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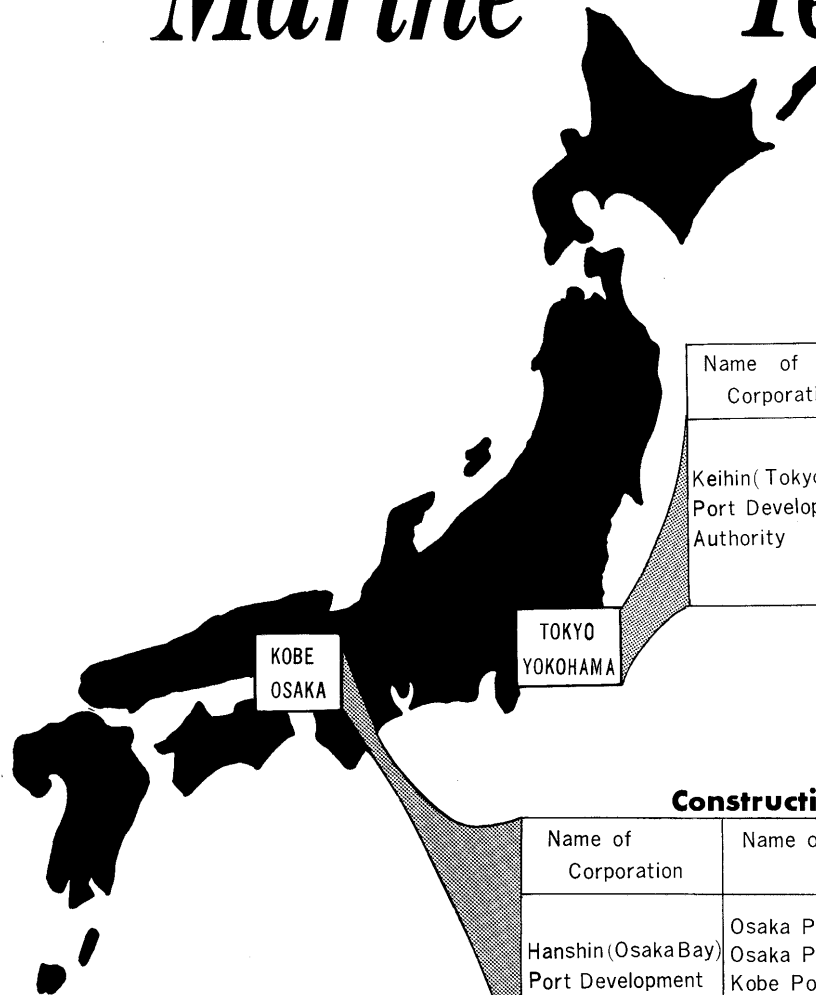
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Construction Plan

Name of Corporation	Name of Port and Type of Berth	Number of Berth
Keihin(Tokyo Bay) Port Development Authority	Tokyo Port Container Berth	11
	Tokyo Port Liner Berth	15
	Yokohama Port Container Berth	6
	Yokohama Port Liner Berth	11
	Total	43

Construction Plan

Name of Corporation	Name of Port and Type of Berth	Number of Berth
Hanshin(Osaka Bay) Port Development Authority	Osaka Port Container Berth	7
	Osaka Port Liner Berth	7
	Kobe Port Container Berth	9
	Kobe Port Liner Berth	21
	Total	44



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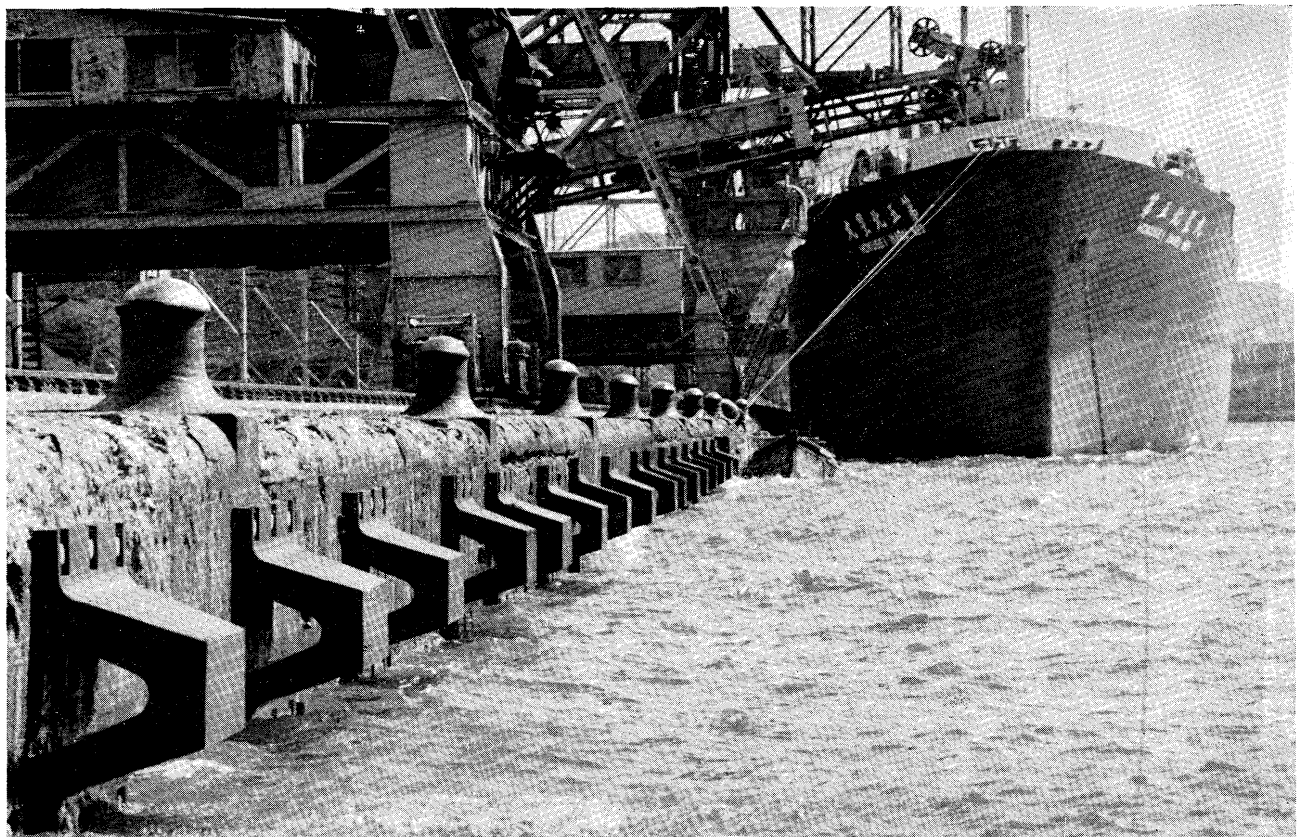
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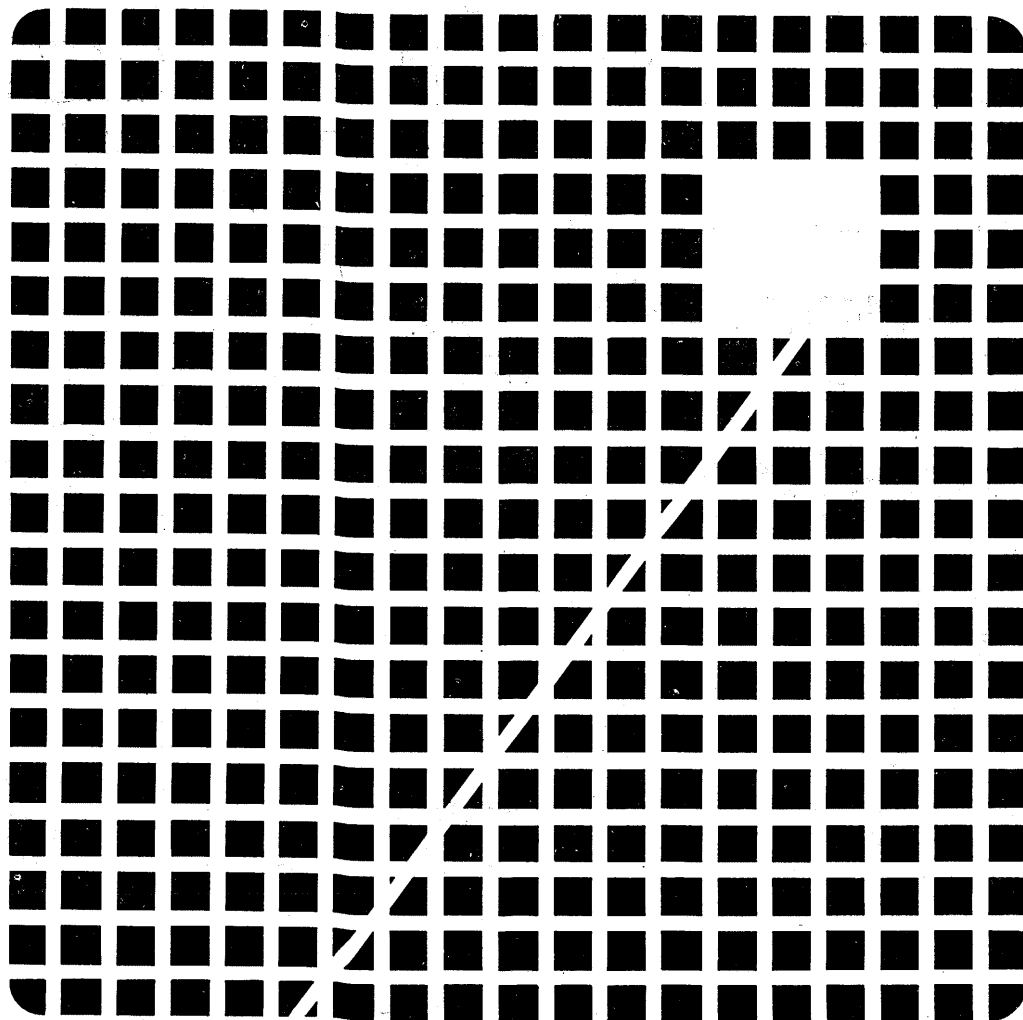
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Head Office:

Kotohira-Kaikan Bldg.
1, Kotohira-cho, Minato-ku,
Tokyo 105, Japan
Tel.: TOKYO (591) 4261
Cable: "IAPHCENTRAL TOKYO"

Secretary General:

Toru Akiyama

Editor: Yoshio Hayashi

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The Cover :

Containers being handled at the British Transport Docks Board port of Southampton. Trans-Atlantic container services from Southampton are operated by Dart Containerline and Atlantic Container Line. A decision to base the bulk of the U.K./Far East container traffic at the port was recently announced in London by the OCL/ACT Container Consortia. An £11m development is planned by the British Transport Docks Board to provide a further 2,100ft. of deep water quay with 50 acres of marshalling area and handling equipment for this trade.

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PORTS *and* HARBORS

Forum on Port Problems :

Historical Aspects of The Port

by W. H. Brotherson, President

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

PAPER PREPARED FOR A SEMINAR CONDUCTED BY
THE AUSTRALIAN INSTITUTE OF MANAGEMENT ON
13TH OCTOBER, 1969, TO DISCUSS THE DEVELOPMENT
OF BOTANY BAY AS AN INDUSTRIAL PORT COMPLEX

When the suggestion was made by the Australian Institute of Management that a symposium be organised to consider the development of Botany Bay as an industrial port complex, the Board was pleased to co-operate recognising that the final preparation of the detailed plans for this major undertaking will benefit from an evaluation of the considered views and opinions of the cross section of the community attending a seminar of the nature planned.

The Board is determined to design and plan the future Port of Botany Bay taking advantage of all of the modern technology available to it and after considering any comment or advice which might assist to this end.

The subject of my talk deals with the historical aspects of the investigations of Botany Bay conducted by the Board over the past few years leading as they did to a recommendation to the Government that the Bay be developed for port purposes.

I do not propose to dwell on the precise future plans the Board has in mind in developing the Bay as the Engineer-in-Chief, Mr. Wallace, the next speaker, will do this, but I hope to prepare the way for him to indicate broadly the thinking in this regard. I have arranged for a number of the Board's technical officers to be present and I am sure

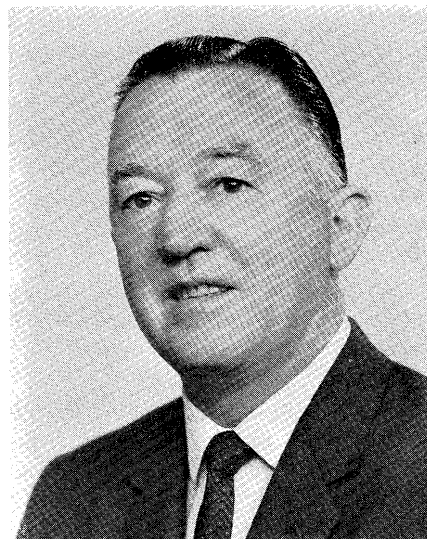
the discussions and questions asked and answered will provide a fruitful source of information for them and for the Board in finalising the detailed plans of the port.

In dealing with the historical background, I would like to touch briefly on the early development of the settlement in Sydney and the way in which the Port of Sydney has expanded in serving the city leading, in the ultimate, to the position where we now find ourselves preparing to move into another area for the development of further port facilities to serve the expanding metropolis of Sydney.

It is, perhaps, ironic that we are looking at Botany Bay.

Captain Cook regarded the Bay as a "capacious, safe and convenient harbour" but then, of course, he had not entered Port Jackson and it is now a matter of history that Captain Phillip, when he arrived 18 years later, remained in Botany Bay for only a short period before moving to Port Jackson.

It may well have been that the reason for Phillip's quick departure related to an early assessment that insufficient fresh water was available to sustain a settlement for any length of time, but he was no doubt conscious of the exposure of Botany Bay to the easterly and south-easterly winds and to the shallowness of the water which resulted in a continual swell and necessitated



Mr. W. H. Brotherson

the mooring of ships some distance from the shore.

In any event, his subsequent visit to Port Jackson and the recognition that these difficulties would not face his small band of settlers there to the same extent, persuaded him to settle at Sydney Cove which was ultimately to become the centre of the great Port of Sydney. I don't think any of us can have cause to complain at the selection Phillip made.

Since those early days, the Port of Sydney has developed into a sea port of major world importance. Based on the tonnage of cargo handled, it is the largest port in Australia and is one of the leading ports in the world.

The development of the port goes back to the earliest days of settlement and, in fact, one of the first tasks undertaken by Captain Phillip was the building of a wharf.

The first wharf in Sydney was a crude structure of rubble enclosed by a timber framework. It was located generally on the present site of the Maritime Services Board's Head Office building and was known as the Hospital Wharf because it was almost opposite the first hospital in the colony.

A second public jetty was built soon afterwards on the other side

of the Tank Stream near where the A.M.P. building now stands, but the first wharf of any substance was built in 1803. This was the privately owned Campbell's Wharf and the site is now occupied partly by the Sydney Cove Passenger Terminal.

Until the end of the 19th century most of the wharfage in Sydney was privately owned but in 1901 the Sydney Harbour Trust was formed and practically all of the private wharfage was resumed and placed under the ownership of the newly formed Trust.

At that time, the wharfage in the port was confined to Sydney Cove, Walsh Bay, Woolloomooloo Bay, Darling Harbour and Pyrmont.

Rebuilding of the private wharves taken over at the time was the primary task of the Sydney Harbour Trust, a body destined to be amalgamated with the State Navigation Department in the year 1936 to form the Maritime Services Board. With the growth of population and the increases in trade since those early days port facilities were extended to the Glebe Island area and, more recently, into the Balmain foreshores where the new container facilities have been located.

During this present century there have been some remarkable changes in the methods of handling general cargo particularly during the last decade. The road vehicles used to move such cargo to and from the wharves became larger and mechanical handling appliances, such as fork lift trucks and tow motors, began to make an appearance. Palletisation came into vogue and this, with the expanded use of mechanical equipment, was the forerunner of unitisation finally leading to the recently established form involving the use of specialised ships including cellular container ships.

As these changes became manifest, the port facilities which had been built to suit the requirements of a rapidly passing era needed re-designing, particularly to increase their ability to handle unitised shipping operations and to cope with the speed of cargo handling implicit in the new order.

Although ships specially built to operate as unit cargo carriers had appeared in Sydney by the year

1966, it was firmly felt by those associated with the shipping industry at that time that containers would not provide a viable shipping method in the long haul overseas general cargo trade serving Australia. In May of that year, however, announcements were made on behalf of a consortia of British Shipping Companies that container operations were to be introduced in the British trade by the end of 1968 and the Board was faced with developing quickly the one remaining area in Sydney zoned for port purposes in time to provide accommodation for these vessels. A consortia of another group of British Shipping Companies made a similar announcement shortly afterwards and the total British Shipping operations were thus committed to container ships.

It is a matter of history now that the Board completed the major task of providing the specialised facilities for the trade within the required time and the container operations around the Australian coastline by Australian feeder ships and between Australia and Great Britain by specially built container vessels is now an established and expanding activity in the Port of Sydney.

Quite apart from the changes indicated in the general cargo shipping scene, the start of the decade saw a major change in the ship building industry by the construction of larger bulk ships serving specialised industries.

Although the Board has continued effectively to redevelop the older areas of the port for general cargo ships while building the container facilities at Balmain, the difficulty of locating wharfage facilities to serve the needs of bulk ships in the Port of Sydney, especially those serving industries requiring large areas of near port land for them to be fully effective, has been apparent for some time.

The Government, in 1961, recognising this trend decided to expand the Board's jurisdiction to embrace Botany Bay so that a study could be undertaken for its eventual development as a port. This action was taken as the Botany Bay area showed potential to provide large areas of reclamation and perhaps

could be used in overcoming the difficulties.

Botany Bay had been used for some years prior to 1961 for port purposes of a specialised nature but longshore wharfage facilities had not been developed there. In fact the Bay had been opened up for port purposes during the last century but was virtually abandoned in favour of Port Jackson except for special trade.

In 1880, a jetty, known locally as "Long Pier", was constructed in what is now the suburb of Banksmeadow to handle cargoes of coal imported from Newcastle for the industries established in the area. At its peak, this trade amounted to some 15,000 tons annually but it has long since ceased and the jetty is no longer used by shipping.

A turning point in the history of the Bay came in 1930 when the Australian oil company of H.C. Sleight Ltd., established a terminal on the banks of the Alexandria Canal and in September of that year arranged for the motor vessel "Mexico" to bring a shipment of petrol, in drums, into Botany Bay.

The vessel was moored in the Bay and the cargo was brought ashore by lighter and, as the method proved successful, it became a forerunner of other shipments.

H.C. Sleight has continued to operate at Botany Bay ever since but it has established a new terminal and now, a submarine pipeline is used to pump bulk petroleum ashore from ships at anchor.

The next major development in the use of Botany Bay as a sea port came in 1948 when a refinery was established by B.O.R.A.L. at Matraville. This company established tanker moorings in the Bay with a submarine pipeline to carry the crude oil direct from the ship to the refinery.

However, perhaps the most significant event in the history of Botany Bay from a port point of view came in 1955 with the establishment of the refinery at Kurnell. This project involved the construction of a roadway through virgin bush and sand dunes from Cronulla to the tip of the Kurnell peninsula and was, in effect, responsible for the opening of extensive areas of land. It also involved the construction of a jetty

and the dredging of a turning basin and approach channel to serve the tankers bringing crude oil to the refinery.

Since 1955 the refinery has expanded considerably and, to accommodate the larger tankers now engaged in the trade, there has been considerable additional dredging. Botany Bay is still essentially an oil port however and although trade now exceeds 7 million tons per year, the only cargoes handled there to date have been petroleum products and a small tonnage of bulk chemicals.

In its early deliberations, the Board recognised the potential of Quibray Bay on the southern side for port development. This Bay is in the lee of the Kurnell peninsula so that it is protected from the south and the south-east and is virtually a still water area.

On the other hand, the northern foreshore is open to the sea moving through the entrance to the Bay particularly in times of severe easterly and south-easterly weather, and it was considered that it would require a great deal of protective work to exclude the waves from any port works established there. As a point of interest, the Board has actually recorded waves 15ft. high breaking on the beach at Brighton-Le-Sands during storm conditions and this area is well inside the Bay.

As a first stage in assessing the possibilities of port development, the Board, in July, 1962, commissioned the Hydraulic Research Station of the British Ministry of Technology at Wallingford in England to investigate the Bay's hydraulic characteristics. The Board itself had undertaken during the preceding year the preliminary work for such investigation by collecting basic hydraulic and meteorological data, including tidal currents and wave heights.

The early investigations undertaken by the Wallingford Laboratory and the studies of the Board itself indicated favourable signs of the potential of the Bay for development as a port and the Board was encouraged to embark upon the long and tedious task of determining whether the dredging of deep channels and the reclamation of large land masses implicit in such develop-

ment would have detrimental effects on the behaviour of the Bay.

In July, 1964, with the co-operation and assistance of the Australian Atomic Energy Commission, the Board commenced a series of long and short term studies of the movement of the bed of the port particularly under storm conditions, using radio active isotopes. These tests, which occupied a period of just on two years, were necessary having regard to the major alterations to the foreshore and the bed of the Bay which were contemplated by way of reclamation for both the airport and port purposes. In addition it was important to calculate the possible extent of maintenance dredging which would be involved once deepening had been undertaken to provide channels for port purposes. Again, these tests gave every indication that the provision of deep channels was not unrealistic and that maintenance dredging in fact would be of a minor order if the channels were dredged according to a certain set pattern.

Having determined that the hydraulic characteristics of the Bay would not be a deterrent, the Board, in the early part of 1965 and in collaboration with the Agent General for N.S.W., in London, commissioned a firm of London based consulting engineers, to carry out a feasibility and economic study of Botany Bay under terms of reference related primarily to Quibray Bay.

As mentioned earlier Quibray Bay on the Kurnell side of the Bay is naturally protected from the severe southeast and east weather by the peninsula and without major breakwaters this area could obviously be developed as a port and this is still the present position.

However, as the northern side was later put forward as being more conveniently placed for the early introduction of the major road and rail systems needed to serve a port rather than the Quibray Bay area and as that side is generally regarded as being in a better location in relation to the Sydney Metropolitan industrial centres, the terms of reference for the study were expanded later in the year to include the northern foreshores. The consultants worked on their assignment in collaboration with the Walling-

ford Hydraulic Research Station in London.

In April, 1966, the Engineering Consultants submitted the first of their reports and in the following month the Wallingford Hydraulic Research Station submitted its initial major report.

Both reports indicated that the development of port facilities on either the northern or southern foreshores of the Bay would be quite feasible subject to an answer being found to exclude waves from entering any port contemplated for the northern foreshores.

As a suggested method of wave control the Consultants included a plan for the possible construction of a breakwater at the entrance of the Bay. It was stressed that this plan had not been examined in detail but, on the surface it appeared to be an attractive proposal. The Consultants preliminary estimate of the cost of the breakwater was \$15 million and it was claimed that its provision would cause the whole of the Bay to become quiescent. This would permit the whole of the Bay to become quiescent. This would permit of the Bay without the need for further extensive protection.

