昭和44年11月15日第三種郵便物認可　昭和46年10月号　昭和46年9月20日発行　第16巻第10号（毎月1回20日発行）

PORTS and HARBORS

October, 1971 Vol.16, No.10

Port of Helsingborg

The Publisher: The International Association of Ports and Harbors

Kotohira-Kaikan Bldg., 1, Kotohira-cho, Minato-ku,
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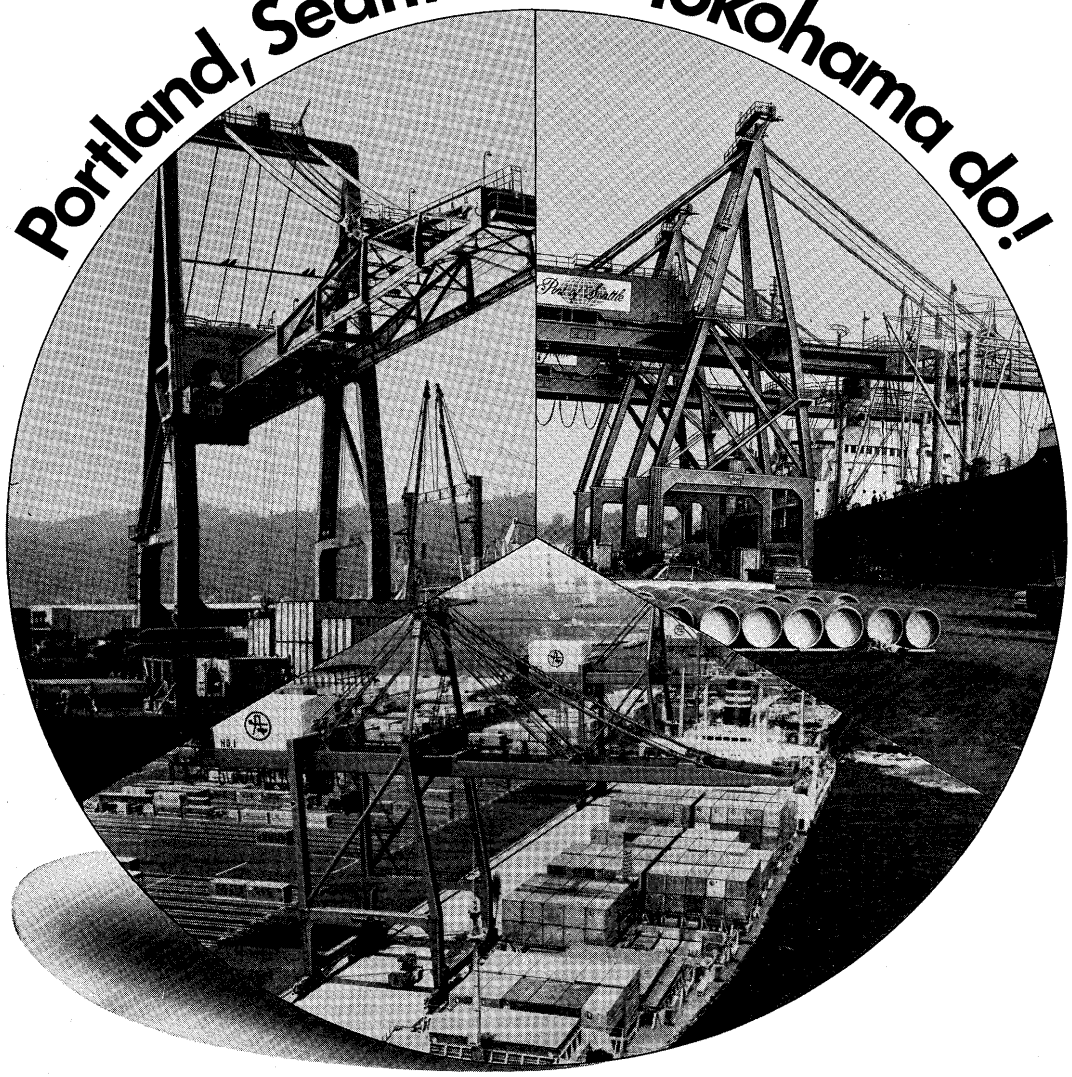

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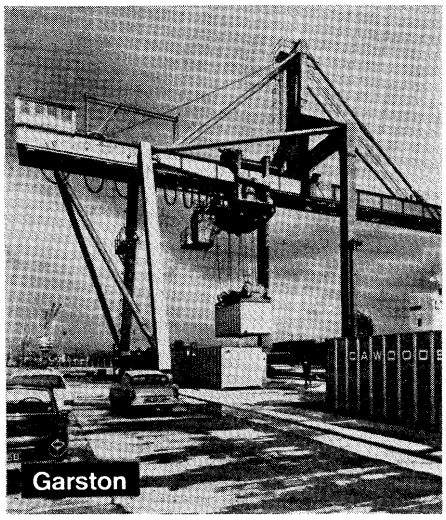

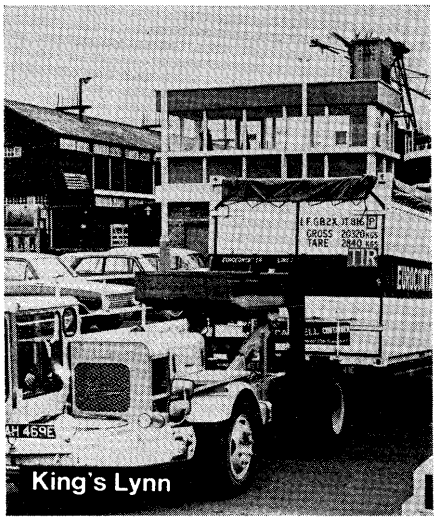

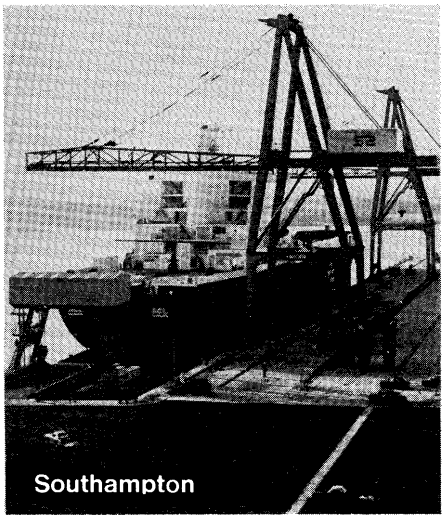

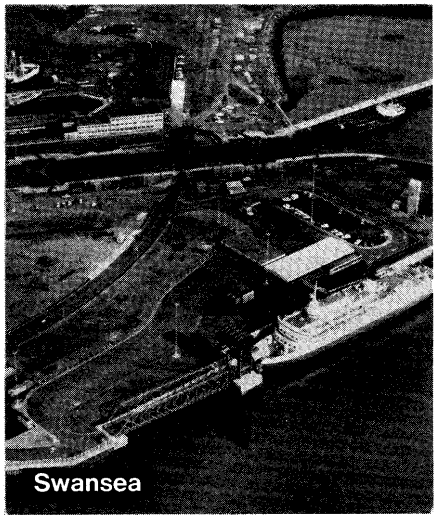

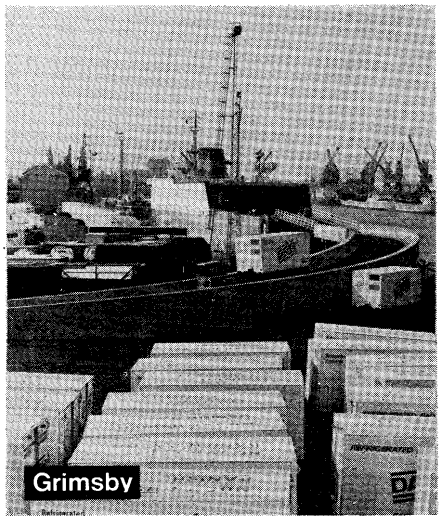

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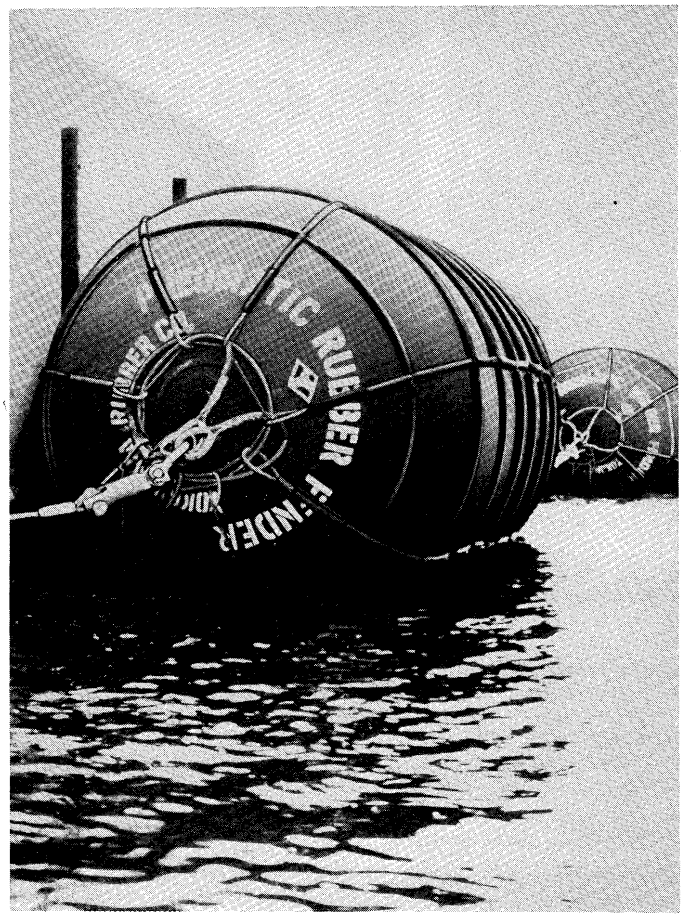

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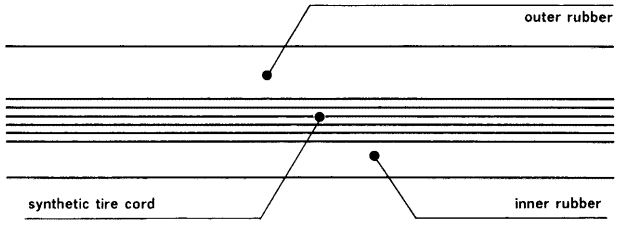

