short-sea routes to and from the British Isles and Continental Europe.

Clearly another factor which is important in the economics of container shipping is the extent to which the import and export flows of potential container traffic are in balance. On most sea routes serving the United Kingdom, the level of containerised general cargo imports is significantly greater than the potential containerisable exports and, on average, containerisable imports are twice as large as containerisable exports. The research conducted by the Port of London Authority has established for each

trade route serving the United Kingdom the potential import and export flow which could go in containers. The largest imbalance between imports and exports is in respect of Central and South America (where imports are over three times that of exports). On the North American route, imports are over  $2\frac{1}{2}$  times that of exports and the only routes on which the potential container flows are anything like in balance are to and from India and to and from the Far East. Our research shows that the potential savings through using containers are such that, even where a ship has to go back entirely empty, it is still economic to use containers, and the implication of this is that one would expect a closer approximation between cargoes which are physically capable of going in containers and those which it is economic to put in containers. Economies exist through using containers on all the main sea routes whether the trade is in balance or not.

Perhaps I should say something about the economics of the pallet ship as opposed to the container ship. Various articles which have been written recently have indicated that the port-to-port costs of pallet ships (which includes costs whilst in port) are very close to those of container ships. It is also stated that at any given utilisation of a pallet ship and a container ship, the cost per ton of cargo is approximately the same. Although we carried out research into this question, we have not established that this is so, and I look forward to the results with interest, but I would suggest that two factors were in favour of containerisation as opposed to palletisation. Firstly, it is to be expected that the cost of inland transport for palletised cargoes will be greater than that for containerised cargoes, especially with the advent of the Freightliner trade, and secondly, that it has been the experience in the post-war period, in the United Kingdom at any rate, that labour costs have been rising far faster than other costs and, if this is so, then in the longer term the capitalintensive system, that is, the container ship, can be expected to win the day.

#### 5. The Implications of the Container Revolution on Inland Traffic Flows

The minimisation of inland transport costs cannot be an aim in itself, the overall objective must be to minimise the overall systems cost from the point of origin of the cargo overseas to the point of destination within the United Kingdom and vice versa. However, as I mentioned above in the introduction, the inland transport costs, far from becoming less important in a container age, can be more important, and hence, reducing this to a minimum is an important step in achieving the optimum overall system's cost.

The research that the Port of London is carrying out at the present time is geared towards minimising the total inland transport cost as a first step to minimising the total system's cost. Our studies, which have started by establishing the container potential of each trade flow, have determined the optimum number of inland clearance depots, as well as the inland transport costs of using London as compared with Liverpool, Southampton or even Felixstowe. These studies have shown how great the advantages are in the inland transport cost of using the Port of London in this transport chain. In judging the overall end-to-end cost of the transport chain, the inland transport costs may be partly offset by dis-savings associated with each of these ports in the sea costs which result from such factors as tidal variation and speed limitations in the port approaches and to a slight extent by sea distances. But, there is an asymmetry between potential savings in inland cost and sea costs. The bulk of sea costs can only be saved if the sea distance saving is such as to eliminate a whole ship from the line in a year, whereas the saving in inland costs accrues automatically.

These studies have also taken into account the costs involved in dealing with container berths within locks as opposed to riverside berths. There are, inevitably, delays due to tides associated with going to a

dock berth as opposed to a riverside berth, and for the very largest container ships—ships which have not even been thought of yet—it could be that riverside container berths will be the most attractive, but at the same time, there are many attractions in discharging container ships at a constant water level in an enclosed dock. The P.L.A. is planning to provide riverside berths for the largest container ships.

The Port of London also has another appreciable advantage in location. This arises from its proximity to Europe's largest port, Rotterdam. Many container shipping companies are realising that the optimum loading and discharging arrangement in Western Europe in a container age is joint ports of call, combining Tilbury, London, with Rotterdam. The proportion of trade on most world zone routes which would need to be transhipped to or from Europe makes this combination an obvious choice for the future. I must confess that a few years ago I did not think I would live to see the day when the ports of Rotterdam and London were complementary.

It was because of the very favourable location of the Tilbury site in the Port of London in relation to the import and export trade of the United Kingdom, that it was decided that Tilbury should be the location of the first major container development in the United Kingdom. At the present time, six deepsea container berths are being constructed there and the first of these will be available for operation by the end of the year. These berths will be equipped with Paceco-Vickers container cranes, ample storage areas, transhipment and rollon roll-off berths and a new British Railways freightliner terminal linking it with the new freightliner grid. The Ministry of Transport have also authorised a substantial improvement in the main A. 13 road linking Tilbury with London and, to the new motorway network. This container development will be several years in advance of container development at any other major port in the United Kingdom, and it is no accident that both of the major British container consortia are to

use these facilities, as well as some of the leading North American companies in this field. The fact that the Port of London was first in these developments has played no small part in this.

#### 6. Worldwide Implications of Container Developments

The P.L.A's. study on container economics is not yet complete but it is very apparent that in the container age a port, such as the Port of London, has to be far more interested in the trade of overseas ports than hitherto. This is because it has to take a view, not only on the economies of scale through using larger container ships, but also upon the degree of concentration which may be necessary to achieve the advantages which such ships can offer and this is dependent upon the administrative and commercial climate of ports at the other end of the voyage. It could well happen that the United Kingdom, as a result of the comprehensive studies which are being done by Port Authorities and the Ministry of Transport, will be successful in preventing the potential containerisable trade of the country being dispersed over a large number of ports. If this is so, the volume of trade of the country may enable larger container ships to be used, but the extent to which they can be used on worldwide routes will be dependent, to a large degree, upon the size of the hinterlands of overseas ports. This is clearly something that cannot be influenced on the United Kingdom side of the ocean.

In overseas countries a number of factors are important in determining the size of the container ship taht can be used-some of which do not operate in the United Kingdom. For instance, in the free enterprise economy of the United States of America the extent to which the Federal Government can intervene to concentrate container ship cargo on a handful of ports is very limited and especially so since there is considerable rivalry between the competing States. Ports on the eastern seaboard of the United States are, as you know, competing very strongly with one another and most of these are in different States of that Republic.

Secondly, although something can be done in deepening and improving the port facilities in the United Kingdom, the size of the container ship that can be used on a world route will be dependent upon the depth of the overseas port. Thirdly, the speed at which containerisation will come in on world routes will be dependent upon the rate of container berth construction overseas. Other factors which will influence the rate at and the extent to which containerisation will come in will be the organisation of the general cargo trade, the attitude of Customs and Excise departments to containerisation and particularly to Inland Clearance Depots, and the standardisation and legal restrictions on the size of containers on each transport mode as well as the extent of union co-operation.

It is quite clear that the size of ship that a United Kingdom port has to cater for in the future will be dependent upon these factors. It will also be dependent upon the type of shipping operation—whether single port of discharge, joint ports of call or transhipment—not only at the United Kingdom end but also at the other end of the voyage. In this sense, trans-ocean container ports truly become world ports, since they are concerned as never before with what happens at the other end of the transport chain.

### 7. Conclusion—U.K. Ports in the Vanguard of Progress

I think you can see from what I have said that the Port of London Authority is continuing container developments in a world context, and has gone a long way in developing the port to serve container trade. Frequently it happens in economic history that forerunners of progress, by committing themselves in the form of capital expenditure at an early date, pay a price for being first in the field. Those who follow learn from the mistakes of the innovators and avoid some of the costs. Where the benefits to be achieved from container shipping are as great as those indicates in this paper, the Port of London would be failing the United Kingdom if it did not take a calculated risk by being early in this field. The dangers of being an innovator can, in any case, be minimised by knowing as many of the facts as possible through an intensive research programme and this is why the P.L.A. is spending so much upon economic and marketing research at the present time. In my view, if a port is to survive in the dynamic age in which we live there is really no alternative but to provide the facilities for container ships at the start of this great development, which after the trade routes to and from the United Kingdom and the Continent of Europe have been containerised, will surely spread over the greater part of the world shipping routes.

The success that the P.L.A. have had in 'selling' their container berths to major shipping consortia, including North American shipping companies, heralds a bright future for the port in a container age, and shows that the advantage of location offered by the Tilbury developments make economic sense to those whose survival depends upon making the right decisions.



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# Symposium on Ports and Harbors

### Management

# Sponsored by Japan Port and Harbor Association

Held at Tokyo Prince Hotel, Tokyo, Japan on May 7, 1967, 2:30-4:20 p.m.

#### Speakers:

- Rt. Hon. Viscount Simon (Chairman, Port of London Authority, President, IAPH)
- Mr. Austin J. Tobin (Executive Director, Port of New York Authority, Chairman, Committee on International Port Development)
- Mr. F. Posthuma (Managing Director, Rotterdam Municipal Port)
- Mr. Ben E. Nutter Executive Director and Chief Engineer, Port of Oakland)
- Dr. Chujiro Haraguchi (President, Japan Port and Harbor Association, First Vice President, IAPH, Mayor of Kobe)
- Dr. Hajime Sato (Director of Bureau for Ports and Harbours, The Ministry of Transport)
- Dr. Yoshinosuke Yasoshima (Professor at Tokyo University)

#### Moderator:

Mr. Toru Akiyama (President, Japan Cargo Handling Mechanization Association)

DR. HARAGUCHI: Gentlemen, this is a great delight for us to be with such eminent authorities on port administration and as the proponent of this conference, I am extremely delighted to have this rare opportunity. It goes without saying that ports and harbors serve as the heart of trade expansion throughout the world by which we can hope to raise the economic standards and living standards of all the nations and to this end we all must strive toward improving port facilities. In this connection we are faced with technological innovations of ships becoming larger and the advent of containerization. In this sense I think we are coming into a new age in which we need to improve not only the quantity of, but also the quality of, port facilities. We must deal with the construction and management of ports or we must pay attention to the proper posture of port labor problems for example, and I would like to invite you to participate in an active discussion this afternoon. As the moderator of this meeting, I take pleasure in introducing Mr. Akiyama.

**MR. AKIYAMA:** My Lord, it is my great pleasure and honor to act as moderator of this port symposium of historical significance. Today we have excellent interpreters and it is rather a rehearsal of the conference now so let me take the liberty of using Japanese please.

So, Gentlemen, the topic for our symposium for this afternoon is the basic philosophy of port management. That is our theme today. I would first like to suggest that some background discussion and explanation of problems in Japan be presented first but that information is already substantially covered by the background material distributed to you and I hope we facilitate this discussion of that background paper. We, of course, would like you to have a better understanding of Japanese situation and problems but please don't feel you are limited to the discussion of Japan or Japanese situation.

Looking back into the history of

ports, the process or stage of development can be considered in many respects. For example, in olden times around sandy beaches of rivers canoes could have been anchored whereby passengers and cargoes were handled in the simplest possible manner, but today we have hundreds of ports with deep water and well built up wharf facilities upon which we have many valuable and expensive cranes and other mechanical facilities. Well, even without looking back into history, when we think about the present coast situation in Japan we see similar development. We have 4000 harbors and ports in Japan. Some are very simple, more or less natural harbors with little additional embankment of rocks or concrete. and some of the largest ones include a modern port like Yokohama. Many of these ports have had varying experiences in development or evolvement of the management, but I think today we would like to emphasize a greater picture, that is the basic philosophy of the management of ports.

In these larger ports we constantly spend a tremendous amount of money for innovation and improvement of existing facilities as a result of which we are faced with the problem of obtaining finance needed for such improvement. We have to pay interest on such money, we have to worry about financing of debts or repayment of the borrowings, therefore we must balance the revenue and in order to do so we have to coordinate among conflicting interests of port users. These are some of the problems we are faced with and in order to intelligently cope with these problems we need a very deep and well established philosophy. I think we can justly use the word philosophy in this respect. I think this should be the core or the basis of the discussion today. First, I would like to invite you to present your views and opinions and would like to go into questions and answers session in order to delve into some of the problems that have been left to be presented. Now first of all I would like to invite our distinguished representative from London, Lord Simon. My Lord, if you will start

our discussion. Thank you, My Lord.

LORD SIMON: Well, Dr. Haraguchi, it is a very great pleasure for me as it is for all of us to be at this meeting of the Japan Port and Harbor Association and to have a little trial run before our great conference begins. When I had your invitation, Dr. Haraguchi, my first thought was to wonder whether in these days of rapid change, the people responsible for the management of ports had any time in which to be philosophers. We rush so much from problem to problem that certainly it is difficult perhaps to find the necessary time but we have of course in all ports a basic approach and I will try to tell you briefly about our outlook in London. We recognize that a port is there to provide a service for those who use it, but that doesn't mean that it is there to provide a free service or indeed a philanthropic service, and we believe that it is vital that ports should be operated on a strictly economical basis.

Until a better method is found, we believe that balancing revenue against expenditure is the best way of assessing the efficiency of an enterprise and of keeping management up to the mark. And at the same time, it is the best way of determining whether the services provided are really needed. Of course, in this context expenditures must include hidden items such as, for example, full depreciation of the assets that are being used, as Mr. Akiyama reminded us. Unless we do this, there is a real danger that we fall into the temptation which besets all port undertakings, that is the temptation to take business which covers the visible costs only. I say this is common to all transport undertakings; it has been found in railways and I believe it has been found in ports. In fact we have an object lesson in the Port of London because our Authority came into existence 57 years ago simply because the existing private dock companies had engaged in cut-throat competition and had not left themselves with enough money to replace and develop their assets. So our approach to any new proposition is to work out an economic assessment to ascertain whether it will



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pay its way including the cost of the capital that it has invested in it.

There will be, I know, some exceptions on the periphery of port activities. For instance, it is necessary probably to provide floating cranes with large capacity and as far as I can make out those never pay their way anywhere because they are so seldom used, but they are a necessary facility. That type of expenditure must be kept at the very lowest if the port is not to walk its way into bankruptcy. The only other point I would make is that we believe that all expenditure connected with the port should be charged to the port and so costed out to the users, and for that reason (I know this isn't a popular view) we are all against having, let us say, dredging costs met by other funds. That has its own danger because dredging costs can be very heavy and if they are paid by another authority, the users of the port never feel that cost, and we have no means of judging whether the cost is worth incurring or not. Very briefly, Mr. Chairman, I think that is all I would like to say about the attitude of London.

**MR. AKIYAMA:** Thank you very much, my Lord. Next I would like to invite Mr. Tobin. Thank you, Mr. Tobin.

**MR. TOBIN:** Mr. Mayor, Mr. Akiyama, I join with Lord Simon in expressing my pleasure at being here with you in this open exchange of views with my port colleagues seated around the table on the sub-

ject you have assigned to us, port management and operation and our thinking about it. Less than sixty years ago, the concept of a public authority or government corporation responsible for the efficient development and operation of a port, was virtually unknown. In some ports local governments provided facilities for ocean commerce. In others, the construction and operation of ship terminals were functions of private enterprise. As a result, the development of efficient docks and piers usually lagged behind that of ships, as Lord Simon has pointed out, and for obvious reasons the depletion of capital occurred as a result of cut-throat practices. Other pressing public needs where the ports were operated by the States or municipality for education, health and in more recent times for housing and other social obligations of government took political priority in the budget over the requests of the dock or harbor departments. For example, there are still some piers in New York Harbor, particularly on Manhattan's East River waterfront, that date back to the days of sailing ships and horse-drawn drays.

Since the establishment of the Port of London Authority in 1908 and The Port of New York Authority in 1921, the public authority has become a familiar and important governmental device, not only in highly industrialized countries such as Great Britain and the United States, but also in less industrialized countries, for providing the services and facilities necessary to the growth of a port.

Public authorities or corporations may be defined as governmental business corporations set up outside the normal structure of traditional government so that they can give continuity, business efficiency, and flexible management to the construction or operation of revenue-producing public enterprises. In other words, they afford a means of bringing the best techniques of corporation management to the operation of our ports. In planning this symposium, you have asked us to discuss the development of port management in our own ports, its basic philosophy, methods of operation and our experience in meeting the problems and challenges of port development.

The Port of New York Authority was established by the States of New York and New Jersey to finance and build the public transportation, terminal and trade facilities in the Port District. More than 16,000,000 people live and work in the metropolitan area of New York and northern New Jersey. No less than 400,000 of these people earn their living, directly or indirectly, through the operations of the Port of New York. Including people depending upon these 400,000, that means that some 2,000,000 of our citizens are dependent for their livelihood on the operation of the port.

The Port Authority is responsible for the **promotion** of the port and the **development** of the port's commerce. As part of our program of port promotion, we maintain offices which service the areas of the Port's principal trading partners, including an office here in Tokyo.

We operate most of the piers and docks along the Brooklyn and New Jersey waterfronts-that is, along the easterly and westerly shores of New York Harbor. The City of New York operates the piers on Manhattan under a City Department. We also operate the principal airports in New York. The bridges and tunnels between the two States are likewise within the Authority's responsibility, as are the bus terminals and certain rail and truck terminals, and an interstate passenger railway system. We are building a World Trade Center in Lower Manhattan as part of the Authority's objective of maintaining and increasing the commerce of the Port of New York. The Trade Center will make available to our world trade community in New York quick interchange of information and proposals on our overseas commercial activities, prompt processing of documents, and rapid consummation of foreign trade transactions. It will house all of the services related to the movement of trade. It is apparent from this recital of our activities that The Port of New York Authority has a much



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broader range of responsibilities than are found in the usual port authority concept, involving marine activities only. However, I should note that under the United States federal system, many functions which in other countries are frequently the responsibility of the port agency, are carried out in New York and in our other American ports by the United States Government. These functions, for example, include the dredging and maintenance of channels, that Lord Simon referred to, port traffic and other regulatory activities, and the like.