At the time the report was under consideration, mid 1966, the first news of the intended introduction of cellular container ships into the United Kingdom/Australia trade and the possibility of being able to proceed immediately with the development of facilities for this trade in Botany Bay made the breakwater proposal very tempting. In fact, it will be remembered, a considerable amount of pressure was exerted by various interests for the breakwater proposal to be adopted so that an immediate start could be made on the development of wharf facilities on the northern shores.

However, the Board was not prepared to move until the proposals were studied in detail, particularly in regard to the effect on navigation of large ships moving through the suggested breakwater, and after some months of investigation, what at first appeared to be a realistic and most attractive plan started to crumble.

In the first case, it was found on closer examination that the cost of providing the breakwater, after al-

lowing for additional strengthening which further data regarding wave heights indicated would be necessary, would be of the order of \$18 million and not \$15 million as originally estimated. But it was on technical grounds rather than purely because of cost that the plan finally fell down.

Studies indicated that in order to exclude the waves from the Bay to the extent necessary for port development, the breakwater opening would need to be restricted to a width of no more than 700ft. As is known, a large body of water is impounded in Botany Bay and because of the necessity for this volume of water to pass through the comparatively narrow opening of the proposed breakwaters with the ebb and flow of the tide, it was calculated that a 3 knot flow of tide could be expected at the entrance. In addition, because of the orientation of the opening, the tidal flow would be somewhat across the line of approach of a ship and, with ships of the length it was envisaged would be using the port, this tidal influence would be unacceptable in a breakwater opening 700ft. in width. Quite apart from this the construction of a breakwater as indicated would provide at the entrance a limiting factor on the size of ships using the Bay from then on. On the other hand, if the breakwater opening were widened, additional wave energy would enter the Bay and the effectiveness of the proposal would be neutralised.

Offsetting the entrance of the breakwaters to give a wider opening but still excluding the wave energy was also considered but, it was not possible to provide an acceptable approach angle for ships under these circumstances. This proposal was also discarded and finally the breakwater proposal was abandoned altogether and the problem of the development of the exposed northern foreshores of the Bay for port purposes remained unsolved.

I have dwelt at some length on this particular aspect because, as I have said, the breakwater concept was widely but prematurely publicised and received considerable support in some quarters as being the answer to a problem the Board

had been struggling with for a long time. Fortunately the Government, on the advice of the Board, did not yield to the pressure of the day to commence the building of the breakwater at a great cost and with the disadvantages it would have presented for the future use of Botany Bay as a port.

Once the breakwater proposal had been ruled out, the Board commissioned the Wallingford Hydraulic Research Station to undertake further research and indicate alternatives and finally, at the end of 1968 after further detailed research, the Station produced the proposal which has now been adopted.

The scheme put forward provides that a pattern of dredging be undertaken at the entrance of the Bay according to a design which will refract the waves to predetermined areas near the entrance. It will be recognised that this is a unique method of dealing with the problem presented but the Research Station has proved the theory of the scheme by the use of all of the modern means available to it.

The proposal has a lot to commend it. The deep channels at the entrance to be used to refract the waves would be required in any case for the deep drafted vessels which will use the port and, although there will be some cost involved in foreshore protection work, this will be minor when compared with the estimated \$18 million saved by the elimination of the breakwaters. The main advantage, however, is that the dredging pattern will provide almost the same degree of protection from waves in the port area as would have been achieved by the building of breakwaters and the navigation problems associated with the restricted width of the entrance to the port are completely eliminated.

I hesitate to use the hackneyed word "exciting", but this is the most appropriate way to describe the proposal. It is based on a computer study programmed over many months of detailed investigation and collation of available data and it will, in fact, be the first occasion on which large scale dredging has been employed to achieve the refraction of waves in the manner indicated. It was only after a thorough

examination of the proposals by the Board's technical officers working in close consultation with the Wallingford Hydraulic Station that the Board was convinced that it would succeed and the way was then clear for the Board to make its decision to recommend to the Government that a start be made on the development of the northern foreshores of Botany Bay for port purposes. It is now well known that in March of this year, the Government approved of the Board's proposals to commence the project.

Since then, the Commonwealth has decided to extend the Kingsford-Smith Airport runway by approximately 5,000ft. and this will involve the dredging of 10½ million cubic yards of filling from the Bay. Approximately 3½ million yards of this is to come from an area to the north-west of the existing runway so as to restore the regime of the Bay in the area fronting Lady Robinson's Beach and thereby rectify the problems created by earlier dredging there while the Board has reached an agreement with the Commonwealth that it will lift the remaining 7 million cubic yards from the entrance to the Bay.

The agreement of the Commonwealth to dredge this amount of filling at a site some distance from the runway project was achieved by negotiation when certain advantages accruing from the adoption of this course so far as the Airport works are concerned were pointed out.

The fact is, however, that the arrangements is very suitable to the Board's needs and the entrance dredging pattern and consequently the first stage of the development of Botany Bay for port purposes will get under way at the end of the year when the recently announced Commonwealth dredging contract is commenced.

With the commencement of the entrance dredging the wave pattern on the Kurnell side of the entrance will alter and foreshore works have been designed to eliminate any resultant problem.

The Board, is about to call tenders for the necessary foreshore protection work to be undertaken fronting Prince Charles Parade, Kurnell, and this work will be

undertaken and completed in conjunction with the dredging to be carried out by the Commonwealth Authorities. As a matter of interest the design of this work is such that problems of erosion in the area extending over many years will be modified generally when the work is completed in some 6 months time.

As mentioned, major detailed investigations have been carried out which have led to the conclusion that the planned entrance dredging will accomplish the Board's aims, but to put the issue beyond doubt and to determine the detail involved in the plans, the Board is now in the course of building a large model of the Bay which will simulate its behaviour and, more particularly, measure the wave heights in selected areas under all selected conditions.

To this end, an eight acre area has been reclaimed on the foreshore to the east of the existing Airport runway and following the letting of a contract a large building is now being erected to house the model. I am sure that there will be great interest in the operation of this major model when fully commissioned and it is, of course, destined to play an important part in the Board's development plans. Mr. Wallace will dwell in more detail on its operation.

In summary, it will be seen that the Government amended the Maritime Services Act in 1961 to place Botany Bay under the control of the Board. This action flowed from a recommendation of an Inter-departmental Officer Committee that this course should be followed to ensure that the Bay be ultimately developed for port purposes.

Shortly after the amendment of the Act, the Board commenced the collection of data to allow of the commissioning of an hydraulic consultant to investigate the feasibility of dredging deep channels and undertaking major reclamations in the Bay. In July, 1962, it commissioned the world recognised Wallingford Hydraulic Research Station to undertake this initial assessment.

In 1964, the reports of the Hydraulic Station indicated the broad feasibility of such a scheme thereby justifying the engagement of engineering consultants in 1965 to undertake an engineering and

economic assessment of the development of the Quibray Bay area as a port and for the retention of the Hydraulic Research Station for further detailed studies.

Shortly after being commissioned the engineering consultants were asked to include in their considerations the northern foreshores of Botany Bay. At this time the Board commenced a detailed study of the bed movement of the Bay under storm conditions using radio active isotopes in conjunction with the Australian Atomic Energy Commission.

In 1966 the engineering and hydraulic consultants both submitted major reports and shortly after the suggestion was canvassed that the port development plans could be achieved by building major breakwaters across the entrance of the Bay at a cost approximating \$18 million.

After much study and consideration the Board rejected the idea of constructing breakwaters and the Wallingford Hydraulic Research Station proceeded to consider alternatives for the protection of the northern foreshores from the waves generated under storm conditions.

A system of dredging at the entrance to refract waves entering the Bay to selected areas near the entrance was finally considered and adopted by the Board as being the best method of protecting the proposed port development of the northern shores.

The Board's recommendation that Botany Bay be developed for port purposes was adopted by the Government in March 1969 and the first stage of the plan will virtually commence when dredging for the Commonwealth in connection with the Airport runway extensions commences later this year.

During the period in which the many intricate matters have been under investigation in regard to the development of the Bay, The State Planning Authority of New South Wales has acted as a catalyst in bringing to bear the considerations of the various bodies and departments having an interest in the proposed port area and thanks are due to the work undertaken by the department in that regard.

The closest liaison has taken place

between the Board and the various departments whose sphere of responsibility extends into the area recommended for port development, notably the Department of Railways and the Department of Main Roads, and the Government took into account the indicated attitudes of these bodies to the proposal when making its decision.

The Board has met the representatives of the four Councils fronting Botany Bay and fully explained what is in mind so they are properly briefed on the proposals and they have been advised that the Board will keep all interested parties informed of progress as necessary.

To this end, the Board set up a major Committee some time ago and it held its first meeting at the end of September. The Committee is representative of all Authorities having jurisdiction in and around the proposed port area.

The Board's Engineer-in-Chief is Chairman of the Committee on which representation has been extended to such bodies as The State Planning Authority of New South Wales, The Department of Main Roads, Department of Railways, Sydney County Council, Australian Gas Light Co., Metropolitan Water Sewerage and Drainage Board and The Postmaster-General's Department together with representatives of the Botany and Randwick Councils, the municipal boundaries of which embrace the northern foreshores of the Bay where the development will take place.

In conclusion, I would point out that in my view the long and tedious investigations leading to the Government's decision in this matter will be shown in the long run to have been really worth while in providing the optimum for the development of an open bay which could well have rebelled against an approach which failed to have full regard to the hydraulic aspects of a proposal involving a major disturbance to the bed of the bay.

The Board now looks forward to the development of Botany Bay as a major port and as I have said before Sydney is indeed fortunate in having been endowed by nature with two major waterways to serve

(Continued on Next Page Bottom)

Waterfront Security

by Captain Robert Herzog

**Massachusetts State Police
Massachusetts Port Authority**

(Before AAPA—Port Security Panel, October 29, 1969)

Gentlemen—it is a pleasure and an honor for me to be asked to appear here today. I am particularly grateful as the occasion permits me to discuss with you one of the more critical and urgent problems facing our nations commercial waterborne commerce today—waterfront security.

My discussion today recounts primarily the problems of the Boston Waterfront, the solutions we see that will lead to greater security and, finally, some of the barriers we face in attempting to develop and implement effective security control measures.

While my comments pertain to Boston, it is my belief that we all share similar problems and that many of **our** solutions may be applied to your individual areas of interest and responsibility.

In 1968, the Massachusetts State Police, in a formal agreement with the Massachusetts Port Authority, assumed the responsibility for policing the Port Authority Marine Terminals and other waterfront properties in the Boston area. The primary purpose of this action was to more effectively deter pilferage and larcenies. Additionally, the unit is responsible for the enforcement of all laws. The primary duties of this unit of the State Police are to enforce state laws generally that may be violated in the pier areas and to assure adherence to the general rules and regulations for port properties as constructed by the Massachusetts Port Authority. Troopers are assigned as plainclothes investigators in unmarked cars, and as a uniformed patrol with marked cruisers. The

the metropolis.

One day Sydney will be referred to as the “Twin Port City”.

unit is based at Logan International Airport in East Boston.

Upon assuming this assignment, numerous weaknesses in the existing security system were found. The weaknesses were both administrative and due to lack of enforcement. The Massachusetts Port Authority does not have direct control on all of the piers. The East Boston piers are leased to the Penn Central Railroad. The Railroad Police do not have any officers assigned to these docks. The only security in the pier sheds is provided by the shipping agent using the pier, who hires what he believes to be an appropriate number of watchmen to guard the cargo. With few exceptions, the watchmen are very old and, in most cases, are retired longshoremen. The watchmen, either through fear of or loyalty toward the longshoremen, provide a minimum amount of information to the police whenever the cargo they are responsible for is pilfered. In most cases, they neither hear, see, or report anything that would be helpful to the police. They are usually **elsewhere** when a crime occurs, and in most instances, complain that the steamship agents do not hire enough watchmen to guard cargo due to the fact that they, the agents, try to cut their labor costs by hiring fewer watchmen. Some complained that the shipping agents have cut down the number of watchmen since the State Police has assumed partial responsibility for policing the docks. This, in turn, occasionally creates an ill feeling by the watchmen toward the police.

It has been found that a good many of these watchmen have previous criminal records. They do not wear uniforms and often cannot be distinguished from longshoremen. If told to take a walk, they comply.



Capt. Robert E. Herzog

If they do not comply, they are subject to assault, or worse. The watchmen are not armed and, as I have previously stated, most are elderly men. In the dock and pier areas that they are assigned to, there are no phones or means of communication available to contact the police, the watchmen do not assume responsibility for other cargo also on the piers, only the particular cargo that they are hired to watch. The Piers that have not been leased out by the Authority, namely, Hoosac and Mystic Piers in Charlestown, and

Commonwealth Pier in South Boston, are under their direct control and have Port Authority uniformed armed guards on patrol with watchdogs. All vehicles entering and leaving these piers are checked in and out by a uniformed authority guard at the gates. Watchmen are also provided by the steamship agents.

The Massachusetts State Police, upon assuming the responsibility of policing the docks, made several suggestions to the members of the Boston Shipping Association relative to security measures which should be taken as soon as possible, they included:

1. Watchmen should be provided with uniforms to distinguish them from other employees. Attempts should be made to hire younger men without criminal records. Some watchmen guarding valuable cargo on the piers have lengthy criminal records, and should not be employed in a security capacity.

2. All employees and visitors on the pier or in the sheds should have identification badges or cards to be displayed upon request or worn on the outer garment. No identification is now required. A watchman badge is carried but this does not give individual identification.

3. No persons, other than employees, and persons carrying out a legitimate business, should be allowed within the pier sheds. At the present time, bookies and vagrants wander on some of the piers at will and without restriction.

4. Vehicles should be parked away from the pier sheds and ships in clearly defined parking areas. Vehicles should not be allowed in the sheds, except trucks loading and unloading, or others on legitimate business, each vehicle entering or leaving should obtain a pass at the gate which states the reason for the vehicle being on the pier. Parking areas should be provided for employees. This is being carried out on the piers operated by the Massachusetts Port Authority. All employees cars should have registered parking stickers.

One of the weakest points found in the area of security is the procedure for loading cargo to be trucked out of the pier sheds. The Steamship Agent hires a clerk or checker from the ILA Union hiring hall.

The clerk is responsible for checking the proper cargo and number of cartons on to the trucks. Either at the shipping platform or in the shed itself. If the union cannot provide a clerk from the hall, they fill the position with any one, including longshoremen, to work that day as a clerk. The clerk is in the position to load any cargo in the shed onto a truck and, if any collusion exists between the clerk and the truckdriver, it is a simple matter to steal any amount of cargo out of the shed. For example, there have been complaints of over eighty cases of liquor, one hundred cases of crabmeat, and 132 cases of frozen meat having been stolen. The one way that larcenies of this type and magnitude could be carried out is with the full cooperation of the clerk and watchmen, due to the fact that a truck would have to be used to transport these large quantities. In one particular case, a uniformed trooper observed the truck being loaded with cartons other than what he believed should be on the truck. A check by the officer revealed that the clerk checking the loading of the truck was also a truckdriver who had been hired to fill in as a clerk. The cartons in question did not belong on the truck, and the clerk and truckdriver claimed that they were placed on by mistake which, by the way, is a very easy way to explain the situation if they should be checked by an officer when in the act of overloading a truck. This situation can be corrected in either of two ways:

1. If the steamship agents have direct control of the personnel hired as clerks and watchmen.

2. If the pier sheds were under the direct control of the Port Authority employees only, no truckdrivers or longshoremen would be allowed to enter, and cargo within would be handled by authority personnel. The cargo would then be offloaded from the ships by longshoremen at dockside and turned over to Authority employees for storage in the shed. The Authority would deliver the cargo to the trucking platform at the shed when it was called for by the various trucking companies.

Another area that could be improved upon by the steamship

agents is the method by which pilfered or stolen cargo is reported to the police. At this time, the agents forward **shortlanded** reports to the police. These indicate cargo that has not arrived in the port or is missing. These reports include cargo that could have been obviously lost through damage or theft, but at present there is no breakdown to indicate if any of the cargo had, in fact, been stolen from the shed. In most cases, reports of larcenies were received after the shipment of cargo from the pier had been completed, and the final count showed a shortage. In these cases, the cargo could have been in the pier shed for weeks, with no count taken from the time it entered the shed until the completion of its delivery.

In situation where stolen cargo is recovered by the police, the shipping companies are hard pressed to identify the cartons from the various shipping marks used by shippers throughout the world, and this, in turn, hinders police investigations when stolen cargo is recovered. There would have to be a central agency, such as the Boston Shipping Association, to have records such as these available and to also determine if and when the cargo had been stolen. This can readily be incorporated into computerized port documentation.

In the latest contracts negotiated between the shipping companies and the ILA, a clause was inserted whereby any longshoreman convicted in the Massachusetts courts of cargo larcenies would be suspended for a period of one year from working on the docks. This action alone, we feel, is a great deterrent and significant step forward in the prevention of larceny and pilferage on the docks.

Under the provisions of the new contract between the Boston Shipping Association and the ILA, which was approved April 1, 1969, Article 26 states, "If any man is found guilty by, and has no appeal pending in any court of law of theft or buying, receiving or selling goods known to be stolen from vessels or waterfront properties or of any felony on a waterfront facility he shall be subject to discipline, in-

(Continued on Next Page Bottom)

cluding discharge. If discharged, he shall thereafter be ineligible for any employment covered by this agreement for a period of one year.

Allow me to summarize for a few moments upon the assumption of policing the Massachusetts Port Authority's waterfront property, the State Police made numerous suggestions to the Boston Shipping Association insofar as security measures were concerned. We suggested:

A) The watchmen be put in uniform, this lends dignity to the job and offers a moral support to the individual performing the task. In addition to making it crystal clear to others that protection is being supplied by the organization.

B) Parking facilities be provided so that private cars could be kept away from piers and sheds. Why? Because a basic rule of police work is "A crime will be committed when you couple desire and opportunity". If we do not allow the opportunities the desires die on the vine.

C) Identification procedures should be adopted and enforced, anyone on the piers should be required to identify themselves by a numbered-photo badge or ID card, so that those without the right to be there could be evicted. Without identification, you cannot tell the "Ballplayers from the spectators".

D) More lighting and more telephones should be accessible to the watchmen. Light and ready communications devices, are tremendous deterrents to the sneak-thief.

I could continue; these are only a few of the suggestions. None of them have been fully developed or implemented. However, progress is being made.

It is my opinion that pilferage and larcenies have been curbed considerably by the far-sighted thinking that added the new provisions to the contract and that there is a basic desire to add progressive security measures, but it all hinges on money, financial responsibility placed squarely on the entity which directly controls the operation at the stage where the loss occurs is probably the catalyst needed to set real security methods in motion.

Report on Port Charges Terminology

National Ports Council, Dock and Harbour Authorities' Association

June 1969

Reprinted in whole from a brochure of the above title

The Joint Committee on Port Terminology

The Joint Committee was set up by the National Ports Council and the Dock and Harbour Authorities' Association following a proposal by the Council that the rationalisation of port charges structures should be accompanied by a standardisation of terminology. The Committee has so far concentrated its work on port charges terminology. It has been composed of P. J. K. Webster, Director of Finance of the National Ports Council, and other officers of the Council, together with the following appointed representatives of the Dock and Harbour Authorities' Association:

J. H. Collier-Wright, C.B.E.
I. Hughes
P. Lawson
A. G. Robinson (until October, 1967)
T. A. Valentine
G. E. Young

Terms of Reference

To consider, in relation to charges, to what extent present terminology meets the requirements of the port transport industry and the port users; to ascertain whether the terms are clear, unambiguous, and self-explanatory; to make recommendations to the National Ports Council and the Dock and Harbour Authorities' Association for new terms, in those cases where the Committee considers that the present terms are unsatisfactory, and which terms should be used, where the number of terms now in use is excessive or confusing.

Summary of Recommendations

- (1) No distinction should normally be made between harbour and port. (para. 4)

- *(2) **Charge** should supersede **rate** or **due** as the general terms to describe an amount payable, except in the heading '**List of Ship, Passenger and Goods Dues**'. (para. 7).

- *(3) **Conservancy charge** should describe the charge made to a ship for proceeding between the seaward port limits and a dock system, river wharf or other destination within the conservancy area. (para. 9).

- *(4) **Dock expenditure** describes the costs of services and facilities incurred to enable a ship to use a berth, other than conservancy and certain other expenditure detailed. **Dock charge** should be the general term for recovery of dock expenditure. It may be used to describe a two-part tariff, compounded of the charges recommended at (6) and (7) below. (para. 10).

- (5) **Berth** is the preferred term to describe the place where a ship lies, other than at anchor (for which **anchorage** is recommended). (para. 11).

- *(6) **Rents** for berths should only be used to describe charges under leases, and the normal term for a separate charge for the use of a berth, which may include time spent in dock in proceeding to or from a berth, should be a **berth charge**. (para. 13).

- (7) **Entrance charge** should be used to describe a separate charge for use of any entry to individual terminals or groups of terminals by a ship. (para. 14).

- *(8) **Wharf** should be preferred to

quay, and wharfage should be the term for a charge on goods passing over a wharf, excluding cargo handling charges. (paras. 15 and 16).

- (9) **Passenger charge** should describe a charge for use of services and facilities provided for passengers, from whomsoever recovered. (para. 17).

* These recommendations involve changes in terminology in the report submitted by the Dock and Harbour Authorities' Association Port Charges Sub-Committee referred to in paragraph 1 below.

General

1. It has been considered whether an all-embracing terminology of port facilities and activities should be compiled, but various considerations have led to this first report being restricted to terms which are used in communication with the public in connection with charges. Through international co-operation, the Permanent International Association of Navigation Congresses has published a terminology of natural features, structures and plant, and there is hence no need to duplicate this work. For the present, since the Port Charges Sub-Committee of the Dock and Harbour Authorities' Association has concentrated on the problems of charges on ships and on goods for the use of the approaches and the terminals of the ports, this report has, in the main, been prepared in parallel with the report of that Sub-Committee on **Conservancy Dues, Dock Dues (including Passenger Charges) and Wharfage Charges**.

2. Whilst the representatives who have worked on this report are not unanimous on every point, the report does represent a consensus of opinion and no member has felt sufficiently concerned to present a minority report.

Port or Harbour

3. It can be argued that **harbour** is a general term covering estuaries, rivers and other havens and the port terminals therein, whilst **port** is the part of the harbour used for loading or unloading of goods or passengers. **Port** on the other hand can mean a harbour town and as such it may contain more than one harbour authority. The problem of distinguishing the two is not resolved by

the definitions in the Harbours Act 1964, and the current usage in the names of authorities is not consistent.

4. Because the words **port** and **harbour** have become interchangeable and since this report will propose that terms such as port rates and harbour dues should be superseded, it is recommended that no distinction should normally be made between **harbour** and **port**. For convenience, **port** is used hereafter in this report.