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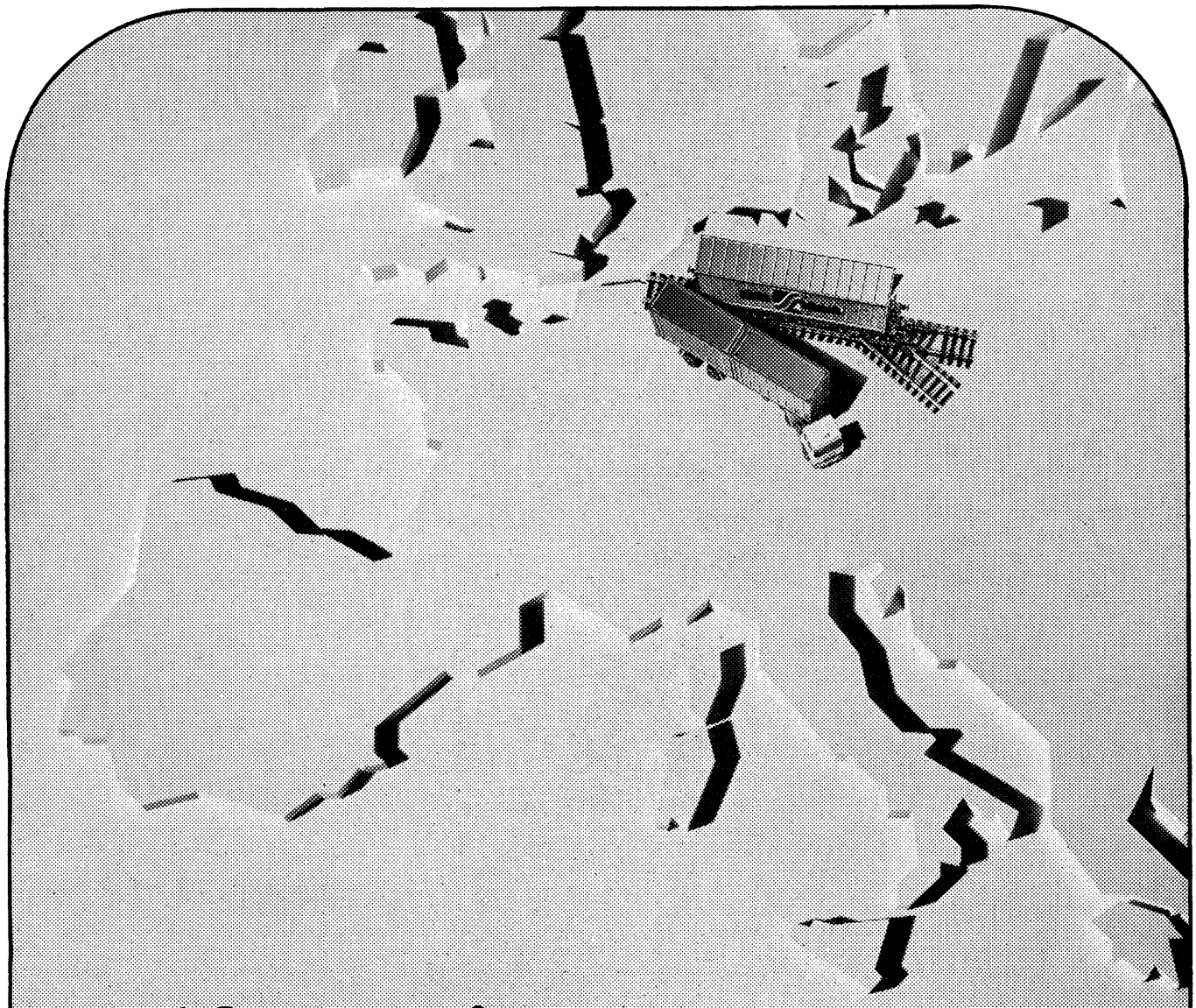

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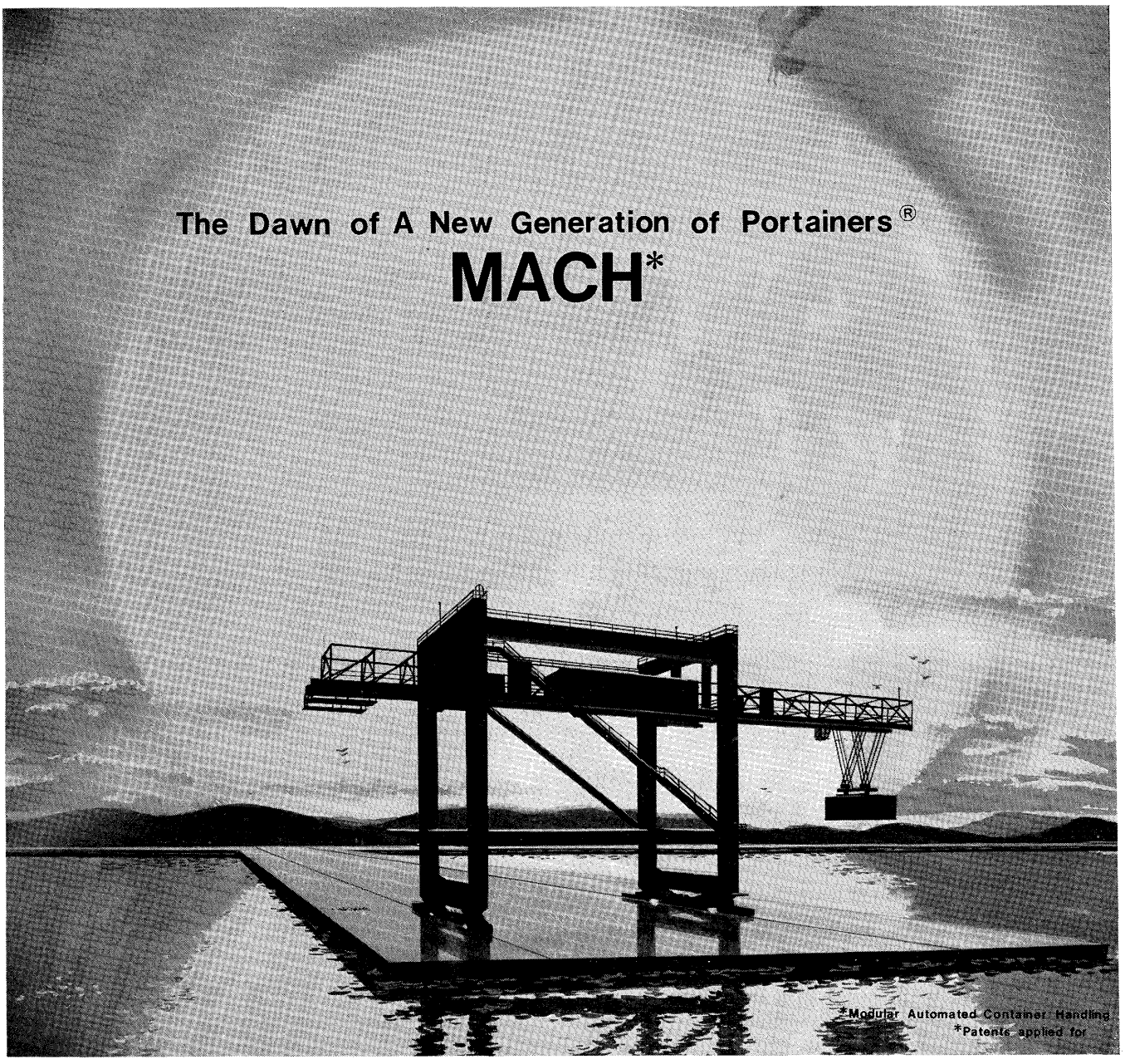

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PORTS and HARBORS

Editor: Yoshio Hayashi

Published monthly by

The International Association of Ports and Harbors

Consultative Status, N.G.O., United Nations, IMCO

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October, 1971 Vol. 16, No. 10

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The Cover:

The Ocean Harbour of Helsingborg is equipped with up-to-date cold- and reefer storage facilities. The high discharging rate of fruit under careful supervision has attracted great attention. See also story on page 20.

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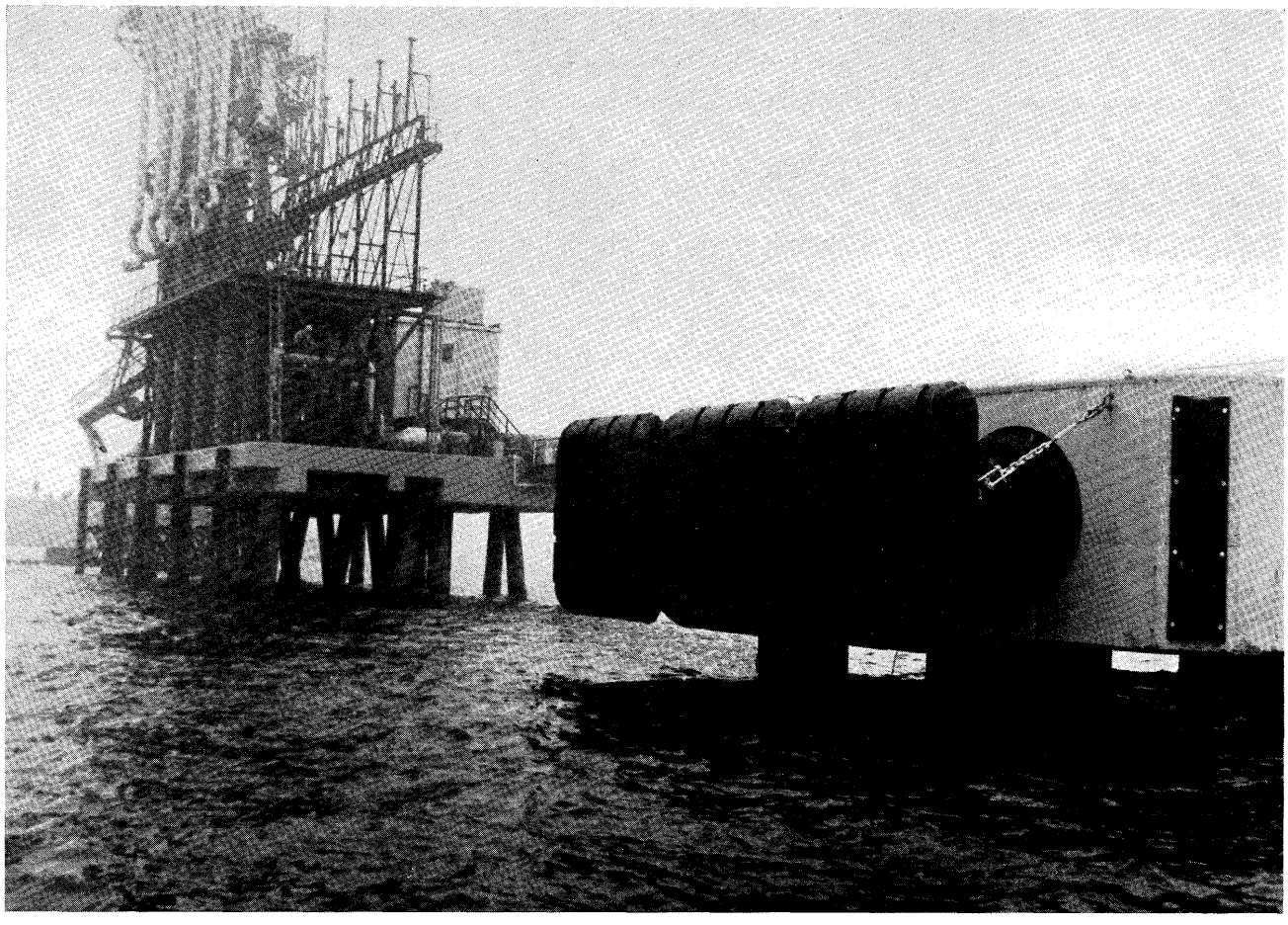

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PORTS and HARBORS

Forum on Port Problems:

From Ship to Shore

A paper presented to the 38th Annual Conference of The Harbours Association of New Zealand by P. Manser Operations Manager to the Auckland Harbour Board

The Object of this paper is to describe as clearly as possible the complex organization required in the shipping of goods from one overseas port to another. (2 April, 1971)

Introduction

In our modern society every nation's development and progress is as dependent on the efficiency of its distribution centres and associated facilities as it is on the many domestic production lines which control its economic growth.

Throughout the vast mechanism of distribution probably the most significant link in the chain is the port and indeed the many ships that its serves. One cannot over emphasise the importance of the design and capacity of the port and the manner in which it is administered.