In creating The Port of New York Authority, the legislatures of New York and New Jersey specified that the Authority's overall operations must be self-supporting. This condition is important to an understanding of the organization. The basic Agreement, or Port Compact, between the two States for the creation of the Port Authority expressly provides that the Authority should have no power whatsoever to tax or assess or to pledge the credit of either State. Thus, before it can undertake any new project, the Port Authority must be able to convince private investors in its bonds that our port program as a whole will be self-supporting and that the new project under consideration will not impair the security of outstanding Port Authority bonds.

This necessity to be self-supporting gives The Port of New York Authority certain advantages over

the traditional governmental agency by combining the public mission and responsibilities of government with the practical incentives of business. As a result of our freedom from routine government administrative or bureaucratic controls, we have been able to develop management policies and practices best suited to meeting our responsibilities to our bondholders. In our freedom from political interference, as contrasted with proper and necessary conformance with the public policies of our two States, we have been able to make personnel decisions on the basis of merit alone, to make program decisions on the basis of economic practicability, and to act with speed and efficiency.

The organization of The Port of New York Authority is designed to promote effective management. At the apex of our organization is our Board of Commissioners. The responsibilities of the Board's twelve members compare with those of the directors of a large private corporation. The Port Authority Commissioners are appointed by the Governors of New York and New Jersey — six from each State — to serve overlapping terms of six years, thus assuring continuity of policy and planning. Since the Commissioners receive no compensation, they are motivated principally by a desire to render a useful public service. The Board's role is policymaking and directoral. They depend upon the executive head and his professional staff for day-to-day management of the Authority. The Board has delegated sufficient authority to the Executive Director to enable him to act promptly and decisively, in the same manner as would the president of a large corporation.

Basic to the philosophy of the corporate organization in The Port of New York Authority are three concepts: **flexibility**, what I call **pragmatism** and **responsibility**.

As to the first, we believe that organization structure and assignment of responsibility within that structure must be **flexible** enough to change with time and circumstances. Change in organization, like change in technology and programs, must be expected, planned for and welcomed.

We reject doctrinaire attitudes about organization structure. The best attitude for an organization is pragmatic—"Does it work?"—with due regard, of course, for our shortand long-range objectives. For example, we don't believe that all our activities should necessarily be centralized or decentralized. Some may be centralized; others, decentralized. It would depend in each case on such factors as public convenience, economy, quality of service, availability of skilled personnel and general effectiveness.

As for responsibility, all of our department heads are given a wide scope of authority and responsibility. They are expected to run their department, and are responsible and are held accountable for their departments' revenues and expenses. They are only expected to come to the central executive offices on matters that involve overall Authority policy, but they are responsible for deciding what is, and what is not, a policy question. All supervisors are expected to perform some organizational planning. They are encouraged to become thoroughly familiar with the Authority's principles affecting organization; to develop their own ideas on the organization and functions of the groups they supervise, and plan future organization patterns. The last includes anticipating changes in personnel, programs, methods or responsibilities and foreseeing the implications of these changes so as to have an organization plan ready or in mind, for use when the right time comes.

The Port of New York Authority follows the same policies in **recruiting** its administrative and professional staff as those followed by our large American corporation. This is important, for any authority's success depends on obtaining the best talent available.

Public ownership imposes a much broader responsibility on **financial** reporting, and even more rigid standards of budgeting and



Rt. Hon. Viscount Simon

accounting on an authority than on a private corporation. Like wellrun private enterprises, the successful management of a public corporation requires an accounting system which identifies all elements of cost as Lord Simon has emphasized in the case of the Port of London Authority, whether direct or indirect, operational or capital, and which then charges those costs properly to each individual operating unit. The public corporation must know its fixed charges and should avoid the tendency of government to forget them. In The Port of New York Authority, we use performance budgeting. Wherever possible, measurement standards are based upon units of work. Attention is thus focused upon the general character and relative importance of the work to be done rather than upon things to be acquired, such as personal services and equipment.

We in The Port of New York Authority believe that public relations are important elements of effective management. Our basic concept is that good public relations consist primarily of doing a good job or providing a good service and then calling attention deftly and intelligently to what we are doing. An authority's public relations program cannot manufacture or substitute for achievement; sometimes it can see to it that achievement will not be overlooked.

Accordingly, service to the public is The Port of New York Authority's key public relations objective. Then all efforts are made to keep the press informed and to answer press inquiries quickly with accurate and complete information. Our public relations staff participates in every major policy decision or discussion **before** action is started or a program is undertaken, rather than **after** a public relations problem develops.

In conclusion then, I might say that the public authority is by no means the answer to all government problems and it should not be used to displace the permanent and regular governmental agencies. But it is particularly well suited to the financing, construction and administration of great public enterprises.

The development and administration of port facilities are typical of such public enterprises. This is especially true where development and administration of a port-as in the Port of New York-must cut across established political and geographical boundaries; where decisions to be made are primarily of a commercial or business character, and where the program is to be selfsupporting, it is an effective instrument where continuity of policy, planning, financing and operation is crucial to the success of the program, and where the undertaking is neither attractive to private industry nor so deficit-ridden as to be impossible of self-support.

**MR. AKIYAMA:** Thank you Mr. Tobin for a very detailed discourse. Then next I would invite Mr. Posthuma to speak for Europe. Thank you Mr. Posthuma.

MR. POSTHUMA: I would like to say that much of what has been stated by Lord Simon and Mr. Tobin applies partly too for the port of Rotterdam. We have a somewhat different organization, the organization of the port of Rotterdam may perhaps be called a Municipal Port Authority. We have the duty to see that the port is selfsupporting. We have our own budget. We are paying interest and depreciation to the Municipality. We work in a way which can closely be compared with private industry. Ultimately the City Council takes the final decision. Before this the proposals are discussed in an Advisory Committee. I am responsible to that Committee. This Committee has 12 members, the Chairman is the Burgomaster of Rotterdam, 5 of the members are representatives of private industry, the other members are leaders of the main political parties of the city council.

I may say that we have in our organization certain elements which are different from New York and London. We are firm believers of private enterprise and we know that this is also at least partly true of other ports, but our philosophy is that what can be done by private industries, should be done by private industries. Still the port keeps us rather busy I must say. We have had this approach for many years and for us and for the circumstances in Holland it is a good approach that the Authority takes only care of the infrastructure, that means that we are dredging the basins and making the quay walls, the railroad facilities, roads, etc. but it is up to private companies to build sheds. cranes, to build their refineries including the jetties for these refineries and in general to build what they want to build if they can explain to us that they have plans which are interesting for the port together with an economic justification. This means that for instance. a shipping company comes to us and says, "we should like to have 3 berths, you build the quay wall and lease to us so much land." We first ask them about the tonnage they will more or less handle there. This is just a simple example but we ask for a kind of economic justification of every user of the port. On the other hand we are also rather selective because we have facilities for big tankers and big ships, we have facilities for container ships, we have all kinds of other facilities, but if an industry comes to us and they have no seaborne traffic or hardly any seaborne traffic, we think such an industry could be better located somewhere else, so not in our port area but somewhere close to the port area with good connections to the port area. Therefore, we have told very big industries which wanted to come to the Port of Rotterdam, "Well in your case it is better to go to an industrial area at a distance



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of 20 to 30 km from the port. There are very good sites and you can have there all the facilities you need."

We have to invest a big amount of money for the accommodation of big tankers- and ore-carriers. We think that we have to receive as many of those ships as possible, therefore we want to reserve our sites for industries and their affiliates which need such an accommodation.

I should like to say now a few words about the relations with the government. The complete infrastructure of the port is financed by the Municipality. The procedure is in a few words like this: I make a proposal for a certain development, together with an economic justification for that development. The proposal is discussed in the Committee and I may say mostly accepted and when it is discussed in the Committee and accepted then it also has to be officially accepted by the City Council. But as the political leaders of the City Council are also members of the Committee mostly the proposal is accepted without changes.

Now the role of the Government. The government pays a part of the dredging of the River Rhine which forms the connection with the sea. When this river has to be deepened, we pay one third of the cost and two thirds of the cost are paid by the government. This system will perhaps change in the near future; if it will change, we will have to

pay more, perhaps 100%. This is now under discussion and a decision has not yet been made. But this means that the port then has a new financial burden and it may well be that the present organization needs then so much money from the municipality that what has already been stated by Lord Simon, may happen, namely, that housing development and recreation will perhaps be endangered. Therefore, it may be, we are studying this, that the organization of the Port of Rotterdam will be changed. I am thinking of an organization like Mr. Tobin has. In any case basically we don't want to go into cargo handling and our principle will not be changed that what can be done by private companies should be done by them, so that they will still invest their money for the cargo handling. Also in this way a closer relationship of the private companies with the port will be brought about than if the port should provide all the facilities and also do the cargo handling. All the port facilities are designed in close cooperation between us and the private companies and under our supervision they can just make what they want to make. I think this is all I would like to say. Thank you very much.

**MR. AKIYAMA:** Thank you very much, Mr. Posthuma. I think the picture that you have painted is very similar to the situation of the Japanese ports today. We are very interested in your discussion. Now, Mr. Nutter next, if you would speak about Oakland and other West Coast port facilities. Thank you. Mr. Nutter.

**MR. NUTTER:** Mr. Haraguchi, Gentlemen, I think that I have seen so many similarities in what the three gentlemen have already spoken that I will as you suggested talk about several West Coast ports rather than just Oakland because ours is so similar to, perhaps patterned after, the New York Port of Authority type of legislation originally in many ways, although in our case and in many of those on the West Coast, these are municipal organizations rather than State or By-State organizations. On the West Coast we have a number of ports, but very few of them are state level ports. The Port of San Francisco is a State owned port, one of the Portland agencies is a State operation, but generally they are municipal operations of one kind or another.

In our case we are administered by a Board of 5 men. These men in our case are appointed by the Mayor of the city but following that they operate independently for budgeting and finance by the city of Oakland. This is true in many cases on the coast, some of the cities have had ports developed as a municipal promotional project rather than as a project which should pay its own way. A few of these are able to collect through general taxes, means of financing the ports either as operations or as capital expenditures. Those of us who operate on our own budget in a manner described quite well by Mr. Tobin, frequently object to this kind of finance for a port. Nevertheless it is a fact of economic life in the port areas. On the West Coast some of these are in that way. San Diego is one of those, Stockton and Sacramento are some of those ports.

Similarly in the US the main channels are dredged by the Federal Government expense. The berths themselves are built at the expense of every port. The Federal Government in our case has the regular body, The Federal Maritime Commission, which looks, now very much more than formerly, into the agreements that are made between the steamship companies and the ports and the terminal companies. I think most of the ports of the Pacific Coast are planning their investment program on a realistic basis, ... exceptions being perhaps the ones I mentioned where general taxes are available to support projects which might not otherwise be economic. I don't think this is prevalent but it does happen occasionally. I might say that perhaps with prejudice, perhaps not, that there are one or two ports on the Pacific Coast that probably could not have been justified as a whole economically, but they are there and they are operating one way or another.

We have in the Port of Oakland,



Ir. F. Posthuma

and I think in most of the others. the same general sort of basic philosophy expressed on behalf of the East Coast by Mr. Tobin or on behalf of the Port of New York. and have on the West Coast and in California particularly, a California Association of Port Authorities. Under the Federal Law we are permitted to discuss and even establish and agree upon rates and charges among the several ports. We are not mandated to agree nor mandated to charge identical charges, but frequently we are able by discussion to arrive at charges which are equal among the several California ports. There is a similar organization among the ports of Washington and Oregon. We have not yet found a way where our organization in California can discuss those similar problems with the organizations in Washington and Oregon. Perhaps that will come along a little later.

In consideration of the fixing of those rates which we do in discussion among the California ports, we provide one accounting office which takes the basic data from all of our ports, not only the charges but the costs, and reports back to us annually to the Association as a whole the deficit or profit under these charges, and back to the ports individually their individual deficits and profits. For instance, our deficit or profit is not reported to another competing port, but the average of all the ports is reported to all of us so that we will know

whether our rates as a whole are adequate.

At Oakland, and I am sure some of the other ports, we feel some of the same philosophy that has been expressed here. If a private enterprise can and will do a job, it should be done by a private enterprise. If it cannot or, for some reason will not, and yet the service must be done for a successful port, then we will undertake it, but this does not include at this point warehousing or stevedoring or barge services, nor for that matter at this point large cranes. The large crane, if it cannot support itself sufficiently so that private enterprise will undertake it, is just not in existence. Right or wrong, this is the case. This is also true with longshore contracts, etc. It has not always been true. The Port of Oakland actually in the past years has been in the terminal business and has been an employer of longshoremen. This was stopped as a matter of policy about ten years ago and has not been resumed, and as near as we can forecast now will not be resumed. We think the terminal operations and stevedores have their proper place in the commerce of the area and will continue. We have not felt greatly the conflicts that there might be either among private enterprise units nor between private and public enterprise very greatly, having had this philosophy.

We have at the Port of Oakland a somewhat broader than normal range of business activity, not as broad as the Port of New York Authority. We sometimes consider ourselves the West Coast younger brother of the Port of New York Authority, and we have airport operations and a substantial amount of industrial property but it is budgeted for independently, and we have the obligation to finance, to revenue bonds not pledging the credit of the city but merely the future income of the port itself, the borrowings that we do for capital development.

In the United States we have the advantage when we sell bonds that these become tax exempt bonds and have the benefit then of lower interest rates than we would otherwise have, and I think this is a marked advantage to municipalities and to municipal ports.

I think I'll close there and answer any questions.

**MR. AKIYAMA:** Thank you very much, Mr. Nutter. I am sure the people have many questions, but I do now have one question I would like Mr. Nutter to clarify. In your reference you mentioned "municipal corporation". Would you care to define just what a municipal government is? How independent is it of the municipal government?

MR. NUTTER: In our instance, Mr. Akiyama, the independence is complete financially. We have some relationship with the city government in that our employees are civil service employees and are selected by examination of the city's civil service. We have, of course, many classifications, many occupations, many skills, which are not reflected again in the city government except in the port or airport areas, but people are examined and an eligibility list submitted to us for our employment. The city auditor also audits the accounts of the port to the degree of determining whether expenditures are legal, not whether these expenditures are good business but whether they are legal under existing laws.

The monies of the ports are completely independent. They are not part of the general fund of the city. We use the term "municipal corporation". We are not strictly speaking a port authority but to the degree that we are financially independent it is a good term or word to use to indicate separateness of our financial responsibility, and the Board of Port Commissioners of Oakland operates much as Mr. Tobin expressed his board, as a Board of Director, guiding the destinies of the board, establishing the policies and acting upon recommendations of the Executive Directors.

**MR. AKIYAMA:** Thank you, Mr. Nutter. Then your Port of Oakland is a corporation establ-



Mr. Ben E. Nutter

ished by the municipality. In other words, it is a legal entity. Is this interpretation correct? It is a legal entity established by the municipality.

**MR. NUTTER:** Yes, it is established by the voters of the City of Oakland and becomes part of the city charter, so that it is established under the laws and may be modified only by a general vote of citizens of Oakland.

**MR. AKIYAMA:** I see. Thank you. I may invite other people to ask questions.

DR. HARAGUCHI: To Mr. Nutter I would like to ask this question. When you say "financial independence" does that mean that any deficit that may have been incurred by the Port Authority is not to be covered by the port? Is that right? In other words, the port is responsible for its own deficits. Don't you sometimes suffer deficits or red letters? Of course, if you are always in the black figures you can boast about being independent. How is this?

**MR. NUTTER:** We have been fortunate enough since our establishment some forty years ago not to have any overall red figures. We hope that we will continue in this so that this problem will not arise.

**DR. HARAGUCHI:** That sounds just fine. By contrast all our Japanese ports suffer red letters. We

never seem to be in the black. I think this is quite amazing and enviable.

**MR. AKIYAMA:** Dr. Sato, this is quite different from our situation, isn't it?

In this connection, Mr. Nutter, the fact that you don't suffer red figures, is that because your rates and fees are established so that there will not be any deficit or red letters? But if you raise rates, what about your competitive position with other ports?

MR. NUTTER: Mr. Akiyama, this is always a very delicate balance, of course. I think we have to take into consideration that the provision for the tax exempt municipal bonds is a very great advantage to all of the ports, that it can't exactly be called a federal subsidy but, to some degree, by providing this tax exempt type of bond it certainly has to be considered in that light. Many of the ports of California have had to some degree a subsidization by the providing of tide-land grants from the state. Some of the state-owned lands along the shores of the State of California have been granted to these ports for use in commerce and navigation, and to the degree that we use those lands. We have been to that degree subsidized by the state. If we had been required to initially purchased this land the financial picture would have been different, so that I like to be able to say we are always in the black but we do have to admit that there is this degree of subsidy that we have enjoyed. Much of the land, however, that we use we have bought and we have paid for in the open market, paying the going market price for it. In the case of financing we have always enjoyed the tax exempt bond method.

**MR. AKIYAMA:** Thank you very much, Mr. Nutter. Any other comments or questions?

**MR. YASOSHIMA:** This is not necessarily a question, Mr. Chairman. Lord Simon and other distinguished representatives here have spoken very well and I found the discourse quite interesting and of value to us. Having listened to these gentlemen, I have gathered the impression now that each of the ports has a long history of its own and has its own peculiar locality behind each port. By the same token each one of the Japanese ports has its own history and local characteristics.

Your discussion has been quite interesting and valuable to us but in our effort to think about the future of the Japanese ports, I think we still have to sort of develop our own philosophy that best matches the need of our own situation. I am a member of the faculty of a university and I am not directly involved in port management. In this sense, Mr. Akiyama and Dr. Haraguchi I am sure will later touch upon this matter, but as a college professor I would like to present one or two impressions or comments of mine.

Especially in the case of Japan, the domestic natural resources are quite limited. We live in a small insular nation with almost 100 million people. Here we necessarily must depend on imported goods and products from your countries. Speaking of the entire Japanese people the ports and harbors have to be managed so that they will not cause any financial burden on the Japanese livelihood. In other words, we like to see our port management very economical.