Charge, Rate or Due

5. A survey shows that the words **due** and **rate** are used with similar frequency by port authorities, in connection with both ships and goods. **Rate** is used in the phrase **tonnage rate** occasionally for goods, and very often in connection with ships, probably because the Merchant Shipping Acts use the term. The Acts do not, however, define it, because they are primarily concerned with the tonnage and with the measurement of ships, and only secondarily with the charges which are based on the tonnage.

6. The Harbours Act 1964 interprets **charges** to include fares, rates, tolls and dues of every description. There can therefore be little objection to substituting **charge** for **rate**. The Act does not define **due** but defines **ship, passenger and goods dues** for the purpose of making provision in the Act for the repeal of some earlier legislation, for the levying of such dues, for dealing with objections to them, and for dealing with schemes for their revision. **Due** is felt to carry with it certain implications of a tax or toll and in view of the Harbours Act definition of **charges** it does not appear to be vital for a due to be called a due.

7. It is therefore recommended that, except in the heading '**List of Ship, Passenger and Goods Dues**', the word **charge** should supersede all alternatives on grounds of simplicity and unambiguity. It would be the general usage term to describe an amount payable for the use of the whole or a part of a port or for operations performed therein: Where charges to be shown under the heading '**List of Ship, Passenger and Goods Dues**' are the subject of recommended terminology in this report, the recommended terminology

should be used, e.g. **conservancy charge**. Where the charges are not so covered, either existing terminology may be retained or, it is suggested in preference, **charge on ships, charge on passengers or charge on goods** may be used.

Conservancy

8. Recommendations of the Port Charges Sub-Committee on the recovery of expenditure by way of charges are based on the concept that a distinction should be made between the terminals of a port and the approaches through marked and lighted channels, and through waterways.

9. Expenditure on the approaches is often incurred by a Conservancy Commission, or is charged to a conservancy account by a port authority which is responsible for the function. Although the expression is not at present in common usage it is recommended that **conservancy charge** should be used to describe the charge made to a ship for facilities and services (other than pilotage and towage) to enable it to proceed between the seaward port limits and a dock system, river wharf or other destination within the conservancy area, if such a charge is made. This term is not intended to apply to any special charge which may be made for entering particular parts of a port, such as locks and docks.

Terminals

Dock or Port

10. The Port Charges Sub-Committee has recommended that expenditure on dock services and facilities provided by a port authority to enable a ship to use a berth should be recovered through charges on the ship. For reasons mentioned in paragraph 3, **port** can be an ambiguous term. It is recommended that **dock expenditure**, whilst in normal usage referring to expenditure relating to a closed dock system, should be the term used to describe the costs of all services and facilities incurred to enable a ship to use a berth, other than conservancy, pilotage, towage and berthing expenditure, and other than expenditure on canal approaches to inland ports. Similarly, **dock charge** should be the general term for the charge in respect of such expenditure. The terminology for separate charges for the

use of a berth and for the entry to a dock system is discussed in paragraphs 12 to 14 below. These may however be combined in a two-part tariff for which the term **dock charge** would be appropriate.

Berths

11. In a very precise sense, a **berth** is where a ship lies in order to carry out the functions for which it is in the port, but in a wider sense the term now often includes land adjacent to a berth, hence **container berth**. It is recommended that **anchorage** should be used for the place where ships lie at anchor, but for all other places **berth** should be preferred. This may be at a wharf, quay, pier, jetty, landing stage, dolphin or other place. It may sometimes be desirable to couple **berth** with another term e.g. **buoy berth**.

Berth Charge or Rent

12. As the word **charge** is preferred to **due** or **rate**, it is neither necessary nor desirable for another word such as **rent** to be used for the charge to a ship for a berth. It is true that the Council and the Port Charges Sub-Committee have recommended that the charge for a berth should be on a daily or other basis related to time, but this is a principle of charging, which can be established without the need of recourse to particular terminology.

13. In normal usage, a rent is seldom charged for a period of less than a week and it then usually gives exclusive rights to the person who pays it. It is therefore recommended that **rents** for berths should be charged only under leases, and that the normal term for the use of a berth, which may include time spent in dock in proceeding to or from a berth, should be **berth charge**.

Entrances

14. Apart from the main waterway which provides the approach to one or more terminals in a port, there may be subsidiary waterways which provide entrances to individual terminals or groups of terminals. The terminals may also have locks or gates. It can be argued that these entrances, like the main waterway, are used only for arrival and departure on a normal visit and that a charge which does not depend on the length of the stay is desirable, unlike that which is proposed for the

Digest of Port Statistics 1969

Issued by

National Ports Council, U.K.

(Port Traffic a Record in 1968)

London, 26th September: — The National Ports Council today published statistics* showing that a record 320 million tons of cargo moved through British ports during 1968—an increase of over 15 million tons on the 1967 figure.

The main ingredient of the increase was the growth in petroleum traffic, with imports and exports of crude oil and refinery products up by over 11 million tons.

An increase of nearly 3 million tons, to a total of 8.9 million tons for the year, in the traffic of unit transport services, reflects the rapid growth of container services.

A big drop in the number of port

employers is also recorded—from 734 at the end of 1967 to 460 at the end of 1968. This reflects the implementation of the licensing provisions of the 1966 Docks and Harbours Act.

The number of man-days lost through industrial disputes during the year was 113,000, the lowest for three years.

Traffic

The total traffic through the ports was 320,093,000 tons, of which 213,873,000 tons was foreign (17,361,000 tons up on 1967) and the rest coastwise (1,197,000 tons down on the previous year).

Again the busiest port by any

berth. If a charge separate from that for the berth is made, a term is needed to describe it. The word **entrance** has particular connotations with a lock entrance but as the charge is intended to apply when a ship enters (including the charge for when it subsequently leaves) so it is recommended that the term used should be **entrance charge**. Possibly there will be a few authorities which need to charge an entrance charge, in addition to a conservancy charge and a berth charge, even though they have no lock or gates.

Quay or Wharf

15. It has been considered whether preference should be expressed for **quay** or **wharf** to describe the structure at which goods or passengers are embarked or landed. For all practical purposes, both mean the same thing; one has a French origin, the other Anglo-Saxon. It is recommended that **wharf** should be preferred in view of the recommendation on **wharfage** below. If

necessary, suitable additions should be made, e.g. **river wharf**.

Wharfage

16. Although the word **quayage**, meaning the charge for the use of a quay, exists, it is very rarely used. It is recommended that **wharfage**, which is in common use as the charge on goods for passing over a wharf and for the use of other wharfage facilities including transit sheds, where appropriate, (but excluding cargo-handling charges), should be preferred. Currently, wharfage is nearly always charged on goods but it is recommended that the same term should be used if the charge is levied upon a port operator or ship-owner.

Passengers

17. It is recommended that, whether a charge for use of services and facilities provided for passengers be recovered from the ship as recommended by the Port Charges Sub-Committee, or from the passengers themselves, it should be termed **passenger charge**.

standards was London (56,369,000 tons).

The largest single traffic is petroleum, totalling 180,689,000 tons (117,553,000 tons of its foreign trade, an increase of 11,013,000 tons over 1967). Milford Haven is again the most important oil port, with 29,296,000 tons. Other major oil ports are London (26,965,000 tons), Southampton (25,968,000 tons) and Medway (24,800,000 tons).

For all cargoes other than fuel, London and Liverpool are the country's major ports, with 18,923,000 tons and 13,966,000 tons respectively, followed by the Tees (6,974,000 tons), the Clyde (5,556,000 tons) and Manchester (5,254,000 tons). The Humber ports (Hull, Goole, Grimsby and Immingham), which are all controlled by the British Transport Docks Board, had a total traffic, other than fuels, of 10,469,000 tons. Liverpool has the largest export traffic (4,362,000 tons compared with London's 4,038,000 tons).

Commercial landings of sand and gravel rose by over a million tons (from 6,455,000 tons in 1967 to 7,654,000 tons).

Unit Transport

The total traffic carried by unit transport services during 1968 was 8,889,000 tons, a rise of nearly 50 per cent compared with 6,027,000 tons in 1967. Of the total, 2,847,000 tons was roll-on/roll-off traffic, compared with 2,222,000 tons in 1967, the increased traffic being largely carried by road goods vehicles. The balance, 6,042,000 tons, was carried by 'other unit transport services', which include all lift on/lift off methods, e.g. flats, bulk liquid containers, as well as dry cargo containers; but the increase of 2,237,000 tons is largely due to the 'container revolution' which gathered momentum during the year.

The greatest increases in unit transport traffic occurred at ports in the North West (up 644,000 tons), at Dover and other South Coast ports (up 527,000 tons) and at East Anglian ports (up 466,000 tons). By June 1st 1969 British ports had 91 specialised unit transport berths available for operation. Most of these serve short-sea routes, but 7 serve exclusively deep-sea traf-

The Port of Sihanoukville

Its Installations-Expansion and Franchise Zone

Through the Courtesy of the Royal Cambodian Embassy in Japan

I.—Preliminary

In 1954, just after the Independence, the Kingdom of Cambodia had only one port of its own, the Port of Phnom-Penh which was situated some 330 Km from the Sea of China.

This port, as an international coastal port, was usable for limited trade with Southeast Asian countries, but was scarcely accessible for small ships of less than 4.10 m draft. For trading with distant countries, the transshipment of cargo was made at several ports nearby (Singapore, Hongkong, etc.) which caused an increase in freight and more delay in trading activities.

In addition, under the policy of neutrality and peace, the Kingdom of Cambodia was wise enough to make necessary efforts to develop its agricultural resources, which were the essential wealth of the country, and increase in this way the export of the surplus products.

In order to meet efficiently the

trade competition, the question is not only to preserve the quality of export products but also and especially to set and maintain the prices that must be competitive on the international market.

One of the factors necessary for attaining efficiently these objects is to use modern cargo boats of more than 10,000 T displacement for long distance transportation, because the use of coasting vessels is almost prohibitive in this case.

Considering these imperatives based on economical standing and in order to avoid to remain under the subjection of the port of Saigon, the high inspiration of Samdech, Head of State, has decided to construct a deep-watered port with direct access to the ocean.

II.—Port of SIHANOUKVILLE

Selection of site—Installation at the start—Management

After many times of investigations on the area extending from Kampot to Siamese border line and as well

ed stoppage in the autumn of 1967 following decasualisation).

ed stoppage in the autumn of 1967 following decasualisation).

The Fourth 'Digest'

This is the fourth annual edition of the Council's Digest of Port Statistics. It contains the usual comprehensive analyses of the traffics of individual ports commodity by commodity and also on the basis of cargo destination; other sections relate to capital expenditure, port facilities, and labour.

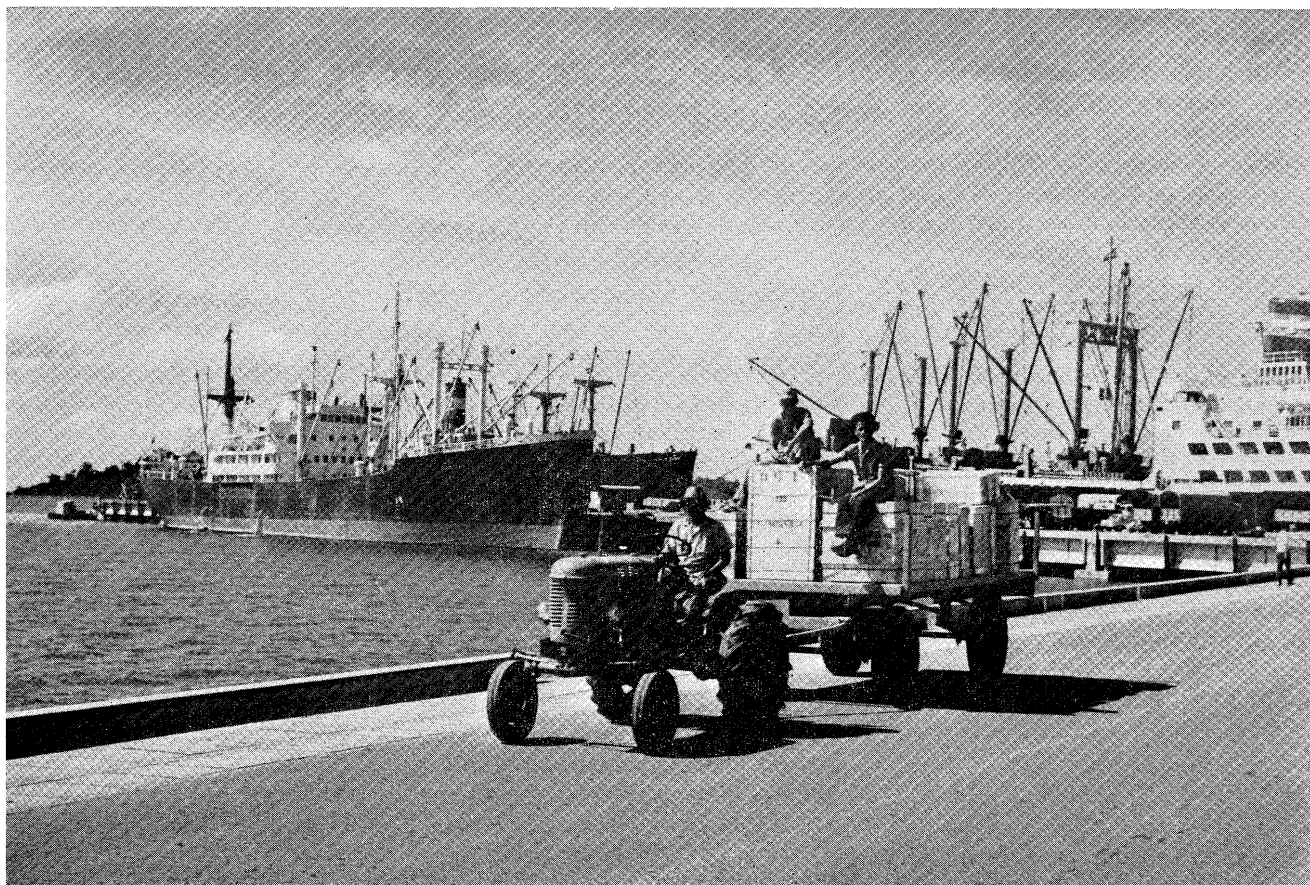
This year the sections on unit transport and port facilities have, with the co-operation of the Northern Ireland Government, been extended to cover Northern Ireland.

* Digest of Port Statistics 1969. Published by the National Ports Council, 17, North Audley Street, London W1Y 1WE. (Price 45s. nett). Also available from H.M.S.O.

Labour

Immediately prior to decasualisation, in September 1967, there were 1,268 registered port employers. With the introduction of licensing the number fell to 734 by the end of 1967 (for all the 80 ports covered by the new legislation), and 1968 saw a further reduction to 460. At the end of 1968 these employers had a total of 54,672 permanent and supplementary workers under contract (20,540 of them at London, and 12,252 at Liverpool).

The number of man-days lost through industrial disputes was 113,000, the lowest since 1965. In 1966 the figure was 134,000, and in 1967, 606,000 (the latter figure was unusually high as a result of the protract-



as of ocean survey and climatological studies, the expert engineers of harbor construction arrived at an conclusion that Kompong Som Bay, which is situated to the northeast of Koh Pos Island along a narrow neck of land, was placed under favorable conditions in every respect as a site for the construction of deep-watered port.

The primary reasons for the decision on this selection were:

1°)—The chain of islands running in a line, blocking up Kompong Som Bay, plays the role of preventing the swell of water which is caused by the surging waves coming from the Gulf of Siam.

2°)—The deep with a depth of more than 10 m runs from south to north between Koh Pos Island and the coast, ending at the point a little toward north in the shape of a deep sea, some 400 m wide, is fitted for the ships' taking shelter or anchoring while waiting for accosting.

The primary wharf construction work including a pier of 285 m in length and 28 m in width was carried out which extends in the aforementioned deep with depth of 10 m in a straight line along the axis of the deep. The pier is connected, at

its northern end, to the land of the port by a land bridge of 185 m long and 10 m wide.

The pier has four moorings on both sides for the ships and is also available not only for the huge traffic of heavy trucks coming in for the transshipment of cargo but also for additional loading of cargo through railway sidetraks.

A level ground of some 2 hectares was constructed by 120,000 m³ hydraulic embankment, on which two warehouses of 120 × 54 m, open, spaces passages, etc. were provided, thus completing the first installations both in substructure and superstructure.

A set of land facilities, such as 15 T and 7 T cranes, trucks, elevators, etc. permit of the easy handling and transportation of cargo.

A flotilla for harbor administration which is equipped with medium-powered tug boats, mooring vedette boats and other necessary launches and the like is used to give effective assistance to ships. These sea vessels are placed in a closed dock to take shelter from the waves which was originally provided to meet the ship-repairing requirements.

The maritime beacon consisting

of luminous buoys indicates the fairways. Each of the two horizontal lights and a landing light, which stand to the south of Koh Rong Samlem Island, has the light power extending over 30 miles, thereby making the perfect utilization of the port possible.

These installations, for which a total sum of some 400 million Riels was invested, started operation in 1960.

The traffic volume on record is as follows:

Years	Traffics in tons (Import—Export)	Number of ships
1960	34,694 T	
1961	95,484 T	89
1962	166,339 T	125
1963	369,559 T	155
1964	714,833 T	250
1965	754,559 T	266
1966	548,529 T	258
1967	545,197 T	245
1968	747,847 T	325
1969 (until June 30th 1969)	503,102 T	139

It may be seen from this table that a slight decrease was made both in 1966 and 1967, which is attributable to the decrease in export of agricultural products due to a heavy

drought that attacked these areas.

Of the cargoes transshipped at the port of Sihanoukville, those for export are the agricultural products of this country, while those for import are the equipment, materials and manufactured products.

EXPORT

- Rice
- Wood
- Maize
- Latex
- Rubber (in bale)
- Kapok and Kapok seeds
- Sesame
- Nux vomica
- Valva nut
- Cotton
- Miscellaneous

IMPORT

- Foodstuff
- Medical goods
- Chemical products
- Cement
- Coal
- Textile
- Motors & Machineries
- Scrap iron & Sheet metal
- Military materials
- Fuels
- Lubricants
- Vehicles
- Rails
- Miscellaneous equipments

It is worthy of special mention that the port of Sihanoukville has, since its opening for traffic, been open to all the vessels, regardless of their nationality, with the exception of those of Portugal and Union of South Africa (by Resolution of the United Nations). The ships with flags of more than 30 different kinds floating high at mastheads are receiving satisfactory services at this sea-port.

III.—Expansion of port

The statistical study of the port traffic showed a rapid and continued increase in traffic which was brought about by the miraculous development of the economy of the Kingdom.

The primary port facilities, which was originally set up in anticipation of the transshipment of only 350,000 T, proved to be inadequate in 1963, and since that time the expansion of the port has been considered to be an urgent imperative.

After systematic studies made on the oceanographic, climatologic

and other fundamental harbor conditions, the most appropriate solution appeared to be to construct a closed artificial lake on the north of the existing installations, and set up supplementary installations in that lake.

The overall plan to determine the final choice of fittings was prepared along this line.

The whole structure extends over 3,500 m, and include 20 mooring berths for long-carriers and coasters which can clear the annual traffic of 2,500,000 T.

Behind the wharf is a level ground made up by hydraulic embankment to complete the whole structure, and on this level ground will be constructed the incidental structures such as substructure, superstructure, etc. to be used in connection with the accosting installations.

It should be noted that the complete execution of the whole plan is to be made step by step, for which a long period of time and a huge capital investment will be required.

Thus, the Port Department of Sihanoukville completed by the end of 1967, the following construction works within the framework of the works for the first stage, with a total sum of investment amounting to 300 million Riels:

1°)—Completion of two piers (south and north) which are estimated to be 2,300 m in total length.

2°)—Completion of an additional wharf of 350 m in length (block-built) which can easily moor two long-carriers of 10,000 to 14,000 T.

3°)—Completion of dredging work for the swinging circle of 500 m in diameter, access fairways to permit vessels such long-carriers to gain easy access to the wharf as well as to make swinging and accosting, and the accosting front.

4°)—Completion of West "Cavalier" constructed along the same line as the wharf and East "Cavalier" constructed at right angles to the line for taking in mud and sand produced by the dredging work for the swinging circle, access fairway, accosting front, etc.

The Port Department of Sihanoukville gave out an order within the framework of the construction program of the first period, for the sucking, carrying and lifting type dredgers with 1,000 m³ capacity. These

dredgers with great capacity will permit realization not only of the level ground required for completing the wharf but also of the industrial land which is of vital importance to the economy of the Kingdom.

IV.—Port of SIHANOUKVILLE Its Franchise Zone

Owing to the phenomenal growth of economy, and in order to accelerate the economical development on one hand and to make the Kingdom participate in the current of international trade on the other, Sangkum decided, under the instructions of Samdech, Head of State, to set up a Franchise Zone in the autonomous port of Sihanoukville.

The establishment of the Franchise Zone was the object of Kram No. 7-CE of September 3, 1960, the provisions of which are very liberal, and the services, facilities as well as the advantages made available thereby are such that they will provide all the services of a large scale that are expected of a traditional Franchise Zone, namely,

- International transit of cargo
- Bonded warehouse business
- Duty-free industries

Since, on the other hand, the Franchise Zone of the autonomous port of Sihanoukville is situated between two traditional big ports (Singapore and Hongkong), which provide highly-developed bonded warehouse and cargo transit facilities, Samdech, Head of State precisely specified that the regime of this Zone should be substantially liberal, and the advantages or the facilities to be provided by the Kingdom should, at least, be equal to those provided by Singapore or Hongkong.

In strict compliance with these princely high instructions, the Government of the Kingdom elaborated the special regulations for the custom duties and tax system in this Zone, the essential specifications of which are as mentioned below.

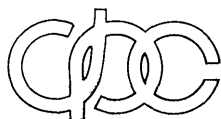
Not Applicable to Franchise Zone

1°)—Custom expenses, custom duties and surtaxes at the time of entry and leaving;

2°)—Taxes on turnover and internal taxes on production, consumption or circulation of imported products;

3°)—Town dues and local taxes

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on transactions of imported products;

4°)—Laws and regulations on economic relations and prices.

In addition to the far-reaching exemption of custom duties and taxes, the Government of the Kingdom is ready to provide the potential investors with other substantial advantages. Some of them may be cited as follows:

—Guarantee of non-nationalization

—Interdiction to import similar products.

—Facility of lease of land.

Thus, owing to these facilities and advantages, the potential investors can do business within this Zone of quite a liberal character without any cause for anxiety.

With the exception of the items interdicted according to the provisions of Article 246 of the Code of Custom, all the commodities can be carried in and kept there, regardless of their nature and origin and without any limitation or quotas.