In this paper which I have the pleasure to present to you today entitled "From Ship to Shore" I am going to attempt to relay some of those more significant events that occur during a typical voyage of an average cargo vessel engaged in transporting typical cargoes from the United Kingdom to New Zealand.

It is indeed appreciated that many of the assembled guests may in one way or another be associated with ship or shore operations. Nevertheless it is my hope in setting out the sequence of events in a not too technical form I will convey to you some idea of the complexities and responsibilities attached to the work from loading to port of discharge.

In order that we remain completely impartial our vessel shall be nameless, and I will assume she has been loaded at London with Auckland as the first port of entry and discharge.

The paper deals with the subject in five stages, and is more particularly designed to cover those aspects concerning the discharge of the ship in New Zealand.

In the first section I will deal with some salient features of the London Loading but will particularly refer to the documentation originated at this point since it plays such a significant role in the ultimate delivery of goods. This is to be followed up with a mere reference to the long journey to New Zealand which I imagine most of you will be familiar with in one way or another. The Documentation exchange that occurs whilst the vessel is on passage, together with the associated import procedures within New Zealand, and the paper concludes with two important sections the first covering the wide framework of preparation prior to the vessel's arrival and the second dealing with the actual operation following arrival.

London Loading and Documentation—

The introductory step in the loading operation in the United Kingdom is initiated by the Shipping Company when it applies to the Port Authority for a berth at which the vessel is to load. In most instances liner companies use the same berths continually, and this tends to offer considerable advantages in planning loading operations and in ultimately reorganizing shipment of any cargo which may have been shut out of any particular sailing.

Following berth allocation a date is agreed when both quay and transit shed areas serving the berth may "open for exports". This date is flexible but is usually set at approximately one week prior to the date on which the actual loading of the vessel is due to commence, and once delivery commences cargo will continue to be received up to about two days prior to the departure of the vessel although frequently congestion and delays will result in cargo having to be received on sailing day.

Shipping Companies endeavour to advise potential shippers of the "opening for exports date" well in advance by means of written notification and advertising in specialised news media such as The Journal of Commerce and Lloyd's List, and in the field of cargo booking freight canvassers working on behalf of shipowners and loading brokers play a significant role in obtaining cargo.

Many manufacturers, instead of attending to details of shipping their goods themselves, will employ a firm of shipping and forwarding agents who specialise in this particular branch of business. These agents will book shipping space, prepare the necessary documents, clear the goods through Customs, and if necessary, arrange insurance cover for such goods. They may deal directly with the Shipping Company or through "Loading Brokers".

From the demands for shipping space, Shipping Companies prepare an"engagement list" which details cargo booked showing measurements and any special stowage requirements together with method of arrival, i.e. road, rail or waterborne traffic, and from this information when collated loading plans are prepared having regard to many factors some of the more significant points being:

(a) Distribution of cargo to facilitate an economic and efficient

programme of loading and discharge.

(b) Ship Stability—Draft and Trim; to cover all stages of her intended voyage, and in this text the planning must incorporate those factors relating to fuel and water consumption and replenishment during passage.

When cargo commences to come forward from inland points for shipment the ship's agent forwards preliminary advice containing relevant details of the goods to the Port Authority. This advice is not an order to ship the goods, and only when all business formalities are concluded is this order forwarded to the Port Authority in the form of a Shipping Note.

In the meantime the Consignor (or Local forwarding Agent) has cleared the goods through H. M. Customs for export, and the Customs will in turn have instructed their officers at the berth that the goods are cleared for shipment.

During loading there is constant liaison between Port Authority and Ships Agents. All Shipping Advice Notes are filed and recorded in ledger form, and when Shipping Notes are received these are also processed through ledger form and forwarded to the berth to act as the authorative instrument for Customs cleared goods to be loaded.

At the time of loading goods are tallied by the Shipping Company or Port Authority acting on their behalf and at this stage a receipt for goods actually loaded aboard is given in the form of a Mate's receipt. It is essential that this receipt accurately records the exact number, weight and description of goods as it is used to draw up the Bill of Lading, and I think at this point a definition of the Bill of Lading is appropriate. It is the document received by the Shipper in exchange for his Mate's receipt and is proof that the goods have indeed been shipped. It is the document of title and is a negotiable instrument by which title to the goods specified therein may be transferred to others if the goods are sold, either in transit or arrival.

From non negotiable copies of the Bill of Lading the compilation of the Ship's Manifest is undertaken by the Shipping Company concerned. The Manifest is a comprehensive list of cargo shipped giving marks, measurement weight and port of destination. Several copies of this Manifest are prepared one of which is supplied to the Port Authority for checking payment on outward dues etc. and another to H.M. Customs. Because of the great number and variety of consignments in a general cargo it is usually impossible to complete the manifest before the ship sails, however, it must be supplied to H.M. Customs within six days of the vessel's departure.

As a further requirement to customs formalities the Shipper must forward to the Department a record of the following:

1. Who shipped the goods.
2. To whom they are shipped.
3. Name of vessel shipped on.
4. Number of cases and marks, size and weight of same.
5. Full description of contents.
6. Current domestic value.
7. Selling price to purchaser.
8. The Certificate of Origin declaring value.
9. A declaration stating the type of material used in packing.

The documentation procedures involving the Exporter are now completed and it simply remains for him to be paid for the goods exported and this is accomplished by presentation of relevant negotiable shipping documents in exchange for a draft on the importer.

Generally speaking the sale of goods is negotiated; Cost Insurance and Freight (C.I.F.) whereby the seller ships the goods, pays freight and all charges up to and including loading, plus insurance in transit. The Buyer is responsible for all expenses and customs duty on arrival at the port of destination, and also for loss or damage after delivery to the carrier.

A commonly used method for the exporter to obtain payment from the buyer is the "documentary credit" system. At the exporter's request, the importer requests his own bank to open documentary credit through its correspondents (i.e. a branch of the same or another bank in the exporting country), in favour of the exporter. The exporter presents a Bill of Exchange, drawn on the bank, accompanied by documents including invoices, Bills of Lading, Consular invoices (if applicable) and Certificate of Insurance, Quality and Origin. If these documents are in order, they will be sent to the importer's bank (the issuing bank) and the exporter will be paid. On payment by the importer, the issuing bank will release the documents to him and the importer is then in a position to take delivery of the goods from the ship or warehouse.

Of interest Marine Policies, drawn up to insure goods in transit are assignable, unless expressly warranted to the contrary, and the original policy taken out by the shipper in his name will cover the goods on behalf of anyone who may have or acquire an interest or part interest in them.

The Voyage—

During the last two or three days of loading at London the vessel is gradually prepared for departure. Crew is signed on—men joining from all parts of the Country from as far away as the Shetland Islands. Practice Boat and Fire drills are held and the crew become completely familiar with their new home to be for the next three or four months.

The voyage to New Zealand via the Panama Canal will take approximately twenty four days, and will include a call at Curacao for bunkers, and a brief stopover at one end of the Canal for the replenishment of fresh water.

Within a week of arrival activity on board will now concentrate on preparations for discharging cargo. Rope falls for guy tackles will be rerove, shackles greased and seized, blocks oiled and rigged, nets and slings made, and every piece of equipment will be checked against the relevant test certificate allowing it to form part of a derrick or crane's gear.

Up to four days prior to arrival master radios estimated time of arrival (E.T.A.) as established by celestial observations and adjusts his estimate daily as he nears the land.

Heading westward, the International Date Line is to be crossed and suddenly it is the day after tomorrow and there is all too little time before the frenzy of "arrival day".

In the blackness of the night a white light flashes, and then again

after 26 seconds. It is Cuvier Island more than 20 miles away, and the long awaited landfall. The ship's position is checked and speed is adjusted as required to make arrival at the Pilot ground at 0600 the following morning.

Documentation Exchange and Import Procedures—

During the course of the vessel's voyage to New Zealand an exchange of documents necessary to implement the efficient importation of goods will have occurred and broadly this consists of:

1. Shipping Company in the United Kingdom to their New Zealand Branch or local agency.
2. From the Bank in the Country of origin to the Bank in the country of destination.

As a result of the former the local shipping agent is enabled to initiate the procedures that will expedite the vessel on arrival, and further the discharge and ultimate delivery of the cargo.

He will distribute copies of the Manifest to the local Harbour Board, Customs, Stevedoring agent and Waterfront Industry Commission and will in addition make avairable for inspection by interested parties a further copy known as a Counter Manifest. Additionally he forwards to both the Harbour Board and Stevedoring agent comprehensive lists containing information on the following:—hazardous cargoes, heavy lifts usually in excess of two tons, special cargoes and stowages, livestock and any other noteworthy information related to the stowage of the vessel.

It is also important that the agent supplies the stevedore with a detailed stowage plan and tonnage disposition in order that the stevedore may undertake the detailed planning necessary to expedite the vessel.

In addition to the distribution of documents, agency procedures require then to make preparatory arrangements with the Harbour Board, Health, Customs and Agriculture Departments relative to the arrival and entry of the vessel. The arrangements referred to are in the main tentative due to the vagaries of wind and sea and are to be finalised as the vessel nears the port of entry.

All negotiable documents and a draft related to the importation of goods will have been relayed to the importer's bank, and for simplicity at this stage we will assume that local import licencing regulations have been complied with. The bank will notify the importer that a draft for his goods has arrived and on his meeting same and any associated bank charges he may uplift the Bills of Lading and other relevant documents.

The importer is now enabled to fully progress the documentation procedures for the importation of his goods. The Bill of Lading is presented to the Shipping Agent who will check the Bill against the Manifest and when satisfied that freight and where applicable wharf handling charges have been accounted for will endorse the Bill for delivery.

The endorsed Bill is then presented to the Treasury Department of the Harbour Board and again checked against the Manifest for the payment of goods wharfage.

The final stage of inward documentation is now progressed when the importer or his agent lodges with the Customs Department the prescribed entry form accompanied by all relevant import documents. Provision is made for these entries to be presented to H.M. Customs and proceed as soon as papers are received from overseas exporters prior to the goods actually arriving within the country, and in an endeavour to improve local delivery procedures measures have recently been introduced that will allow importers to obtain customs release two days before the vessel arrives in New Zealand waters.

In order to obtain clearance the importer or his agent is required to produce to the Custom's Examining Officer an invoice in a standardised from including Certificate of Origin and Value, Insurance papers, Bills of Lading and in some instances freight catalogues. The documents are scrutinised to verify that they conform with the requirements of restricted and prohibited imports and that licensing provisions are complied with. The imported goods are classified in terms of the tariff and the duty is declared and providing the Examining Officer is satisfied that all requirements are met payment of duty is made and the necessary customs release issued.

In the event of the entry and associated documentation not meeting satisfactory requirements the Examining Officer will demand a visual inspection of the goods concerned.

Of interest in scrutinising import documents the Department is called upon to prevent the importation of such items as:

1. Indecent Publications.
2. Dangerous Goods.
3. Undesirable pests, and disease germs in animal and plant products.

On the question of undesirable pests and germs in animal and plant products the Department is acting for both the Departments of Agriculture and Forestry and in so doing may only permit release of goods subject to final inspection by an officer of the appropriate Department.

The importer has now concluded his documentation procedures and all that remains is for him to forward all documents to his nominated cartage contractor in readiness for ultimate up lifting of the goods from the wharf.

Preparation for Arrival—

The entire network of pre-planning a vessel's call is initiated by the local Shipping Company or agent concerned, by him constantly forwarding updated information relative to the operation to the parties concerned as it comes to hand.