Another thing that is very important to us is that the port authorities and other port management groups need to be selfsupporting as enterprises. In other words, from the viewpoint of the port users we like to see our ports very economical and causing as little as possible financial burden on the rest of the people and they ought to be in terms of business self-supporting.

Mr. Akiyama used the word "philosophy" but I think this is a sort of philosophy as I picture it of running ports.

Now, in the Japanese way of management of ports and harbors, I think there is one problem, that is the standardization of the management organizations or structures.



Dr. Hajime Sato

Dr. Haraguchi may touch upon this later, but the Port of Tokyo of course handles a great tonnage of cargo. Here are three local governments involved and they all independently manage their own port. Now this is a situation that is responsible for much poor economy or inefficiency. Therefore, I think here we need a unification of management.

Then, how should such management be run? We have heard about the case of New York and Rotterdam, and just what is the best form for such unified management is yet for us to develop from now on, but I know for sure that we need some unification of port management for Tokyo Bay.

I would like to make another comment in this connection that in order to modernize and rationalize management and as well as in order to increase the capacity, we in Japan today are still endeavoring to exapnd the facilities of these ports and harbors. For example, in the next five years to come, the strengthening or expansion of port facilities will be financed to the tune of 2.3 billion dollars. This, of course, is a substantial amount of money. This comes not only from the general national treasury but comes from all other sources. Now compared to the amount of money being spent in Japan for road improvement programs, this is only about 1/7 of the money spend for road improvement in the same next 5 years. Therefore in

order to make the best use out of this 2.3 billion dollars and in order to realize the best efficiency, I think we Japanese have a major challenge in the years ahead. As was touched upon earlier in our discussion, those vested with responsibilities of management of course have been spending a lot of money for dredging for example, if at all possible we ought to design ports so that it will take the least amount of dredging and for cargo handling or stevedoring, the shortage of labor is a universal problem and the question is how can we design and build a port that can use the minimum of labor, I think this is another challenge for us. And earlier Mr. Akiyama mentioned that there are hundreds of ports in Japan or rather thousands of ports in Japan. Now whether all of these thousands of ports need to be improved and expanded in equal pace, I think is problematical. I think there are naturally different degrees of importance attached to the various ports, but I think we should spend our money more on a selective basis. This being selective in our future investment I think will also remain a major challenge for us. Now I don't think we have come to be able to give an intelligent solution yet, but I think this gives us some food for thought in future. Thank you.

MR. AKIYAMA: Thank you, Professor Yasoshima. Along with Profesor Yasoshima I am also interested in Japan's long range investment programs. I have been working with him for quite some In his discussion he very time. wisely touched upon a problem with which I am also keenly concerned especially in connection with the symposium. This is the question of making ports economical, in other words, less expensive for the users. But at the same time, whatever investments you make here ought to be self supporting. I think Professor Yasoshima raised these two points, but then of course to keep a good balance between these two requirements is very difficult, and that is why we need some kind of philosophy in order to balance these two conflicting requirements. Therefore the discourse by Professor Yasoshima that has just been given will open the door for very liberal and candid views and criticisms from people probably outside the ports and harbors activities. Well, please.

**DR. SATO:** Yes, my name is Sato of the Japanese Ministry of Transportation. To Mr. Posthuma, I would like to put this question. I was listening to you through the Japanese interpretation and I just want to make sure that when you dredge the River Rhine, the sharing of the cost betwen the state or the nation and the local government, how it is to be precise, can you clarify that? Between the national government and the municipality.

MR. POSTHUMA: It's like this, that when the depth of the river has to be improved because of bigger ships coming in, then we pay 1/3 of the costs and the government pays 2/3 of the costs. But negotiations are going on now so that we may perhaps have to pay more than 1/3, but the present situation is 1/3, 2/3. In the River Rhine there is not much siltation. In theory, it's like this, that maintenance dredging has to be paid by the government but as we need large quantities of sand for filling sites and for road construction etc. in practice it works out that when the river has to be dredged or even when there is a possibility that the river can be dredged, we ask a concession of the government to dredge the river, so the government does not pay for the maintenance. Is this clear?

**DR. SATO:** Yes, I understand you very clearly now. I have another question, that is the tax money to be spent by the city, for what purposes can the city spend the tax money?

**MR. POSTHUMA:** Well, we have our own income as a port, and we have our expenditures and there has to be a balance between those two. As far as capital investment is concerned, the city can go to pension funds, or to the open market, but much to our regret, we have not the same facilities as



Dr. Yoshinosuke Yasoshima

in the United States. We have to pay just the same interest as every private company, the present rate is about 6 1/2 percent. I want to add this that we have always made some profit during the last 20 years. We have to avoid losses. But now we are developing the Europort plan, which will cost somewhere around 250 million dollars. You will understand that when you start such a plan and start dredging the basins and filling the sites and so on and so forth, that during the first 2 or 3 years, you will have to invest a big amount of money and you don't get a penny back because it can not be used. We have also to find first the users for the sites, when they are ready, but that's not too difficult, but you will have in any case very severe losses of such a new and very big project during the first years. We made a profit until 2 years ago, but now we are in the red and as our profits went to the municipality, the municipality also pays our losses, but the principle of this 250 million dollars Europort plan is that it has to pay after 5 or 6 vears. It is impossible to let it pay during the first 2 or 3 years, because it is not possible to use the land, first a lot of port facilities have to be made and then you can make money.

DR. SATO: Thank you.

MR. AKIYAMA: I have another question now, to Mr. Tobin.

In New York you have a great number of piers at present. Of these piers certain piers I think are equipped with very modern facilities by the port authority and I think they are self supporting or they are designed to be self supporting. Now either for the city of New York or for the city of New Jersey, I think there are some ports or piers of your own, at the same time there are piers that are under direct ownerships and control of the port authority. Then what is the relationship between the different types of piers and different ownership? In future do you have any plan to consolidate ownership or what is your thinking about competitiveness between these piers of different owners?

MR. TOBIN: Well, Mr. Akiyama, the majority of the piers all along the New Jersey side of the Port, that is the westerly side, are built and operated by The Port of New York Authority. We also operate most of the docks along the Brooklyn shore, some 3<sup>1</sup>/<sub>2</sub> miles of docks. The Port Compact, which I mentioned before, created the Port Authority, provided that we could not take over any municipal docks unless the local municipality consented. The cities in New Jersey did so consent. The docks in Brooklyn were private docks which we could acquire, but the City of New York preferred to continue the operation of its own docks which are principally on the island of Manhattan under the jurisdiction of the Department of Marine and Aviation. So that the City operates these docks and has not improved them at all. Many are old and obsolete and fortunately for the Port just from the standpoint of appearance, are being torn down. Actually, it is apparent result of the technoloas a gical changes that we are familiar with, the island of Manhattan has become obsolete for cargo handling. There isn't sufficient working space in the upland area for these docks and cargo cannot be economically handled and should be handled along the New Jersey and Brooklyn shores, particularly where we have these much wider and greater areas to develop. Some twenty years ago on a number of occasions the City of New York asked the Port Authority to take over the Manhattan docks. We did submit such proposals and on each occasion, they were rejected. In the new administration, that is during Mayor Lindsay's term, he asked us immediately to come forward with a plan for the construction of a new consolidated passenger terminal which is badly needed in Manhattan. The present passenger piers are what we would call "big barns" in American slang. They are unheated and have no air-conditioning and so the Mayor asked us to present a plan for this terminal since practically all of the passenger ships coming to the East Coast of the United States come into the Port of New York. Just two short weeks ago, after a great deal of study, we submitted such a plan to the Mayor which would give New York modern facilities such as they have in London and Rotterdam and other European ports. That proposal is now under consideration by the City and would represent the first time that the Port Authority would go forward with a large, new modern dock construction program on Manhattan island.

MR. AKIYAMA: Thank you very much, sir. I wish you best of success in your effort. As a matter of fact, I still have some questions on my mind, those piers you have or the docks you have in Manhattan to be run by the City of New York, and I think this is comparable to the City of Rotterdam running their own piers. But in the International Association of Ports and Harbors for example New York City representatives are not represented. Therefore when we talk about these ports in the world, I'd like to see the representation of New York City, but I don't see the city people in these gatherings, and why is it?

**MR. TOBIN:** I really can't answer that. The City of New York is represented in the American Association of Port Authorities and Mr. King, Director of the Port Authority's Marine Terminals, ad-

vises me that they intend to join the IAPH and I sincerely hope that they do so.

**MR. AKIYAMA:** Thank you very much. Any comments?

LORD SIMON: I was very interested in what Professor Yasoshima had to say about two matters because they have a curious and interesting parallel with what is going on in our country. He spoke of the proposed or suggested unification of ports in Tokyo Bay. This is entirely in line with the present recommendations of the National Ports Council in the United Kingdom for the unification in our case of ports on a single estuary where you may now have two or three Port Authorities. As he rightly says, this can involve a great saving in administrative costs as well as a better coordination for the ports.

I don't know that it would appeal much to Mr. Nutter to propose the unification of ports in San Francisco Bay, but it depends on who would be the leader, no doubt. The other thing I was very interested in was what the Professor said about the need, in planning this very heavy capital expenditure on the ports of Japan, of producing some selective plan and spending the money where it was most needed. This again is exactly in line with what is now being thought in Britain where the National Council's first duty is to establish a national plan which will form the basis of the capital development of the ports and in order to make this plan effective, the government have already taken power in parliament to refuse permission for any development in excess of 1,500,000 let us say a million and a half dollars, without their consent. In that way they can regulate any major expansion of the ports.

If I may ask one other question which is really to all colleagues here on both sides of the table. We have talked quite a lot about being in the black or in the red, but, of course, this depends on the system of accounting adopted. As all of my colleagues know, we have adopted in England what some of us feel is a very hard, self-denying

ordinance and that is that we should provide out of revenue, not merely the cost of redeeming our capital loans and the cost of recovering the capital spent on assets, but sufficient in addition to that to replace the assets when they fall due for replacement at whatever cost there may be in those days.

This is what we call replacement cost depreciation, and this is a very heavy burden indeed. We in London have, I must say, since we adopted this system, never been out of the red. My financial experts tell me that in two or three years time they hope we will, but at the moment it's rather like jam tomorrow, we never seem to get it in any particular year, but we are told that in two or three years we should be able to get right, and I will say for the British Transport Docks Board, that is our publicly owned Board (Sir Arthur Kirby is coming to this conference to represent them), they have for three successive years produced a surplus on that very hard basis for which I pay them a great tribute because I think it's a very clever thing to have done. But I don't think very many people adopt that very severe discipline, that you've got to replace your assets at whatever it may cost in the future, out of your revenue. I would be very interested to hear what other people think about that.

**MR. TOBIN:** My Lord, we really have the same system because it is placed upon us by the necessities of making sufficient commitment to bondholders in the borrowing of funds. We pledge to bondholders that we will so handle our affairs that we will earn our debt service calculated upon the maximum debt service for any one year in the next ten years ahead, 130 per cent. In other words, we must set our rates so that we earn not only sufficient to meet our principal and interest payments on the debt itself but so also as to earn them a 30 per cent override. The law provides that we must establish at all times and have in reserves, built up out of such funds, 10 per cent of our total debt outstanding. So, typically with our total debt outstanding now about a billion we have a hundred million dollars in reserves which really is such a sort of replacement surplus as required in London.

**LORD SIMON:** Could I ask Mr. Tobin just one quick question on that? Is this 10 per cent which is maintained in reserve maintained so to speak in cash, or is that reinvested in the undertaking as one does with one's reserves in an industrial enterprise?

**MR. TOBIN:** No, that is, in effect, reserved in cash and it may only be invested in government bonds. We have all of that practically invested in U.S. government securities.

MR. AKIYAMA: 'Thank you, I may be able to contribute to this symposium by some clarification. I would like to suggest that it is perhaps for Dr. Sato to answer because of political implications. Therefore, as an outsider or sort of bystander, being outside of the government now I can afford to be an independent critic and I would like to clarify the picture for you. This question of unification of public ports, Professor Yasoshima said there are 3 ports in Tokyo, but actually in fact there are going to be 4 all together. Or maybe even better to say 5 because there is a little additional port of Yokosuka which is growing very rapidly. Then we have Yokohama and to the north of it we have Kawasaki, a major industrial port, following which to the northern-most we have the port of Tokyo, which so far has been handling mostly domestic cargo.

But on the opposite side of the bay, on the Chiba Prefecture or the Peninsula of Chiba, there, at present are huge development works going on and the southern part is going to be commercial port but most of these new developments are going to be industrial ports. There is a substantial reclamation works going on and we have to combine or try to unify all these 5 areas together, and of course, the question of local autonomy in the form of Prefecture presents us a problem.

The Prefectures all have long history and they have their niches in their history. In other words,

to move, or affect, or change, or alter their authority in any way is always practically a very difficult issue, but this question, of course, is not only affecting ports and harbours but has to do with the phenomena of the urban explosion. This is very strongly visible in Tokyo, especially around Tokyo we have some 12 million people but now in 10 years it's going to be 13 million people in and around Tokyo, which means, in this relatively small area, we cannot afford to have 5 different political divisions.

Therefore, we ought to abolish all these boundaries and divisions according to the present argument. As an experiment to suggestion, there is a suggestion to establish a great metropolitan board or public authority to cover all these different political and geographical divisions, upon which to modernize the administration but practically this involves a lot of difficulties. So for the time being we are thinking of at least unifying the ports to begin with if not the entire municipalities, all 5 of them altogether.

But of course, given different local divisions and vested interests and authorities they would hardly be willing to give up any part of such authorities. I am sorry I have to say this in the presence of Mayor Haraguchi, but in the Bay of Osaka is another major industrial and economic center. There the Prefecture of Hyogo or rather the city of Kobe is strongly involved and there is in addition the city of Amagasaki and the great city of Osaka, and there is the Osaka municipal port and then adjacent to this port there are many other smaller ports.

Dr. Haraguchi is concerned with the Hanshin or Osaka and Kobe port authority and he is suggesting that there be such an Authority created in order to run the entire port area and we are very impressed with his courage and understanding and foresight, but of course, the big question here, is the possible deficit in such huge management enterprise. Who is going to bear the burden of such financial burden? I understand there are many, many difficulties in this area.

To boil down, the question is

the red figures, that is the deficit in the running of ports. In Japan, up to the present, these public rates or charges have been kept rather low, for example the railroad fare. Whether it can be justifiable theoretically or not, it has been kept very low in efforts to keep the consumer living costs low, as a matter of government policy. In other words, there has always been strong government design or policy to keep these public charges or fares to the minimum possible level.

Another thing is the remnant of the war time price control. We do have some remnant of the wartime legacy, that is to consider these costs as something very sacred. Now what is the cost, or the return on the investment. You don't need to gain anything over and beyond what you have invested. This is the lagacy of the wartime cost control concept. Of course, once you give some thought to the depreciation this becomes also evident. To depreciate the original investment is of course a virtue because you have to generate enough profit for replacement of these invested facilities. Naturally you have to have some allowances, otherwise the business will not continue. I am sure you understand, and you agree with me.

I happen to be in the business of running an airport terminal building, and I am also always concerned in setting the charges or rates with sufficient margin so that we can afford to refinance or reinvest into future expansion. Of course we are a private company so we can do this very easily. But when government organizations are involved in the running of these ports, I don't think they have come quite to this economic enlightenment of raising enough profit. Their accounting system has not been completely modernized as in the case of private enterprises. They follow the conventional bureaucratic governmental accounting, therefore, they tend to be very strict about the cash outflow or inflow but beyond that when it comes to routine balancing of revenue and expenditures and the raising or keeping enough for margins of profits to earmark for

the replacement, they are rather old-fashioned. They have not been courageous enough to raise enough margins of profit.

I have heard of the case of the port of London where you are depreciating the investment in such a way as to raise enough interest or profit for future refinancing or reinvestment, or in the case of New York, I think you mentioned the figure of 30% into the sinking fund of the revenue funds. I think this is a very sound and wholesome thought which gives us much edu-Professor Yasoshima is cation. another member of this long term planning board and I am in the same school with him. I hope all these outsiders like myself or Professor Yasoshima will continue to speak in a very vociferous manner to support our cause. Thank you.

DR. HARAGUCHI: Mr. Akiyama was using the examples of Tokyo Bay or Osaka Bay, but in addition there are a lot of small ports and harbours, I think there are some 3,000 in Japan including fishery ports. All of these small ports desire to develop themselves and they like to grow bigger and They like to raise their bigger. revenue, to bring benefits to the inhabitants around these ports and harbours. This naturally is everybody's aspiration. Now given the democratic institution of our nation the people naturally desire to be all equal. They intend to say that to develop themselves, to catch up with the national level is democracy. Hence, everybody has a sort of development program of their own. This is our situation. On the other hand, in the Netherlands, Rotterdam and Amsterdam are just about the only two ports. Now along the coastline of the Netherlands, I wonder if there is any move at all to build or start a new port along the Dutch coast, or to develop some new facilities in addition to Rotterdam and Amsterdam. From the viewpoint of the Japanese people it is rather amazing that the Dutch people are concentrating only upon these two major ports. Can you discuss this, Sir?