Within the Franchise Zone of the

port of Sihanoukville, it is authorized to conduct such operations on commodities as sorting, mixing, assorting, sifting, crushing, pulverizing, glazing, coloring, dividing, emptying, decanting, torrefying, grinding, filtering, etc. and all the other operations to be performed in conformity to the loyal commercial practice for the purpose of conserving or improving the products.

The sale of commodities kept within the Franchise Zone will, in case such commodities are subject to conditions that they are sold within the Zone, not be the object of taxation on turnover.

The commodities to be brought from the Franchise Zone into the National Custom Territory will receive the benefit for origin on the same conditions as those for the commodities imported directly from foreign countries with reservations that such commodities will be presented to the custom-house just as they were when they were introduced into the Franchise Zone.

As in the Franchise Zones of for-

eign countries, there are also some restrictions placed on the activities within this Zone which are related to the residence and retail trade. It should, however, be noted that, in favor of the persons of a certain categories who are working within the Zone or who are engaged in supervisory business, a departure from such restrictive provisions may be allowed by the Minister of Finance.

Taking into consideration the far-reaching advantages to be gained from the reduction of various taxes and other privileges, it may be considered that the Franchise Zone of the port of Sihanoukville can meet all the requirements for export trade as well as for production of excellent articles.

This is also one of the objects, with which Sangkum, decided, under the explicit instructions of Samdech, Head of State, to make this sea-port "the Lungs of the Kingdom" and furthermore to built it up into a "Plaques tournantes" of Southeast Asia.



WTCA JAPAN GENERAL ASSEMBLY

WORLD TRADE CENTERS ASSOCIATION

TOKYO-YOKOHAMA-KOBE, JULY 1-6, 1970



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- JULY 1 (Wed.) Tokyo
Registration
Opening Ceremony
- JULY 2 (Thurs.) Tokyo
First Day Proceedings
10 minutes speech
Working Session I, II
- JULY 3 (Fri.) Tokyo
Second Day Proceedings
10 minutes speech
Working Session III, IV
- JULY 4 (Sat.) Hakone
Tour to Hakone via Yokohama
- JULY 5 (Sun.) Kobe
From Hakone to Kobe by New Tokaido Line
- JULY 6 (Mon.) Kobe
Third Day Proceedings
Working Session V
Closing Ceremony
- Special Programs will also be arranged for ladies.

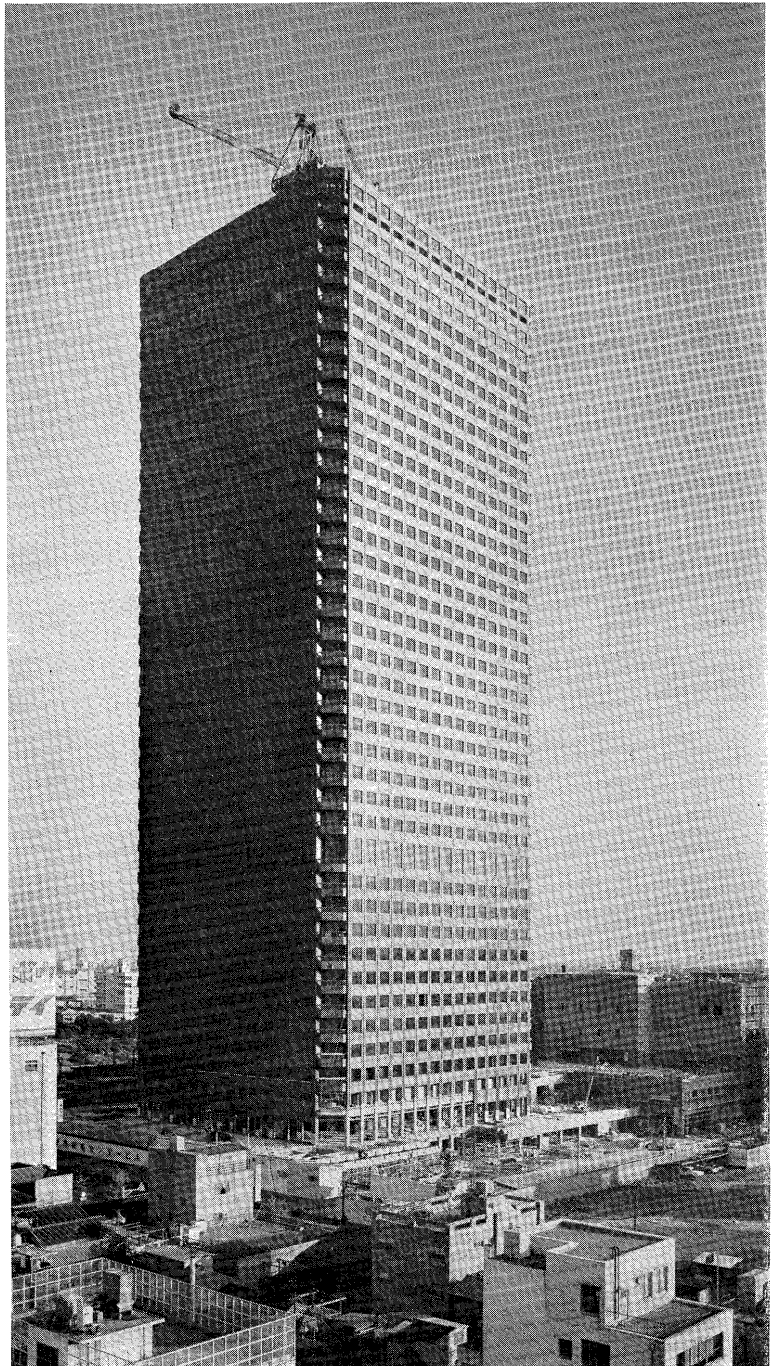
THE WORLD TRADE CENTER OF JAPAN INC.
WTCA JAPAN GENERAL ASSEMBLY ORGANIZING
COMMITTEE

Hoko Bldg., 8-19, Ginza 1-chome, Chuo-ku, Tokyo
104, Japan

Telephone: Tokyo 567-6561

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Registration fee: Delegate \$125.00 Accompanying Lady \$50.00

Join The WTCA

by Guy F. Tozzoli

Secretary General

World Trade Centers Association

(Reprinted from "World Traders")

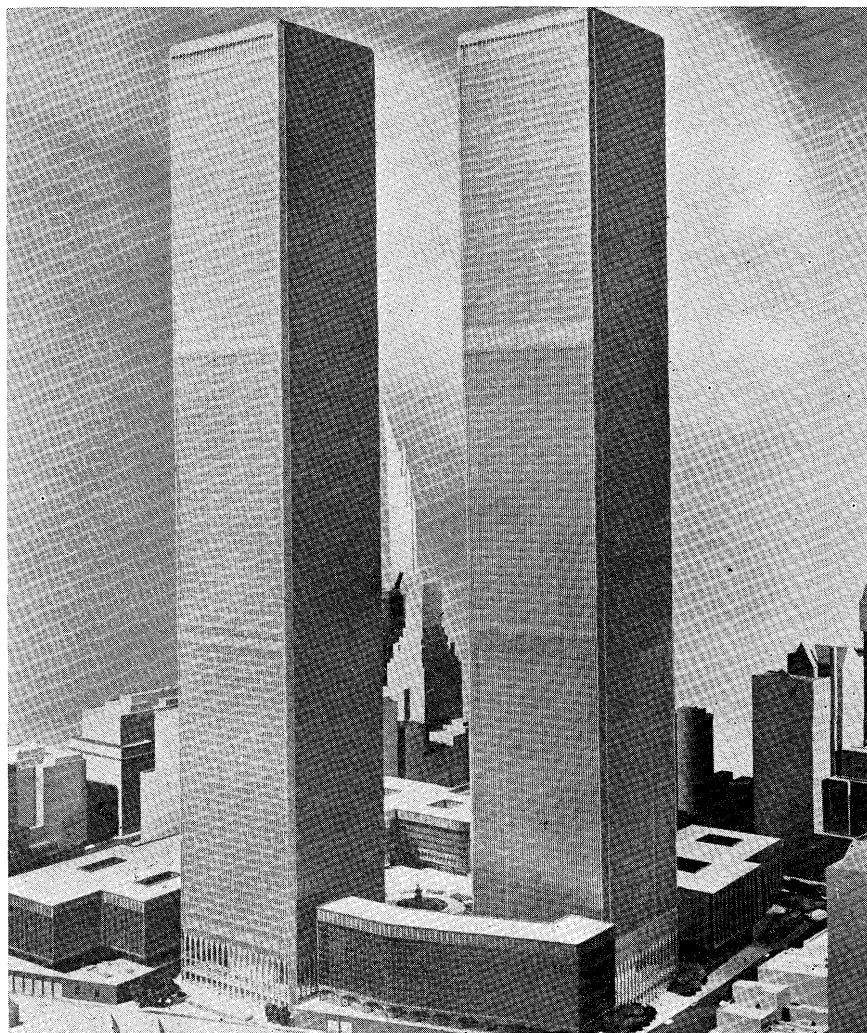
October-December, 1969)

Dear Sir:

Recent years have seen the emergence of the world trade center as a modern, dynamic instrument to promote international commerce, communication, and understanding. In 1960, there were about half a dozen world trade centers. Now over forty organizations are in various stages of developing these facilities. World trade centers, concen-

trating in one efficient setting the many services and agencies involved in the sale and processing of export cargoes, are springing up in virtually all the world's commercial capitals.

With the growth of world trade centers, there arose an imaginative idea to link these nerve centers of commerce together in a network that would span the globe. The



New York WTC Twin Towers

goal is to enhance the effectiveness of all trade centers in stimulating international commerce by providing for special communications among trade centers, information sharing, assistance to traveling businessmen and other cooperative programs.

Next July, in Tokyo and Kobe, Japan, representatives of trade centers all over the world will be participating in the General Assembly of the World Trade Centers Association. Hosted by the World Trade Center of Japan, the Assembly will provide valuable insight and hard advice on the planning, developing, and operating of a world trade center for those involved or contemplating involvement. There will also be sessions on how world trade centers can assist one another in programs aimed at increasing international commerce.

The Association was initiated in New Orleans last year at a meeting of 70 delegates from seven nations representing 31 organizations planning or interested in trade centers. A Steering Committee was formed by the New Orleans assembly and given the task of launching the endeavor, including the establishment of an organizational framework.

The Committee has since completed its work after a series of intensive and productive work sessions, giving careful consideration to the most effective means of accomplishing the objectives expressed at the New Orleans meeting. We think we have designed an Association that will reach these goals in excellent fashion and will greatly enhance the value and influence of trade centers, individually and collectively, all over the world. On behalf of the Interim Board of Directors, I am taking this means to publicize the Association to interested persons and organizations and to extend invitations to join us as charter members in this challenging venture.

Association Purposes

The fundamental objects of the Association, as stated in our Constitution and By-laws are:

- a) to encourage the expansion of world trade;
- b) to promote international business relationships and understanding among nations;
- c) to foster the increased participation in world trade by develop-

- ing nations;
- d) to create and encourage mutual assistance and cooperation among members;
 - e) to promote and further the concept of the world trade center; and,
 - f) to act in pursuance of these goals.

Association Activities

We envision a vigorous program of communication, cooperation, and information sharing among trade centers and to continually develop programs in new areas to promote the purposes of trade centers. Here are some of the specific activities being planned:

1. General assemblies, where the full membership will meet to discuss matters of common interest, to hear reports on Association activities, and to discuss future Association programs.
2. Communications links among trade centers to promote easy inter-change of messages and data and to facilitate business contacts by international businessmen.
3. Cooperative programs, including the publication of a year-book of world trade center membership providing data on the progress and activities of trade center all around the world.
4. Assistance to individual businessmen including access to World Trade Center Club facilities and other trade center services.
5. A quarterly magazine, *World Traders* (available free to Association members), already being published on behalf of the Association by the World Trade Center of Japan and providing up-to-date information of interest to the membership.
6. Other programs to be developed through brochures and other publications promoting the trade center concept and the use of trade centers by international businessmen.

Membership Plan

There are three classes of membership.

Regular: For those organizations substantially involved in the opera-

World Trade Center

Amsterdam

Reach expanding European Markets through World Trade Center Amsterdam

For centuries Amsterdam has been a center of European trade. Its central location has made the city a natural gateway to industrial and commercial Western Europe.

The World Trade Center in Amsterdam is the logical outcome of the city's location and trade facilities. It offers international businessmen two great advantages: a complete range of world trade services, and a unique concentration of international business contacts. Centralizing these activities greatly simplifies and expedites the administrative procedures of international trade.

The Center will house a full range of national and foreign busi-

ness firms engaged in international marketing and the servicing of international trade as well as consulates, public and private trade promotion agencies and commercial offices of foreign nations.

The World Trade Center Information Service provides businessmen with accurate data on world markets, regulations and trade opportunities.

The most up-to-date communications system ever devised for commercial use will be incorporated in the World Trade Center for maximum benefit to participants. Direct telephone and closed-circuit television connections allow for long distance conferences.

tion of a World Trade Center, or similarly involved in the active development of a World Trade Center.

For the purposes of the Association, a World Trade Center is defined as one or more buildings providing for the centralized accommodation of activities and services devoted to world trade, the promotion, furthering and protection of world trade or similar services related to the foregoing.

Affiliate: For those organizations actively engaged in the expansion of world trade, including world trade libraries and especially for those organizations desiring to create a World Trade Center where none exists and seeking the assistance and guidance of the Association towards this end.

Associate: For World Trade Center Clubs, devoted to the expansion of world trade and interested in entering into reciprocal arrangements for the use of member facilities.

Affiliate and Associate member-

ship will not have voting privileges.

Application Procedures

If your organization is interested and eligible for WTCA membership, I cordially invite you to complete the prescribed application form* and return it to me. All applications will be reviewed at a special meeting of the Interim Board of Directors, and applicants will be notified of the Interim Board's action as soon as possible. The information in this letter and on the application form should assist you in determining which class of membership is appropriate for your organization.

I will be looking forward to hearing from you, and I hope to welcome you to our growing family of members in the World Trade Centers Association.

Remark: *The form will be given upon request to the Secretary General's office at the World Trade Department of The Port of New York Authority, 111 Eighth Avenue, New York, N.Y. 10011, U.S.A.

Yes, all Duty & Tax Free!

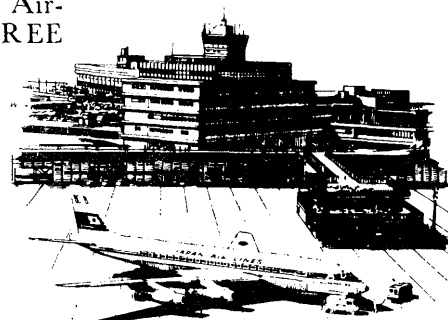


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More than a million businessmen from abroad visit Amsterdam every year. When the World Trade Center opens in 1971 it will be the first stop for the majority of these businessmen.

World trade is expanding fast. World exports have quadrupled over the last two decades. Is your firm keeping pace with this trend? The World Trade Center Amsterdam can have you keep up with Europe's expanding markets.

Lay-out of the premises

The World Trade Center is built around two spacious plazas. Multi-storied office buildings, reception and information centers on the North Plaza, where sheltered galleries house foreign and national government offices, chambers of commerce, international banks and other service organisations.

A hotel, conference rooms and apartments will be found on the South Plaza. Its galleries house shops and service organisations.

The basement offers space for

3800 automobiles, warehouses and maintenance shops.

Railways station, bus terminals and parking lot give direct access to the Center via escalators and lifts.

The World Trade Center is occupy a 28-acre site in the industrial and harbour area of Amsterdam. Connected with a railway station it is located at the intersection of the primary North-South and East-West motorways — nine minutes from Amsterdam International Airport and four minutes from the Amsterdam city center.

The World Trade Center offers its International business tenants.

A focal point for international trade

A meeting place for international businessmen

A choice location, nine minutes from Amsterdam's airport and four minutes from the city center

A concentration of business contacts

• Foreign and national trade as-

sociations, international banks, transport and insurance companies and other members of the world trade community will have their offices in the Center

- Government commercial offices, consulates, chambers of commerce from many countries will assist businessmen in finding new trade opportunities

A concentration of world trade services

- Government agencies, whose direct accessibility for consular or trade assistance speed up the acquisition of information and the talking of decisions
- Finance, international banks will handle the manifold financial requirements of international businessmen
- Insurance, insurance companies enable on-the-spot coverage of liabilities, real estate, transport and goods both in the Netherlands and abroad
- Transport, with agents of land,

(Continued on Next Page Bottom)

Orbiter Probe

IAPH News :

Travelers

• Mr. Jean-Claude Ailleret, Directeur de l'Outillage, and Mr. Christian Guary, Directeur Adjoint de l'Exploitation Commerciale, of the Port Authority of L'Havre, visited Mr. Toru Akiyama the Secretary General, at the Head Office Wednesday November 5. These two Frenchmen had busy business and

sea and air transport services to handle passenger and goods movements

- Information, the World Trade Center Information Service will provide fast and accurate information on markets, prospects, import and export
- Communication, the most advanced means available for internal and external communication; direct telephone and closed-circuit television connections for long-distance group conferences Auxiliary services
- Ample parking space
- Meeting and exhibition rooms
- Multilingual secretariat and translation services
- Computer service
- Advertising agencies
- Publicity media
- Legal and accountancy assistance
- International shops, bookstall
- Medical aid center
- Hotel, restaurants
- World Trade Center Club

For more information on the World Trade Center, write to World Trade Center Amsterdam

Beursgebouw, Damrak, Amsterdam Netherlands

Telephone. (020) 233413★

Cable address: Worldtrader Amsterdam

inspection programs in various parts of Japan.

• The Port of Oakland Trade Mission came out in force to hold a cocktails and buffet on Friday, November 7 from 5.30 to 7.30 p.m. at Rose Room, Palace Hotel, Tokyo. Standing in line to shake hands with guests were Mr. John H. Reading, Mayor of City of Oakland, Mr. Robert E. Mortensen, President, Board of Port Commissioners, Mr. William F. Knowland, Owner & Publisher, Oakland Tribune, other commissioners, Mr. Ben E. Nutter, Executive Director, and Mr. S. Kuwata, Director Far East, Port of Oakland.

• At a luncheon on Wednesday November 12 at Katsura Room of Hotel New Ohtani in Tokyo, Mr. Charles Dickey, Managing Director Far East, Division of Port Development, DRPA, introduced to local guests Mr. John P. Gaffigan, International Industrial Coordinator, and Mr. William Brawley, Managing Director of the DRPA Office in New York City.

Later, a slide narration was given of the industrial potentiality of the DRPA's hinterland. Refer to the article thereon on page 31.

• Mr. E. A. C. Howells, E.R.D., Chief Docks Manager, British Transport Docks Board, Dock House Southampton, called on Mr. Toru Akiyama, IAPH Secretary General, in his Head Office on Thursday November 13.

• Comdr. E. H. W. Platt, M.B.E., R.N., Director and Assistant General Manager, BP Tanker Company Limited, visited Mr. Toru Akiyama, IAPH Secretary General in his IAPH Head Office Thursday November 27. The Comdr. was then invited to a lunch at the Crown Room in Palace Hotel, Tokyo, along with Mr. Gengo Tsuboi and Mr. Takao Tsuji and a few IAPH staff members.

80th Birthday

Dr. Chujiro Haraguchi, immediate past president of I.A.P.H. and Mayor of Kobe, celebrated his 80th birthday November 12, 1969.

Dr. Haraguchi first became Mayor of Kobe November 30, 1949 and has held the position for 20 years until this year. At the end of the 5th terms as Mayor of Kobe this November, he renounced his candidacy for re-election. As Mr. Tatsuo Miyazaki was elected new Mayor November 14, Dr. Haraguchi resigned from his mayorship November 19.

In his relation with I.A.P.H., Dr. Haraguchi is an ex-officio member of the Executive Committee, besides being an Honorary Member.

AAPA 58th Convention

The American Association of Port Authorities, Inc. held its 58th annual convention at the Fairmont Hotel in San Francisco from October 26 to 30. Rae F. Watts, Director of the Port of San Francisco, was elected president of the Association October 30.

Also elected to serve concurrent one-year terms were Jan Oenes, Harbourmaster at Curacao, N.A., first vice president, George M. Baldwin, General Manager, Port of Portland, Oregon, Commission, second vice president; and James W. Davis, Executive Director, North Carolina State Ports Authority, third vice president.

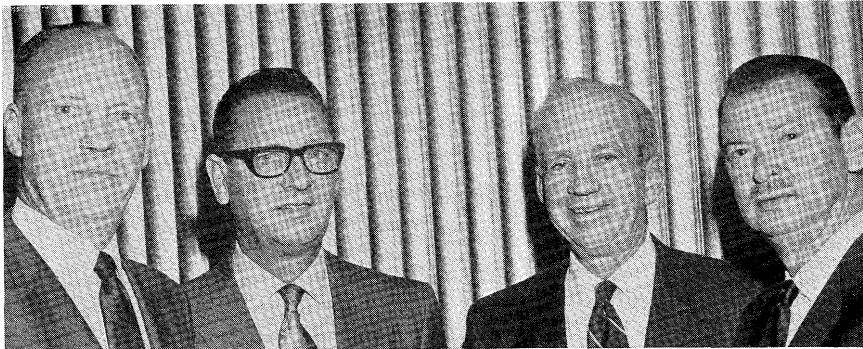
Youngest Port Director

Duluth, Minn.:—C. Thomas Burke has been appointed Executive Director of the Seaway Port Authority of Duluth and, at 36, thus becomes the youngest port director in the United States.

The appointment was announced by Conrad M. Fredin, Duluth, President of the Seaway Port Authority Board of Commissioners, and is effective Dec. 1.

Burke has been Assistant to the Director of Port Commerce for the Port of New York Authority for nearly three years. No stranger to the Great Lakes area, he headquartered in Cleveland, Ohio, for 10 years while engaged in traffic work prior to joining the New York

New AAPA Officers



These four port leaders will direct the programs of the American Association of Port Authorities in 1970 following their election October 30 at the San Francisco convention of the western hemisphere harbor group. From left: President, Rae F. Watts, director of the Port of San Francisco; first vice president, Jan Oenes, harbourmaster of the Port of Curacao, N.A.; second vice president, George M. Baldwin, general manager of the Port of Portland, Oregon; third vice president, James W. Davis, executive director of the North Carolina State Ports Authority. (Port of San Francisco)

Prize Awarded L.A.



The Port of Los Angeles was awarded first place for a series of advertisements entered in competition at the recent annual convention of the American Association of Port Authorities. Accepting the award, presented by Roger H. Gilman, right, immediate past president of the AAPA, is Bernard J. Caughlin, general manager of the port. The winning series, which competed against entries by 23 other major U.S. ports, was developed by Robert L. Golden & Associates, was produced under the direction of Robert G. Robinson, Port of Los Angeles public relations director.

port staff.

Fredin pointed out that despite Burke's youth, the new port director carries impressive credentials in port and traffic development and is widely known in the nation's shipping industry.

He said the appointment is consistent with Duluth's efforts to become one of the country's most aggressive world ports.