Initially advice of a vessel's intended call is usually obtained some weeks in advance in the form of projected Shipping Schedules published by the Shipping Companies, and these Schedules are circularised regularly to those concerned within the framework of port operations. As time advances information becomes more detailed and planning by all parties more positive.

Introductory detailed planning arises in the hands of the local stevedoring agent who is nominated by the Shipping Company for the discharge of his vessel. Ideally the stevedore will have received all those documents mentioned earlier in this paper seven to ten days prior to the vessel's arrival, and a full evaluation of these will enable him to prepare for an efficient and quick dispatch

of the ship. In planning the operation his first consideration must be to evaluate which berth within the port would be the most satisfactory to enable him to accomplish the most effective turn round and in this context it is necessary for him to consider the length and draft of the vessel, the over-all capabilities of the vessel's cargo handling equipment and the amount and type of cargo that is to be handled. It will be appreciated that at any port the most suitable berth for a particular ship or cargo is not always readily available and therefore stevedore planning cannot be concluded until final berth allocation is made by the Harbour Board.

Berth allocation at Auckland is made by the Harbourmaster in consultation with the Traffic Manager and decisions are made daily at a meeting held in the Harbourmaster's office to which representatives of those Shipping or Stevedoring Companies concerned are invited to attend. Each representative advises details of all projected arrivals and departures with which he is concerned and from this information when collated the Board's Officers have an overall assessment of all requirements for shipping within the port, and having regard to all aspects the berth will be allocated accordingly.

It will naturally be appreciated that long range forecasting of berth allocation is difficult due to the delays that may accrue not only to those vessels alongside but to those at sea and indeed those scheduled to arrive from other New Zealand ports that only involve a short sea passage. It is therefore essential that any early allocation of berth is merely tentative and that the stevedore remains flexible in his planning until final confirmation is given and frequently this may not occur until within 24 hours prior to the arrival of the vessel.

During the period of time that berth allocation is unconfirmed the stevedore is able to progress with that planning that will not be affected greatly by any change in berth and in this context he evaluates some of the following and still working on a tentative or at least flexible basis. He will:

1. Evaluate the required number of gangs to facilitate an even discharge and early dispatch of the vessel.
2. Analyse the required manning scales for each proposed gang having regard to any proposed methods of discharge using mechanical equipment and the extent of unitized or pre slung cargo which in certain circumstances will allow for a reduction in the number of men to be employed for a particular operation.
3. Establish the most suitable method of discharge i.e. with the ship's gear, or shore cranes. In this context it is usual for optimum efficiency to utilise a combination of the two.
4. Evaluate the requirements for mechanical equipment both on shore and aboard ship and to give early tentative advice of the requirements to the Board's Traffic Department.
5. Make those arrangements necessary for such cargoes that require urgent or immediate delivery on arrival e.g. dangerous goods and livestock.
6. Locate and estimate time of discharge and delivery of any cargo requiring specialised attention such as those consignments requiring to be discharged direct to road or rail and to make the necessary arrangements re the availability of the transport desired.
7. Prepare a detailed list of suitable cargo operating gear necessary for the discharge of the vessel.
8. Locate the position in stowage of any heavy-lift cargo that is in excess of the normal weight limitation of normal cargo gear or of quay side cranes and thence make tentative arrangements for the use of the Board's floating crane or indeed provision for the ship's heavy derrick to be rigged and necessary arrangements for transport to be available to take delivery.
9. Ensure that the Receiving and Delivery Department of the Stevedoring Company is fully aware of details of the proposed operation and are thereby able to supply sufficient cargo watchment and clerks for the purpose of security and delivery of cargo.
10. Discuss the proposed operation with the Shipwright Section of the Department to ensure that all cargo tomming is removed as required on arrival in order to facilitate speedy commencement of discharge.
11. On the basis of obtaining the tentative berth indicated and implementing the tentative plans already discussed the Stevedore will now advise the Shipping Company of his estimated time for completion of discharge and ultimate departure of the vessel.

In addition to detailed planning by the Stevedore, the Receiving and Delivery Section of the Stevedoring Company have considerable documentation to process themselves.

From a copy of the Manifest that they will have received from the Shipping Agent they will compile a comprehensive list of all cargo marks with corresponding Bill of Lading numbers, the main purpose of this list being to enable quick reference to the Manifest by way of cargo marks only for any cargo details that may be required from time to time. In addition sorting lists are prepared which tabulate all leading marks contained within the cargo and a description of and quantity of the cargo against each mark.

In due course during the discharge of the vessel the function of these sorting lists will be two-fold. They will assist the Harbour Board Shed Supervisor in the manner in which he will lay out the floor space within the transit shed during discharge, having regard to commodities, extent of consignment and ultimate delivery. Secondly they will be used by the Watersiders for the purpose of sorting the cargo to marks as discharged and placing goods within the transit shed in the areas allocated by the Shed Supervisors.

During this tentative planning period the Shipping Company representative will have also notified the Port Health, Customs and Agriculture Departments in order that they may initiate their arrangements for boarding the vessel on arrival at Auckland.

With considerable unconfirmed planning now accounted for we

move into a more positive period in time when the Master radios the estimated time of arrival (E.T.A.) approximately 48 hours prior to arrival. The E.T.A. is again relayed 24 hours later and finally confirmed 4 hours prior to arrival at the pilot station. On receipt of the 24 hour E.T.A. arrangements are formalised and confirmed. The Master will advise by radio to the Port Medical Officer of the state of health of his crew and apply for pratique. Through the Berthage Committee the berth is confirmed and the entire network of arrival formalities is tightened.

The Harbour Department will make the necessary arrangements for berthing in terms of pilot, tugs, line launches and linesmen and will flag the quay to ensure that the vessel is moored in the most satisfactory position for ultimate working.

The Traffic Department will arrange for any clearance of unclaimed cargo from a previous vessel that may be necessary at the berth to facilitate free movement of discharge. This exercise has probably been a continuing one in preparation for the vessel's arrival from the time the berth was first tentatively nominated.

The Stevedore is able to finalise his framework of activity in confirming all requisitions for labour with the Waterfront Industry Commission Labour Bureau through his timekeeper, and for all mechanical handling equipment and associated facilities through the Traffic Department of the Board. He now discusses fully the overall operation with his personal supervisory staff and in addition some operational detail related to crane shunts and wharf operations with those of the Harbour Board's undertaking connected with the exercise, and to conclude he now formalises those tentative plans previously discussed in this paper.

The Port Medical Officer of Health now makes his personal arrangements for a launch to be available for him to board the vessel in the Harbour on arrival, and Customs, Agriculture and Agency staff will arrange an additional launch to enable them to board the vessel whilst in the stream after pratique has been granted.

The Arrival and Discharge—

My short account of the voyage from London to Auckland terminated at that point of making landfall, from which time our vessel steams through the night within the waters of the Gulf. During this night passage the mood of the ship takes on a new atmosphere. The crew become aware of the many lights around them and of the distant red glow emanating from the numerous lights of Auckland in contrast to the blackness of the ocean night to which they are all now so accustomed. The ship's movement has changed, no longer the slow ocean roll, and the vibration of the engines has taken on a new tempo with the necessary reduction in revolutions.

At 0200 hours the Officer of the Watch checks the ship's position and usually in consultation with the Master adjusts course and speed to make the Pilot Station at 0600 hours; and at the time of this adjustment confirmation of Estimated Time of Arrival (E.T.A.) is relayed to the Harbour Board by radio.

Pilot launch crew assemble aboard the launch at the Pilot Station at 0500 hours and make ready to leave. The Pilot boards the launch at 0515 and they proceed to the rendezvous point at the entrance to the buoyed Channel. At about this time our inbound vessel is able to make visual contact by signal lamp with the Harbour Board's Communication Centre at Mount Victoria, and in so doing identifies himself and indicates the side on which he intends to embark the Pilot this latter information being immediately replayed to the Pilot launch by radio.

At approximately 0545 the vessel and Pilot launch are well within visual contact of each other, the Master places engines on stand by, this being the immediate signal for Engine Room staff to maintain manouvering stations, speed is reduced and way taken off the ship. Pilot ladder and man ropes are made fast and ready, and the vessel is slowly brought up offering a lee to the approaching pilot launch making up from the stern towards the pilot ladder. 0600 hours Pilot boards and is swiftly escorted by a junior officer to the bridge where he is greeted by a Master who is no doubt relieved to hand over the manouvering of his vessel to the skilled Pilot who is completely familiar with the surrounding waters. The arrival of the Pilot frequently not only eases the Master's mind but causes jubilation throughout the crew by him handling over a parcel of mail that all have been eagerly awaiting since clearing Panama.

The Pilot's first action is usually to order engines full ahead harbour speed, which is generally about 10 knots, and lines the vessel up for entrance into the Channel, and in this initial run into the Channel it is customary for Pilot and Master to discuss the manouvering capabilities of the vessel, the state of wind and tide and the operation that is about to be carried out.

During the six mile passage up the Channel and into the harbour the crew are busy making ready for port. The bridge has become an active nerve centre from which point orders are generated rapidly. Engineers on stand by are positioned at key points for manouvering, anxiously watching dials and guages and awaiting the familiar ring of the telegraphs.

A Senior Officer and ship's carpenter are standing by forward with anchors cleared away in readiness for emergency anchoring. The Purser is busy preparing to receive the Port Doctor, Customs, Agriculture Officers and agency staff. Deck hands under the supervision of the Boatswain are about the decks topping derricks, unsecuring hatches, unlashing deck cargo and rigging the gangway in readiness to receive the many Port Officials shortly to embark whilst the vessel is proceeding up the harbour.

The vessel rounds North Head and enters the Harbour displaying flags of many colours; the New Zealand Ensign, Company House flag and mail pennant at the Foremast, at the stern the Red Ensign, and from the Mid ship signal halyards the ship's signal letters; the Q flag signifying the vessel is healthy and requires pratique and the H flag signifying that a Pilot is on board.

Around North Head speed is reduced and way taken off the ship and at approximately 0640 the Port Medical Officer boards from his

launch. He is met by the Purser and immediately given a completed Medical Declaration of Health signed by the Master. In addition a full crew list giving the date of the last small pox vacination of the crew members and finally a current De—Rat Certificate.

From the wide range of questions answered on the completed declaration of Health, the Doctor is quickly able to assess the state of health existing on the ship. His main concern being evidence of small pox, plague, infestation of rats, deaths during the voyage and any erruptive infections that may have occurred during the voyage.

If the Doctor is not satisfied with information on the Declaration of Health or indeed the state of health of the crew he may order a muster and carry out a visual examination of all members of the crew.

Of interest Port Doctors receive weekly copies of the International Epidemiological record from which he is constantly updated on lands throughout the world where infectious diseases are occurring, this information being of particular value knowing from whence the ship has come.

The Port Doctor being satisfied with state of health grants pratique, the Q flag is hauled down and Doctor disembarks.

The launch carrying Customs and Agriculture Officers now moves alongside and Officers board the ship.

This vessel being a regular trader to New Zealand the Senior Boarding Inspector of Customs will advise the Master that he can proceed to berth, on the assumption that the various formalities will have been concluded by the time the vessel is alongside.

Two of the Board's tugs having left their berth at 0630 move alongside the ship, the crew proceed to mooring stations and the tugs are made fast one forward and one aft. The Engines again move slowly ahead and the Pilot commences the skilful manouvre of finally berthing the vessel.