MR. POSTHUMA: The situation is somewhat different. It is

true that Rotterdam and Amsterdam are the main ports but apart from that, with the help of the Government but also because a lot of salt and natural gas is available in the northern part of my country. the industrial port of Delfzijl is developed there. Furthermore, the policy of Rotterdam is that we should be as I said before, as selective as possible. So Rotterdam is in favour of port development, elsewhere. Otherwise in our small country, Holland and the area around Rotterdam would get so many industries that from the point of view of national planning it would be wrong. There is also another area south of Rotterdam where there are many small ports, fishing ports and other ports dating from the 17th Century. We call it Zeeland and it lies more or less between Rotterdam and Antwerp. There are many islands and many small ports and now the government has chosen a few areas there and a few ports and they will be developed. So this was partly government planning, but already before the government thought about it we were already convinced that it is rather important for Rotterdam to be selective and we had already contacted those small ports south of Rotterdam. Recently, it was in October last year, we have started a cooperation between Rotterdam and the other ports which are partly developed or will be developed in this so called Delta area which I mentioned in my paper. An area of 150 square miles of perhaps more water than land is available there for housing, recreation and industries. This is not like Tokyo Bay, Tokyo Bay may become perhaps more important, but in any case we started a cooperation in this Delta area and this has already partly been successful. We help them with knowhow and when industries are discussing with us the possibilities of sites in the Rotterdam area, we also tell them the possibilities in the large area south of Rotterdam. This is all starting now but the basic discussions started already about 7 years ago and there are already some big industries in the Delta area, and therefore we talk now about the Port

of the Delta. So there are not only Rotterdam and Amsterdam but the area around Rotterdam is becoming bigger and bigger and outside the municipality of Rotterdam and in a way the same is true on a somewhat smaller scale for Amsterdam.

MR. TOBIN: The situation in New York as outlined is an illustration of the same thing where you have something like 700 miles of waterfront in the Port of New York but you had historically many ports in the States of New York and New Jersey. In the Port of New York the creation of the Port Authority was designed to bring these ports together in one coordinated and bi-state institution, treating the Port as one geographic, economic, and political entity. The Compact provided for the recognition of the many municipalities in the Port District and as Dr. Haraguchi said, included provisions which protect the democratic rights of the people as to what they want to do and given the choice as to whether they could come into it or not. Now all of the Port areas in New York through the years have come into a consortium-in effect, the Authority-except for the City of New York on the island of Manhattan, which prefers to operate its own facilities. We would not as an example of what Lord Simon has mentioned in England in recent years, contemplate the creation of Port Authorities on a national level since we have in the U.S. the strong feeling of separate states and sovereignty within our Constitution. Such a development would seriously affect the ports of the country or even one section of the country where the spur to development is in fact the intense competition between American ports. We think that competition is a great spur to the modernization of marine facilities and to a sound economic program of port development.

**MR. POSTHUMA:** One question. How are the ports in Japan operated. Are these sheds and cranes owned by the port and are the ports also involved in cargo handling or is it done by private companies?

**MR. AKIYAMA:** Yes, the sheds and cranes and the like are generally furnished by the bigger authority. When it comes to the actual handling of cargo it is by the hands of private enterprises. That is the division of labor we have. We have a law covering ports and harbours in Japan under the provisions of which the warehousing and stevedoring and cargo handling or barge services are not to be done by governmental bodies as a rule. That is our set-up.

**MR. POSTHUMA:** Do you lease the sheds and cranes to private industries?

MR. AKIYAMA: Well, actually there is a problem, too. To build a shed and to rent it to a private company is not permitted under our law. No matter what private company, there is supposed to be complete freedom, in other words any company or private enterprise can come in and operate it. But naturally there is a growth of invested interest there. And that is a rather delicate and difficult problem for us for which we need some new approach, for example, to establish a government corporation, one for the Bay of Tokyo and one for the Bay of Osaka and their entire areas, so that we can have some semblance of really public service administration. We would like to see that they become selfsupporting and self-financing whereby sheds and warehouses and the like can be rented to private users in a more efficient manner. That is what I think Dr. Sato is now trying to do as a new project.

**MR. NUTTER:** May I ask a question here. My understanding from what you said, is that if a corporation needs a shed or other capital improvements, they must make it themselves rather than for the city to provide that. Is that correct?

**MR. AKIYAMA:** The city furnishes the sheds, on the contrary.

**MR. NUTTER:** Builds the sheds and rents them? When a private corporation needs these facilities, they rent them from the port?

**MR. AKIYAMA:** The entire shed, the complete berth should

not be rented, only a portion.

**MR. NUTTER:** Only a portion? When it is rented is it leased for a long period?

**MR. AKIYAMA:** Only a short period. But as a matter of fact, it will be rented for a short term and you keep renewing it and then it will be tantamount to a long term renting or leasing.

**MR. NUTTER:** Is this limited to Japanese corporations, or are these areas ever rented to foreign corporations?

MR. AKIYAMA: I think it is not quite the concept of leasing. I think the concept is slightly different. In other words there is no leasing actually, in other words it is a case of government giving permission to use part of the berth, or part of the facilities, it is not quite leasing. We try to clarify it, in other words, it is a temporary permission for use. For example, foreign ships can come to these berths and then there is an agent to handle the cargo carried by such foreign vessels and this agent or agencies is given permission by the government to use that part of the berth and then the cargo is unloaded there and handled on the land, but it does not mean that one and the same operator can use it continuously. It actually looks like leasing but only short-term leasing and one-time deals. There actually is a technical problem.

**LORD SIMON:** In effect, really these are all common user berths.

**MR. AKIYAMA:** Theoretically, yes.

**LORD SIMON:** But in practice some company with a big business may have the same berth over and over again.

**MR. AKIYAMA:** Yes, over and over again. Actually it is something like a lease.

**MR. POSTHUMA:** Do you control the number of days during which the goods can stay in the sheds?

**MR. AKIYAMA:** It depends upon the port management. Free for five days. In other words, for five days you can leave your cargo there free. Anybody can, and then beyond five days the rate goes up for every few days, that is, say, after the second week it becomes double and in another week it doubles again and doubles again, etc. By raising the rates in the step-by-step manner we control the use of these facilities. This is one system that was started by Kobe a long time ago, but other ports have not been able to practice the same system.

**MR. POSTHUMA:** Let me ask you just one more question. Is it the practice in the Japanese ports, that they get no pay for the storage of goods?

**MR. AKIYAMA:** In other words, we have no revenue if the cargo is moved within five days. By principle it is supposed to be free and anybody's occupancy beyond five days is an abnormality. In other words, there is a sort of fine or punitive charge for anybody laying his cargo beyond five days. In other words, if everybody moves the cargo within five days there is no revenue and that is the basic principle of our public facilities.

**LORD SIMON:** Mr. Chairman, surely there must be some basic wharfage charge for the cargo.

**MR. AKIYAMA:** Well, historically, in Japan ports have been always considered the same as roads, in other words free. Red ink, naturally, you see. These are taken for granted more or less. We ought to be collecting some basic usage charge. Of course, I understand you.

I think time is up. I thank all of you as the moderator of this symposium. I think discussion has been quite stimulating and interesting if you would bear with my any inadvertencies as chairman.

**DR. HARAGUCHI:** I am thankful to the very dexterous chairmanship by Mr. Akiyama which has contributed to a very enthusiastic discussion. We have heard individual problems of different ports and I think we learned a great deal in terms of philosophy governing con-(Continued on Next Page Bottom)

# The East African Ports in 1966

#### (Spear, Vol. VIII, No. 1)

The East African Railways and Harbours

The year 1966 has been another record one for the tonnage of dry cargo traffic passing through our maritime ports. It has also been a record for bulk oils, but as this and other piped traffic is not physically handled by us, we do not include the tonnage when we wish to show what we accomplish year by year. The main increase and resulting pressure have been felt at the two major ports of Mombasa and Dar es Salaam and the combined tonnage at these two ports in 1966 has been 20% more than in 1965 which itself was 14% higher than 1964.

We naturally give much thought to the future growth of traffic likely to pass through the ports and the planning of additional facilities is very much a feature of our every day work, but each new deep water

struction, maintenance, operation and management. I think the discussion has been very impressive to us Japanese people and we thank you for your contribution.

Our course, we have been successful in this symposium because our theme of the philosophy of managament of ports and harbors has always been the focus of your great attention and thought. What you have spoken today is going to be printed in our house organ a magazine called KOWAN, or ports and harbors. Your suggestions and statements will be very, very beneficial for readers of our magazine. I thank all of your again.

**MR. AKIYAMA:** May 1 take this opportunity to ask you what do you think of our interpreting service?

ALL: Wonderful. Excellent.

berth complete with its equipment costs nowadays in the region of one and a quarter million pounds and some years must elapse between the date the final go-ahead is given for construction and the day the first sling of cargo passes across the apron. It follows that sudden upsurges in traffic must be handled through the berths available, by the introduction of such extraordinary measures as are possible to deal with the situation, and it says much for the workers in the ports both Cargo Handling Services and E.A.R. & H. that we have been able to meet the challenge. The workers have cheerfully undertaken long hours of overtime work and have shown ready willingness at times of difficult conditions in the interest of East Africa.

The highlights of 1966 working were: (a) the need to gear ourselves at the Tanzania Ports to handle large quantities of Zambia imports and exports. As readers are no doubt aware, Zambia wishes to open up new traffic routes in order to reduce her dependence on the one through Rhodesia and has turned to East Africa for help which has willingly been offered; (b) the importation of very large tonnages of foodstuffs through Mombasa necessitated by the unfavourable crop season and (c) an upsurge in East African general traffic particularly at Dar es Salaam.

The Port of Dar es Salaam's throughput was at a higher rate than in 1965 but this became suddenly more marked in August, when the monthly figure increased by 40%. Part of this can be attributed to the export of Zambia copper, but in the tonnages there is a large element of purely Tanzanian traffic occasioned by the develop-

ment taking place in that country. Previously Dar es Salaam was regarded as a five-ship daily working port averaging a throughput equivalent to roughly 50,000 tons per month, with a comparatively slack season in the first half of the year and heavier commitments during the produce season, July to December.

In the last part of 1966 the status of the Port was raised to seven-ship daily working and an average throughput in the region of 70,000 tons per month has been achieved. This, however, has not been accomplished with ease — spasmodic ship waiting has occurred at times to a most unwelcome degree—and greater performance has only been possible because the plans to gear the port to meet Zambia requirements were progressively coming to fruition.

These plans included a substantial expansion of the Cargo Handling supervisory and clerical staff to permit extended hours for working and the accompanying engagement/ training programme; the provision of additional floating craft, cranes and mechanical handling equipment; and the provision of more sheds, stacking grounds and other facilities for dealing with cargo. These programmes are now under way and will continue for many months to come.

Throughout the year small quantities of import general cargo had been received on Zambia account, in addition to a very large number of lorries and trailers for the Zambia/Tanzania road link. In the second quarter of 1966, lorries laden with copper bars regularly arrived at Dar es Salaam. These lorries were offloaded in the Port area and the copper was made up into unit loads of twelve bars weighing up to 30 cwt. and then strapped by machines. This method allows the full use of mechanical handling equipment both ashore and in the ships, resulting in speedir handling, better utilisation of the available storage space and

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General view of Port installations showing deep water berths Nos. 1 to 10 (extreme left), Mombasa, Kenya.



Kipevu deep-water berths, Mombasa, Kenya.

the minimum of physical labour. Between April and December, 1966, approximately 44,000 tons of Zambia copper were exported through the Port: the monthly tonnages steadily increased until by December 1966 they were running at more than 8,000 tons per month.

The Port of Mombasa commenced the year under pressure. Heavy importation of foodstuffs had taken place in the last few months of 1965 and by January, 1966, the queuing of ships was causing a great deal of concern. Every effort was directed to discharge and load ships and move cargo through the Port as quickly and efficiently as possible in order that the fullest use of resources at our disposal could be made but, because of sheer quantity little headway at the time was achieved. The lines of communication with the port were of course also under extreme pressure, and by March 1966, emergency measures became imperative. E.A.R. & H. controlled road vehicles commenced a service between Nairobi and Mombasa clearing imports and exports. The Kenya Government assisted by providing Kenya Youth Service and departmental lorries and the Nairobi City Council assisted: to strengthen the fleet still further, private lorries were hired by the E.A.R. & H.

By the end of June 1966, 240,-000 tons of wheat, maize and sugar had been imported, but there were at last signs of a break-through, and by August, 1966, the congestion which had lasted over eight months was virtually at an end.

Throughput after August 1966 continued to be high but the situation was contained—albeit with a certain amount of inconvenience to ships at times—and for the first year on record, general dry cargo in Mombasa Port exceeded the two million ton mark.

Much is said and written about the expected capacity of a deep water berth — and our customers are sometimes critical of our performance in this respect; but our reading of overseas publications and discussions with visitors from other ports make it clear that we

#### (Continued on Page 29)



Mechanical Handling at Kipevu deep-water berths, Mombasa, Kenya.



The layout and extent of the facilities at Kipevu have been designed for the highest degree of mechanisation to permit a greatly increased rate of ship handling as compared with any of the Mombasa Island berths. The above photo shows fork-lift trucks handling agricultural products for export in Berth No. 11 Transit Shed, Kipevu, Mombasa.



Aerial view of Dar es Salaam.



Aerial view of Dar es Salaam Port, Tanzania.



Loading cargo from Belbase Shed, Princess Margaret Quay, Dar es Salaam Harbour.



Aerial view of Tanga Port, showing lighterage wharf.



Sisal is the main commodity handled at the lighterage port of Tanga, where nearly 350,000 tons of imports and exports are handled every year.



Mtwara Port, Tanzania.

are not alone in the problem we have to contend with in this very complex field of port operating. Our harbours and the facilities we provide are amongst the best in the world, and there is no doubt that our berth capacity would increase markedly if every cog always locked in at the right time and place. However, matters connected with handling, discharging and loading of ships do not usually follow an orderly path, and this we have to accept. For instance, the first half of December, 1966, was an unusually easy month at Kilind<sup>1</sup>ni with many empty berth days, but in the second half ships bunched and high tonnages arrived leading to some

discharging vessels having to wait their turn.

At Tanga tonnages followed the normal pattern for exports but an increase in imported goods lifted throughput a little above that of 1965. Plans to increase the capacity of the Port to meet Zambia requirements, if necessary, have been prepared.

Yearly tonnages at Mtwara do not fluctuate to any extent and, because of the seasonal nature of the principal commodities, for many months each year in the past, spare capacity has been available. However, it is proposed to use this Port to meet some of Zambia's transport needs and when the expected traffic reaches its height, the yearly throughput will be more than doubled. Our Engineers are now working on the provision of a large new transit shed and further paved areas for rough import cargo and copper exports. Ancillary facilities are receiving attention and further mechanical handling equipment is expected in the near future.

East African Railways and Harbours enters 1967 in the knowledge that the year will not be without its problems, but is also confident that all who work in the Ports will continue to give of their best for the good of East Africa and its neighbours.

## What is The B.T.D.B.?

#### The British Transport Docks Board is a publicly owned and profit-making \* authority responsible for 22 active ports in England, Scotland and Wales.

(\* The Transport Act, 1962 18-(1) Each of the Boards shall so conduct their business as to secure that their revenue is not less than sufficient for making provision for the meeting of charges properly chargeable to revenue, taking one year with another.)

#### 1. Historical Background

The ports within the Docks Board group have a varied history. Some date from ancient times, but most grew up early in the railway age, when the new railway companies first took an interest in their operation.

This close association with the railways continued until 1948 when the ports first passed to public ownership under the 1947 Transport Act.

The railways and other sections of the transport system were vested in the British Transport Commission which formed a number of 'executives', one of which—the Docks and Inland Waterways Executive—became responsible for almost all of what are now Docks Board ports. The railway 'packet ports', dealing in through-booked traffic to Ireland and the Continent, came under the Railway Executive, and are now with the British Railways Board.

The 1953 Transport Act abolished the Docks and Inland Railways Executive, and certain other executives, and separate *Boards of Management* appointed direct by the British Transport Commission were set up for docks and waterways.

The 1962 Transport Act brought into being the *British Transport Docks Board* which began operations on 1st January 1963 as an independent authority appointed directly by the Minister of Transport.

The Tees & Hartlepools Port Authority Act, 1966, set up a new estuarial authority for the Tees and Hartlepools and the Board's docks at Middlesbrough and Hartlepools were transferred to that body on 1st January, 1967.

The number of active ports owned and operated by the British Transport Docks Board is now 22.

# 2. Constitution and Membership Constitution

The British Transport Docks Board was set up under the Transport Act of 1962. The Act lays down that the Board 'shall consist of a chairman, a vice chairman and not more than nine or less than four other members; the chairman and other members of the Board shall be appointed from among persons who appear to the Minister to have had wide experience of. and to have shown capacity in, the operation, management or administration of docks, or transport, industrial, commercial or financial matters, administration, applied science, or the organisation of workers, and the Minister in appointing them shall have regard to the desirability of having members who are familiar with the special requirements and circumstances of particular regions and docks served by the Board.'

The Docks Board is thus an autonomous authority directly answerable to the Minister of Transport who appoints its members. Mr. S.A. Finnis, O.B.E., E.R.D., M. Inst. T. succeeded Sir Arthur Kirby, K.B.E., C.M.G. as Chairman of the Board on 15 June, 1967.

#### South Wales Local Board

To enable it better to discharge its statutory duties, the British Transport Docks Board in 1966 set up a non-executive local board of twelve members in South Wales to co-operate with and assist the Docks Board in making policy de-

cisions relating to its South Wales ports.

In framing the membership of the Local Board, the Docks Board aimed to cover all interests, though it was obviously not possible, within the size of a manageable board, for every interest to have direct and sole representation.

Membership to the Local Board is for three years from the date of appointment. The Local Board will meet at least four times a year, and the Chief Docks Manager and Docks Managers of the South Wales Ports are normally in attendance.

#### 3. Management

#### **Principal Officers**

Principal Officers appointed 15 June, 1967 include Managing Director—Mr. S. Johnson, F.C.A., M. Inst. T., Deputy Managing Director —Mr. D. A. Stringer, and Secretary —Mr. K. E. Bantock.

#### **Port Autonomy**

Ports and docks for which the Docks Board is responsible are in the charge of local managers vested with the maximum autonomous powers consistent with efficient group control. Each manager is authorised to incur expenditure on on works, plant, and craft, and to appoint and retire certain staff. He is also responsible for consultation with port users and local authorities.