Burke was director of sales, Eastern Division, Anderson Motor Service, Inc., in Cleveland for a year immediately preceding his appointment in New York. He also served as sales and service coordinator for Trans-American Freight Lines, Inc., Cleveland, for one year, and as a traveling freight agent for The Delaware & Hudson Railroad for eight years.

A native of Albany, N.Y., Burke is a graduate of Albany Business College and Northeastern University's Institute of Transportation with a degree in business administration. He is a graduate of the Traffic and Transportation Association of Pittsburgh, Pa., College of Advanced Traffic Management and has completed graduate courses in community relations at Cleveland College of Western Reserve University.

He also holds a bachelor of laws degree from the Blackstone School of Law, Chicago, Ill., and has been admitted to practice before the Department of Commerce Maritime Administration and Subsidy Board, the Interstate Commerce Commission and the Federal Maritime Commission.

Burke presently is a member of the public relations committee, National Foreign Trade Council, Inc.; the National Defense Transportation Association; Delta Nu Alpha National Transportation Fraternity; New York Chapter of the United Nations Association of the United States of America, (Board of Directors), and Northeastern University Graduate School of International Business, Boston, Mass., (Board of Advisors).

He is a former governor of the Cleveland Traffic Club, a former vice president of the Cleveland Chapter of the Ohio Transportation Research Forum, a former



Anticipating major changes in U.S. maritime policy were three participants in the recent 43rd national convention of the Propeller Club of the United States. Thomas E. Stakem (left) of Washington, D.C. was re-elected president of the maritime association, while Congressman Thomas N. Downing (D., Va.—center) addressed the 500-person American Merchant Marine Conference in Savannah, Ga. Ralph B. Dewey (right) headed San Francisco's delegation as president of the Club's Golden Gate unit, where the 1973 convention and conference will be held. (Don Maskell Photography)

member of the Civic Advisory Committee of the Cleveland Seven-County Transportation Land Use Study, was a member of the first state-authorized board for mentally retarded children in Lorain County, Ohio, and a former director of the Cleveland Chapter of the United Nations Association of the United States of America.

The father of five children, he is married to the former Mary Joanne Burke of Albany.

Burke succeeds David W. Oberlin as Duluth port director. Oberlin has been St. Lawrence Seaway administrator since receiving a Presidential appointment this past June. Deputy Port Director Robert H. Smith has served as acting port director since Oberlin's appointment. (Seaway Port Authority of Duluth)

We're Moving

Ottawa:—The National Harbours Board of Canada will move effective October 20 from the old address (at The Humson Building, 180 Elgin Street, Ottawa 4, Ontario) to a new address at The Trebla Building, 473 Albert Street, Ottawa 4, Ontario.

We're Moving, Too

Ottawa:—The St. Lawrence Seaway Authority will be moved from its present location at Place de Ville, 112 Kent Street, Ottawa 4 to a new address at The Trebla Building, 473 Albert Street, Ottawa 4, Ontario, Canada.

The Age of Containers

Los Angeles, Calif., Nov. 17:—We live in the age of containers. Just about everything is containerized, including what we eat, what we see, what we hear and what we smell.

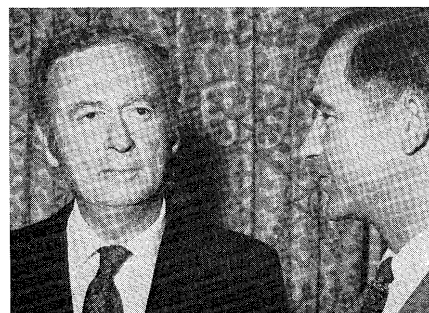
Practically all the food in the supermarket is in some sort of container. Television is contained in a cabinet, movies are contained in cans of film, music is contained in cartridges or in record albums and perfume and deodorants come in bottles and aerosol cans.

Man has put his discoveries and inventions into packages, cartons, bags, plastic bottles, tanks, vats, urns, jugs, decanters, flasks, jars, vials, barrels, drums, kegs, boxes, cases, crates, baskets, sacks and capsules.

Today, the same thing is happening in the shipping business. In fact, there is a revolution going on in cargo-handling called "containerization."

All over the world major shipping lines are switching to containers as a more practical and economical way of handling imports and exports. The revolution or transition is very much apparent at the Port of Los Angeles. Ten years ago, hardly a container could be seen. A year later, about 7,000 containers were counted at the port. And last year the number had grown to 250,000.

With two major container complexes in operation and two more under construction, Los Angeles



San Francisco—Compliments on his optimistic forecast for the American merchant marine were recently extended to Howard Pack, president of Seatrain Lines, by Ralph B. Dewey (right), San Francisco Propeller Club president. The innovative steamship line executive told an overflow maritime audience in San Francisco that America's technological leadership can assure an increasingly competitive commercial fleet without the "bureaucratic waste and inefficiency" of government operating subsidies. While subsidized construction will continue to be required, he forecast a growing portion of the "enormously exciting" container traffic will move on U.S. ships. The \$40 million exploit of the S.S. Manhattan (owned by Seatrain) was cited as assuring a major surge in large tanker construction—in part by the company's own facility, the former Brooklyn Navy Yard. Seatrain plans to build two supertankers—each over 200,000 tons. (Don Maskell & Co.)

has become an international container port.

Now, one of the world's most unique container facilities has begun operations at Los Angeles Harbor. It is Overseas Shipping Company's combination container and conventional cargo-handling terminal which was dedicated today (November 18) at the Port of Los Angeles.

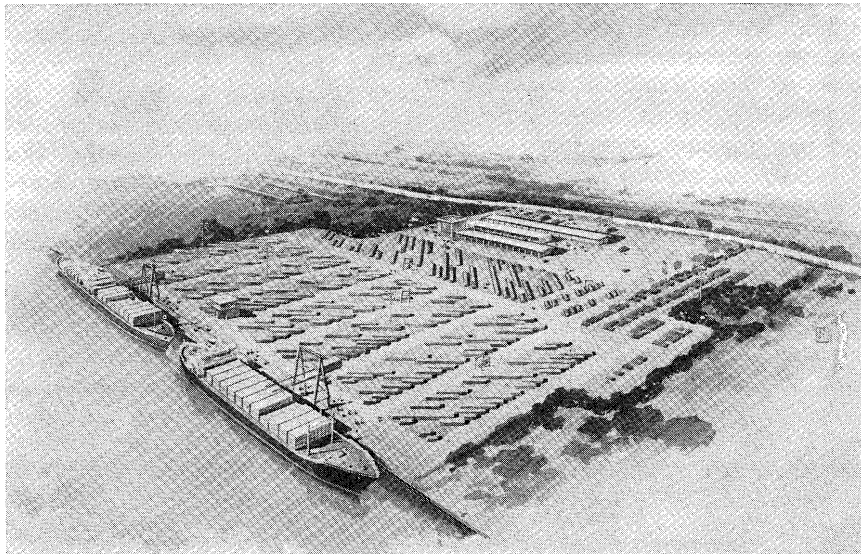
Several features make the terminal unique among its contemporaries. It is the first "tri-terminal," with facilities for conventional, containerized and bulk cargo handling. It is the first adaptation of a conventional cargo terminal to include a container handling capability, and it features the first crane to handle containerized cargo shipments from both the Far East and Europe.



San Francisco—Public announcement of the nation's first full harbor advisory radar system was made here at the 58th annual convention of the American Association of Port Authorities. Reporting to the 600 Western Hemisphere port delegates on "Radio, Radar and Golden Gate Ship Traffic" were (L. to R.) William N. Nations, Pacific Far East Line port radio officer and Marine Exchange technical adviser, Capt. William F. Adams, 12th Coast Guard District operations chief, and E. S. Olcott, AAPA committee chairman and planning chief for New York Port Authority, who moderated the session. Adams and Nations described the joint Coast Guard—Marine Exchange program going operational in November which ties a regional VHF radio-telephone vessel "plot" system to a central San Francisco Bay, government-operated shore advisory radar service. Some 10,000-plus annual Golden Gate ship transits—and intra-system movements—are expected to benefit from the two-year test program, results of which may find national application at other U.S. ports, Adams said. New operations manuals were distributed at the four-day AAPA conclave. (Marine Exchange of the San Francisco Bay Region, 10/30/1969)



San Francisco—Friendly competitors who join hands when seeking improvements of California harbor projects are Rae F. Watts (left), San Francisco port director, and Lawrence L. Whiteneck, chief engineer for the Port of Los Angeles, who succeeds Watts as chairman of the Marine Affairs Conference. The 13-year old organization of deep draft and small craft harbors will spearhead continuing efforts for increasing federal funding of studies, construction and maintenance of Golden State channels and ports. (California Marine Affairs Conference)



Artist's rendering of Matson's new Terminal Island Container complex, now under construction at the Port of Los Angeles, illustrates how the 50-acre facility will utilize land and orient to the harbor's main channel, with buildings in backland area, control tower near edge of wharf and container cranes dockside. Complex will be completed in the fall of 1970. (Port of Los Angeles)

The container crane itself is unlike any gantry in use today in the shipping industry. A creation of Houben Industries of Los Angeles, it stands 185 feet in the air, rides on a support system (designed by the Engineering Division of the Los Angeles Harbor Department) with

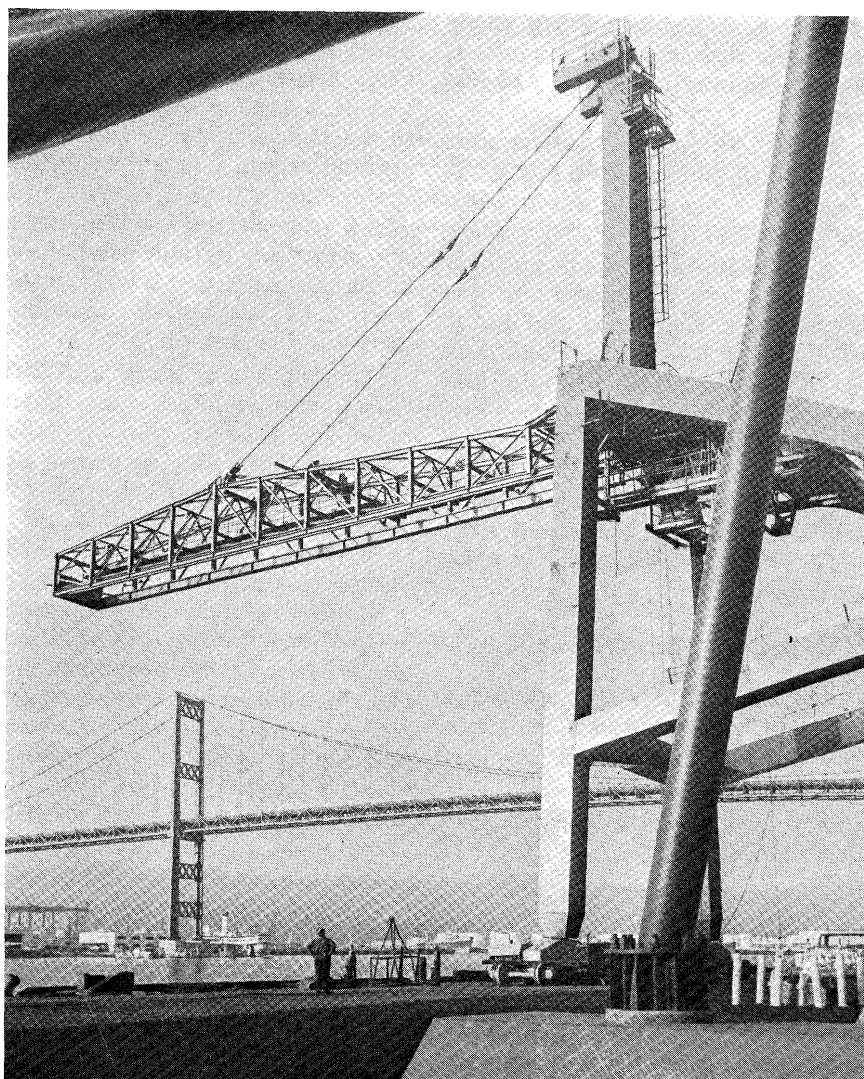
rear legs mounted on a transit building and front legs on wharf tracks, and negotiates a 45 degree turn on the wharf. It can rotate a container 90 degrees for maximum mobility and it can handle both containerized and bulk cargoes via special and unique attachments.

It cost \$900,000 to modify and modernize Overseas Shipping Company's 45-year-old port facility, including \$400,000 for the special crane. The complex includes two freight transit buildings, a new container repair building, stationary hoist for loading and unloading trucks, several straddle carriers and storage for 600 containers without stacking.

Chris Blom, president of the company, expects the new facility to handle 10,000 containers per year.

Cargoes arrive and leave the terminal in ships sailing under the flags of Norway and Great Britain. The vessels belong to the shipping firms of Barber Lines (a recent consolidation of Klaveness Line, Fern-Ville Lines and Barber Wilhelmsen Line) and Blue Star Line.

Blue Star, one of the world's largest carriers of scotch whiskey, brings into the port annually about five million bottles of scotch from Great Britain. Even special water,



The shipping world's first multi-purpose container crane was unveiled today (November 18) at the Port of Los Angeles, when Overseas Shipping Company dedicated its new terminal facilities. Houben Industries of Los Angeles designed and built the versatile lifting device, which handles both containerized and bulk cargoes to and from the Far East and Europe.



Overseas Shipping Company's new container crane and terminal facilities at the Port of Los Angeles were dedicated today (November 18) and proclaimed both "bold and unique" in concept.

imported from Scotland, arrives at the port in plastic flasks, ready for Southern California's discriminating scotch-and-water set.

Overseas' terminal receives containerized shipments of radios and tape recorders from Japan, artificial flowers from Hong Kong, frozen shrimp and lobster from Bangkok, bails of crude rubber from Singapore and about 90 percent of the scotch whiskey imported into this region.

Among Overseas' exports are fresh citrus fruit, mainly oranges and lemons bound for Europe, borax and infusorial earth. The facility also handles both imported and exported general cargo.

The next time you enjoy a scotch and water while listening to music from your transistor, before sitting down to a broiled lobster dinner that starts with a shrimp cocktail and ends with an after-dinner imported liqueur, remember it all came to you through the convenience of containers.

And the containers were probably boxed, packaged, cased and then containerized for shipment to Overseas Shipping Company's container terminal at the Port of Los Angeles . . . all a part of the new age of containerization.

France Road Terminal

New Orleans, La., November 13:—The Port of New Orleans held ground-breaking ceremonies for its new France Road container terminal on November 13.

Hon. Edward A. Garmatz, chairman of the Merchant Marine and Fisheries Committee of the U.S. House of Representatives and Democratic congressman from the state of Maryland, gave the principal address.

Governor John J. McKeithen of Louisiana and various state and city officials were honored guests at the event, at which Robert R. Barkerding, Sr., Executive General Manager of the port, was master of ceremonies.

The general public was invited to attend the ceremonies, which marked initial work on the first planned container ship facility in the Gulf. "This is our first step in putting the Port of New Orleans out front for the important contain-

er business," said Barkerding.

Con-Plex Division of U.S. Industries, Inc., will build the first container ship berth under a contract that calls for the expenditure of \$1,796,000. The port has already spent more than \$1,500,000 on site preparation.

Congressman Garmatz is leading the fight in the present Congress to revitalize the declining American Merchant Marine. In addition to spear-heading the present legislative fight to rebuild the American Merchant Marine, he has gained recognition as a watchdog in the area of marine safety. He has led the campaign to force major changes in international maritime agreements to prevent tragedies at sea.

John J. Petre, of the New Orleans City Council, represented Mayor Victor H. Schiro. Others who offered remarks from the podium were Paul V. Lacoste, president of Con-Plex; Lawrence C. Gayle, vice-president of Delta Steamship Lines; Ronald M. Katims, vice-president of Sea-Land Service, Inc., and James E. Fitzmorris, New Orleans Mayoral candidate. A taped greeting from F. Edward Hebert, U.S. congressman from Louisiana, was also heard.

Dr. Joseph S. D'Antoni, president of the Board of Commissioners of the port, introduced Garmatz. Port Chaplain Rev. Patrick Prendergast made the invocation. (Port of New Orleans)

James E. Smith

New Orleans, La., November 12:—James E. Smith, president of T. Smith & Son, New Orleans stevedores, has been named to the Board of Commissioners of the Port of New Orleans.

Gov. John McKeithen of Louisiana selected Smith from a list of three nominees submitted to him by seven New Orleans port-related nominating organizations.

Smith fills a vacancy created by the resignation from the Board of Robert R. Barkerding, Sr., who became executive general manager of the port on October 1.

Board members are non-salaried and serve staggered five-year terms. Acting Board president is Dr.

Joseph S. D'Antoni. Other members are Richard B. Montgomery, Eads Poitevent and J. Melton Garrett.

Smith, 40, is a third generation member of his family active in T. Smith & Sons, which was founded in the 1880's.

A graduate of Notre Dame University, he is a member of the Chamber of Commerce, the Board of Trade, International House and the Propeller Club. He is a past president of the Waterfront Employers Association of Greater New Orleans.

Smith's brother, Terence J. Smith, was a member of the Board from 1956 to 1961, serving as president in 1959.

"Growth" and "Potential"

San Diego, Calif., October 31:—"Growth" and "potential" were descriptive terms used by two Port officials who this week returned from a 23-day marketing and trade development mission to the Far East.

Walter A. Vestal, Chairman of the Board of Port Commissioners, and William L. Dick, Director of Community Relations for the Port, arrived in San Diego convinced that the already heavy commerce between the nations of the Orient and the Port of San Diego will increase by several percentage points during FY 69-70.

According to Vestal, considerable interest in the storage elevators of San Diego Bulk Storage, Inc., situated on the 10th Avenue Marine Terminal and scheduled for beginning of operations in December, was evidenced by Mitsubishi and UNICOOP of Japan. The latter is one of the largest grain purchasing trusts in the world. With December availability of the new storage addition at 10th Avenue, movement of feeder grains and sorghums through the Port of San Diego looms as a major factor of bulk cargo out of this port, Dick said.

Vestal commented on the great industrial potential still remaining in already remarkably westernized Japan and in the Republic of Korea which now is among the world's largest producers of finished ply-

wood, a major import across 24th Street Marine Terminal in National City. According to Vestal, continuation of a healthy building industry in the United States, a level or increasing rate in building starts, and the eventual easing of interest rates will permit the plywood industries in both Korea and Nationalist China to enter the world market even more aggressively than has been the case thus far.

While in Japan, Vestal and Dick visited representatives of United States and Japanese shipping firms, steamship lines and economic advisors of both government. Points in Tokyo, Yokohama, Osaka and Kobe were touched during the initial portion of the trip.

In Seoul and Inchon, economic advisors to President Park of Korea explained to the Port representatives that the nation will continue to expand its commercial presence. Business officials toured the San Diego team through factories recently placed in operation which produce plastic items such as toys and high-quality artificial flowers. Along with the plywood, plastic products represent commodities which currently move through the Port of San Diego and which are slated for increase in production and shipment.

Kaohsiung, in southern Formosa, along with Yokohama is a sister port to the Port of San Diego. This growing installation was toured by the visiting team, providing an opportunity to view the work being accomplished in construction of a second entrance to the harbor, Taiwan's largest and busiest port. The entrance has been created, jetties are now being placed and completion is anticipated prior to 1975.

Other promising developments were noted in the interest of major Japanese manufacturing concerns relating to coal imports. According to Vestal, a definite possibility exists for the development of major United States export trade through the Port of San Diego for the coal users in Japan.

The Port of San Diego trade mission also conferred with officials of Chinese steamship concerns on the subject of requirements for container facilities in the Port of San Diego to handle cargo which will

Strategic Location of D.R.P.A. Ports

be carried on the transpacific run via semi-container ships now in operation. Within two years full containerships, under construction for the Chinese shipping concern will be in use. According to Vestal, the Port of San Diego is continuing its efforts to create a requirement for a container facility in San Diego through constant promotion of the community and the Port to shipping lines which now conduct this specialized type of cargo handling in port cities situated at a terminus of a major intercontinental rail carrier. Prospects of a major shipping line requesting container handling equipment and facilities be made available in San Diego are as bright as they have been in several years, Vestal said. Mr. Vestal recently attended the American Association of Port Authorities convention in San Francisco. He was accompanied by Port Director Don L. Nay and other commission and staff members. The party returned to San Diego Thursday.

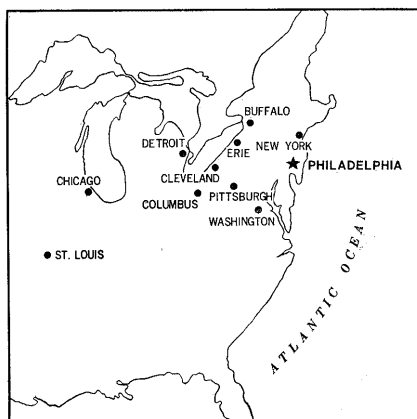
Elected Chairman

Hollywood-Fort Lauderdale, Fla.:—Port Vice Chairman Jack Clark was elected chairman of the Port Everglades Authority and Commissioner Fred Stevens was named Vice Chairman at a recent meeting of the Commission. Clark succeeds Gregory S. McIntosh who passed away two months ago. Both Clark and Stevens will serve out the year as Chairman and Vice Chairman, respectively. Jack C. Behringer, Fort Lauderdale broker and securities agent, was appointed by Florida Gov. Claude Kirk to the Port Board as the result of the vacancy. Other members of the five-man Commission are Lester E. Culverson and W. Phil McConaghey. (Port Everglades News)

Robert A. Day

Los Angeles, Calif.:—Robert A. Day, president of the Los Angeles Board of Harbor Commissioners, has been elected the Board of Directors and the Executive Committee of the Pacific Coast Association of Port Authorities, it was announced yesterday (Wednesday, October 1).

Day, a member of the Harbor



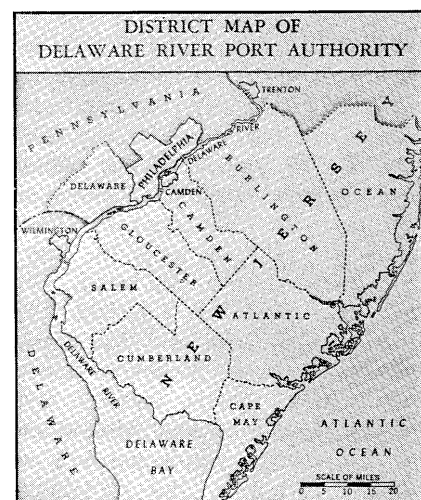
The Delaware River Port Authority is the corporate instrumentality of the Commonwealth of Pennsylvania and the State of New Jersey. It was established by Congress on July 17, 1952 as the successor to The Delaware River Joint Commission. The Authority is made up of a board of 16 com-

missioners, eight from each state. In addition to operating and maintaining the Benjamin Franklin Bridge between Philadelphia and Camden and the Walt Whitman Bridge between Philadelphia and Gloucester City, the Port Authority has constructed a transit line providing rapid commuter service between Lindenwold, Ashland, Haddonfield, Westmont, Collingswood, Camden and Philadelphia.