During the 30 minutes or so that it generally takes to berth the Customs Officers process a well defined procedure with the Purser as follows:—

They commence by obtaining the clearance from the last overseas port. This indicates that the law has been complied within the country from which the ship has arrived.

The nett and gross tonnages are ascertained from the ship's register from which Light dues are calculated on behalf of the Marine Department. At this point it is usual to obtain information as to the loading ports and the dates of departure of the vessel therefrom. With fluctuating rates of exchange throughout the world, this information is necessary in order that proper values of imported goods he known.

The Officer now directs his attention to the number and composition of the crew and here the Master is required to complete a list of any crew who are restricted immigrants in terms of the Immigration Act 1964. In these instances the crew members concerned are accounted for by the completion of a Deportation Certificate which becomes part of the vessel's coast wise clearance, and at the final port of departure each individual named thereon is sighted by the Officer clearing the ship outwards.

It is the duty of the Master and every member of the crew at first port of entry to sign a search list and to declare thereon all items in their possession or custody, whether for landing in New Zealand or not, such as radios, cameras, fire-arms etc. Articles of a personal nature need not be declared provided they are not to be landed in New Zealand.

Incorporated in the search list are instructions clearly setting out Custom's requirements and including a declaration by the Master certifying that these have been met, and that there are no animals, birds or live fish on board other than those declared on the list or Ship's Manifest. All high duty goods declared are to be placed under seal or accounted for by the payment of duty if for landing in New Zealand.

In association with the production of the search list, is the requirement of a Stores list, listing all high duty goods carried by ships for use and consumption by the Master and crew during the voyage and includes such items as liquor, cigarettes and tobacco. It is the duty of the Customs Officer to check the contents of the storeroom against the quantity shown on the store list and to certify that same have been placed under seal. Finally as required by the Poisons Act the Officer receives a list of all poisons carried aboard the vessel, and personally sights the stowage of any poisons within the cargo and further certifies that such poisons are stowed away from any foodstuffs. Should there be any irregularity in this matter attention must be drawn to it and the matter reported to the Health Department.

The Agriculture Inspector in dealing with the Purser or his deputy will obtain a list of and sight all animals and birds aboard ship and bond those that are ship's pets. He will check and seal all meat lockers containing prohibited meat, which includes meat from Asia, Europe, South America and Africa, check garbage disposal arrangements, and inspect the baggage of any crew member paying off for agricultural items.

The agent is busily engaged moving between the Master, Chief Engineer, and Purser, completing domestic documentation, advising of ship's immediate discharge programme and future intended coastal programme, and arranging the many requirements in terms of stores, bunkers, repairs and crew replacements.

At 0715 the vessel is abreast of the wharf, lines are run fore and aft and she is slowly moved alongside with tug assistance from the off side. 0725 the vessel is alongside and secure fore and aft. The tugs are let go and dismissed. Engine telegraphs are rung to Finished with Engines and the Pilots duties are complete. The attention of the deck crew is now immediately centred on ensuring that the gangway is properly rigged to meet statuory regulations and in readiness to accommodate that Boarding party of many workers that will shortly descend upon the vessel.

On arrival at the berth and with clearance granted the first person aboard is usually the stevedore and he proceeds immediately to the

Chief Officer to discuss immediate discharge plans and any requirements he may have of the ship's crew in terms of setting up cargo gear etc.

The quayside cranes under the supervision of the Harbour Board Crane Foreman are positioned adjacent to the required hatches as predetermined by the stevedore.

The labour timekeeper and stevedore foreman check and direct the labour to the various hatches or places of work on the wharf, and in this instance the labour force consists of some one hundred and twenty men in seven gangs, with an additional force of eight mobile plant operators and three quayside crane drivers.

During the first hour alongside although there is much activity very little cargo is discharged since foreman, crew and labour are all busy setting up cargo gear, overside safety nets and removing hatch covers in readiness to commence work, and it is during this period that the Harbour Board Shed Supervisor studies the ship's discharge plan with the Stevedore or Wharf foreman and establishes a basic layout for his shed. Mobile Plant as requisitioned for by the Stevedore arrives and is told off for the various duties it is to undertake.

As the morning progresses the ship and wharf complex develops into a net work of activity and the discharge of the vessel settles into a pattern of operation that will basically continue to exist for the remainder of the vessel's stay in port.

The Stevedore is now responsible for the efficient discharge of the ship and in conjunction with ship's officers and Harbour Board Officials will ensure that all statutory regulations are complied with.

He will requisition for and coordinate all services required and from time to time will be position labour and adjust manning scales etc. to facilitate an efficient and economical discharge programme. He will constantly liaise with the Wharfinger who is the Senior Harbour Board Representative stationed at the Wharf and thereby ensure free movement of goods is maintained at all times.

Following two days of discharge those goods discharged on the first day and remaining in storage commence to incur demurrage charges, and the Shed Supervisor records this on a day to day basis. In addition he advises the Commercial Section of the Board of the various marks of cargo discharged on a day to day basis, this section in turn advising the various consignees of the availability and location of their goods.

During the currency of discharge officers from Customs, Agriculture and Forestry Departments will frequently visit the Wharf. The Customs primarily for recording pillages and recovering loose articles within the holds, and in this regard the stevedore is required to notify the Department of any pillage located in stow prior to its removal from the stow, this is intended to assist the Customs Officer in establishing where the pillage occurred i.e. locally or overseas, and if it is established that pillage occurred in New Zealand the appropriate duty is claimed.

The Agriculture Department will visit to inspect cargo requiring agriculture clearance, and will further inspect daily, ship's pets, meat locker seals and garbage disposal systems.

Forestry inspectors will regularly inspect packing cases and dunnage for evidence of bug infestation and issue permits that may be required from time to time.

By the second and third day discharge is well advanced and delivery of goods starts to become a continuous process. Ideally sufficient delivery should occur each day to ensure that sufficient floor space remains within and around the transit shed to allow continuity of discharge at all times.

In the event of delivery being slow it may be necessary for the Traffic Department to ease congestion by arranging off wharf storage.

This movement is arranged by the Traffic Department after consultation with Wharfinger and Stevedore and it involves the removal of consignments of cargo by the Board, using its Cartage Contractor to the off wharf storage areas established within the port area and owned and operated by the Board.

The method of delivery to consignees of goods from the wharf, transit sheds and storage is relatively simple. The consignee's carrier will locate his goods within the transit shed and present his endorsed Bill of Lading together with Customs and if applicable Agriculture and Forestry clearance to the Head Tally Clerk acting for the delivery company. In return for the documents the consignment is delivered, and the carrier signs a receipt in the form of a three part tally note, one part of which acts as his pass to leave the wharf with the goods collected, the remaining copies are retained for Shipping Company records.

Should it be necessary for carrier to take delivery from an off Wharf Store he obtains a delivery note from the Delivery Company in exchange for the Bill of Lading etc. and with this delivery order he is able to arrange collection from the Board's warehouse.

Having discharged at a steady rate of say 800 tons per day the discharge of the cargo is nearly completed. The Stevedore has constantly reviewed his estimated completion date and when within 24 hours of completing is generally able to assess finishing time within one hour or so. Based on this information the Master establishes a departure time and through his agent notifies Harbourmaster accordingly.

Sailing orders promulgated ship's engines are made ready. Pilot and tugs are ordered and the closing stages of the exercise draws near.

Ideally the various hatches should all complete discharge together and during the final day as hatches are completed and secured labour and equipment are withdrawn.

The crew commence preparing the ship for sea, securing completed hatches, housing derricks and generally clearing the decks of dunnage etc. that has accumulated during the discharge. Officers make a close inspection of all cargo compartments as hatches complete to ensure cargo is not oncarried.

Finally the last hatch is completed and all labour is ashore. The quayside cranes are drawn along the berth clear of the ship, and the Stevedore reports to the Master that the operation is complete.

Departure has been scheduled for one hour after completion of cargo,

(Continued on Next Page Bottom)

thereby allowing the crew sufficient time to secure the vessel in every way for sea.

The Pilot boards approximately 20 minutes prior to departure and after brief consultation with the Master advises the Chief Officer to single up fore and aft and make tugs fast as required.

Minutes prior to departure time agency staff and customs having cleared the vessel disembark. The gangway is raised. Engine telegraphs are put to Stand By and when acknowledged from the Engine Room we hear the decisive order echo from the Bridge—Let go ford. Let go aft.—

As the vessel pulls away one reflects on the vast amount of organisation that has been necessary to load and dispatch the ship, safely berth it at its destination and to discharge the cargo. At the New Zealand end the Harbour Board's tasks have been many, communications, pilotage, towage, berth arrangements, sheds, lighting, gangways, cranes, telephones, storage supervision etc. Add to these the activities of other agencies and one will quickly realise the importance of the tasks of those organizations whose objectives are presently directed at streamlining and simplifying procedures.

Boating Is Booming— But Space for It Isn't

Robert G. Robinson

Port of Los Angeles

There was a time, not too long ago, when boating—or "yachting" —was strictly a rich man's sport.

That has changed in this country, but boating could again become a sport limited to the rich and near-rich, rather than a recreation with mass appeal, according to Don Walsh, director of Planning and Research for the Port of Los Angeles.

What's more, he feels it could happen in the next decade or two unless some fundamental changes are made in the sport.

"The trouble is," Walsh explained, "that as a nation we are running out of space. Where available waterfront space is concerned, we now have to create it as we are able."

The Port of Los Angeles, on San Pedro Bay, is operated by the Harbor Department of the City of Los Angeles; the citizens of Los Angeles the citizen-owners. Although it is one of the nation's leading commercial ports, it gives more attention than most to recreational needs. Along its 28 miles of waterfront are 18 marinas with places for 3,300 boats of varying sizes. There is also a swimming beach, a fishing pier, and a tideland natural park.

Los Angeles Harbor boaters have some 1,000 acres of waterways and 3,000 acres of Outer Harbor to sail in, plus the whole Pacific Ocean (acreage subject to some dispute) just outside the breakwater.

"But much of the Outer Harbor will soon be gone," Walsh said. "Our plans call for filling in more than 1,200 acres for additional operations by 1990. To meet the demands of world trade, we may soon be making plans for another breakwater farther out, with an all-new 'Outer Harbor'."

Where does this leave the small boater? For one thing, farther from a place to sail. That doesn't mean, however, that the Port of Los Angeles is deliberately neglecting the boating enthusiast.

"By 1975," Walsh said, "the port will offer an additional 2,550 slips for boaters, and there will be some 4,200 more at other locations in Los Angeles County.

"But as soon as we provide an additional slip, there are at least two, or as many as six more new boat owners who want space. I understand some Southern California boat builders are thinking of moving operations to other parts of the country; they are losing business because prospective buyers can't find a place to keep a boat if they do buy one."

The current boating boom, as Walsh sees it, came at a less-than-opportune time; it co-incides with a snowballing boom in world sea trade, as well as a sudden popular upsurge of interest in ecology.

"Throughout history," said Walsh, an affable former enlisted navy tugboat skipper, "when men needed waterfrontage, they went out and took some that wasn't being used—there was always plenty."

"This just isn't true any more. Everybody — shippers, swimmers, boaters, you-name-it—wants more ocean front land. You can't blame them, but at the same time ecologists, people interested in our environment, want what unused land is left to be left in as nearly a natural condition as possible.

"I'm on the side of the ecologists, frankly. I'd like my grandchildren, and generations after that, to be able to see a sample of the country I knew as a boy. Unless we save the few 'natural' areas left, that just won't be possible. The country is filling up too fast."