The Board controls overall policy including finance, important staff matters and senior appointments.

The headquarters in London is largely directive and advisory. Within the structure of a nationwide group of publicly-owned ports it seeks to create flexible conditions which make for enterprising local management.

#### Central Establishments

The Board's headquarters is at Melbury House, London, N.W.1. immediately behind Marylebone Station. There are three commercial offices: in the City of London, in Birmingham, and in Leeds. The Board's Staff College is at King's Lynn, Norfolk. The Research Station is at Southall, Middlesex, and there is a section at Hull employed in the design of small ships for the Board's own use.

## Another Successful Year

British Transport Docks Board Chairman's Review of 1966

#### (Sir Arthur Kirby, K.B.E., C.M.G.)

The fourth year of the British Transport Docks Board's existence as an independent body has been stimulating and successful, both in operational achievement and progress in developing the network of nationally-owned ports to deal yet more efficiently with a growing share of Britain's sea-borne trade.

Despite the combined effects of the generally unfavourable economic conditions, the six-week national strike of seamen, and substantial increases in the payments of local rates, the Board achieved a surplus of £1,495,431 after providing for depreciation on a replacement cost basis and paying interest on the capital debt of £87,416,-192. This is an increase of thirty per cent over the 1965 figure, and, as in previous years, the surplus has been transferred to reserves and used to finance capital development. Gross receipts for 1966 at £26,-629,091 were £2,077,273 higher than in 1965, but working expenses rose by only £1,530,881 to £21,-888,716. Higher depreciation and interest charges follow from the Board's investments in new and improved facilities at their ports.

Traffic passing through the ports in 1966 totalled 53,591,000 tons compared with 52,418,000 in the previous year. Increases in tonnages of petroleum, coal and general cargo more than offset a decline in the imports of timber and ores. Shipping entering and leaving the Board's ports during the year rose by 1.8 per cent to 90,511,000 n.r.t.,

Fingertip Facts
The British Transport Docks Board
operates 22 active ports
handles about one-third of Britain's dry cargo trade
employs 9,979 people
has an 11-member board and 12 principal officers
$\ldots$ has spent nearly £25 million on capital development
has a five-year, £89,000,000 investment scheme
$\ldots$ made a profit of £1.53 million in 1963, its first year
$\ldots$ made a profit of £1.64 million in 1964
made a profit of £1.15 million in 1965
handled 52.4 million tons of cargo in 1963
handled 54.9 million tons in 1964
handled 52.4 million tons in 1965
loads and unloads 75,000 ships a year
maintains about 70 miles of quays
owns 21 dry docks and 22 slipways
has 9 million square feet of transit and storage space
operates nearly 1000 cranes and coaling appliances
owns 10 tugs, 30 dredgers, 11 hopper barges, 8 floating
cranes, 3 floating grain elevators and 12 launches

and as a direct result of the Board's provision of new facilities, there was an increase of more than 25 per cent to 1.2 million in the number of passengers.

#### **Modernisation and Development**

Impetus was given to development at the Board's principal ports, and it was heartening to see many of the Board's plans of earlier years materialising and coming into operation. At the same time further planning was set in train. During 1966 the Board authorised new works and developments to a value of  $\pounds 30$  million; 15 major contracts for work at 10 different ports were placed; and actual expenditure on Capital Account during the year was £9.8 million. During the four years of their existence the Board have made a total capital investment of £24.7 million, of which over  $\pounds 20$  million have been provided from the Board's own resources.

Of the contracts let during 1966, the largest, with a value of  $\pounds 5$ million, was for the construction of breakwaters for a deep-water tidal harbour at Port Talbot. Intended primarily as a terminal for large iron ore carriers, the harbour is estimated to cost £17 million and should be ready to receive and discharge ships by the summer of 1969. A contract for £3.1 million was placed in December for the first phase of a new arm to the deep-water King George Dock at Hull, which will provide 4,750 ft. of additional quayage and an overside berth at a total cost of about £7 million. At Newport work began on the  $\pounds 1.1$  million initial stage of the construction of a new 1,700 ft. wharf for packaged timber vessels and container ships at the South Dock. Progress was made at Grangemouth with new oil jetties as a preliminary to construction of a new, larger entrance lock: the estimated cost of the whole scheme being  $\pounds 7$  million.

New works completed at Southampton during the year included a modern ocean passenger/cargo terminal at Berths 38/39, officially opened by H.M. The Queen, and now named the Queen Elizabeth II Terminal. At Hull two roll-on/roll-off terminals catering for ferry services to Gothenburg and Rotterdam were completed and brought into service at King George Dock; and the development of the South Side of Albert and William Wright Docks and the erection of new quay cranes and transit sheds at Alexandra Dock were among other projects completed at the port. At Immingham a roll-on/roll-off terminal for services to Gothenburg and Amsterdam added to the general cargo facilities of this expanding port. At King's Lynn the construction of a new quay on the south-east side of Alexandra Dock, with a transit shed and quay cranes, was completed and extended to the full length of the dock, and terminal facilities for a roll-on/roll-off service to Hamburg were completed and brought into service at the end of the year in the north-west corner of the dock. Among important developments at other Docks Board ports was a scheme under way at Goole to provide new berths and transit shed accommodation at a cost of some £330,000.

#### New Concepts in Cargo Handling

The increasing momentum of what has been called the 'container revolution' has been well in evidence at the Board's ports during the past year. In both the short-sea and ocean trades the Docks Board have successfully and happily co-operated with ship-owners in the introduction of unit load and container services, and have to date invested  $\pounds 4.1$  million in specialised terminal facilities for roll-on/roll-off and lift-on/lift-off services.

The movement of unit load traffic through specialised roll-on/ roll-off ferry terminals is now well established at the Docks Board ports of Hull, Southampton, Grimsby, Immingham and King's Lynn. The provision of further berths of this type at Hull and Southampton, bringing the total to eleven, was well in hand at the end of the year.

With the introduction at Grangemouth in May 1966 of a weekly container service to the U.S.A. and, later, of a short-sea service to Rotterdam, the Board authorised the

provision of two heavy-duty transporter cranes and container compounds to handle this growing traffic. The first crane is now in operation and the second is due to enter service in October. As well as at Grangemouth, short sea lifton/lift-off container services were operating from Hull and Garston. The erection of a derrick crane at Newport was authorised for a container service to Ireland starting early in 1967 and at several ports negotiations were in progress for the provision of short-sea container facilities.

At Southampton the Board have long-term plans for the extension of the Western Docks to provide thirty additional deep-water berths at an estimated cost of £60 million, and in August, the requisite Parliamentary powers were obtained. A scheme for a trans-ocean container-ship terminal with a 1,000 ft. deep-water quay, as the initial stage of the project, has been approved by the Minister of Transport under Section 9 of the Harbours Act 1964 at an estimated cost of  $\pounds 2.5$  million, and is now in hand.

#### Research

Increasing use of skilled engineering research has been made by the Board. The extension added to their Research Station at Southall, Middlesex, in 1965 became so occupied with hydraulic models that it was necessary to make further space available. Further studies of siltation and model experiments carried out by the research staff yielded valuable results. A contract was placed for the construction at Hull, in association with the Humber Conservancy Board and the Hydraulics Research Station, Wallingford, of a large tidal model of the Humber, which is regarded by the Board as having tremendous development potential. It is expected that the model will be ready for experimental work by the end of 1967.

#### **Port Services Department**

In order to expand the scope of operational research and achieve maximum management efficiency, the establishment of a Port Services Department was begun at headquarters to provide expert assistance to port management in operational research; computer and data processing; O. & M.; work study; and purchasing and stores. Studies of the introduction of computer techniques are well advanced.

#### **Training and Education**

In the field of training and education, the Board expanded their programme, which breaks new ground in the port industry. Their Staff College at King's Lynn, opened in 1965, has been extended by the provision of a residential wing and syndicate rooms. During the year 472 members of the staff attended 35 courses at the college and a number of places were made available to staff of other port authorities and the National Dock Labour Board. Encouragement is given to staff to undertake courses of further education.

The Docks Board's engineering and management training schemes continued to operate and in September a junior trainees scheme was introduced.

#### The Future

The next five years will present many new challenges to the docks industry both in operation and or-The Docks Board's ganization. preparations to meet the rapid evolution of new cargo handling methods and the introduction of larger vessels are evidenced not only by what has been achieved during 1966 but also by an £89 million capital investment programme for the period 1967/71, involving major developments at ports on the Humber, in South Wales and at Southampton.

Radical changes in the conditions of employment of dock labour, estuarial re-organisation schemes, and the Government's nationalisation plans for the ports may drastically alter the structure of the industry. For their part the British Transport Docks Board are meeting these challenges with the determination that their port network shall be as efficient and modern as any in the world: a network geared to the needs of a major trading nation in the world of tomorrow.

# San Francisco Opens Finest Ocean Shipping Facility

#### Port of San Francisco News

(Special Army Street Terminal Dedication Issue)



Rae F. Watts, Port Director San Francisco Port Authority

The Largest, Finest and most efficient ocean shipping facility ever built in San Francisco Bay opens to world trade on September 1, Rae F. Watts, Port Director, has announced.

The San Francisco Port Authority's new, 68-acre Army Street Terminal will begin cargo operations as the most important terminal to be opened in San Francisco since the port became a major world shipping center well over a century ago.

More than 25 steamship lines including leading European carriers serving the Pacific Coast, major Japanese steamship companies, and some American-flag lines—will use Army Street as their West Coast freight center.

The terminal has nine berths to accommodate deep-draft freighters carrying both break-bulk and containerized cargoes. It includes all the supporting services found at a modern ocean terminal.

The terminal will be dedicated on August 30, when more than 500 shipping executives, national, state and local officials, and civic dignitaries attend a special luncheon at the terminal.

In addition to the formal part



Cyril Magnin, President San Francisco Port Authority



The San Francisco Bay Bridge, world's longest suspension bridge, leads highways to the city of San Francisco. On-off ramps are within a few blocks of the Port of San Francisco, which may be seen in the picture.



Following a dedication ceremony attended by more than 400 civic dignitaries and shipping executives, the Port of San Francisco opened the new \$26 million Army Street Terminal as the largest, finest and most efficient ocean shipping facility ever built in the San Francisco Bay Area. Port Authority President Cyril Magnin cut the ribbon opening the entrance to the 68-acre facility that will accommodate nine deep-draft ocean freighters carrying both break-bulk and containerized cargoes. Shown left to right at the ceremony are Port Commissioners James Rudden and Daniel London; Port Director Rae F. Watts; Mr. Magnin; Gordon Paul Smith, Director of Finance for the State of California, and principal speaker at the event; San Francisco Supervisor Jack Morrison, representing the Mayor; and Port Commissioner Trevor C. Roberts.

of the ceremonies, there will be an opportunity for a tour of the modern facilities, including the four mammoth cargo transit sheds, covering a million square feet of storage space, the mile long concrete wharf, administration building, gear storage building, and the 30-acre open storage area for containers.

Gordon P. Smith, State Director of Finance, will address the luncheon guests.

The Army Street Terminal was built at a cost of \$25 million and

financed from a State port bond issue of \$50 million voted by the people of California for Port of San Francisco improvements.

Port Authority President Cyril Magnin emphasized that the debt service will be met from port operating income. He pointed out that the 104-year-old State owned port is unique on the U.S. West Coast in that it has never received tax aid or subsidy from any source.

#### **Efficient Handling**

The Army Street Terminal is designed and built to produce the utmost in ship berthing and handling, discharge and loading, cargo transit and storage, truck and railroad dispatch, and all the supporting services that are important to modern terminal operations.

Every factor in its location and design is calculated to allow its users to progress well beyond customary standards of productivity and economy in the handling of ships and cargo.

"The efficient and economical movement of cargo will be major advantages to the steamship lines using the Army Street facility. This terminal opens an entire new era in modern cargo-handling methods at the port," said Rae F. Watts, San Francisco Port Director.

The terminal is located on the Islais Creek Channel at the southern extremity of the port, where newly developed land areas provide ample space for future expansion. It is just eight miles from the Golden Gate Bridge by the main south Bay ship channel.

The south side of the terminal lies immediately within the entry of the Channel and is 2,657 feet long, providing berths for five freighters.

Two major berths are located on the east (offshore) side of the terminal with a continuous apron of 1,-296 feet. An apron of 1,138 feet on the north side allows berthing for two more vessels.

The terminal construction is of reinforced concrete supported by prestressed concrete pilings. The entire linear berthing area features a timber fender line with rubber bumper mountings.

Fifty-foot wide deck aprons provide ample space for truck and rail car delivery or receipt direct at the ship's side. The deck load capacity is 1,000 pounds per square foot —more than enough for the most concentrated container load.

Four steel and concrete cargo



Aerial view of the Port of San Francisco's new Army Street Terminal as it nears completion. The Terminal opens to world trade September 1, and more than 25 steamship lines are expected to use the modern and efficient facilities.



The Army Street Terminal is a U-shaped pier with berthing space on the three sides to accommodate nine ocean freighters. This picture shows the half-mile long wharf on Islais Creek Channel capable of handling five ships for cargo loading and discharge operations. The prestressed concrete deck is rated for a capacity of 1,000 pounds per square foot, more than enough for the largest container load. Rails are installed to serve railroad cars, and note the twin rails for container cranes.



Interior view of one of Army Street Terminal's mammoth cargo transit sheds shows clear-span area covering 225,000 square feet. More than 870,000 square feet are enclosed in the terminal's four sheds, and a 30-acre open area is set aside for container storage.

transit sheds cover a million square feet of freight storage space. They range in length from 763 to 1,100 feet, and each is 225 feet wide.

The interiors of the buildings are completely clear-span, eliminating posts that would hamper the storage and movement of cargo. Steel trusses, spanning the 225-foot width, are considered to be among the largest ever used on a cargo shed.

Aluminum siding is used extensively in the construction of the walls and roofs. One of the feature of the roof is sections made from transparent material to achieve natural lighting. Mercury lamps provide well-balanced lighting for night work.

Electrically powered steel-rolling doors are placed at frequent intervals to provide maximum passage into and out of the sheds. Some of the doors are 30 feet wide and 24 feet high to accommodate the largest container and cargo load.

Other features of Army Street's cargo transit sheds are loud speaker and pneumatic tube messenger systems, telephone and water connections conveniently located at ship berths, and freight offices that serve both inside and outside the shed.

More than 22,000 feet of rail track runs on both sides of the cargo sheds, along the 50-foot wide apron of the berthing wharf, and along the Terminal side of the sheds adjacent to the one-level loading platforms.

#### For Van Cargo

The Army Street Terminal is the Pacific Coast's most versatile ocean shipping facility—a combination terminal with the capability of handling ships carrying both containers and general palletized cargoes.

"Major facilities for the fast and efficient handling of containers and the ships designed to carry them have been included in the construction to meet the anticipated needs of the steamship lines using the terminal," said Port Director Rae F. Watts.

"We will be ready with full facilities at Army Street when the container ships now being planned are ready to berth there," Watts assured.

The south side of the huge termi-

nal, a continuous 2,657-foot wharf, will be served by multi-purpose cranes that minimize the time and cost requirements in loading and discharging containers and breakbulk cargoes.

Fifty-foot wide deck aprons provide ample space for truck and rail car delivery or receipt direct at the ship's side. The deck load capacity is 1,000 pounds per square foot—more than enough for the most concentrated container load.

Other cranes and companion equipment to serve containerized shipments are to be installed.

The large center of the terminal, capable of accommodating 8,000 vans, may be used for a container storage area. It has direct access to all ship berths on the pier's three working sides.

#### Rail and Highway

The Army Street Terminal is located in an area that is the marine center for transportation and distribution in Northern California. It is a spacious, uncongested part of San Francisco and more convenient to rail and highway accesses than any ocean facility in the Bay Area.

On-off ramps to the major highways are less than one-half mile from the terminal entrance, and connection is via a wide, asphaltpaved, four lane thorough-fare.

Railway cars serve the terminal over track spurs on the wharf deck and through the center of the facility. Adjoining the terminal is the marshalling yard and ferry landing for Western Pacific Railroad. Approximately one mile away is the marshalling yards of the Southern Pacific and Santa Fe Railroads.

The San Francisco International Airport, the Bay Area's air freight center with 98.5% of all air cargo handled through it, is within easy reach of the Army Street Terminal in a direct, eight-lane highway. Truck driving time is approximately 10 minutes.

The Port of San Francisco, which traces its history back more than a century as a leading world port, is on the threshold of a sparkling new era of development.

A broad program for the rejuve-



This artist's drawing shows the Army Street Terminal prepared for container service, including two large container cranes on the channel wharf and two bridge cranes in the center storage area.

nation of the San Francisco waterfront, beginning with the opening of the Army Street Terminal, has been established through a master plan for the physical and economic growth of the port.

#### New Pier 27

Opening in early September will be the new Pier 27 Terminal, providing an additional two-berth wharf and more than 475,000 square feet of covered and open cargo storage space.

The triangular shaped Pier 27 was constructed of reinforced concrete over prestressed concrete pilings at the site of two old finger piers.

Assigned exclusively to the expanding trans-Pacific fleet of Pacific Far East Line, the new Pier 27 adjoins Piers 29, 31 and 33 to give PEEL the facilities to dock and handle seven ships simultaneously for cargo operations.

The Port of San Francisco plans to redesign and double the capacity of its grain terminal, making it the most modern and efficient facility on the West Coast.

The present grain elevator, located at Islais Creek across the channel from the Army Street Terminal, will be rebuilt to a total capacity of 2,000,000 bushels, and capable of handling ships with a draft up to 40 feet.

The loading capacity of the new facility will be increased to more than 1,200 tons per hour.

A conveyor belt will be constructed to carry the grain from the car dumper and distribute it throughout the elevator at the rate of 25,000 bushels an hour.