The Authority has underway two additional river crossings. One of the new bridges will link Chester, Pa. with Bridgeport, N.J. The other will connect Northeast Philadelphia and Delair, N.J. Both of the spans will be modern, high-level structures, permitting an uninterrupted flow of vehicular traffic and affording safe navigation to ships on the river.

Advantages of the Ports of Philadelphia to world traders

Strategic location in the "Geographic Middle" of the

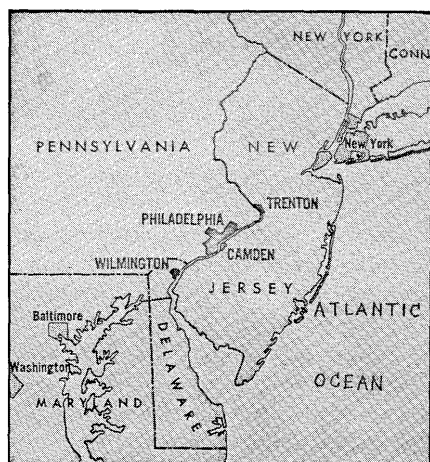


Commission since July 5, 1967, will serve in his two PCAPA posts for a term of one year. His election was one of the final actions of business last week during the Association's 56th annual convention at the Ilikai Hotel in Honolulu, Hawaii. Memberships in the PCAPA include representatives from ports in California, Washington, Oregon, Hawaii and British Columbia. The Association benefits its members and Pacific Coast marine commerce through the exchange of information relative to port construction, maintenance, operation, administration and management and the promotion of development of waterborne transportation to and from all world ports.

Day, a prominent Los Angeles civic leader and businessman who has served the City as a commissioner for nearly 12 years, became the Harbor Commission's president last July 30. Last year he was also appointed by Governor Reagan to the Southern California World Trade Center Authority. (Port of Los Angeles)

Boston-to-Richmond Megalopolis. Within Overnight Delivery of a 70 Billion Dollar Market with a 60 Million Population. Regularly Scheduled Sailings Monthly to 300 Ports in 100 Countries.

Direct Ship-to-Truck and Ship-to-Rail Cargo Transfer. Millions of Square Feet of



Covered Storage and Transit Space,
Including Refrigerated Storage.
Ample Open Storage Adjacent to
Dockside Facilities.
Export Packing and Crating Firms.
Container Service Available
at all Terminals.
Foreign Freight Forwarders and
Customs House Brokers.
Many Banks with Foreign
Trade Departments.
Thirty-eight Consular Offices.
Skilled and Efficient Labor Force.
Maritime Insurance Companies.

The Ports of Philadelphia are located on the Atlantic Seaboard at the strategic center of the greatest concentration of industry, population, wealth and productive capacity in the Western Hemisphere.

Philadelphia offers international traders a speedy route to and from the World's market places. There are regularly scheduled sailings to 300 ports in 100 countries. Four trunk line railroads serve the Port: The Penn Central Railroad, The Baltimore and Ohio Railroad, The Reading Company, and The Pennsylvania-Reading Seashore Lines. Hundreds of motor carriers take freight directly to and from dockside, traveling over a network of bridges, turnpikes, and superhighways.

A vast, rich market rings the Ports of Philadelphia—a spendable income of over \$70 billion annually within 100 miles of the Port and 60 million persons within overnight distance of Philadelphia. Overseas traders find sophisticated buyers with tastes for merchandise from every part of the world—plus the

capacity to purchase.

A freshwater harbor brought business and industry to Philadelphia. Today, the refineries, manufacturing establishments, wholesalers and retailers in the cities along the Delaware River produce huge tonnages for the Port.

Delaware Valley produces a diversity of products; steel, chemicals, machinery, textiles, petroleum products, paper, building materials, etc.—8,000 industrial establishments in the immediate Greater Philadelphia area with over 35% of U.S. industrial capacity located within 400 miles of the Ports of Philadelphia.

There is room on the waterfront for further industrial expansion. Land along the banks of the Delaware is level and lends itself easily to industrial construction. The River furnishes an unequaled fresh water supply for homes and industry. Available power and fuel, a skilled labor force, progressive government, and excellent living conditions round out a picture of opportunity for industry with both domestic and overseas markets.

Division of Port Development

The development of increased commerce for the Ports of Philadelphia is a responsibility of the Delaware River Port Authority. At Camden headquarters the Division of Port Development carries on port planning, industrial development, traffic, research and promotion activities. Regional Trade Development offices are located in Philadelphia, New York, Pittsburgh, Washington, Chicago, London, Brussels and Tokyo offices of the Authority are staffed with experienced staff members eager to provide shippers with assistance and information on facilities and services of the Ports of Philadelphia.

Vice Chairman

Chittagong:—Commodore M. A. K. Lodi, T., P.K., Imtiaz Sanad, P. N., Naval Officer-in-Charge, Chittagong and Trustee on the Board of Trustees for the Port of Chittagong, has been elected unanimously as Vice-Chairman in the

Board's meeting held on 17-7 1969 for the next term of the Board, i.e. up to June 30, 1970.

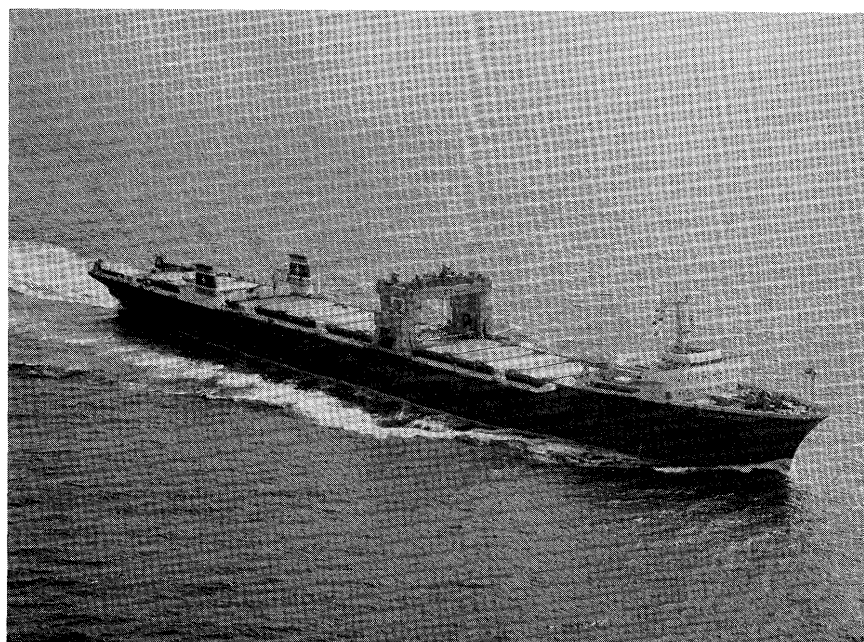
Commodore Mujeeb Ahmad Khan Lodi joined the Royal Indian Navy in early 1943 and has to his credit over thirteen years of service at sea from Motor Torpedo Boat to a Cruiser. He has to his credit another thirteen years of shore service which he spent in various important shore appointments including the 1st ADC (Flag Lieutenant) to 1st Pakistani C-in-C, Naval Advisor to Pakistani High Commission in London, and Naval Secretary to Vice-Admiral S.M. Ahsan, H.Q.A., S.P.K., D.S.C., Commander - in - Chief, Pakistan Navy. He brought the 1st Minesweeper under the U.S. Aid Programme from Seattle (Washington) U.S.A. through Panama Canal and Suez in 1955. He has commanded Destroyers, Destroyer Divisions and was in command of P.N.S. "BABUR", the Navy Cruiser, during 1965 Indo-Pak War. The ship took part in Dwarka and other important operations.

Commodore Lodi is a specialist in Torpedo-Anti Submarine and other under-water warfare. He has done Joint Services Staff Course in U.K. and other important courses in U.S.A. and abroad. He holds the decorations of Tamgha-e-Pakistan, Sitara-e-Harb, Tamgha-e-Jang, Tamgha-e-Difa with Clasp Kutch, Imtiaz Sand, Pakistan Independence and Pakistan Republic, Coronation, 1935-45 Star & Victory Medals.

He was born in June 1924 in a small village near Jullandhar (East Punjab). He completed his education in Cawnpore and Allahabad where his parents spent most of their time. He took his Intermediate Science from Christ Church College, Cawnpore, and for B.Sc. Degree he joined the Allahabad University.

He took over as Naval Officer-in-Charge, Chittagong, on the 31st May, 1969.

World's First LASH Ship



The world's first LASH ship, m.v. "Acadia Forest", 43,000-ton d.w., which had been under construction for A/S Moslash Shipping Co., Norway, in the Uruga Shipbuilding Yard, Yokosuka, of Sumitomo Shipbuilding & Machinery Co., Ltd., was completed, and delivered September 27, 1969. The vessel has the world's largest capacity (510 short tons) shipboard gantry crane for loading and unloading lighters. The vessel will be placed under a long-term charter to Central Gulf Steamship Corporation, U.S.A., to sail between the U.S. and Europe for carrying the products of; International Paper Company, U.S.A. Sumitomo has another LASH ship of the same type on order for A/S Mosvold Shipping Co., Norway. (Sumitomo Shipbuilding & Machinery Co., Ltd.)

1. The Out Line of LASH System

LASH system is a patent developed by Lash Systems Inc. of the United States. This system consists of the ship component, the massive gantry crane component and the series of lighters. Briefly, the system may be said to be akin to containerization system in some points, lighters with cargoes can be loaded and unloaded as they are. And it may be said "door-to-door" transportation system that can send cargoes from the shipper's to the consignee's wharf without any transshipment.

2. The Outstanding Features of LASH System

- (1) Cargo handling operations can be done irrespective of the water depth and congestion of

a port.

- (2) Realization of the door-to-door delivery.
- (3) Reduction of the cargo work time.
- (4) Mixed cargoes can also be handled at the same time in the cargo work.
- (5) Saving of cargo handling cost.

3. The LASH Ship

- (1) The type of this ship is single deck, forward accommodation, machinery aft or semi-aft, and side stacks.
- (2) Longitudinal bulkheads partition, the holds for stowing lighters and the wing tanks.
- (3) At the stern there is arranged a crane supporting part of cantilever type designed for car-

rying out lighter cargo work.

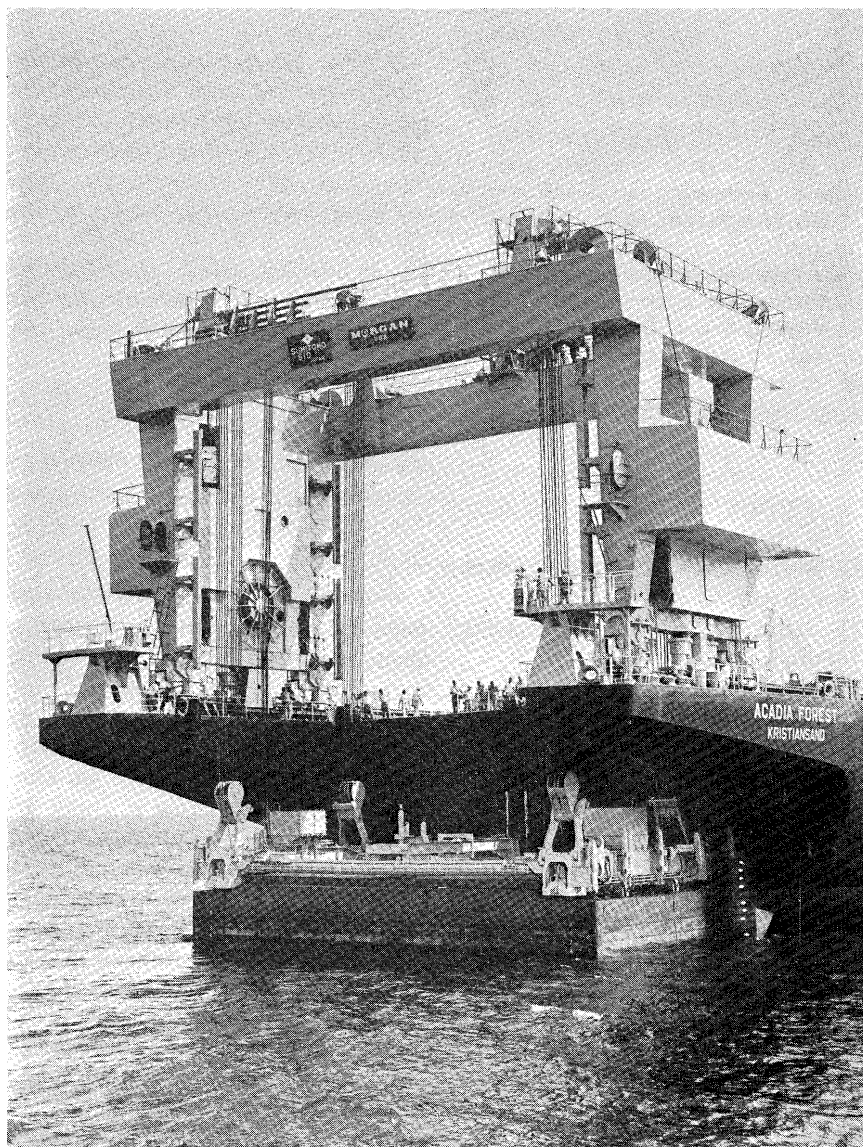
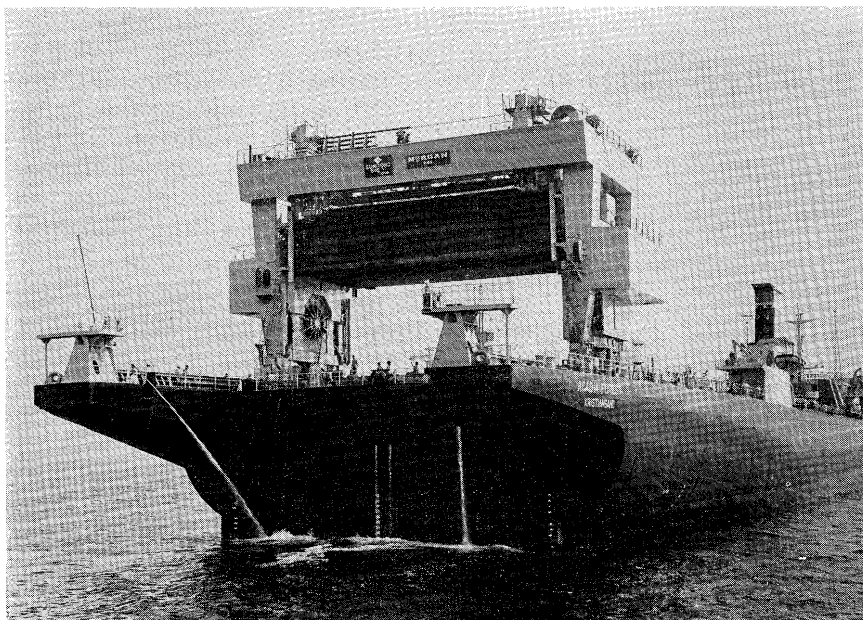
- (4) Lighter cells are provided with strong vertical guides, the double bottom with sockets to receive corner posts of lighters, and being arranged a walk way for convenience of inspection and maintenance of lighters stowed.
- (5) Having a large single piece steel pontoon type hatch cover, metal fittings are provided on top for keeping lighters in layers, and also strong metal fittings to the hatch coaming for tightening up hatch cover.
- (6) Equipped with 510 short-ton gantry crane for loading and unloading of lighters and handling of hatch covers.

4. The Cargo Handling Equipment

For the barge carrier, one of the most important outfitting should be cargo handling equipment, of which the focal point is pinned on the problem that how economically and safely the cargo work should be executed in the wavy outside of a port in connection with the lighters whose weight and volume are far surpassing the common sense of the conventional cargoes.

This ship is equipped with a LASH lighter gantry crane having a hoisting capacity of 510 short-tons developed by Morgan Engineering Co. of the U.S., and manufactured by our firm.

Respectively for traveling and loading or unloading operations, there are provided separately four motors and even if two of the four failed to function it is rendered possible to continue running and performance of loading/unloading. One duty cycle of the crane is about 15 minutes. There is provided a load frame, which is corresponding to the spreader of container crane, having a latching device of hydraulic mechanism, thereby enabling to grip lighters and hatch covers. Still further, there are provided such provisions as an automatic holding device designed to catch and hold the lighter at the stern of the ship even when the relative movements happened to



the ship and lighter, and also a swell compensator for use when the lighters are in rocking movements on the water.

Main Particulars (Gantry Crane)

Hoisting Capacity:	510 s.t.
Span:	21.336 m
Overall Height:	19.965 m (from top of rail)
Hoisting Speed:	Approx. 13.5 ft./min.
Traveling Speed:	Approx. 200 ft./min.
Voltage:	4,160 volts AC

5 The Lighter

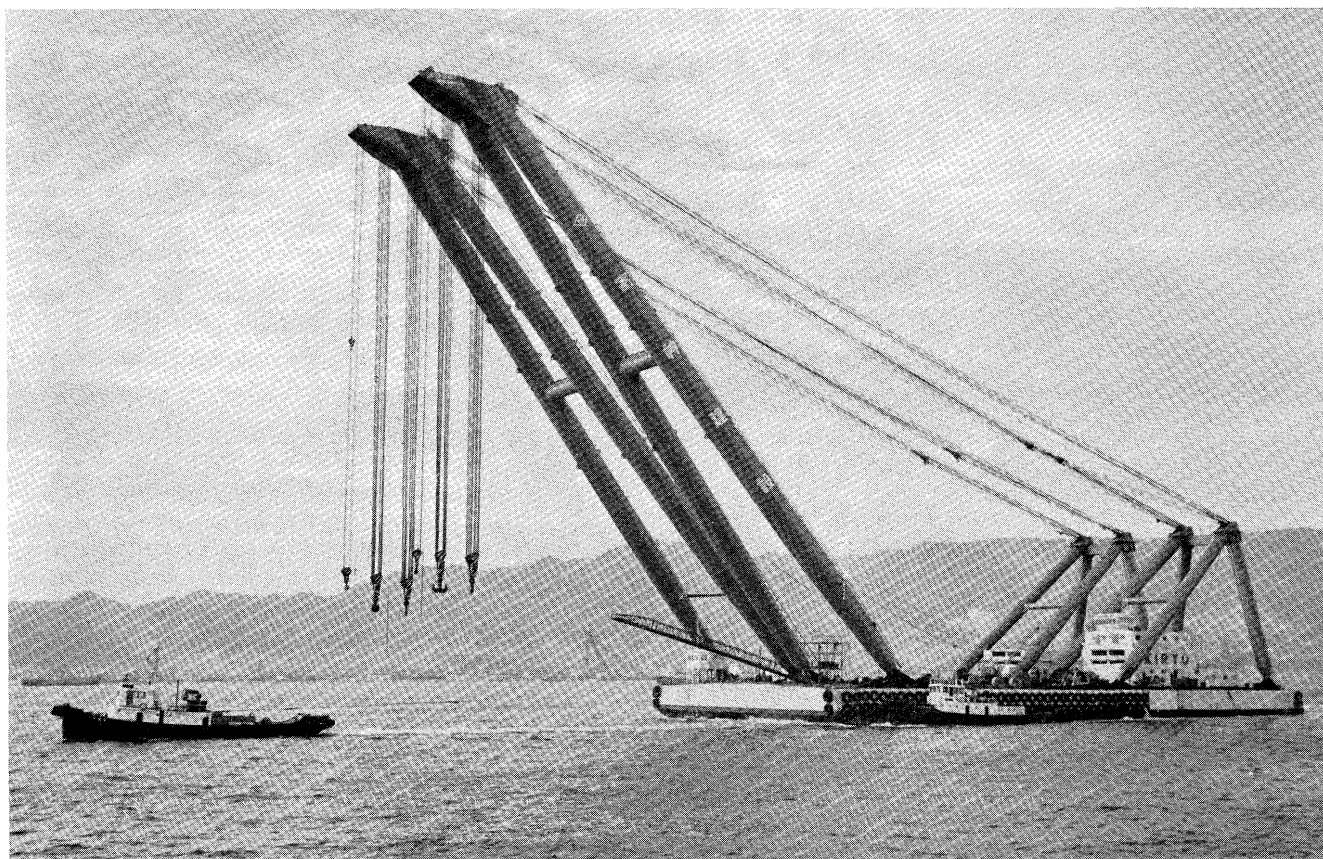
The LASH lighter is a box-type lighter. Being arranged double bottom and fore and aft voids, a consideration is paid so as to protect cargoes from sustaining damages due to siding to pier or running aground. The hatch way is of a large opening, being provided with a strong post at each corner, and those posts will be used for stacking up when stowing on the lighter. To the top of post, there is provided a hole wherein the hydraulic latching rod of load frame is to be inserted, thereby facilitating the corner work to a great extent. At the corners of the deck, there is arranged the "Barge Make up System" of Blackburn Instrument Co., thus due consideration is being paid so that the barge line system may be incorporated without any difficulty. This lighter has a ventilation cap respectively at its fore and aft, and by means of flexible hose connection is established with the ventilation during navigation.

The lighters of this LASH ship are now under construction in the U.S.

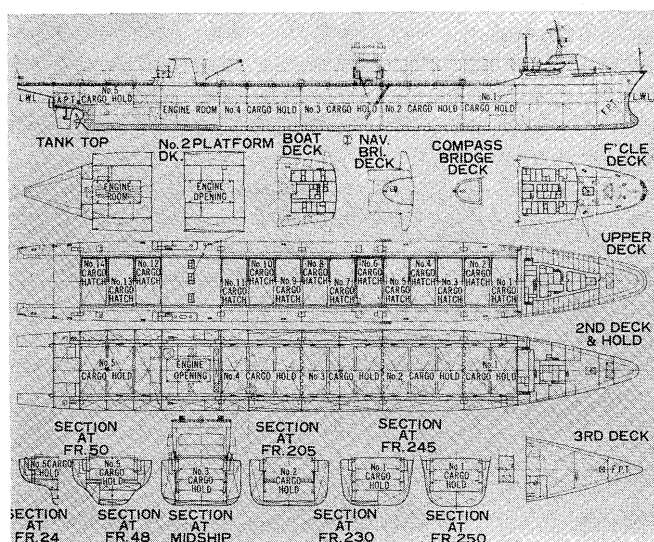
Particulars (Lighter)

Length (o.a.):	18.745 m
Breadth (o.a.):	9.50 m
Depth (o.a.):	4.30 m
Max. Cargo:	370 t
Cargo Capacity:	19,500 Bale cu. ft.
Hatch Size:	13.41 × 7.93 m

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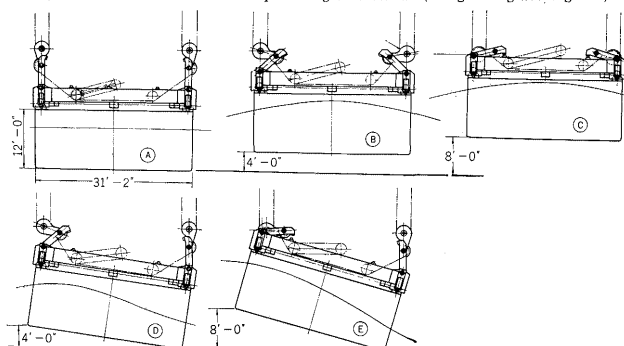
The world's largest 2,000 t. floating crane "Kiryu" was completed in November 1969 at Uraga Dock Shipyard at a cost of ¥1,150,000,000 and was delivered to the owner, Yorigami Maritime Construction Co., Ltd. in Kobe. The company already owns a 1,000 t. floating crane, and the new crane will further speed up concrete caisson sinking operations in the Port of Kobe, especially in connection with the construction of the Port Island.