Thoughts of generations of follow are small consolations to the guy who has, or would like to have, a boat, but with no place to have some fun with it.

Walsh has several possible solutions to offer.

Keeping a boat at home, taking it to and from the nearest water on a trailer, is not one of them. At best, it is a stopgap.

"Trailers for boats solve the problem of water surface space," he explained, "but they create their own problem—they take up surface space. The average car-and-boat-trailer combination, parked waiting for boat and the boaters, takes up the space of three average parked cars.

"Boating has its own parking problems, own traffic bottlenecks and rush hours. Each car-trailer-boat combination must wait its turn at a ramp or boat hoist to get into

the water, and to get out.

"Then, unless the boater has someone drive him, the boater has to take time to park his car and trailer—and, more and more, it's a case of finding a place to park, then finding a way to get back to his boat.

"A boat on a trailer," Walsh concluded the subject, "is a 'solution' that's rapidly becoming as much a problem as the one it's supposed to solve."

Walsh's solutions may sound radical to most boating enthusiasts, but the fact remains a solution must be found, and soon, if the average man is to have a place in boating's future.

So how are you struck, boating fan, by the idea of an apartment house for boats? If that doesn't grab you, what about an overnight train, choice of pullman or stateroom, for boaters, with their boats on the same train.

Far-fetched? Not, as Walsh explained it, necessarily.

"Since we are running out of available usable space around the waterfront," he said, "we'll have to get better use out of the land there is.

"Why couldn't a 'marina' consist of an automated high-rise boat storage building with its own ramps and hoists, plus a high-rise parking garage next door. Boats, dry, protected and ship-shape, could be kept cubicled until wanted. Push a button and—bzzz—a boat in the water, ready to go."

Walsh admitted that, even with the boat apartment-parking garage concept, he'd be happier if owners would use car pools to and from the "dry" marinas. He can foresee the day when boaters could clog streets and freeways leading to marinas.

The solution to that problem, in turn, is the boaters' special, a passenger-freight train.

"The time will come, if boating continues to increase in popularity," Walsh said, "when even high-rise solutions will be outdated. There will simply be no more room at or near the water. If people want to own and enjoy boats, they'll have to keep them at some distance.

"Luckily we have, at least near Los Angeles, quite a bit of desert that, ironically because of a lack of water, may stay vacant.

"I see no reason," Walsh envisioned, "why owners couldn't store their boats out in less congested areas miles from Los Angeles. Come Friday night — Thursday night if we go on a four-day workweek—the boat owner goes to the desert to catch the marina train. While owners sleep or enjoy the club car, their boats are loaded aboard. At the 'railhead marina' in the morning, the boats are in the water, ready to go, when the owners wake up. Or even earlier, if the owner is a heavy sleeper or had a little too much in the club car . . ."

Walsh made it clear his ideas are just that—ideas, not predictions.

"I just don't know what direction private boating will take," he said. "It may go in a way I've mentioned, it may not. Some people see offshore floating marinas as the solution I'd be the last to say they are wrong.

"Right now, in some backyard workshop, some would-be boater may be solving the problem with a combination car-boat that can drive to the water, down the ramp, pull in its wheels and become a full-fledged pleasure boat, then leave the water and drive home in the evening.

"There have been efforts in this direction, but they haven't been popular. Too much of the emphasis has been on an automobile with amphibious capabilities rather than on a boat with amphibious capability.

"One of these days, though, through sheer necessity, some one might come up with a 'wheeled boat' that could solve all our problems.

"Then again," Walsh concluded, "the answer may be something no one has as yet thought of. The solution may be so simple we're all overlooking it. If that's it, sooner or later some boater will trip over it and make a fortune—but the rest of us will benefit.

"I've no doubt that there's a big future for small, privately-owned pleasure boats—but there are still problems to be solved before that big future becomes a reality."

Port of New York Authority Is Fifty Years Old

The Port of New York Authority

The Port Authority: Organization and Functions

New York, N.Y., April 1971:—On April 30, The Port of New York Authority will be 50 years old. The bi-state agency which began its history with the flourish of pens in the Great Hall of the Chamber of Commerce in New York in 1921, is today operating transportation and terminal facilities which serve about half a billion people a year.

Port Authority Commissioners, six from each State, are appointed by the Governors of New Jersey and New York. They serve without pay for terms of six years. Starting in 1921 with a handful of staff members, the Authority today has over 8,000 career employees, headed by an Executive Director.

Fifty years ago, the job that faced Port Authority Chairman Eugenius H. Outerbridge and his fellow Commissioners in the newly created agency was two-fold. First, they were to plan and develop terminal and transportation facilities in the Port District, a 1,500-square mile area within a 25-mile radius of the Statue of Liberty. Second, they had the equally important job of improving and protecting the commerce of the bi-state Port. Both tasks, the Compact declared, could "best be accomplished through the cooperation of the two States by and through a common joint agency."

In the past five decades, the bi-state agency has invested some $2.4 billion in 24 great public projects. This money has been raised by the

Authority on its own credit, under a pooled revenue concept as directed by the two States. Under the Compact, the Port Authority was required to be financially self-supporting, functioning without burden to the taxpayer. It had neither the power to tax nor to borrow on the credit of either State.

Today the Port Authority operates six interstate tunnels and bridges, a regional system of four airports and two heliports, six marine terminals, the world's largest bus terminal as well as a smaller bus station, two union motor truck terminals, and the Port Authority Building at 111 Eighth Avenue.

In addition, since 1962, the Authority through its rail operating subsidiary, the Port Authority Trans-Hudson Corporation has operated PATH, a vital rapid transit system linking Newark, Jersey City and Hoboken, with lower and mid-Manhattan. As a significant step in improving the commerce of the bi-state harbor, The World Trade Center, scheduled for completion in 1973, opened its doors to its first tenants in December, 1970.

In 1970, the Port Authority facilities generated employment for about 90,000 people who earned almost one billion dollars. This includes about 82,200 people employed by the private businesses operating at these facilities. PATH provides employment for 1,090 people with an annual payroll of almost $10,000,000. Construction jobs at the Port Authority's tunnels, bridges and terminals will provide employment this year for an additional 8,400 New York and New Jersey workers who will earn $99,120,000.

Tunnels and Bridges

The first facilities to be built by the Port Authority were two bridges linking Staten Island with New Jersey across the Arthur Kill. **Outerbridge Crossing** named in honor of Eugenius H. Outerbridge, first Chairman of the Port Authority, and a signer of the original Port Compact, connects Perth Amboy, New Jersey, with Tottenville, Staten Island, and was opened to traffic on June 29, 1928. On the same day, the **Goethals Bridge,** between Elizabeth, New Jersey, and Howland Hook, Staten Island, was opened. This bridge is a memorial to General George W. Goethals, builder of the Panama Canal and the first consulting engineer to the Port Authority.

The world-famous **George Washington Bridge** designed by the bridge builder, Othmar H. Ammann, was opened by the Port Authority in 1931. This graceful structure, spanning the Hudson River between Fort Lee, New Jersey and West 178th Street in upper Manhattan has been called "the most beautiful bridge in the world." The addition of a six-lane lower level in 1962 makes it the world's only 14-lane suspension bridge.

The **Bayonne Bridge,** also opened to traffic in 1931, is the longest steel arch bridge in the world. One of the most spectacular bridges in the metropolitan area, it connects Bayonne, New Jersey with Port Richmond, Staten Island. Last year a tiara of lights was placed along the 1,675-foot arch of the Bridge, similar to the famed diamond necklace of lights that adorn the cables of the George Washington Bridge.

The **Holland Tunnel,** opened in 1927, was the first vehicular tunnel under the Hudson River. It connects Canal Street in Manhattan with 12th and 14th Streets in Jersey City. It is named for Clifford M. Holland, the brilliant Chief Engineer whose pioneering achievement permits the construction of underwater vehicular tunnels throughout the world.

The **Lincoln Tunnel** plays a similar role in linking midtown Manhattan and Weehawken, New Jersey. The Center Tube was placed in operation in 1937, the North Tube in 1945 and the South Tube in 1957, making it the world's only three-tube vehicular underwater tunnel. Direct ramps connect the tunnel with the Port Authority Bus Terminal to facilitate the handling of commuter buses, and remove them from City streets.

Two significant improvements for users of Port Authority vehicular crossings were made last year. A new one-way tolls collection system was put into operation at all crossings and a time-saving exclusive bus lane was opened on the New Jersey approach to the Lincoln Tunnel.

The one-way tolls collection begun last August, has expedited traffic not only at the six Port Authority crossings, but on six additional crossings operated by the New York State Thruway Authority and the New York State Bridge Authority. Operators of all vehicles using these facilities now pay a round trip toll on their eastbound trip, eliminating the need to stop to pay a toll on the westbound trip.

Last December, an exclusive bus lane was put into operation on the New Jersey approach to the Lincoln Tunnel, the first of its type in a congested urban area. About 800 buses use the 2½ mile section of I-495 between the New Jersey Turnpike and the Lincoln Tunnel toll plaze during the morning peak period. They travel toward New York on a lightly travelled lane adjacent to the median barrier, operated westbound at all other times.

The exclusive bus lane saves 15 minutes travel time each weekday morning for some 35,000 bus commuters entering the Port Authority Bus Terminal. It has demonstrated that properly utilized highway capacity can be made available for bus mass transit.

Bus and Truck Terminals

The **Port Authority Bus Terminal,** busiest and largest in the world, has served more than one billion people since its opening in December, 1950. Each weekday at the Bus Terminal at Eighth Avenue and 41st Street, only one block from Times Square, 211,000 people arrive and leave on over 7,700 buses.

To accommodate the ever-increasing number of commuters and travelers, the eight-level Terminal features four spacious concourses providing easy access to the three separate bus operating levels. Forty-one short and long haul carriers including all major long distance and suburban bus companies use the Terminal. In addition, there is a 1,080 car, three-level parking facility atop the Terminal.

Last July, plans were announced for an $80 million expansion project which will increase the Terminal to more than 1½ times its present size. All eight levels of the present Terminal will be extended over and under 41st Street north to 42nd Street and will cover all the area between Eighth Avenue and the Mc-Graw-Hill Building. Construction is expected to begin this

year and will take about 2½ years.

This additional expansion will increase peak hour capacity by about 50 per cent, significantly reduce traffic congestion and provide another direct tunnel connection from the Terminal to the Lincoln Tunnel. Additional bus loading and unloading zones will make travel faster and more convenient for bus passengers. Moreover, the project will complement the City's program for revitalization of the west side of Manhattan in the 42nd to 50th Street area.

The 20 year-old Terminal has accomplished its twin objectives of aiding bus travelers by consolidating scattered terminal operations that existed throughout the midtown area and relieving congestion by removing almost all intercity bus traffic from city streets. Direct ramp connections to the Lincoln Tunnel serve 143,000 commuters from New Jersey on an average day.

The original five-level, block-long facility was built at a cost of $24 million. In 1963, the Terminal underwent a $30 million expansion. As contemplated in the original design, the Terminal roof was converted from automobile parking to bus operations, and a three-level parking garage added above the Terminal.

Uptown the bi-state agency's **George Washington Bridge Bus Station** at 178th Street and Broadway serves travelers and commuters in Northern New Jersey and Rockland County, New York. The Bus Station also serves Westchester County, the Catskills, upstate New York and New England as well as the New Jersey shore and the South.

The $15,300,000 Bus Station, opened in 1963, was built as a part of the George Washington Bridge lower level expansion. It replaced a number of sidewalk bus loading areas that existed in the 166-167th Streets area of Washington Heights. Direct ramps connect the Station's suburban bus level with the upper level of the bridge, and a brightly illuminated pedestrian passageway connects the Bus Station at the Fort Washington end below street level with the north end of the 175th Street IND Subway Station.