To transport the grain from the storage bin to the ship, three conveyor belt will be used, feeding two 20,000 bushel per hour shipping legs. Six mechanized loading spouts will be arranged to load the largest bulk carriers without shifting the vessel.

Capable of handling containerized cargoes quickly and expertly, the Port of San Franciso has available two locations perfect for use as container terminals.

Directly across Islais Creek Channel from the Army Street Terminal is a 135-acre site now being filled. The Port of San Francisco will build to tenants' requirements and specifications the type of marine facility desired, complete container terminal or combination general cargo and container complex.

A second container terminal site on the San Francisco waterfront is comprised of 36-acres located at the Bethlehem Steel shipyard.

Other redevelopment plans come from two recent studies conducted

for the Port Authority by the national research firm, Arthur D. Little Company, and John S. Bolles Associates, a San Francisco architectural firm, encompassing the northern waterfront and Ferry Building areas.

The research firm advocated a sweeping commercial development of port property in the Hyde Street-Fisherman's Wharf area to expand retail, restaurant and entertainment facilities to serve what it described as "an insistent and growing public demand for more consumer-based facilities."

The study recommended retirement of 11 aging piers which now serve shipping, to make some 44 acres available for redevelopment.

At the Ferry Building, the Bolles report recommended the construction of an office building-garage complex, which would provide more than 100,000 square feet of office space and room for 1,000 automobiles. The top of the building would be proposed for use as a landing and terminal for helicopter service.

The plan would also include a restaurant, small boat lagoon, a marine and ferry boat landing, and a dock for "ceremonial" ships. The entire area would be landscaped and include open pedestrian promenades to the water's edge.

# Newsletter No. 5 September, 1967

### Ghana Cargo Handling Company, Ltd. Tema, Ghana

Spring—and the Conference Season—has come and gone. We are grateful for the good sense of the organisers of conferences in choosing such a pleasant time of year to bring together from all over the world all of us who are interested in ports and cargo handling.

We are represented at the International Association of Ports and Harbours Conference in Tokyo, the I.C.H.C.A. Conference in Antwerp, and the Conference arranged by the publishers of "Ports and Terminals" at Brighten. All were highly interesting and instructive and we are still digesting the mass of literature that we collected.

The emphasis at all three gatherings was to a very great degree on containers and container handling and at the risk of sounding old fashioned we must confess that we found the degree of emphasis a little disturbing.

The advantages of the container were stated over and over again and are obvious to us for the major sea routes where the volume of traffic is high. We are not so sure of the advantages of the container to the smaller ports, particularly those remote from the major sea routes, and it is surely these smaller ports that make up the majority of the world's ports even though the tonnage they handle may not be very great.

The I.A.P.H. Standing Committee on containerisation forecast that most cargo that is containerable will be moved by container ships in the near future, and recognises that this will inevitably create problems at the ports. "The piers and facilities that were satisfactory for general break bulk cargo will be totally inadequate for handling containers in large volumes. The biggest problem for the ports is to provide sufficient land or back up area for containers. Another is the handling equipment that is required. To attract container ships and containerised cargoes, a port must provide:—

- 1. An adequate deep water berth.
- 2. Sufficient back up area close by for the parking of containers.
- 3. A minimum of one Paceco Portainer or similar crane capable of handling any sized container from ship to wharf or from wharf to ship.
- 4. Straddle trucks or similar equipment to rapidly transfer containers from the holding area to the ship or from the ship to the holding area.
- 5. A Consolidation Terminal of sufficient size to handle the stuffing of containers so that all containers that are put aboard the ship are fully loaded."

There must be a very large number of ports throughout the world (we know of some) where drafts are restricted and shore space distinctly limited. It has been suggested that the full advantage of the use of containers and container ships will come with fast main line services between a limited number of ports, each of which will be served by a network of feeder services. In theory, this seems extremely logical, but in practice there would be a very considerable number of difficulties for the majority of the ports in the world. The more remote they are, and the smaller and more varied the cargo they handle, the fewer will be the containers they are expected to handle and yet they will have to have facilities to handle 10-30 ton units in sizes ranging from 20-40 feet in length. The cost of providing such facilities for a comparatively small flow of traffic might mean that the container age will be for them not a boon and a blessing but a distinct nuisance and a financial liability.

Furthermore, developing countries exporting mainly unprocessed material (logs for example) will mostly likely have a trade pattern that would not provide suitable return loads for any containers used for imports.

There is a special danger that the developing countries may, as has happened in the past in other ways, decide that as a matter of national prestige they must have bigger and better container berths because of all the ballyhoo that has been and is being printed.

We feel that the International Associations and the trade papers are placing too much emphasis on containers and only rarely is there a note of caution in article or speech that the introduction of containers is not necessarily the panacea for most shipping and cargo handling problems; for some ports it could more closely resemble the kiss of death, at any rate as far as their finances are concerned.

It is hoped that things will settle down and that once more a further thought and encouragement will be given to the non-container unit load. If the present emphasis on the use of containers diverts efforts away from the drive to increase the amount of cargo that is handled on pallets it will be a tragedy and disservice to the greatest number of ports. It is hoped that the learned and renowned gentlemen who speak so eloquently in favour of containers and the great and wealthy organisations they represent will be able to spare a little of their resources and expertise in seeking ways and means to improve methods and expand the volume of palletised cargo for the greater benefit of the smaller fry all over the world.

It seems timely to add that we have nothing at all against containers. We just are trying to express our view that there must be very many ports where the prospect of having to cater for quite a limited and intermittent trade in containers causes some concern. The facilities required could be comparatively costly and the rewards negligible. For such ports and for such traffic, the benefits of increased use of pallets with existing or additional pallet trucks, forklifts or even cranes (in conjunction with pallet hooks) would be considerable and call for little additional financial outlay.

Because of the very great emphasis on containers at the Conferences and in the newspapers and trade journals, it is all the more heartening when experts press the virtues of palletisation. At the ICHCA Conference in Antwerp, strong arguments were put forward in favour of greater emphasis and encouragement on the use of a palletised load and we were a little surprised but extremely happy that Tema was included in the list of ports who were favorably mentioned regarding palletisation.

Strong arguments in favour of the advantages and versatility of unitised cargoes on pallets, particularly in conjunction with fully mechanised side port vessels, were put forward in a very instructive letter printed in the English newspaper "The Daily Telegraph" on Monday, August 21st, 1967.

#### Mechanical Equipment

We have just taken delivery of six Clark DCY 50 forklift trucks especially equipped for on board use and hope that this addition will enable us to meet the growing demand for forklifts to work with the stevedores. We are now operating sixty-four Clark DCY 50 machines.

Other equipment received or on its way includes eight tractors, ten pallet trucks and further attachments for our forklifts.

#### Other News

The report of the Commission set up by the National Liberation Council to investigate Ghana Cargo Handling Company is being awaited.

As a result of the Government's economic measures and the restriction of imports, activity at Tema and Takoradi has been very low. Last year import tonnage

# Kobe CIT Center Builds 26-Storied Skyscraper

Port Community's Aspiration Shown in Height

The City of Kobe



was more than one-third lower than in the previous year and so far this year there has been a further decline although some improvement is expected towards the end of the year.

For the last six years the Company has had to use temporary accommodation for the maintenance of its mechanical equipment. A new mechanical workshop has now been completed and our equipment is now being serviced under ideal conditions.

Mr. E. Q. Okletey, B. Sc. (Econ.), A. M. Inst. T. was appointed General Manager of Ghana Cargo Handling Company on 1st April, 1967. Mr. John Newland, M. Inst. T., F.C.C.S., Deputy General Manager, who has been with the company since its formation, has now left Ghana.

The plan to build "a skyscraper, 26-storied and 108 meters high," has been shaped up and its construction work stared on November 4, 1967. Our architecture has progressed remarkably of late and the "skyscraper age" has actually commenced in Japan. For instance, a 36-storied building (147 meters meters high) is already under construction at Kasumigaseki, Tokyo, by the Mitsui Fudosan, besides the above-mentioned 26-storied building which will be erected in Kobe. The promoters of the Kobe skyscraper declare boastfully that this building, once erected, will be the highest structure in West Japan and keep this status for some time to come.

It is the Kobe CIT (Commerce-Industry-Trade) Center, Ltd., that will build the skyscraper in ques-



tion. This company has been founded jointly by the Kobe Muncipal Government and the Kobe Chamber of Commerce and Industry, each of which possesses one half of this company's shares amounting to  $\pm$ 1,500 million. These two shareholders organized in 1966 the "skyscraper erection preparatory committee (Chairman: Deputy Mayor Arioka of Kobe) to work out a concrete plan. The meeting of promoters (representative: Mayor Haraguchi of Kobe) was held on July 1, 1967 and the inaugural meeting took place in August.

The site chosen for this building is an 8,536-sq.m. lot at No. 2-1 Hamabe-dori 5-chome, Fukiai-ku, which is located within the port area. It will have 26 floors above the ground and 2 floors under the ground. (the aggregate floor area will be 41,844 square meters.)

The upper floor of the basement will accommodate shops, restaurants and a parking space, while the machine room will occupy the lower floor.

The 26th floor will be used as an observatory. The 24th floor will be a restaurant. The 15th and 16th floors will be occupied by the Chamber of Commerce and Industry. The other floors will accommodate office-rooms to let. It is hoped that governmental offices connected with foreign trade, trading companies, manufacturers of export goods, banks, shipping companies, consulates, etc, will conduct their business in these rooms so that business transactions and all related arrangements may be done in this building.

On the lot next to this skyscraper, a two-storied reinforced concrete buildings (total floor area: 4,100 square meters) will be erected jointly by the Hyogo Prefectural Government and the Kobe Municipal Government, and various products will be exhibited in this build-The cost of construction of ing. skyscraper is estimated at the ¥4,250 million and the construction will be completed by the end of 1969. It is hoped that during the 1970 World Exposition which will start in March, 1970, this exhibition hall will be fully utilized by traders as a suitable place for their transaction of sales.

This year falls on the centenary of Kobe Port. The erection of the skyscraper in question has been planned, by way of commemorating this anniversary, so as to give impetus to the economic progress of Kobe and the Kansai district at large which are now in a sluggish condition. Thus the ambition of the Kansai business circles "to retake the financial leadership which has removed to the Kanto district" is embodied in the project to erect this skyscraper.

Many problems must be dealt with, in order to put the plan into practice since this is the first attempt to build such an enormous structure as the 26-storied skyscraper in this district. It is assumed that when the rooms of this building are all occupied, the number of persons to be engaged by the organizations which have their offices in the edifice will amount to 5,000, approximately. Thus, the number of people who use this building will range from 15,000 to 20,000, including visitors.

Twelve elevators will be installed in this building. Six of them, which are for the lower floors, stop at each floor and ascend up to the 14th floor. Five are for the upper floors; and go up to the 14th floor nonstop and stop at each of the upper floors. The remaining one goes up to the 26th floor nonstop in 30 seconds.

After the practice prevalent in the United States, the rents of the rooms on the upper most floor and the first floor will be highest and those of the rooms on the other floors will be cheaper, with the exception of the rooms on the 14th floor which has such an advantage of traffic that the five express elevators stop at this floor. The rents of the rooms on the 14th floors also will be fixed at the highest rate for this special reason. According to the tentatively worked out table, rates are as follows:

The charges (per 3.3 sq.m.):

Deposit money

\$\$200,000\$+the amount of 10 month's rent

Rent

¥4,000~5,000 per month For the prevention of fires, which work havoc if they break out in skyscrapers, this building will be equipped with all possible facilities which include: the alarm signal system, automatic extinguishers, emergency elevators which will be operated by its own power plant in case of fire, exhausters, fireproof partitions on the higher floors, refugee rooms into which fresh air will be pumped.

Many applications have already been made for reservations of space on the upper floor of the basement which will consist of ships, and also for the operation of the restaurant on the 24th floor and the (Continued on Next Page Bottom)

# Job Training Program In Fifth Successful Year

### Portland Public Docks Portland, Oregon U.S.A.

Portland, News Release August 26, 1967:—After five years of experience involving four Japanese work trainees, the Commission of Public Docks considers its experiment in international relations an unqualified success. Begun in 1962 as participation in a student exchange program, and switched three years later to its own version, the Commission's project gives a four to six month employment and living experience that sends the trainee home thoroughly familiar with Portland and the Pacific Northwest.

Akira Tsukamoto, most recent of the trainees, is typical. A sixyear employee with Marubeni-Iida Co., Ltd., Japan's third largest trading firm, he is a university graduate with a degree in commerce. Like his predecessors, Mr. Tsukamoto was selected by his superiors on the basis of demonstrated ability and will receive promotion and increased responsibility on returning to Tokyo in September.

He, and other trainees, are given a four to six week indoctrination in all phases of the Dock Commission's operation. This includes onthe-job exposure to cargo handling techniques, documentation, sales

refreshment rooms on the 26th floor. The authorities of the Chamber of Commerce and Industry are elated with this favorable prospect. One of the novel ideas in the planning of this building is that a part of the restaurant on the 24th floor will be appropriated for the wedding hall where "the solemnization of marriage in space" will be observed. The promoters intend to give much publicity to this skyscraper as one of the main attractions of west Japan.

and promotion activities, and all administrative functions.

Simultaneously, the trainee studies Portland's position as a transportation-distribution complex. In this the Commission receives excellent cooperation from foreign departments of Portland's banks, from steamship companies, trading companies, custom house brokers and freight forwarders, who take the trainee into their offices for briefings on U.S. business methods.

Federal agencies, such as the Corps of Engineers, Bonneville Power Administration, Department of Commerce, Maritime Administration and Customs provide additional training aid. So do the State Department of Commerce, Portland Chamber of Commerce, and Port of Portland Commission.

A highlight of one trainee's experience was a meeting with the Governor. An autographed picture of the visit now hangs on his Tokyo office wall.

Excellent cooperation has been received from Portland-area firms which have accepted the men into their operations from periods ranging from a few days up to a week or longer.

The Dock Commission makes every attempt to keep the program flexible and to adapt it to the trainee's interests, background and future with his company. Some have enrolled in Portland State College classes in marketing or international trade to add to courses they took at Japanese universities. But most prefer actual working experiences or on-the-spot observations.

Each trainee accompanies Dock Commission sales representatives on trips ranging from a few days to two weeks. These take him into the Willamette Valley, central and eastern Washington, southern ldaho, western Montana, and the Puget Sound area. They consider this first-hand look at the trade territory valuable and an eye-opening exposure to a market being cultivated by Japanese firms that are interested in export markets.

Every trainee writes exhaustive reports for his home office covering everything from local politics, to regional economy, weather conditions and race relations.

During his time in Portland, the trainee is called on to interpret for visiting Japanese trade and cultural missions, conduct tours of the city and harbor for such groups, translate letters or reports, and serve as emissary for the Mayor's office or Dock Commission at semi-official functions such as the recent visit of the Japanese trade fair ship "Sakura Maru".

As a result, each trainee returns home thoroughly indoctrinated on Portland, Oregon, and the Pacific Northwest. Follow-up contact with those who have been here indicates the experience has been personally beneficial.

The first two, who came under the student training program, were Hiromasa Kubota, here in 1962 and now in the export division of Toyota Motor Co., and Isao Ohkoma, manager of the North American Department of the Foreign Trade Division of Akai Electric Co., Ltd., a trainee in 1963.

After a year's hiatus, the Commission in 1965 decided to enter its own program through direct contact with Japanese firms. This resulted in the assignment by the Nissho Co. Ltd., a trading firm, of Mr. Takeo Miyazawa from its Traffic Department. In 1966, Mr. Haru Hommo, of the Foreign Trade Division of Nissan Motor Co., Ltd., spent almost five months in Portland and this year Mr. Tsukamoto of Marubeni-Iida Co., Ltd., has just ended his training period.

The program will continue, the Commission declares, on the basis of one trainee a year, at least for the present. The Commission is convinced of the effectiveness of the program and of the long-range benefits to both sides.

# Fully Containerized All-Year-Round Service— Manchester-Montreal

#### The Port of Manchester

(The Manchester Ship Canal Company)

We are glad to be associated with the project announced by Manchester Liners Limited to provide a fully containerized all year round service to Canada. This project has been studied for many months by Manchester Liners and the Port Authorities at Manchester and Montreal, the two terminal ports of the proposed service. Three new, specially designed container only vessels will be in service before the end of next year and each will carry about 500 containers.

The cargo unit for the new ships will be the standard 20ft. container, and the Port of Manchester will provide integrated container-handling facilities at a special berth at Manchester Docks to meet the demands of the service. These facilities will cost £425,000, and will include the characteristic landmark of a container berth, a 25-ton transporter crane. The order for this crane has been placed with Stothert & Pitt Ltd. A 5-acre container park will be laid out for two-high stacking of containers, and two Clark series 510 van carriers have been ordered for quay handling. The 500-container ships will be turned around within 48 hours. During the planning stages of this new project port officials have visited many foreign ports on the west and east coasts of North America and in Europe, and have also had discussions with the Montreal Harbour Board.

Manchester has long been the major U.K. port for shipment to

Canada, and the establishment of this new fully containerized service reflects the strategic importance of Manchester in relation to the Canadian export and import trade, and will reinforce the present extensive and growing range of North Atlantic services provided by Manchester Liners. Manchester Liners will continue to operate a conventional service to Montreal.

#### Ice-Breaker Container Ships

#### (The following is an announcement of the Manchester Liners Limited)

Manchester Liners announce their intention to commence:---a fullycontainerized ocean freight service between Manchester and Montreal on an all-year-round basis with specially designed ice-breaking ships which will enable navigation through the winter ice direct to Montreal. The three ships necessary to operate a weekly sailing to and from Montreal are being built by Smith's Dock Company, Limited, Middlesbrough, and will be phased into service as they are commissioned: commencing the end of November, 1968, preparatory to the regular weekly schedule from March, 1969.