Main Particulars (m. v. Acadia Forest)

Gross Tonnage	36,861.97 T
Deadweight	43,517 LT
Length (b.p.)	234.0 m
Breadth (moulded)	32.5 m
Depth (moulded)	18.29 m
Draft (moulded)	11.25 m

Illustration of the swell compensating mechanism (Morgan Engineering Co.)



(A) Ordinary Condition. (B) Lighter is raised 4 ft. in its entirety. (C) It is raised further to 8 ft. (D), (E) Respectively one side is raised 4 ft. and 8 ft. The compensator can respond to the movements in 5~7 seconds.

Main Engine	Uraga-Sulzer Diesel Engine 9RND90 MCR 26,000 PS at 122 rpm 1 set
Speed	Trial 20.69 knots Service 19.13 knots
Cargo Handling Equipment	510-short ton LASH Lighter Gantry Crane 1 set

Europe-Africa

No. of Lighters on Board	73
Classification	NV
Construction Date	
Keel-laying	December 3, 1968
Launching	April 3, 1969
Completion	September 27, 1969
Hull No.	918
(Sumitomo Shipbuilding & Machinery Co., Ltd.)	

Change in Management

Edinburgh, 13th Oct.:—The Forth Ports Authority at their Board Meeting held on Monday, 13th October 1969 made certain changes in the management structure, these being as follows:-

Mr. I. H. McDonald, Chief Accountant, has been appointed Secretary and Chief Financial Officer. Mr. T. W. Cowan, Deputy Chief Accountant, appointed Chief Accountant.

This reorganisation was agreed following a report prepared by Messrs. Urwick Orr & Partners Ltd., Consultants to the Board. The reorganisation has been made to allow Mr. A. Balfour Kinnear, who will now be designated Chief Executive, to be relieved of certain secretarial duties and afford him more time to carry out the administrative policies of the Board.

The Authority were also advised of the appointment to the Board by the Ministry of Transport of Dr. David Blair Watt, Scottish Co-ordinator, B. J.P. Chemicals Limited, in place of Dr. W. B. Peutherer, who recently retired due to ill health. (Forth Ports Authority)

Lock Being Closed

London, 6th October:—The Port of London Authority announce that as from close of business on Friday, October 10th, 1969 the Western Entrance lock to the Royal Victoria Dock will be closed to all traffic. From this date all barge traffic for the Royal Docks will be dealt with at the Gallions and King George V Lock Entrances.

The P. L. A. originally planned to close the Entrance from May 1st, 1969 but after representations from the Association of Master Lightermen and Barge Owners and the Trade Unions concerned agreed to defer the closure for three months to enable the lighterage trade to demonstrate their willingness to contribute towards the cost of the facility by making a payment for each barge movement. Since this trial began traffic has declined to a point where the continued operation of the Lock cannot be justified.

The Lock will be maintained for the time being. (News from PLA)

London Salvage Fleet

London:—The second new vessel to be built for the Port London Authority's salvage fleet this year was launched today (25th September) from the Wivenhoe slipway of her builders, James W. Cook & Co. (Wivenhoe) Ltd.

The vessel is "HOOKNESS", which is sister ship to "CROSSNESS" launched from the same yard on 20th January this year. These two vessels represent a £400,000 programme to replace three ageing P.L.A. salvage craft, whose tasks the new vessels will perform more efficiently as well as providing the most up-to-date facility for all kinds of salvage and underwater work required in a modern port.

The naming and launching of "HOOKNESS" was performed by Mrs. G. A. Wilson, wife of Mr. G. A. Wilson who retired last month from the position of Director of Engineering of the P.L.A. In this position he was responsible for the major tasks of reconstruction and re-equipping of the port in the post-war years and it was fitting that Mrs. Wilson should launch the vessel, which completes the modernisation of the salvage fleet.

The two ships were designed by the P.L.A. Engineering Department and combine the best features of diesel, hydraulic and electric power. They have special auxiliary equipment for the laying and overhauling of mooring screws. A unique

feature of each is the deck mounting of a Coles Hydra 150T FB selfcontained crane with a telescopic jib extending to 50 ft and which has a maximum lifting capacity of 15 tons.

The vessels, which have an overall length of 127 ft. 6 ins., are each capable of lifting 120 tons over the bow horn sheave and both have two side sheaves with individual capacities of 60 tons.

The P.L.A. now has a first class capability and expertise for dealing with marine casualties and maintenance work within the Port of London and will also consider requests for this kind of assistance outside their own port limits. (News from PLA)

ICHCA-U.K.

London, 15th October:—In 1968, the United Kingdom National Committee of the International Cargo Handling Co-ordination Association sponsored a Scholarship Scheme which enabled Supervisors and Foremen of Corporate Members of the Association to see at first hand the operation of continental ports. The Scholarships were awarded to Supervisors who had undergone some formal training (such as the training schemes organised by the National Ports Council or the National Association of Port Employers) and were intended as an extension to such training.

From the points of view of the candidates and their Employers, the 1968 scholarship awards were tremendously successful and the benefits of the scheme were endorsed by the high quality of the reports submitted by each candidate in connection with the specific project studies.

In view of the success of last year's awards, the U.K. National Committee has decided to sponsor twelve similar scholarships for 1969.

The candidates, divided into four parties, will spend the working week commencing 20th October, 1969 in Antwerp, Bremen, Gothenburg and Rotterdam. Each visit will commence with a general tour of the

port facilities and for the remainder of the time, candidates will be attached to and work with their opposite numbers in the respective ports. In addition, each candidate has been given a specific project to study which will be the subject of a written report on return to the U.K.

The scholarships include all travel, accommodation and out-of-pocket expenses, the necessary arrangements having been made by the U.K. National Committee of I.C.H.C.A. in conjunction with their counterparts in the host countries.

Details of the 1969 awards, which were made to be as widely representative of the membership interests of I.C.H.C.A. as possible, are as follows:—

- J. T. Byrne
British Transport Docks Board
(Antwerp)
- F. M. Harris
Ben Line Steamers Ltd.
(Antwerp)
- R. O. J. Stiff
Port of Bristol Authority
(Antwerp)
- M. Bruder
Liverpool Maritime Terminals Ltd. (Bremen)
- S. W. J. Long
Port of London Authority
(Bremen)
- K. G. Petrony
British Transport Docks Board
(Bremen)
- J. G. Anderson
Currie Line Ltd.
(Gothenburg)
- G. L. Casson
British Railways
(Gothenburg)
- J. Smith
British Road Services
(Gothenburg)
- G. S. Duell
Port of London Authority
(Rotterdam)
- M. Eden
A. E. Smith Coggins Ltd.
(Rotterdam)
- M. Whyman
Imperial Chemical Industries Ltd. (Rotterdam)
- For further information please contact:—
A. J. V. Merritt,
Secretary,
I.C.H.C.A.,

P.O. Box 1,
29 High Street,
Yarm,
Yorkshire.
Telephone No.
EAGLESCLIFFE 28233

Navigation Service

London, 5th November:— The third stage of development of the Port of London Authority's Thames Navigation Service and radar coverage of the River Thames was brought into commission on 1st November, 1969. Plans for this were announced in October 1968 when it was said that the project, costing £180,000 will give the most up-to-date navigational communications system and radar surveillance of any British port.

The scheme has meant the enlargement of facilities at PLA TNS (Thames Navigation Service) Centre at Gravesend, with links to new radar stations at key points on the Thames above Gravesend, covering the busy shipping sections of the river. PLA have also built a new River Services base, called Thames House, between Gallions and King George V Lock Entrances to the Royal Docks in which is included an operations room for a Sub-Centre for TNS..

From 0001 hours on 1st November, 1969 the operational re-organisation of PLA TNS took effect.

TNS Centre at Gravesend (call sign 'GRAVESEND RADIO') now has operational responsibility for about 60 miles of the river from Crayfordness to the seaward limit of the Port of London, working in close association with Medway, Garrison Point Station for the estuary below Southend. Up-river, two new unmanned radar stations have been built at Broadness (opposite Thurrock) and Crayfordness (Dartford) giving extensive coverage of the busy industrial sections of the river. These new stations have micro-wave links with the Gravesend Operations Room which has been re-designed to incorporate additional radar display units, and the Crayfordness radar is also linked to Gallions. Gravesend Radio maintains continuous watch on VHF channels Nos. 12, 16, 18 and 20, issuing navigational broadcasts on channel 12

each hour and half-hour. Channel 18 will be made available on request for 'talk-through' facilities between ships and Pilots and the Port of London Health Authority. Radar coverage operated by Gravesend extends from Crayfordness to Southend.

Gravesend Centre will meet requests for actual tide heights from remote recording gauges at Walton-on-the-Naze, Margate, Shivering Sands, Southend and Tilbury.

The newly built sub-centre at Thames House, Gallions (call sign 'GALLIONS RADIO') has operational responsibility for about 20 miles of the river above Crayfordness. It maintains continuous watch on VHF radio channels Nos. 14, 16 and 22 and issues navigational broadcasts at 15 and 45 minutes past each hour on channel 14. Radar coverage from the sub-centre extends from Gallions Reach eastwards past Fords at Dagenham, and Erith to Purfleet. Gallions sub-centre will meet request for actual tide height recorded on the North Woolwich gauge which is close to the entrance to King George V Dock.

Another element in the re-organisation is the transfer of the PLA SHIPCON (Shipping Co-ordination) Centre to Thames House.

SHIPCON was set up in 1966 in the PLA Head Offices and has been steadily expanding with its telex links through the PLA Tape Relay Centre, providing instant communications between the Shipping Officer, River Department, Dock Managers and Dockmasters, during normal working hours. SHIPCON will now be continuously manned at Gallions. It collects from Shipping Companies and Agents information on all shipping movements, E.T.A.s and E.T.D.s, as required by the General Directions for Navigation, and transmits daily programmes by teleprinter links to all Pilot stations in the London area, H. M. Customs, Lloyds and Journal of Commerce. It has direct lines to Gravesend Operations Room. It will also deal with applications for buoy and tier berths in the river.

The PLA have built at Gallions a new base for their Marine Services which hitherto have been located

in various parts of the Port. From here operate their Harbour Service units for the Middle District of the River Thames, Hydrographic, Dredging, Salvage, Marine and Electronic Engineering services. This means that all emergency services are at hand and on call at one central point.

Commander G.V. Parmiter, PLA Chief River Manager, sees this rationalisation and re-organisation providing the efficiency of the various services and their co-ordination which is vital to the smooth and safe running of the Port which is receiving tankers, bulk carriers and container ships of ever increasing size, all requiring to operate to stricter time schedules. (News from PLA)

More Management Changes

London, 8th October:—Re-organisation of the P.L.A. management structure which began with the appointments, announced last month, of Mr. John Lunch and Mr. William Bowey as Assistant Directors-General has been carried a stage further by changes now made in the Management of P.L.A. Finance Department.

Mr. B. E. Sewell, Deputy Director of Finance, has left the Authority due to his ill health. There will be no new appointment to this position which now is abolished.

The P.L.A. Finance Department is now headed by a Financial Controller who is a Chief Officer and Mr. P. D. Blackburn has been appointed to the new post; he was previously Assistant Director of Finance (Development).

The work of the Development Division is now included in a re-organised Management Accounting Division headed by Mr. D. K. Baden who is appointed Deputy Financial Controller.

The Financial Accounting Division, which now includes Investment Administration, is headed by Mr. G. R. Brocklehurst who is appointed Assistant Financial Controller.

These changes continue the policy announced last August by Mr. Dudley Perkins, P.L.A. Director-General, and which is designed to

achieve greater efficiency and economical conduct of the Authority's affairs. (News from PLA)

OCL/ACT Orient Service

London, 6 November:—"Naturally we welcome the choice of Southampton for the Far East service and are going ahead with our preparations so that construction can begin on receipt of approval of our plans by the Minister of Transport.

"The new berths will comprise a substantial further stage in the development of the Western Docks Extension, at Southampton for which the Docks Board were granted parliamentary powers by the British Transport Docks Act, 1966. These powers were sought by the Board who recognised the assured growth and potential of Southampton as a major cargo port, particularly in the container field. The decision now announced is further justification of the Board's judgement and follows the selection of Southampton by Atlantic Container Lines, Belgian Marine Line and Dart Containerliner for their respective North Atlantic container-ship services."

Statement by Mr. E. G. Allan, the Regional Secretary of the Transport and General Workers Union, at Southampton.

"This is great news for the Port and will be welcomed by our membership. We have been concerned for some time about Southampton getting its share of container traffic. This is now a real start and I am confident that our Southampton dockers will give the fullest possible co-operation to provide the most efficient container service in the country. On a personal note I am delighted and will lend all my efforts to make this venture a 100% success." (British Transport Docks Board)

Southampton-Far East

1. Overseas Containers Limited and Associated Container Transportation Limited announce that they plan to handle the bulk of their container traffic between the U.K. and the

Far East, through the port of Southampton. This new container service for which the British Lines have already ordered seven vessels, is due to start at the end of 1971.

2. The terminal requirements for the service will be some 2,100 ft of new quay with associated facilities, including a large container marshalling and storage area. The British Transport Docks Board welcomes this announcement and has applied to the Minister of Transport for his authorisation, under the Harbours Act 1964, to proceed with the work.
3. OCL and ACT in arriving at their choice of Southampton, gave very careful consideration to highly competitive tenders submitted by London and Liverpool and also to factors relating to:—

(i) the size and technical and operational characteristics of the ships in relation to the port facilities that could be made available.

(ii) the geographical location in the U.K. best suited to their operational requirements.

4. The need for flexibility in an operation of this size makes it likely that ships on this service will, from time to time, call at other major U.K. ports. Further, with the continued growth of the Far East trade, it may also be necessary to look to these ports to handle some of the future traffic.
5. OCL and ACT have taken fully into account the ability of inland transport links with the Southampton terminal to handle the likely flows of container traffic and are developing their transport plans with the Ministry Transport and the Road and Rail Authorities.

(London, November 6, Terry Walsh, OCL Press Officer)



STAD ANTWERPEN
 To Mr. Thomas A. Seales,
 Port Director,
 Massachusetts Port Authority
 KARNEL VAN DE SCHEEREN
 HANDEL EN VERKEER
 In recognition of your successful activity in
 providing the interchange of trade and traffic
 between London and Antwerp, please
 accept the medal of honor of the City of Antwerp
 as a token of our gratitude and friendship.
 L. Delwaide,
 Alderman of the Port of Antwerp,
 October 1969.

Antwerp News

- At present for shippers in Antwerp there exist over 300 sailing-possibilities a month by full or semi container ships calling at 42 different overseas ports. This appears from a list compiled by the Port of Antwerp Promotion Association (Meir 21, 2000 Antwerp). On simple request free copies of this list are sent to interested persons. On the other hand the list gives an enumeration of the general cargo ships loading containers regularly. Per month those ships offer 213 shipping-possibilities to 53 different destinations. Also the RO/RO are mentioned in it (55 departures to 11 ports, of which for cars only). This list is completed by practical data about the Antwerp firms dealing with the transport, handling, leasing, repair etc. of containers.
- With the putting in commission by the Central Gulf-Contramar Lines of the first LASH-vessel, "the Acadia Forest", the Port of Antwerp becomes involved in this new kind of traffic. In view of the probable extension of this way of transport the City of Antwerp decided to adapt its port dues and to apply new tariffs: for LASH-vessels loading and unloading a maximum of

10 barges a reduction 35% on the barges, 25% for 26 to 40 barges and 20% for more than 40 barges. As to the barges themselves, the tariff of 0.45 BF per m³ will be applied when they are loaded or unloaded in the port. When handled out of the port area, a tariff of 2 BF will be applied. (Assiport, Antwerp)

Student Association

Antwerp:—The "International Association of Students of Commercial and Economic Sciences" (A.I.E.S.E.C.) is an independent non-political and non-profit organization established in 1948 grouping students of commercial and economic sciences of over 40 countries and having i.a. an advisory statute at the UNESCO.

A.I.E.S.E.C. aims—by organizing seminars and especially by the exchange of traineeships—to offer students of the economic sciences the opportunity of bringing into practice abroad their theoretical knowledge.

This exchange program includes mainly firms of international size or societies entertaining close commercial relations with foreign countries.

These firms are asked to admit a foreign student as a trainee during a 6 or 10 weeks period. The Central Office of A.I.E.S.E.C. in Geneva composed of businessmen, professors and students sees that the student meets the criteria stipulated by the firm. Also the knowledge of foreign languages by the candidate is examined.

In Belgium the association has a local committee in the faculties of economics or colleges in Antwerp, Brussels, Ghent, Liege, Louvain and Mons.

In Antwerp there exists even a master organization composed of delegates of the local committees of the two university centers and of the "Commercial University for Girls".

Last year this committee organized a Summer School Training Program dealing with the theme: "The modern port at the service of the international trade". This year's theme is: "Port policy and E.E.C.".

For this the organizing committee

obtained the collaboration of a number of Antwerp personalities and firms and also of the City Council and the Port of Antwerp Promotion Association (ASSIPORT).

In the frame of the 1969 program several transport specialists will speak. Apart from Belgian personalities qualified economists from France, Great-Britain, the Netherlands and Germany will take the floor.

This program also includes guided visits to ports and remarkable transport installations. (Assiport Press Release)

Antwerp News

- On Wednesday 25th June, the Norwegian oil tanker "Julian" with a deadweight of 93,240 tons entered the Port of Antwerp coming from Kuwait. This deadweight is a record for the Port of Antwerp. The oil tanker called at the Port of Antwerp with a cargo of 58.000 tons of crude oil.

This Norwegian unit is represented in Antwerp by the firm Newman W. H. & Son, s.a.

- With a total number of 9,072 loaded containers (transporting about 115.000 tons of goods) the month of May 1969 constitutes a record for the port of Antwerp. As usual the unloaded containers are not included in this figures.

- Cobelfret S. A. announces the rapid discharging of the English bulkcarrier "Clyde Bridge" at the installations of Stocatra. Arriving from Narvik with a 42,207 tons cargo of iron-ore this vessel was discharged in 23 hours. (Assiport Press Release)

Computer Named "Portia"

Liverpool, September 5th:—A "new girl" called Portia, with electronic brains that can store 500 million facts, was signed on by Britain's busiest export port today.

Portia is the code word for a new £600,000 computer installed by the Mersey Docks and Harbour Board, pioneers in the use of computers to aid dock development and port administration.

The Board's chairman, Mr. Joseph C. Taylor, introduced Portia, in her

1. Real Time-Processing

2. Future Work

The extension of the magnetic storage on the central computer unit, the introduction of higher capacity disks and tapes, linked with video display units at various points on the dock estate, enables information to be transmitted, quickly and correctly, between the central unit and the terminal links.

The following diagram shows a computer-orientated control of a transportation complex as applied to a hypothetical loading berth.

new blue and white computer suite, by typing the code word, short for Port Operations, Research, Transport and Integrated Accountancy. "She" chattered back instantly a message of thanks on the typewriter and flashed the same message on to a T.V.-type screen.

Two other jobs also became simultaneously operative, one using information from tapes and the other abstracting information from a multiplicity of magnetic discs.

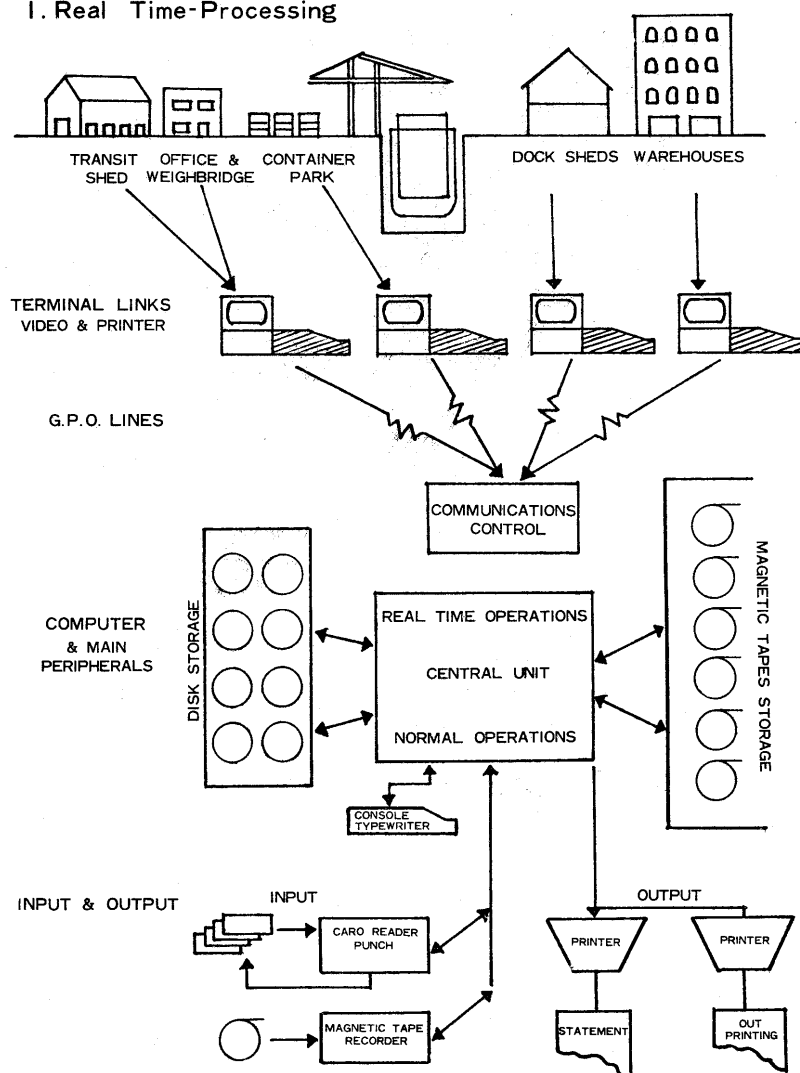
Portia, the third computer to be installed by the Dock Board, belongs to the container ship era. It will help in the operational control of the port's Gladstone Container Terminal and has been designed to assist the control of all container traffic passing through the new docks at Seaforth when they are completed in 1971.