On a typical weekway, about 40,000 passengers on some 1,700 buses use the Bus Station. In 1970, over 12,300,000 passengers were handled on about 540,000 buses. The Bus Station can accommodate over 200 buses and 10,000 passengers in a peak hour.

The Port Authority's remaining inland terminals are the Port Authority Building at Eighth Avenue and Fifteenth Street, which houses the bi-state agency's administrative offices, and the Newark and New York Union Motor Truck Ter-. minals.

The fifteen-story **Port Authority Building,** opened in 1932, is unique in that huge elevators carry 20-ton trucks to and from tenants' receiving platforms on the upper floors. Occupying a full city block, the building, 38,000,000 cubic feet in volume, is one of the largest by cubical content in the world.

The **New York Truck Terminal** was opened in 1949, and the **Newark Truck Terminal,** the following year. Both terminals serve as freight consolidation and transfer stations.

Port Authority Trans-Hudson System

One of the newest Port Authority facilities is paradoxically, one of the oldest. The former Hudson and Manhattan Railroad, in operation since 1908, was acquired by the Port Authority in 1962. The 13.9-mile rail rapid transit system provides service for over 140,000 passengers daily moving between the two States via under-river tunnels.

On September 1, 1962, the Port Authority Trans-Hudson Corporation (PATH), a subsidiary of the Port Authority was created to operate and modernize the bankrupt transit system. PATH immediately initiated a $200 million improvement program to serve the public better, while continuing to operate the existing antiquated rapid transit line.

Starting with a quick paint and patch program, the PATH riders began to see the rebirth of the system in the first eight years of the bi-state agency's operation. Old black cars, dating back to 1909, were replaced with a new fleet of air-conditioned cars, and construction of a new PATH Terminal on the site of the World Trade Center was begun. This terminal will replace the existing Hudson Terminal when it goes into operation in mid-1971.

In New Jersey, PATH improved the Grove Street station entrance in Jersey City, and began an ambitious undertaking for a coordinated bus, rail, automobile Journal Square Transportation Center to replace the old Journal Square station. Renovation of other passenger stations in both States went forward, as did rebuilding of the signal system, replacement of the electric traction power system, and track and tunnel rehabilitation.

This year PATH will implement a new exact change fare collection system, including coin turnstiles, change making machines, and a passenger information phone service.

PATH's new car fleet, the first fully air conditioned rail transit fleet in the United States, will be augmented early next year with 46 additional cars, bringing the total fleet to 298 cars. Purchase of the cars, together with the provision of longer platforms at the PATH-World Trade Center Terminal and the Journal Square Transportation Center, will make it possible to increase the vital peak-hour capacity of PATH.

The peaking characteristic of the traffic is disastrous to the rail rapid transit system's economics, since costs for crews and equipment are determined by peak-hour requirements. Despite the reduction of severe peaking at Hudson Terminal by a staggered work hours program in downtown Manhattan, nearly one-half of PATH's current weekday traffic is carried in the two peak hours—morning and evening. As a consequence PATH incurred a deficit of over $13,000,000 in 1970.

Air Terminals

The Port Authority operates John F. Kennedy International and LaGuardia Airports in New York, under a lease with the City of New York, and is developing Newark Airport under a similar lease with that municipality.

Last year, a total of 37,400,000 passengers used the three major airports—John F. Kennedy International, LaGuardia and Newark. These air terminals processed over 956,000 tons of cargo and 205,400 tons of mail, and handled 868,095 plane movements. In addition,

Teterboro Airport handled an additional 240,792 non-airline plane movements.

John F. Kennedy International Airport, opened by the Port Authority in 1948, is the Aerial Gateway to the United States. Its 4,930 acres is equivalent to all of Manhattan Island from 42nd Street to the Battery. An airport of superlatives, it features an architecturally striking Terminal City, comprising ten passenger terminals with a 655-acre central area of the field. This central terminal area is currently being expanded to 840 acres, and the International Arrivals and Airline Wing Buildings are being doubled in size by the Port Authority to facilitate handling the ever growing international air traffic. Together the Port Authority and the airlines are investing more than $350,000,000 in the program of additional construction and development.

Among Kennedy Airport's unique features are the world's largest air cargo center, an Animalport operated by the ASPCA, and an International Hotel. The tri-faith Chapel area within Terminal City draws airport employees as well as air travelers to the quiet sanctuaries of the Catholic, Protestant and Jewish worshippers who use it. At Kennedy, about 45,000 people earn an annual payroll of some $480,000,000. It is estimated that by 1980, that airport alone will have a working force of 67,000, larger than that of many a thriving township.

Newark Airport, the nation's pioneer commercial airport, is also undergoing a major redevelopment under Port Authority operation. Opened in 1928 by the city of Newark, the management of the 2,300-acre facility was transferred to the bi-state agency in 1948. New runways, an $8,500,000 Terminal Building, a modern Control Tower, and an air cargo area second only in size to Kennedy Airport were added by the Authority.

The present $200,000,000 reconstruction project includes the modification and extension of the existing instrument Runway 4-22, construction of a new runway parallel to Runway 4-22, three new passenger terminals, and additional hangars and cargo handling facilities. The shells of the first two new terminal buildings are virtually complete, and the concrete and glass structures have been made ready for interior finishing by the airlines. It is anticipated that the first two terminals will begin operation in 1972.

Newark Airport's 6,870 employees earn about $68 million annually, and this employment is expected to grow as the redevelopment program nears completion. When all new facilities are in operation, including the third passenger terminal and expanded cargo facilities, the airport's operating capacity will be increased.

LaGuardia Airport, opened by the City of New York in 1939, has been under Port Authority operation and development since 1947. The 650-acre airport, though the smallest of the three major airports, is one of the most active, particularly for business and short-haul domestic travel. The airport has been virtually rebuilt by the Authority, with a $36,000,000 Passenger Terminal dedicated in 1964, and a $40,000,000 project to extend both runways into the adjacent bay completed in 1967.

A preliminary plan to enlarge LaGuardia Airport's capacity was announced by the Port Authority last year. The 133-acre addition, within the existing airport boundaries, will provide space for additional hangar and parking facilities at the western end of the airport. LaGuardia's 6,500 employees take about $85 million in wages back to their own neighborhoods.

Teterboro Airport, in Bergen County, New Jersey, which was purchased by the bi-state agency in 1949, has been leased to Pan American World Airways which assumed operation of the general aviation airport early last year. The agreement with the airline specifies that Teterboro will continue as a public general aviation airport. It precludes the use of the field for scheduled commercial flights other than helicopters.

The Authority also operates two Manhattan heliports. The **Port Authority-Midtown West 30th Street Heliport,** opened in 1956, as Manhattan's first commercial heliport, is located along the Hudson River. The **Port Authority-Downton Heliport,** put into operation in 1960, is located on the East River just above the Battery to serve the downtown financial and business district.

Marine Terminals

The waterborne commerce of the New Jersey-New York Port has long been the cornerstone on which the bi-state metropolitan region has developed. One out of every four persons who live in the Port District are dependent upon the Port for his livelihood. With more than 56,585,000 long tons of oceanborne foreign trade valued at $15.44 billion moving through the bi-state harbor in 1970, the development of modern marine facilities to handle these cargoes is of paramount importance.

The six Port Authority Marine terminals include **Port Newark,** the **Elizabeth-Port Authority Marine Terminal** and the **Hoboken-Port Authority Marine Terminay,** in New Jersey, and **Brooklyn-Port Authority Marine Terminal, Erie Basin-Port Authority Marine Terminal,** and the **Columbia Street Marine Terminal** in New York.

Over 12 million long tons of general cargo of the Port's total of about 16 million tons of such high value cargo were handled at the Authority's six marine terminals last year. These increased tonnages created employment at the marine terminals for nearly 12,000 workers who earned over $92 million during the year. To date, the bi-state agency has invested some $364 million in the development of these modern marine facilities.

The completed development of the **Elizabeth-Port Authority Marine Terminal** in 1973 will culminate a 15-year program which the bi-state agency has undertaken in Elizabeth and at adjacent Port Newark to give New York Harbor the most modern ocean container and break bulk terminal facilities in the world. Developed out of reclaimed meadowland, the Elizabeth terminal was opened in 1962. Its container berths along with those at its seaport, Port Newark, will provide nearly four miles of containership berthing space.

The roster of lines at Newark-Elizabeth include seven of the nine carriers offering container services in the North Atlantic trade, the most intensively containerized route in the world. With the growing

volumes of such cargo, it is conceivable that half of the Port of New York's general cargo exports and imports will be handled in containers before the end of this year.

The **Brooklyn-Port Authority Marine Terminal,** purchased by the bi-state agency in 1956, has been the scene of a $95,000,000 redevelopment program. Thirteen modern steel and concrete piers with a total of 28 modern, efficient vessel berths have replaced some 25 antiquated piers with 43 obsolete berths. Together with the Erie Basin-Port Authority Marine Terminal and the Columbia Street facility, the Authority has completed a modernization of nearly three miles of prime freight generating waterfront south of the Brooklyn Bridge.

The World Trade Center

Just as modern marine terminals are required to maintain the Port of New York's position of leadership among the nation's ports, The World Trade Center which opened its doors at the end of last year is needed to provide efficient facilities for servicing international trade.

The North Tower Building, first of two 110-story buildings, each 1,350 feet high, was "topped out" last year, and the steelwork for the adjacent South Tower Building will be similarly "topped" this summer. Under construction also are a new United States Custom House, and a Northeast Plaza Building, with a Southeast Plaza Building and a hotel soon to follow. The entire $650 million project is expected to be completed in stages by 1973.

Hundreds of world trade firms and organizations, running the gamut of world trade activity will be housed in the Center. Their concentration in a common location, strategically situated on a 16-acre site on the West Side of Lower Manhattan, will create a single purpose business community. A world trade communications system now being developed to serve these tenants will be tied in with similar facilities of various trade centers through the World Trade Centers Association founded in 1968.

Port Commerce

An important part of the 1921 Port Compact was the direction by the two States to their bi-state agency to improve and protect the commerce of the Port. Since 1945, the Authority has established a network of nine Trade Development Offices, five in this country and four abroad. The advancement of the Port's trade is stimulated by face-to-face contacts in the areas served by the offices in New York, Washington, Cleveland, Pittsburgh, and Chicago; as well as the important international business centers in London, Zurich, San Juan and Tokyo.

The protection of port commerce is an intricate field of traffic management in which Port Authority specialists continually participate in proceedings before Federal Government regulatory agencies on behalf of the bi-state Port community. The traffic management staff analyzes any changes in freight rates or practices which would discriminate against the New Jersey-New York Port, and keep it from remaining competitive with shipping practices and charges at competing ports.

Container Traffic— Britain Leads in Europe

New Statistics from N.P.C.

(Refer to the article "Container Traffic: Britain Leads In Northern Europe" on page 21, Ports and Harbors, April, 1971.)

British ports continue to lead Europe in container operations, according to estimates published today by the National Ports Council*.

Traffic through British ports on 'Lift-on' container services totalled 9,719,000 tons in 1970, almost half of North-West Europe's total traffic of 20,253,000 tons on such services. The Council's estimates for other countries are: Holland, 3,257,000 tons; Belgium, 2,933,000 tons; Germany, 2,082,000 tons; Northern France, 862,000 tons; and Scandinavia and the Baltic, 1,400,000 tons. The figures used in the comparison are metric tons, and exclude traffic on 'roll-on' services.