The ships will be 530 ft. in length, fitted with cellular slotted



The Port of Manchester's high capacity container handling facility.

![](_page_44_Picture_0.jpeg)

Manchester Liners new completely containerized icebreaking vessel—21 knots 530 feet in length. Capacity 500-20 ft x 8 ft x 8 ft containers.

holds to carry 500 standard 20 ft.  $\times$  8 ft.  $\times$  8 ft. containers with certain special modifications to suit particular types of cargo. The vessels will be capable of 21 knots, giving a transit time from Manchester to Montreal of 6<sup>1/2</sup> days with a planned turn-round time at each end of between 36 and 48 hours.

The capital investment involved in the ships, containers and Port equipment at Manchester and Montreal will be approximately £10 million. Although, Manchester Liners-with the friendly cooperation of both Port Authorities have operated a service to and from Manchester and Montreal for practically 70 years-we have been greatly impressed and delighted with their helpful advice and willingness to co-operate with us in this great venture by providing-first-class container Terminals with suitable gantry cranes and container handling equipment-without which our container service could not operate. In Manchester the berth will be at No. 9 Dock, located opposite the sheds used by Manchester Liners conventional vessels and will be easily accessible to existing road and rail systems. The Port of Manchester will operate the Terminal, stacking containers with Van Carriers and operating closely with the Line to ensure quick handling to and from all inland carriers.

In Montreal the National Harbours Board has made available Sections 69 and 70, close by Montreal itself and within a mile of a link road to the Trans-Canada Highway providing first-class coast to coast road access; there is also direct rail connection with the Terminal which is of great importance in Canada because of the great distances involved. The Montreal Terminal will be operated with Van Carriers and special rail transfer equipment by our Canadian Agents, Messrs. Furness, Withy & Co. Limited.

Excellent packing, unpacking and distribution facilities are planned to be available at Depots located in Manchester and Montreal for lessthan-container loads or for those companies presently unable to pack and unpack containers at their own factories, although it is hoped that the many importers and exporters presently using our service will cooperate and will pack and unpack their own containers in order that the highest possible proportion of house to house container movement will be achieved—which after all is the aim of containerization.

It has been suggested that fullycontainerized services will be restricted to perhaps only two or three major Ports in the United Kingdom and that the ships to serve these "special Ports" must be large and capable of carrying over 1,000 standard containers. It is our contention based on 70 years' experience and most thorough research that it is pointless having vessels larger than the requirements of the trade. We are also convinced, and independent research agrees, that the Port of Manchester is ideally situated to provide this specialised transport facility for the Canadian trade. The geographical position of Manchester with its adjacent road, Motorway and rail connections from the East, North and from the Midlands and the South, is the ideal choice for exporters and importers who are part of a population of 11 million within a 50 miles radius of Manchester and nearly 20 million within a 100 miles, or 40% of the total population of the United Kingdom.

In addition to our "complete container service", we also feel there are great advantages in these early days of containerization and the necessary introduction of a sophisticated Dock system that such a service operates alongside a wellestablished Conventional-type service. Having been the first British Company to provide direct regular ocean services to the Great Lakes in 1952, which has culminated in Manchester Liners offering two sailings per week-one for Montreal and one direct into the Canadian and U.S. Lakes, we are proud to offer this "new first" in the Canadian trade. As a result Manchester Liners will be operating a weekly container ship to Montreal to serve all interior points in Canada including Toronto and Hamilton with three vessels instead of six; additionally for the many friends of Manchester Liners who are not yet ready, or who have cargo which is unsuitable for containers, we shall still continue to offer weekly express sailings with 12,000-ton conventional vessels to Montreal, Toronto, Hamilton, Detroit and Chicago-the regular maritime service will continue. Importers and exporters can benefit by the "best of both worlds" and will enable a gradual changeover to full containerization to be made for all suitable traffic.

Keen interest is presently being shown in Canada as to whether or not a regular and efficient container service will be provided for their needs. Concern has been registered that the Canadian market might well have to rely on such services over New York with containers moving inland across the border. It is the contention of Manchester Liners that having served the Canadian market since before the turn of the century, that it is only right-and in fact desirable-that Canadian traffic should move through Canadian Ports and it is hoped that the choice of Montreal as a container Terminal will prove acceptable and economical to Canadian commerce and the Canadian Government. Manchester Liners have gained valuable experience in operating containers over recent years, nevertheless, it is realised that we are very early in the field of complete containerization between the United Kingdom and Canada (Lloyd's List, October 16, 1967)

Britain's port traffic now exceeds 300 million tons a year. The latest volume of statistics published by the National Ports Council shows that more than 304 million tons passed through the ports of Great Britain in 1966, an increase of over five million tons on 1965.

The figure, which excludes traffic through ports in Northern Ireland, is the total of import, export and coastwise traffic. Over half ---154.6 m. tons----was imports. Exports totalled 37.6 m. tons and coastwise traffic amounted to 112 m. tons.

Petroleum imports—over 90 m. tons during the year—explain the size of the import figure. Other important bulk cargoes were ores and scrap metals (18 m. tons); cereals (7 m. tons); timber (6 m. tons); and crude fertilisers (4 m. tons).

If fuels are excluded, the total foreign traffic during 1966 was 85 m. tons, of which 64 m. tons was imports. The share of individual major ports in this total traffic was:

	Imports	Exports
	m. tons	m. tons
London	12.0	4.2
Liverpool	9.5	4.5
Manchester	3.9	1.1
Clyde	4.0	0.7

and invite the help and co-operation of shippers, Forwarding Agents and inland carriers in both Canada and the United Kingdom—all essential links in the trade—to ensure the earliest possible success in the interests of all parties and for the expansion of trade between Britain and Canada—a vital international market,

Tees	3.2	1.2
Hull	3.4	0.9
Newport	3.2	0.8
Port Talbot	3.1	0.2
Bristol	3.0	0.2
Immingham	2.4	0.2
Tyne	1.8	0.2
Cardiff	1.0	0.1

During the year capital expenditure by port authorities totalled  $\pounds 35.8 \text{ m.} \pounds 11 \text{ m.}$  of this was spent on improvements at London. Other ports each spending  $\pounds 1 \text{ m.}$ or more on capital works were: Tees ( $\pounds 4 \text{ m.}$ ); Liverpool ( $\pounds 2.8 \text{ m.}$ ); Southampton ( $\pounds 2.7 \text{ m.}$ ); Hull ( $\pounds 2.1 \text{ m.}$ ); Leith ( $\pounds 1.3 \text{ m.}$ ); Cardiff ( $\pounds 1.2 \text{ m.}$ ); Clyde ( $\pounds 1.2 \text{ m.}$ ); Manchester ( $\pounds 1 \text{ m.}$ ), and Dover ( $\pounds 1 \text{ m.}$ ).

Labour statistics published in the Digest show that 125,000 people work in the ports—119,000 of them men. Disputes in the ports caused 81 stoppages during the year; all but nine of these were settled in three days or less.

The 178 tables in the Digest bring together into one volume all the available basic statistical information on British ports.

#### **Comprehensive Analysis**

Th largest section—98 tables is a comprehensive analysis in both tonnage and value terms of goods traffic between the various ports and individual overseas trading areas; other sections give information about port undertakings, capital expenditure, labour, analysis of goods traffic and shipping movements.

A new series of maps and diagrams has been specially prepared for this issue. Having regard to the recent decasualisation of dock

# Trading Industries Prepares for Streamlined Documentation "Via Port of New York" August, 1967

#### (The Port of New York Authority)

The coming of the "container revolution," computerization and many other technological advances have brought new concepts, new ways to streamline and improve the flow of international trade at the Port of New York. Yet, in the sphere of foreign trade, "the paperwork jungle" of documents in daily use continues to impose drawbacks for the nation's entire foreign trade community.

Although sporadic attempts have been made to eliminate excessive documentation by various sectors of the trading community and government, there was, until recently, no industry-wide organization geared to analyze, study and simplify the maze of paper needed to do business abroad. This is about to change. A serious move to accomplish the task of simplification recently began with the establishment of the National Committee on International Trade Documentation (NCITD), the offices of which are at the Port of New York. NCITD is composed of almost every type of

workers and to the current Common Market negotiations, among those of particular interest is a map showing the deployment of the labour force of registered dock workers around the country, and one showing the volume of goods traffic (excluding fuels) passing through individual British ports to Common Market countries.

Digest of Port Statistics 1967, Obtainable from the National Ports Council, 17, North Audley Street, London, W. 1, or from H.M.S.O. price 45s. (postage extra). organization engaged in American foreign commerce, a majority of which are domiciled at the New York-New Jersey Port, America's Container Capital and preparatory point of documentation for the nation's international commerce.

Formation of NCITD focuses attention on the "cultural lag" of international trade—the sharp divergence between modern shipping technology, with its unprecedented speed and advantages to trade, and historic, rather discoordinated documentary requirements existing at home and abroad. The U.S. Department of Commerce has noted that to transport a one-ton shipment from producer to foreign customer by ship may involve as many as 170 steps in documentation before the goods reach a consignee. As many as 8,600 pieces of paper have been involved in a single freighter's round-trip voyage.

Commenting on the millstone of documents of another era carried into contemporary world trade and its adverse impact on the nation's trade expansion program, President Johnson noted last year, "We have mounted a sizable governmentindustry program to expand exports, yet we allow a mountain of red tape paperwork to negate our efforts."

The red tape of trade has grown from a handful of papers in the days of sail to a conglomeration of Thus, today's paperwork forms. is inherited from many sub-systems, often unrelated. Each generation's attempt to solve its own documentary needs has built up an accumulation of paperwork beyond any early tradesman's imagination. Consequently, shippers, consignees, transportation personnel, freight forwarders, importers, customs house brokers and government agencies are now swamped in the morass of paper.

The point has long been passed wherein actual transportation of

![](_page_46_Figure_12.jpeg)

Reproducible standard export format developed by trading industries has saved considerable time and costs by lessening clerical preparation of export documents.

goods takes less time than to prepare the papers required before deliveries can be completed. Today's trader finds himself in the untenable position of being able to complete shipments of freight by sea or air before the associated documents can be processed. In varying degree every modern device and system now used to expedite shipments is compromised by entanglements of documentation.

The unbridled growth of documentation is a story of rising costs for world traders, too. These costs in their entirety represent a huge expenditure which industry insists must be halted and ultimately reversed. The Federal Government, itself directly involved with the problem, spends about \$53 million yearly for forms. It is estimated that between five and ten per cent of the \$50 billion annual value of international trade conducted by American exporters and importers is expended for paperwork and clerical help. Conservatively, a 20 per cent saving in paperwork costs estimated at \$2.5 billion could mean an aggregate reduction of \$500 million.

The paperwork hurdles confronting world trade are not confined to the United States. Worldwide, some 810 forms are employed. In the United States alone, as many as 43 forms have been used for a single export shipment while as many as 80 forms may be required to process some imports. Carbon copies only add to the burden. As President Johnson summed up: "This is paperwork run wild."

Accordingly, the National Com-International Trade mittee on Documentation has attracted direct and indirect support and membership from exporters, importers, bankers, forwarders, insurers, transportation executives, government agencies and others interested in improving world trade. The American Association of Port Authorities, for example, is cooperating with the efforts of NCITD and is represented by Clifford B. O'Hara, director of port commerce, Port of New York Authority. Vitally concerned with progressive methods to spur international trade, The Port of New York Authority itself has

# Niagara Frontier Progress

#### LAKE PORT

1958 Acquisition of Port Terminal building (former Ford assembly plant) for \$2,300,000 rated as finest port facility on the Great Lakes.

1962 Negotiated lease with Pittston Stevedoring Corp. to handle Port of Buffalo cargo.

1962 Took over operation of Small Boat Harbor and converted a steady loss into a consistent profit. Port Authority will spend \$65,000 this year on harbor raising its accommodation capacity to 370 craft.

1963-64 Worked with U.S. Engineers on this planning and construction of new harbor entrances.

1964-65 Dredging of harbor by U.S. Army Engineers, with Port Authority Staff assistance, to 27-foot depth at all approaches and slips.

1964-65 Reclaimed submerged land at waterfront to provide 210 acres of usable property. Provided U.S. Army Corps of Engineers with \$600,000 for their work on this project.

1965 Pennsylvania R.R. spur line on Seaway Piers adds great facility to bulk cargo movement.

1966 Built storage shed on Seaway Piers for protection of clay shipments now imported on a regular basis from England. 1966 Built Warehouse B (84,000 sq. ft.) on reclaimed lake front land. Secured Federal EDA grant for half the cost of this \$2,200,000 project. Developed and improved former Municipal Piers which had been operating at deficit and converted loss to \$50,000 average yearly profit at this bulk cargo facility now known as Seaway Piers.

1966 Added 14,000 square feet of storage shed space to Port Terminal.

	TONNAGE	
	General	Bulk
Tons 1955	- 0 -	- 0 -
Tons 1959	12,000	- 0 -
Tons 1966	76,000	72,000

joined with many organizations and business firms in supporting the new, non-profit corporation.

To date about half of the \$250,000 proposed for the firstyear budget has been pledged in a drive to make NCITD an active and vital force in streamlining documentation. NCITD has various classes of membership. For details, interested firms may contact George F. Bengal, Jr., senior specialist, export services information systems, General Electric Company, IGE Export Division, 159 Madison Avenue, New York, N.Y. 10016.

An earlier indication of the Port Authority's interest was its retention of the consulting firm of A.T. Kearney and Company in 1966 to conduct a comprehensive study to improve handling and circulation of

# Port Authority 1955-1967

Now... Preparations worked out for receipt and dispatch of containerized cargo.

#### AIRPORT

1955 Authority takes over Municipal Airport. In past 5 years Greater Buffalo International Airport has shown annual profits ranging from \$500,000 to \$900,000, all of which has been used for necessary and constant expenses in maintenance and enlargement of facilities.

1964 Lengthened main runway from 5600 to 8100 feet—to satisfy FAA jet requirements. In so doing a highway, creek, and railroad were moved underground in what experts have stated to be an "outstanding engineering achievement."

1964-67 Acquires equipment and develops technique to give Buffalo national reputation for ability to remove snow, and operate with minimum of winter flight interruptions.

1965 Ready to accommodate full jet operations.

1966 Secures N. Y. State loan of \$21,000,000 for expansion and remodelling of physical facilities.

1966 Adds Eastern Air Lines to list of major carriers serving Buffalo.

1966-67 Installation of center line lights in Runway 5-23 for planned category 2 operation. Runway will also be dually instrumented (ALS-ILS systems) for air carrier operations.

1967 Brings in third-level carrier, Reading Airlines, to serve off-city airports in Pennsylvania.

AIRP	ORT TRAFFIC GROV	NTH
Movements	1961	1966
	99,806	196,034
Passengers	1961	1966
	1301	1500
	969,799	1,712,648

cargo documents at piers and offices within the New York-New Jersey Port. The completed study, entitled "Paperwork Simplification on Piers Within the Port of New York," showed pier personnel should be freed from excessive paperwork to give them more time to devote to terminal operations and to improve cargo handling controls.

Now building the World Trade

Center in Lower Manhattan, the Port Authority will make a tremendous contribution towards modernizing the flow of paper and related procedures affecting commerce of the Port of New York. Executive Director Austin J. Tobin of the Port Authority has said: "The Trade Center will expedite, modernize and multiply the efficiencies of our foreign trade business. It will coordi-

tions, services and activities of our overseas commerce, equipping it with the resources of today's electronic communications and data processing. It will permit our world trade services at the Port of New York to function as an integrated community-with quick interchange of information and proposals, prompt processing of documents and rapid consummation of transactions. It will house all of the port's services related to the movement of trade, including the collection and appraisal functions of the United States Customs Services; other government trade services; the commercial services of the foreign consulates; foreign departments of the banks; marine insurance firms; and steamship, rail, truck and air carriers."

Objectives of the World Trade Center are consistent with the aims of almost 200 industry and government executives from throughout the nation who gathered recently in Washington, D.C., to help launch the National Committee on International Trade Documentation. They enthusiastically endorsed NCITD's incorporation and goals, chose a board of directors and approved bylaws. Charles H. Beard, general traffic manager and assistant to the vice president of Union Carbide Corporation, and George F. Bengal, Jr., General Electric Company, IGE Export Division, both of whom spearheaded the successful ad hoc committee which led to NCITD's founding, spoke of the urgent need to cut the nation's wasteful and costly red tape.

Secretary of Transportation Alan S. Boyd, principal speaker at the NCITD meeting, endorsed NCITD's aims and pledged his department's determination to seek ways to cut paperwork inhibiting movement of goods and people around the world. Secretary Boyd also announced plans for a facilitation program under Donald G. Agger, assistant secretary of international affairs, to coordinate efforts to eliminate unnecessary paperwork and to work closely with the new industry committee. Underscoring the contemporary predicament, Secretary Boyd posed the question: "What will be gained by the speed of Mach 2.7

in the air, 30 knots on the sea and 150 miles per hour on the land, if we continue to waste long hours processing documents?"

While NCITD's program is of a broad scope --- including working with all interested groups concerned with simplifying documentation -its goal is the development of a "model system" workable in the short run as an alternative to existing practices. Subsequently, this early format would, it is hoped, lead to its widespread adoption once it was proven to be completely workable. Without pre-determining exactly what type of system could evolve from studies, NCITD, through a contracted research organization, hopes to define, investigate, analyze, design and develop an unprecedented model which could be submitted with a report for government consideration.

This "model" will conform to the thesis that documents are intended simply to tell the story of a shipment. In the words of authors Charles J. Olson and Ray C. Ellis, in Export or Die, documents "tell the whole story of every export transaction clearly and specifically and should be easy to understand. They tell who sold what to whom for how much and how and when payment will be made. They tell where the goods are and who owns them, how and where they are going, when they should get there and how they will be protected. Best of all, they tell us that the whole thing is legal and aboveboard from start to finish." The problem of contemporary documentation is not *telling* the story but of how it Documentation's undesiis told. rable duplication and inconsistencies are the target of NCITD's search for a better system.