Six IBM visual display and printing units will be located at the Gladstone Container Terminal, operating on-line to the computer installed in the Board's head office some four miles away.

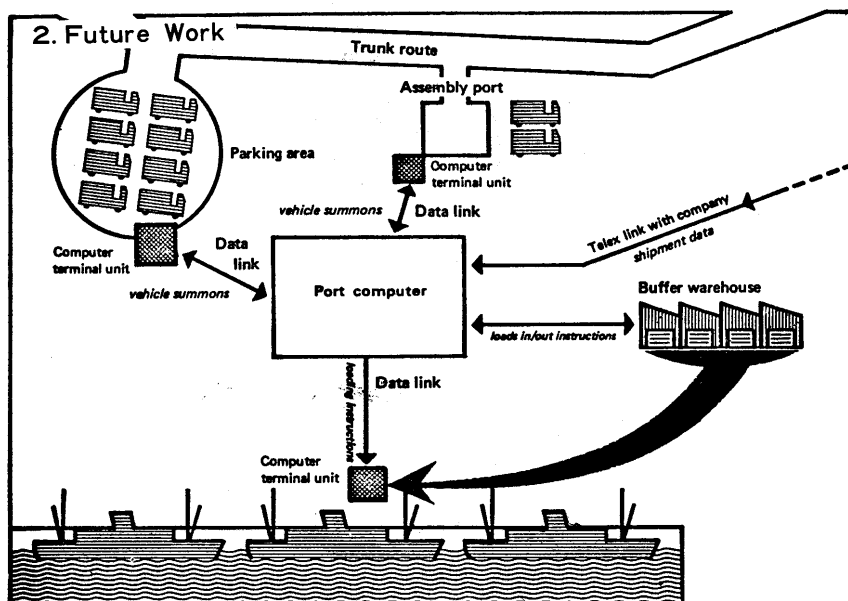
Information passing to and from the computer will help control the flow of all container traffic and give a complete visual record of operating data, contents of containers, their arrival, departure times and destinations—all the facts being available on site.

Relative extracts from this information and operating instructions for controllers, drivers, dock workers and ships' crews and the scheduling of movements of each unit from dock gate to sailing time, and vice versa, will be printed out at the

1. Real Time-Processing



2. Future Work



printer terminals.

It is expected that the new system will still further reduce the turn-round time of the container ships.

Portia will undertake intricate calculations for hydrographic survey simulations, critical path analyses for engineering works and a host of more mundane duties such as the preparation of a payroll amounting to £8 million a year; the analysis of an annual income of £16 million from some 17,000 ships and 30 million tons of cargo; the control of interest and repayment of a capital debt of more than £80 million; the allocation of pilotage receipts; and the recording of incidence of staff sickness.

The Mersey Docks and Harbour Board has scored another "first" in linking a computer to container berths and warehouses. It is claimed to be a revolutionary step in port management techniques.

The Port of Liverpool made history 10 years ago when it became the first port to instal a stored programmed computer. This first computer cost £65,000. It achieved an overall saving of about £40,000 in the first year, and the new model—trade name IBM 360/40 (128K)—is already programmed to save more than £80,000 a year.

The new system is the culmination of a plan put forward by Mr. Frank Mundy, who retires as the Board's Chief Accountant tomorrow, and his staff.

Such has been the growth of computer operations in the Board that this latest computer and its associated services will be run as a new and distinct department. Nearly 2,000 visitors from all parts of the world have called to inspect and discuss the port's computer techniques in the last seven years.

In reply to the Chairman's starting signal, Portia promised to repay the faith, hope and charity (in the form of capital) invested in me".

And the message went on to quote a passage from "The Merchant of Venice", from which Portia has borrowed her name—"The villany you teach me I will execute, and it shall go hard, but I will better the instruction..."

Pre-Booking Scheme

London, 22nd October:—A further extension to the Port of London Authority's pre-booking system for lorries tendering export cargo in the port is to come into operation on November 6th.

The lorry appointment scheme will from that date, cover exports for shipment by Ellerman and Bucknall Steamship Co. Ltd. vessels to South Africa, South East Africa, Lobito and Walvis Bay. Similar schemes have previously been introduced by the P.L.A. for services operated by the New Zealand and Fiji Conference Lines, the Australian Conference Lines, East African Conference Lines and the South African Marine Corporation (U.K.) Ltd.

The scheme provides an even flow of cargoes into the docks and also gives up-to-the-minute information on the receiving position at export berths for shippers and transport operators.

The new section of the scheme for Ellerman and Bucknall Steamship Co. Ltd. will apply to vehicles tendering export cargo at No. 13 Shed, Royal Albert Dock or any other berth from which the company may operate.

Shippers or hauliers wishing to deliver exports to the berth should telephone or telex for a booking for their vehicle. Telex and telephone numbers, which will be available between 7.00 a.m. and 7.00 p.m. Monday to Friday are:- Telephones: 01-476 4595 01-476 6265, 01-476 6266, 01-476 7667, 01-476 7777, or 01-481 2000 Extns. 95/489 & 95/490. Telex: 896816. When making a booking the following information will be required:- Port of Destination; name of shipper or carrier; brief description of load; gross weight of load; number of packages; gross weight of heaviest individual package. Vehicles will be booked to arrive within specified four-hour periods and every endeavour will be made to meet the requirements of transport operators. Pre-booking will not guarantee off-loading immediately on arrival, but booked vehicles will be given preference. Pre-booked vehicles which fail to arrive within the arranged period will be treated as un-booked vehicles.

cles.

By arrangement with Ellerman & Bucknall Steamship Co. Ltd. the closing dates for vessels will be strictly adhered to so that prompt sailings can be made. Vehicles unable to obtain bookings during the receiving period, and those unbooked vehicles which arrive after the closing date, will only be dealt with by special arrangement. Therefore, application should be made as far in advance as possible.

When the carrying line has advised the P.L.A. that the vessel is fully committed, no further vehicle bookings will be made. (The Press Office, Port of London Authority)

Portuguese Ports

Lourenço Marques:—A contract was signed with the National Laboratory of Civil Engineering (LNEC) of Lisbon for the execution and operation of reduced scale models of the ports of Beira and Lourenço Marques.

For the use of LNEC the Moçambique Harbours Railways and Transport Administration, with the specialized cooperation of the Geographic and Survey Department, the Marine Services and the Hydrographic Mission and also some private enterprizes, have been collecting and preparing the necessary field data.

These include the hydrography of ports, their estuaries, affluent rivers and bays, waves in the port, tides, liquid and solid flow and seabed samples.

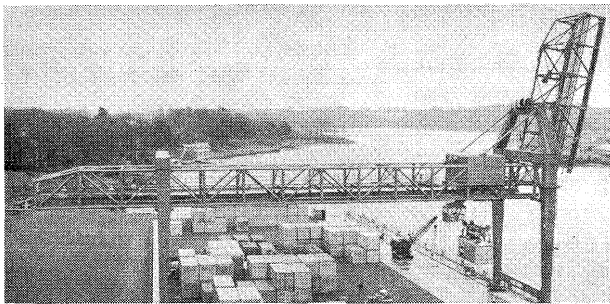
The models to which we are referring, as in the case of the port of Lisbon, also in charge by the case of the port of Lisbon, also in charge by the LNEC, will serve basically for the studies of its maritime accesses, and may also be used in all the surveys pertaining to the said ports.

For some time big efforts are being made to obtain the LNEC the necessary data for the materialization of the models, but the magnitude of the undertaking to be accomplished and the time the tests take does not permit one to establish a date which their results will be known. (Boletim Portos, Caminhos de Ferro e Transportes de Moçambique, Maio 1969)

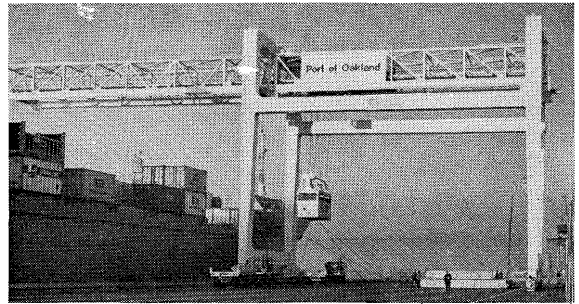
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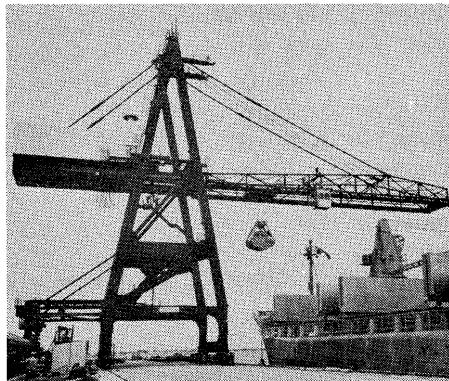
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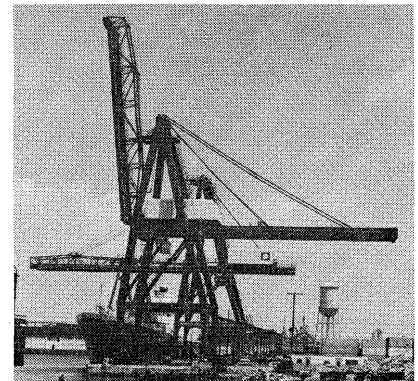
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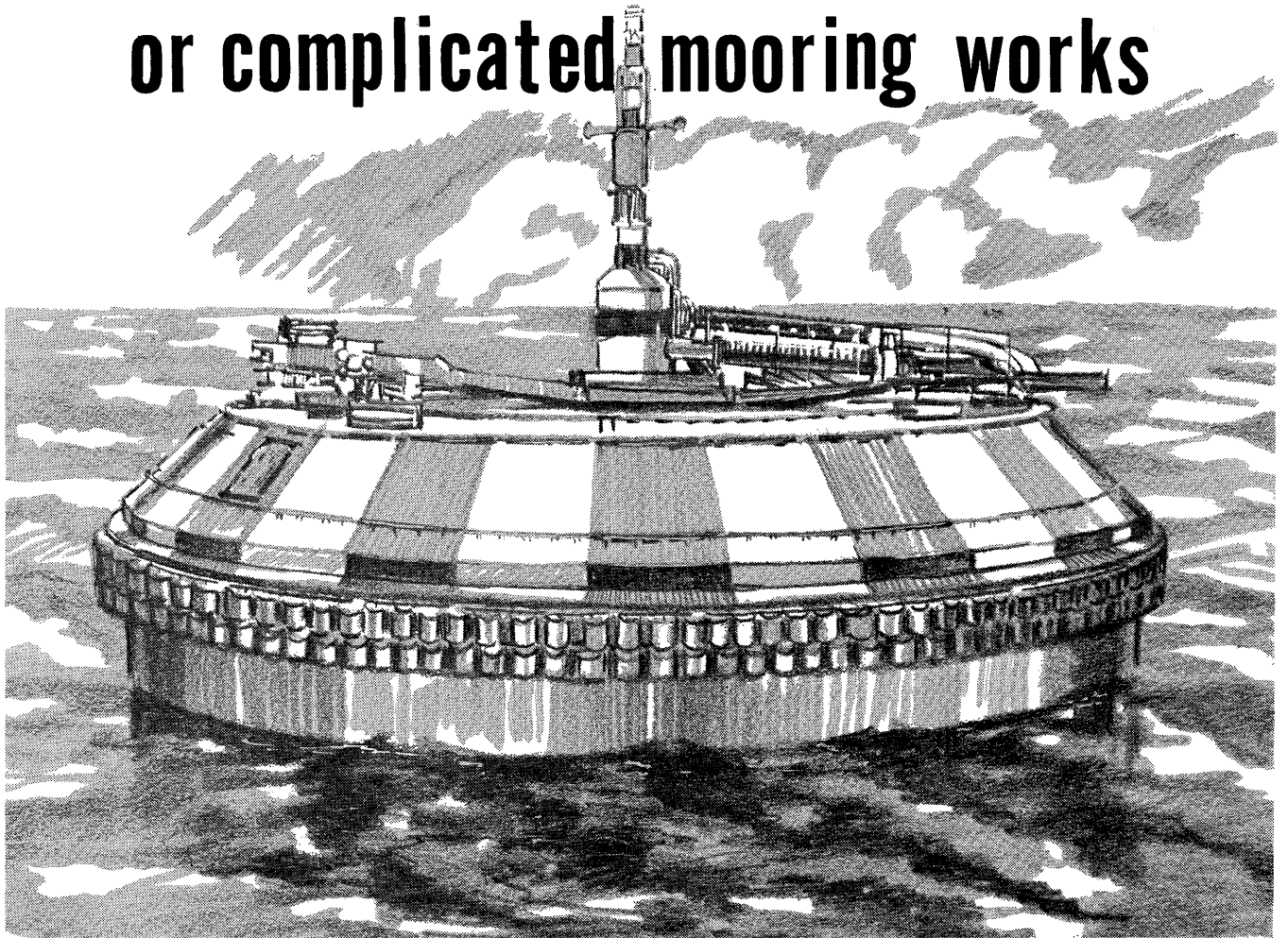
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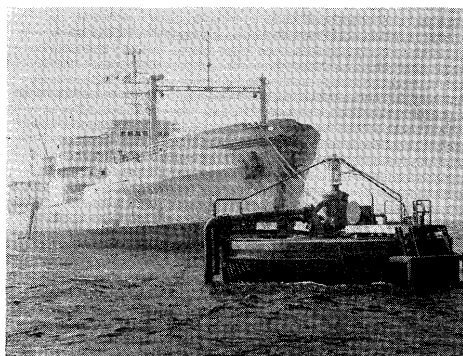
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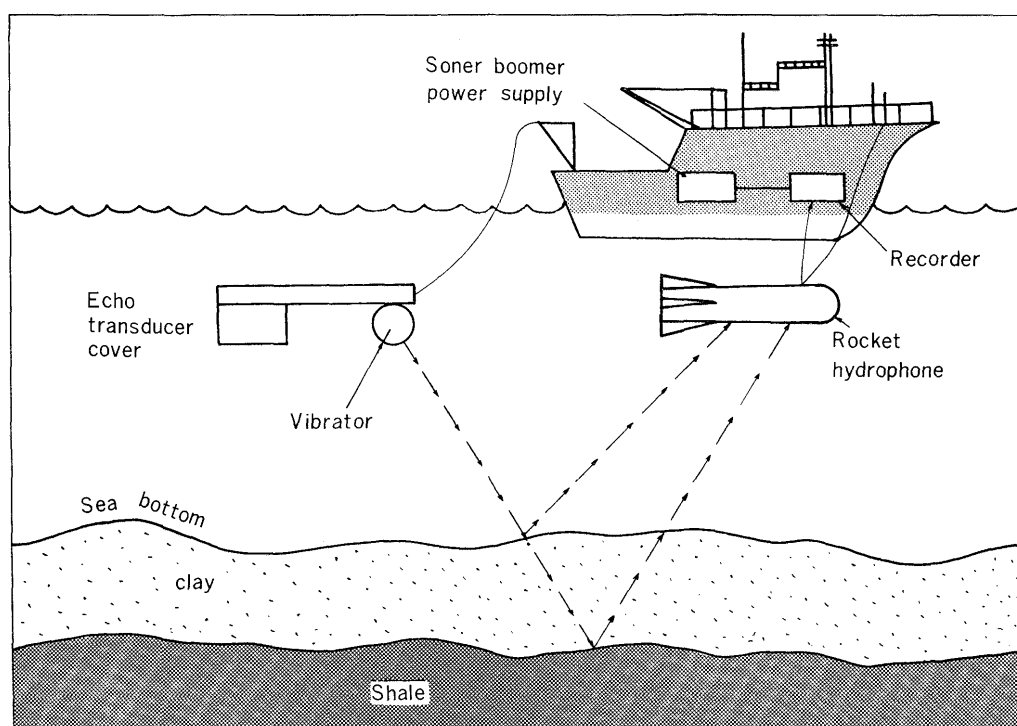


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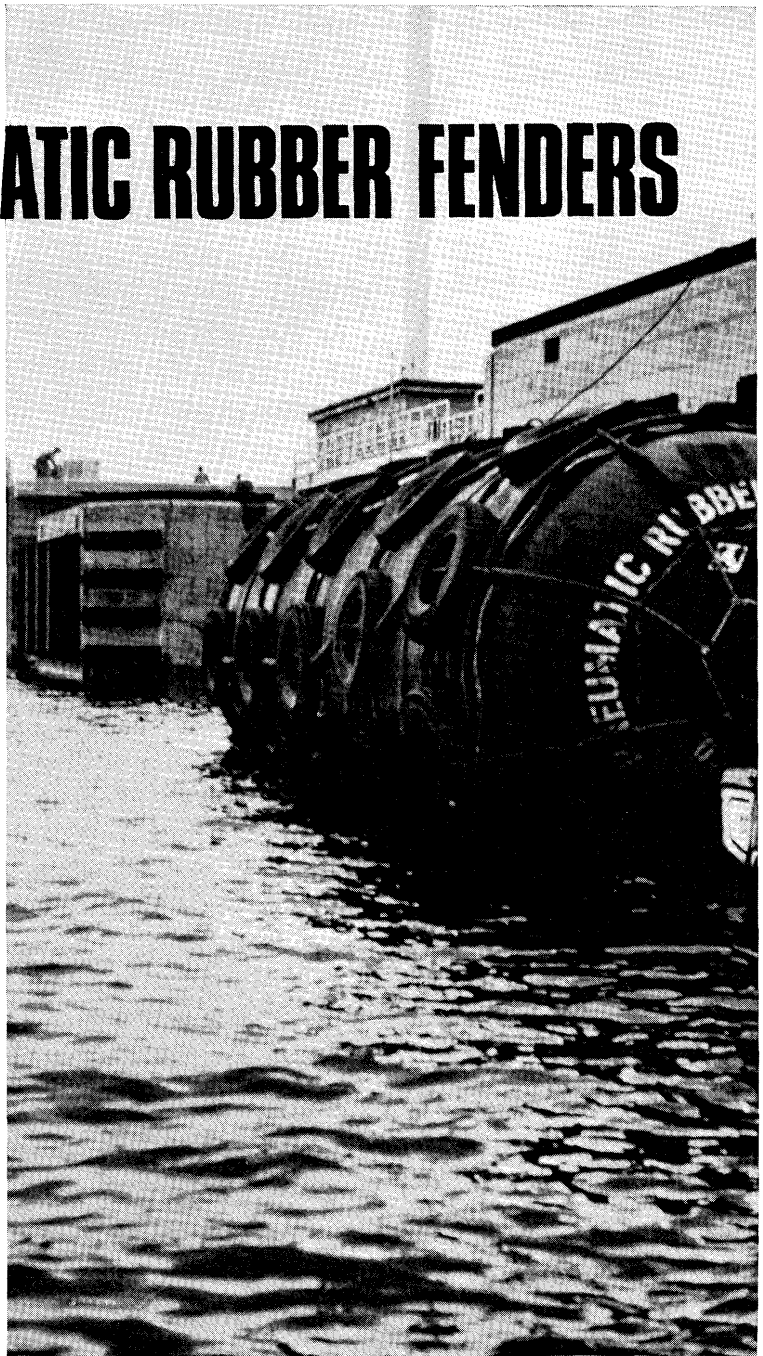
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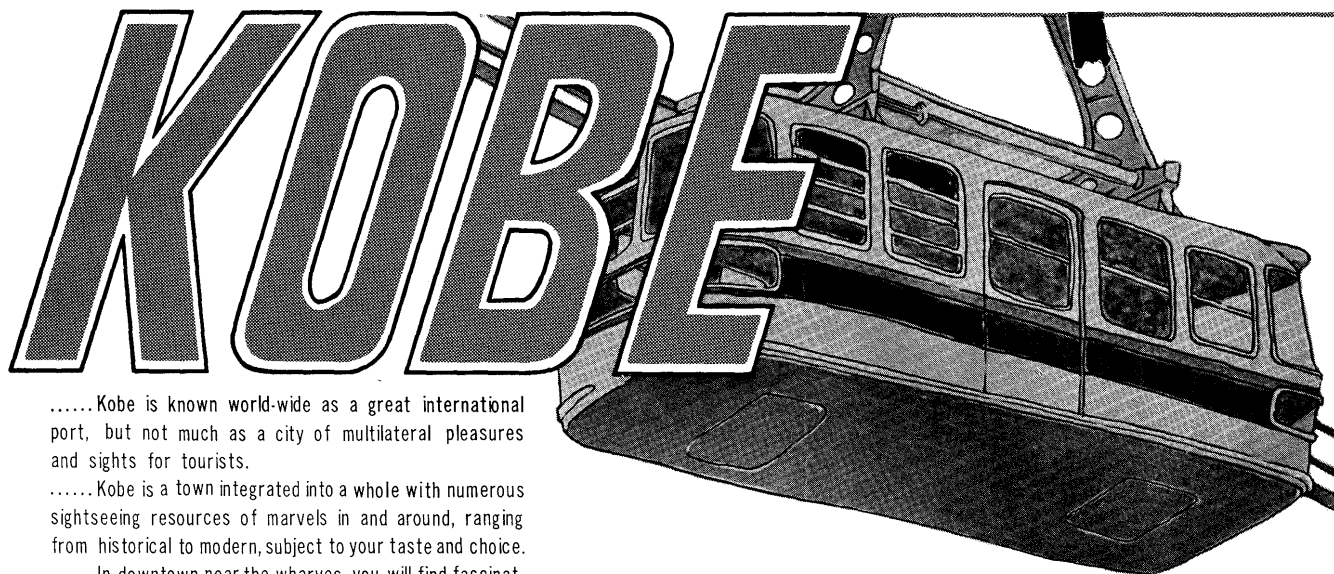
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Cable Address : "YOKORUCO TOKYO" Telephone: Tokyo 432-7111



.....Kobe is known world-wide as a great international port, but not much as a city of multilateral pleasures and sights for tourists.

.....Kobe is a town integrated into a whole with numerous sightseeing resources of marvels in and around, ranging from historical to modern, subject to your taste and choice.

.....In downtown near the wharves, you will find fascinating chic shopping arcades sprawling along both sides of the streets to puzzle you which to choose.

.....Only a 40-minute ride by car, cable or ropeway, either from your ship or your downtown hotel, will bring you up to the National Park Mt. Rokko (930 mtrs. above the sea), wherefrom you can enjoy a 10-million-Dollar view of the whole of Osaka Bay unrolling under your eyes.

.....Once you reach the mountain-top, we should recommend you a ride on a 5-Kilometer ropeway, the longest in Japan to be opened this summer, which will carry you over the rolls of mountain peaks and ravines exposing you to breath-taking views changing every moment through its descending trip to Arima Spa.

.....At Arima, the terminal of the ropeway, you may just pick out one from among many good hotels and Japanese inns with indoor hotspring, where you will be taken care of by good-natured local hosts and hostesses.

Note: For your information: Kobe—EXPO '70 Osaka (30 min.), Kobe—Kyoto (60 min.), Kobe—Nara (90 min.)