In recent years ad hoc industry committees, now joining efforts within NCITD, have worked closely with the federal government to alleviate some of the burdensome paperwork. To date several significant time and cost savings results have been achieved and stand as evidence of what can be done.

# **Container Terminal Amsterdam**

![](_page_49_Picture_5.jpeg)

The enormous container crane which is being built by M.A.N. for the Container Terminal Amsterdam will change the port silhouet of Amsterdam as from September 1968. This largest container crane of Europe will have a lifting capacity of 50 tons, a reach over shipside of 110 ft (36 m) and a reach over quay side of 75 ft (24 m). Lifting, traversing and traveling speeds are such that a turnover of 1,000 tons of containerized cargo is feasible. With this crane it will be possible to lift 40-ft containers as well as two 20-ft containers simultaneously. At present the ships of Container Marine Lines load and unload at the Container Terminal Amsterdam, which is considered among the most modern of Europe, with ships' cargo gear.

Among the steps achieved were the elimination of oaths on the shipper's export declaration. Seemingly minor, this change came about only after ten years of discussion.

Another progressive step came in 1966 when a national standardsized reproducible master of the "standard export format" was developed. By designing a uniform master compatible to alignment with basic export documents, including Agency for International Development (AID) forms, considerable savings have been realized. The standard export format was evolved over a three-year period. Documents now used in conjunction with the standard export format include, among others, the shipper's export declaration, drawback, bill of lading, dock receipt, insurance certificate, arrival notice and certificate of origin.

One major shipper's experience indicated recently that use of the standard export master cut some 55 per cent of typed data. This, in turn, has saved almost three days time for each shipment and has provided faster payment for goods and the utilization of capital during time previously lost by paperwork preparation. Although its use does not eliminate any documents, the standard export master does serve to halt needless retyping. Any model system devised through NCITD would go considerably further to reduce the number of forms to an essential minimum.

In still another recent improvement, AID forms were redesigned to be compatible with the reproducible master. According to estimates prepared by the American Merchant Marine Institute and AID, a 60 per cent reduction of \$153,000 in preparation costs and typing of some 450,000 certificates yearly was achieved. The institute also anticipated savings of over \$400,-000 annually in freeing capital funds due to faster payments to shippers and a \$75,000 savings in messenger services. Impressive though these gains are, they represent only the beginning of a savings drive through simplified documentation and procedures.

Clearing the logjam of paperwork is vitally important to smaller exporters and importers. In U.S. foreign trade approximately ten million export shipments worth \$28 billion and two million import shipments valued at \$25 billion are involved. Some 25 per cent of the nation's ten million export shipments are valued at less than \$100. Yet, these small shipments require a similar mass of documents as do extremely valuable or large orders.

Consular requirements of some nations add to documentation delays. Shipments to some countries require that consular documents be legalized by their consuls at the port of export 48 hours prior to a freighter's departure for overseas. Still other countries demand consular legalization 24 hours prior to a cargoliner's departure. On occasion these time standards cause shippers to postpone shipments another week rather than engage in a frantic race to complete and process all papers before delivery to a consul within stipulated time. As a result, overseas buyers wait for their equipment and some shippers wait for payments.

In the future a freer flow of world trade ultimately will necessitate

# Cam Ranh Bay Bound

![](_page_50_Picture_6.jpeg)

Now underway for Vietnam with the first load of containers to be shipped to Cam Ranh Bay is the SS Bienville, shown being night loaded for the trip earlier this week at the Port of Oakland. Two giant Paceco container cranes (identical to that pictured) were installed this month to make Cam Ranh Bay the first containerized port in the Far East. Paceco of Alameda, Calif., designed and built the cranes for Sea-Land Service, Inc., the steamship company which pioneered the concept of containerization. The cranes each have a 27.5-ton capacity and are the fastest dockside container handling cranes in the world. (PACECO)

concerted efforts on an international scale. Many traders contend that a sharp reduction—if not elimination of most consular documents would mutually benefit two-way traffic among trading nations.

NCITD's future model system will free the export-import community from the complexities of a myriad of papers and holds much promise of introducing an entirely new era for world trade—an era of streamlined documentation fully compatible with the advanced technology employed in the unmatched transportation and terminal facilities of the Port of New York, the port exerting leadership in the struggle to keep documentation apace with the container revolution.

# Michael Mora Speaks on Future of Port

(Reprinted from "Trade Winds", International House Newsletter, July-August, 1967)

New Orleans, La.:—In a recent speech at International House, Michael M. Mora, former director of IH World Trade Department and chairman of the Foreign Commerce Committee of the American Association of Ports, made the following statements:

"The greater the impact of the Port on the economic life of the community, the greater its dependence on the world climate for international commerce.

"It is almost impossible for an individual port to advance when total world trade is contracting.

"Paradoxically, in a bad year for the world trade of the nation as a whole, a local percentage of decline, lesser than the national average, can be considered a success. Conversely, an increase lesser than the national average in a good year may be deemed a failure.

"The volume of world trade of the nation is tied to many apron strings. To cite a few: domestic politics, foreign politics, financial liquidity, inflation or deflation, resulting in swings of competitive price levels at home or abroad, war or peace, etc, etc.

"Therefore, a port, in order to progress, regardless of its physical plant and trade promotional efforts, must play an active part on the wider national and international scene.

"Ports of the U.S. must cooperate before they compete. As a whole the 63 major port authorities in this country, representing all four coasts, can muster a vast amount of talent and persuasion in dealing with Government and Congress. Theirs must be the role of uniting behind them local civic, economic and political forces, which added together constitute a formidable array of influence.

"Industrial development in the port dependent areas is a mighty factor in the growth of port commerce, therefore port connected industry—both as an importer of raw materials or semiprocessed materials and exporter of its products—can account for a vital portion of port commerce and, what is also of major importance, this represents captive cargo, the proximity of such industry taking their chosen port out of competition for cargo with its neighbors.

"The Port of New Orleans is the largest port in Louisiana and second largest in the nation in total value of foreign commerce. In 1952 the value of its exports \$1,500,000and imports was In 1966 it rose to \$2,-000. 351,000,000, an increase of 58.8%, for an average growth of about 5% per annum. On that basis the port's foreign trade in 1978 will be valued at \$3,860,000,000 in 1966 dollars and more, if the price index will advance more rapidly than in the past dozen years.

"However, it is noteworthy that the record figure in New Orleans of \$2.351 billion as No. 2 port compares with New York's No. 1 position of nearly \$12 billion! It is true, that the densely industrialized backyard of New York contains an enormous captive cargo area in which the port of New York occupies a preferred position, while no such concentration of diversified industry, other than petrochemicals, surrounds New Orleans. The latter has to reach deep into the Mississippi Valley for its sources of supply and markets.

"The Mid-Continent area of the U.S., a mighty concentration of both heavy and light industry, represents a most lucrative source of business for New Orleans, but due to its geographic location it can and does trade through many ports.

"New Orleans finds itself in keen competition with New York, Philadelphia, Baltimore, Hampton Roads, Charleston, Great Lakes Ports and even the Pacific coast.

"In this day of computer economics the evaluation of the component factors which determine the routing of cargo is quick and accurate. The total cost of moving cargo from origin to destination consists of overland cost, over-thewater cost and time. The more valuable the cargo, the more important is the saving of time.

"To illustrate the point: assume that a shipment of machinery, valued at \$100,000, is to be routed to Beirut, Lebanon. Assuming that the inland and ocean costs via New Orleans and New York are equal, time will be the deciding factor. Not only distance, but density of traffic and schedule of arrivals will have a bearing on time.

"If this shipment can be delivered, after delivery to shipside, in two weeks time from New York and three weeks time from New Orleans, what will that one week mean to the shipper? If sent C.I.F., \$100,000 at 6% (probable cost of carrying inventory) will be tied up one week longer and cost the shipper \$115.20 extra. So, computer will say New York.

"If this shipment is made F.O.B. port of departure, the buyer will calculate the time cost and, since it is probable that his credit money is more expensive, his saving will be more than that of the U.S. shipper and his instructions will be: "Ship via New York."

"In 1966, Global World Trade, according to the U.N., totaled \$204 billion, of which \$180.5 billion were contributed by the so-called free economies and \$23.5 billion by the centrally planned economies of Eastern Europe and Asia. This represented an increase of more than 100% over 1956, or an average of 10% per annum. Comparing it to the 5% average increase for New Orleans, one must conclude that the latter has not realized its full potential as a world port.

"Now, project the probable changes and pinpoint the opportunities in the coming decade. Ten years ago about 50% of the dollar value of New Orleans' foreign busi-

# **Port Anti-Pollution Group Shows Measurable Results**

"The Port", August 1967

Massachusetts Port Authority Boston, Mass. U.S.A.

One hundred representatives of Boston Harbor officialdom were given a demonstration of antipollution methods June 28 during a waterside tour sponsored by the Massachusetts Port Authority. The tour was a project of the Boston Harbor Pollution Committee, whose chairman is Assistant to the Executive Director Thomas P. Callaghan.

In contrast to a similar tour last year, the group witnessed measurable improvement in pollution control. In one instance, large pieces of flotsam were being retrieved by a towboat. A large skeletal steel frame, which has been an eyesore along the Northern Avenue waterfront, was lifted from the floor of the harbor by crane and onto a barge for disposal.

Prior to sailing from Rowes Wharf, Executive Director Edward J. King of the Authority told participants that the cruise had a twofold purpose: to enable them to "take a look" at some of the sources of pollution and hazardous

ness was done with Latin America and about 30% with Europe. In 1966 these figures were substantially reversed and Asia came in as a strong contender. Will similar changes occur in the next decade?

"Will Latin America get off dead center and start realizing its enormous potential? Will Africa, now so politically young, so well endowed in riches of raw materials and with a population of over 200 million, start on the road to stability and meaningful development?

These and other factors will influence the future of foreign trade." drift and to call attention to the effective work of the Harbor Pollution Committee.

#### "It is our aim," King said, "to keep Boston Harbor as clean as possible, consistent with its purpose and activity."

Providing a running commentary during the cruise, Chairman Callaghan outlined the following ten areas where action had been implemented:

1—Mayor John F. Collins has directed the City of Boston Building Department to undertake, in cooperation with the Fire Department and Health Department, a survey of all waterfront structures that may be a sources of harbor pollution. Already, more than a dozen violators have been cited.

2—State Commissioner of Public Works Edward J. Ribbs has contracted to raise three sunken hulks, one at the entrance of Fort Point Channel and two off Calf Island. The Coast Guard has removed two other hulks that were a danger to navigation.

3—Spillage of petroleum from waterfront terminals and ships has been the subject of cooperative discussions. Presently, responsibility for a further program has been assumed by the Massachusetts Division of Water Pollution Control.

4—Senator Edward M. Kennedy has initiated an appropriation for a study of hazardous drift in Boston Harbor. An additional appropriation of \$50,000 is included in the President's budget for fiscal 1968 and an additional \$45,000 is expected in the following fiscal year.

5—John J. Halloran, Manager of the Maritime Association of Greater Boston, as Chairman of the Enforcement Subcommittee, is recording pollution complaints and referring them to appropriate enforcement agencies. Offenders have been warned and legal action will follow unless cooperation is received.

6—The Massachusetts Division of Motorboats has contacted yacht clubs for the display of harbor pollution posters and for other cooperative efforts. Motorboat operators in the harbor are contacting the United States Coast Guard to report dangerous flotsam.

7—The Federal Water Pollution Control Administration has recently sampled harbor water at various locations. It will cooperate with the Massachusetts Division of Water Pollution Control in a study of liquid pollution of the harbor, while the Army Engineers study the hazardous drift.

8—The Waterways Division of the State Department of Public Works has assumed the responsibility for the issuance of permits for transporting rubbish and other debris to the outer harbor for burning.

9—Cargo terminal operators have been asked to cooperate by removing rubbish from piers.

10—The Metropolitan District Commission is developing full operation of its \$110 million program to eliminate sewage outfalls in the harbor.

Approximately 30 organizations from government and business are represented on the Boston Harbor Pollution Committee. These organizations include government agencies on the Federal, State and City levels.

Harbor pollution control began in Boston about three years ago, when the Army Corps of Engineers held meetings to determine the responsibilities and interests of various elements involved in the operations and regulations of Boston Harbor.

Meetings of the Committee are held on the second Wednesday of the month at the Massachusetts Port Authority offices.

### **Mechanized Data Handling**

(The PLA Monthly, July, 1967)

London:—Everyone knows what is implied by mechanised cargohandling. Mechanisation of anything is something we have lived with since the first industrial revolution. We have all come to terms with mechanical equipment of all kinds and no longer conduct our thinking about it in terms of muscles and horses. This was the thinking which ceased to be relevant when the slave and the horse had been replaced by steam and internal combustion engines.

But the present technological revolution is a little more subtle. It is a revolution in control. Control implies being in possession of the relevant facts, the data, relevant to any decision. And so the "mechanisation" we have come to terms with today is the automatic processing, collation, analysis and deployment of information, data, relevant facts, or whatever one cares to call the knowledge one must have of any given situation before presuming to make a control decision. The control decision may be nothing more than that ship A should go to berth X and not berth Y. Or it may involve the spending of  $\pounds 20$  million on a new dock development, as at Tilbury.

In a great sea port such as London, there are literally millions of decisions about hard practical matters taken every day. There are equally human value judgements made. But in dealing with the masses and masses of statistics -hard facts and figures-and in dealing with the mountains of documents generated by the movement of ships and cargo the time saving offered by a computer is immense. This was appreciated some years ago and in fact much data handling has been done by computer, especially in the Finance and Commerce Department, for some time.

More recently a much more

radical and up-to-date approach has been made to the whole field of cargo and document handling. A complete new computer system is to be installed and it is hoped that eventually, when the world can be weaned from the "signature-onchit" mentality, all cargo routing and documentation will be done by machines talking to each other. As a first stage, however, people and machines must talk to each other.

First stage in the P.L.A.'s new computer and data-handling complex will be an English Electric 4-50 computer, costing about £400,000 and with limited communication facilities to other parts of the dock operating complex. The second machine, costing about  $\pounds 750,000$ , is to be installed by 1970. By this date, it is expected, there will be about 130 teletype terminals connected to the central installation at St. Katharine Dock House as well as 33 points at which video display is provided. Many banks already use such video systems; for example to permit remote inspection of cheques, signatures and other documents centrally stored. The advantages for a dock and port system stretching over 92 miles from end to end are obvious enough.

their uses, let us imagine a lorry driver arriving to collect a consignment of cargo from the docks. At present it is necessary for the P.L.A. to make a number of checks -whether his firm has title to the goods, whether they have been cleared by Customs, whether they are ready for delivery and charges paid or assured. At present this information is manually recorded in each dock ledger office following an exchange of documents between departments and it is necessary to check the records before clearance can be given.

With a computer control of data, each operating point feeds the information about the various handling processes or actions concerning the consignment direct to the computer. All the facts, in short, are centrally stored. By means of video screen, the dock office can check the status of any given consignment instantly, the computer having carried out the document processing.

Technically, there is no reason why the whole process of routing a cargo consignment, from factory to eventual destination, should not be done by a computer. This is no doubt some way off, but at present the P.L.A.'s plans for computer guided deployment of port resources is a step towards the day when mental drudgery is as much a thing of the past as physical drudgery is becoming nowadays.

To take a practical example of

Season's Greetings and Best Wishes for A Happy New Year IAPH HEAD OFFICE SECRETARY GENERAL

AND STAFF

![](_page_54_Picture_0.jpeg)

# YOKOHAMA PNEUMATIC RUBBER FENDERS

Yokohama Pneumatic Rubber Fenders excel in protecting ships as they come along side other ships or quaies—protect quaies from damage and facilitate loading and unloading.

Yokohama Pneumatic Rubber Fenders easily absorb the intense shock energy created when ships contact the quay while berthing or bump against each other when along side at sea. These fenders are already in common use with large-size whaling vessels and mother ships, mammoth tankers and oil jetty around the world.

A unique and epochal development of The Yokohama Rubber Co., Ltd.—patented abroad in the United States, England, Norway and elsewhere.

![](_page_54_Picture_5.jpeg)

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# The World Trade Center in the Port of New York

![](_page_55_Picture_1.jpeg)

Guy F. Tozzoli Director, World Trade Department L. Edward Scriven General Manager, Development and Rentals Division

- A new headquarters for international trade
- A new opportunity for international businessmen
- A new landmark in the bi-state Port of New York

The World Trade Center will be the Port of New York's newest and greatest facility of commerce. This great building complex, including two 110story towers, each 1350 feet high and four lowrise plaza buildings, is being constructed by The Port of New York Authority on a 16-acre site in lower Manhattan at a cost of \$575 million. This focal point for world trade is scheduled for completion in 1972 with first occupancy only three years away.

The Center offers international businessmen a complete range of essential world trade services including the United States Bureau of Customs, freight forwarders, custom house brokers, international banks, overseas government trade agencies, marine insurance firms and transportation lines.

Firms which establish offices or display their products in The World Trade Center gain another big advantage—exposure to an unparalleled concentration of world trade contacts. Some 50,000 people will be working in the Center every day and an additional 80,000 business and other visitors will come to the Center daily. They represent new opportunities in the form of potential buyers, sellers, agents, distributors and licensees for products moving to all corners of the globe.

To make international business easier, more efficient and more profitable, the Center offers a World Trade Information Service, on-site parking, a hotel, and other important busniess amenities. The Center will be easily accessible from all points in the New York-New Jersey Metropolitan area, including major rail, sea and air terminals.

For further information concerning the **unique** advantages offered by The World Trade Center, write to:

### The Port of New York Authority

111 Eighth Avenue, New York, N.Y. 10011