Britain's total unitised traffic in 1970 on both lift-on and roll-on services, in long tons, rose by nearly four million tons to 16,613,000, an increase of 30 per cent compared with 1969.

The port with the greatest increase was London which almost doubled its 1969 figure to a total of 1,566,000 tons, followed by Southampton with a rise of 50 per cent to 793,000 tons. The second largest port for lift-on and roll-on traffic was Preston (1,408,000 tons), very closely followed by Liverpool (1,398,000 tons) Felixstowe (1,390,000 tons) and then Dover (1,245,000 tons). Figures for Tees and Hartlepool (369,000 tons) are given for the first time following the growth in the number of different services operating there.

The North West Group of ports, (including Liverpool, Manchester, Preston, Garston, Weston Point, and Lancaster) with 4.1 million tons and the East Midlands/East Anglia group, (including Felixstowe, Harwich and Ipswich) 3.9 million tons, together account, as in 1969, for half the total traffic of the country.

The greatest growth of this traffic was on the deep sea trade routes, which more than doubled from 1¼ million tons to over 2½ million tons, partly due to the direct sailings Australia/Tilbury where berth 39 came into use in the middle of the year, and partly due to the increase in traffic with North America (2,091,000 tons compared with 1,245,000 tons in 1969). Short sea traffic also rose rapidly, especially with Scandinavia and the Baltic (2 million tons from 1.3 million in 1969) and with Spain and Portugal (from 161,000 tons to 344,000 tons). Separate figures are available in considerable detail for the forst time of the types of unit and services with France (1.7 million tons) Belgium (2.3 million)

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* Container and Roll-on Port Statistics, Great Britain, 1971 Part 1, Published by the National Ports Council, 17, North Audley Street, London W1Y 1WE, price £1.00.

Unitized Cargo Taking Lead at Helsingborg

Port of Helsingborg

(See front cover photograph also.)

The unit loads at the port of Helsingborg is on a sharp increase. In 1970 the number of containers, flats, trailers and lorries reached 248,600. About 90% of the units were handled by the roll-on/roll-off method.

Denmark (0.7 million) and Sweden (0.9 million tons).

The total number of loaded units passing through all British ports during the year was 1,590,661 (1,323,622 in 1969), in addition to 430,708 empty units (a relatively smaller rise from 414,286 empties in 1969). Loaded units carried on specialized lift-on services increased by 45 per cent to 8,974,000 tons, at the expense of those carried on conventional services (614,000 tons compared with 932,000 tons in 1969), whilst the traffic carried on roll-on services in road goods vehicles rose by 36 per cent to 3,428,000 tons, and in container units by 27 per cent to 1,612,000 tons.

Statistics of accompanied cars on roll-on vessel services in the various tourist trades are shown for the first time at the major ports involved, among which Dover accounted for almost half of the total, (1,744,773 both inwards and outwards); a traffic principally on the Cross-Channel routes (1,084,709) and the Irish Sea (366,472).

Hovercraft statistics published for the first time reveal that these craft (with 572,105 vehicles) had captured almost one quarter of the total accompanied car carryings for the year and more than one third of the cars carried on the shorter cross-Channel routes to France and Belgium.

Some 400,000 import and export cars, lorries and other vehicles (representing 427,000 tons of traffic) were also carried on roll-on roll-off services principally with France, Germany, Netherlands and Sweden —a country-by-country analysis of which is separately published for the first time.

The ideal position in South Scandinavia has in few years made the port of Helsingborg a truly centre for international traffic. Conveniently located on the Sound with frequent European and transatlatic services the port easily attracts all kind of cargoes for further distribution to various parts of the Nordic countries. Its importance for transshipments is in particular interesting today.

The Skane Terminal at Helsingborg is now the largest container port of Scandinavia after Gothenburg. Inaugurated two years ago it has rapidly developed considerable traffic. The terminal offers 577 m of quays, warehouses and a container crane of ASEA make with 45 tons capacity. The crane straddles 3 railway trucks and 2 vehicular lanes for road transport. There are 2 roll-on/roll-off ramps at each end of the quay and the marshalling yards of the terminal are being extended from 100,000 sq.m. to 120,000 sq. m.

Unitized cargo is handled not only at the Skane Terminal but also at the other wharfs. Last year the number of containers, flats, trailers and lorries reached 248,600. More than 90% of the units were of the roll-on/roll-off type. In all the port offers 8 ramps for this kind of traffic. During the same period 205,000 railway waggons were shipped via helsingborg and 13.8 million passengers passed through the port to and from Denmark and Germany.

Container Traffic to USA and Europe.

The water depth is 11.5 m at the Skane Terminal, thus suitable for Ocean vessels. Including the ro-ro traffic there are today regular container services to Bremerhafen, Copenhagen, Elsinore, Felixstowe, Gothenburg, Immingham, Middlesborough, Oslo, Rotterdam and Travemünde (Lübeck). A speedy link with the United States is provided for by the weekly transatlantic service of Seatrain via Bremerhafen. A new vessel of this line has just been introduced increasing the capacity required to take care of the growing cargo volume from Helsingborg to USA.

Helsingborg—Truly Swedish Fruit Centre.

In the cold stores on the wharfs you will find citrus fruits from all large production areas of the world. You may thus indentify oranges, grape fruits and lemons from California, Swaziland, Israel, Morocco, Spain and Italy. You will certainly also find apples and pears from Australia, Africa and South America. The great variety includes grapes, tangerines and dried fruits of all kinds.

The over all import of fruits to Sweden in 1969 amounted to 464,000 tons. Out of this Helsingborg took 143,500 tons, no less than 31% of the total.

Spacious cold and reefer storage on the quays in the North Harbour minimizes transports and decreases the number of reloadings. The total volume of such storage amounts to 6 million cu.ft. at Helsingborg including the main factories of Frigoscandia in the city. This is unique for Northern Europe.

Quick dispatch of the ships and careful handling of fruits in combination with the highest discharging rate are reasons behind the rapid progress. Transshipment is conveniently arranged for to all Sweden and to other Scandinavian countries as well.

New Terminal Company Takes Over All Cargo Handling.

Until recently the cargo handling was served by two separate companies. In order to higher the efficiency the two firms merged and established close cooperation with the port and customes authorities. The terminal company named Skane Terminalen AB has the complete control over all cargo passing through the port. Its system has simplified the handling, including the documentation, and there has been a saving both in time and handling costs.

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Annual Report of the BREMER LAGERHAUS-GESELLSCHAFT for 1970

Via Bremen Bremerhaven

The development of business done by the BREMER LAGERHAUS-GESELLSCHAFT, Bremen/Bremerhaven, in 1970 was influenced by the constantly increasing volume of traffic on the one hand and by extensive structural changes on the other. This is stated in the Company's report for the 1970 business year, which has just been published.

First of all, the BREMER LAGERHAUS - GESELLSCHAFT states in the report that the volume of goods shipped via the Ports of Bremen and Bremerhaven was influenced by the universal economic boom in 1970 too, with the result that the upward trend, which has been evident for some years, still continued in the past business year. After having passed the 20-million-tons mark for the first time in 1969, the total amount of goods handled rose to 23.5 mill. tons in 1970. This is an increase of 13.8%. With these results the Ports of Bremen had better rates of growth than the ten most important German ports, which could only record an average increase of 12.4%.

Above average increases could be recorded in the movement of bulk cargoes, which increased by 21.7%, whereas in the field of general cargoes the increase was only 6.2%. It was remarkable that the amount of goods handled during the summer months, which usually decreases, remained constant in 1970; this led to a monthly average of about 2 million tons.

As the BREMER LAGERHAUS-GESELLSCHAFT further points out in their annual report, the proportion of general cargoes to bulk cargoes changed from 53.7% to 46.3% in 1969, to 50.3% to 49.7% in 1970; this was due to increasing amounts of bulk cargoes handled. Nevertheless, the proportion of general cargoes to the total amount of cargoes handled by the Ports of Bremen was much higher than the comparable proportions of the other ports in the Hamburg-Antwerp area. And it must not be forgotten that the turnover of these highly qualified general cargoes is always on the increase. In detail, the amount of cargoes handled in the Ports of Bremen has steadily increased since 1968:

One of the reasons for the in-

Future Prospects.

Plans are in preparation to increase the volume of cold stores in the fruit harbour. A new cold store will add 4.000 sq.m. to the existing ones and be ready early in 1972 to meet the expected increase of imported fruits and vegetables.

A new radio communications system has just been put into operation. The system will further improve the efficiency of the handling in all parts of the port. It will be operated in parallell with and in addition to the already existing radio communications at the container terminal. When completely built out harbour operations in practically every corner of the wharfs will be controlled by radio in order to handle the cargo with utmost care at a minimum of time.

Other long-term projects are also designed for the traffic of the future. Just close to the fruit centre at the Ocean Harbour an additional area of 25.000 sq.m. with a quay length of 300 m is to be constructed for the purpose of serving the ever increasing traffic. Included in the project are spacious warehouses, rail and road connections, other necessary up-to-date equipment, etc.

	1968	1969		1970	
(in thousands of tons)	Turnover	Turnover	Change against 1968	Turnover	Change against 1969
General cargo	10.435	11.146	+ 711	11.833	+ 687
Bulk cargo	8.553	9.594	+1.041	11.676	+2.082
Total	18.988	20.740	+1.752	23.509	+2.769
Exports	7.026	6.941		7.435	
Imports	11.962	13.799		16.074	

Port of Bremen (in thousands of tons)

	1969	1970	Change in tons	Change in %
General cargo	8.983	9.141	+ 158	+ 1,8
Bulk cargo	5.262	6.651	+1.139	+26,4
Total	14.245	15.792	+1.547	+10,9

Port of Bremerhaven (in thousands of tons)

	1969	1970	Change in tons	Change in %
General cargo	2.163	2.692	+ 529	+24,4
Bulk cargo	4.332	5.025	+ 693	+16,0
Total	6.495	7.717	+1.222	+18,8

creasing share of the total amount of goods handled in Bremerhaven, from 31% in 1969 to 33% in 1970, was partly the steadily increasing amount of container traffic handled by this deepsea port.

The BREMER LAGERHAUS-GESELLSCHAFT emphasizes further that they increased their share of the total amount of goods handled (23.509.000 tons) to 9.872.000 tons (=42%). In comparison with the year before an increase of 804.-000 tons or about 9% could be registered. This increase is to be found in the field of general goods (616.000 tons: 130.000 tons in Bremen and 486.000 tons in Bremerhaven) and in the grain sector (189.000 tons). Although the rate of growth in the field of general goods is lower than in 1969 (630.000 tons), this slight decrease is more than compensated by an increase in the grain sector (189.000 tons in 1970 as against 104.000 tons in 1969). Passenger services, which had experienced a slump, because there had been no passenger ferry service to England from time to time, increased again in 1970 by 33.443 to 113.323 passengers.

As the BREMER LARGER-HAUS-GESELLSCHAFT maintains, the largest rate of growth is, however, to be found in the number of containers handled. An increase from 73.334 containers with 822.000 tons in 1969 to 112.191 containers with 1.385.000 tons in 1970 could be recorded. On a 20-ft basis, 194.812 units were moved. Owing to these rates of growth—53% according to the number and 68% according to the weight—the proportion of goods shipped in containers rose to more than 15% of the total amount of general cargoes handled by the BREMER LAGERHAUS-GESELLSCHAFT.

Most of these containers were moved on the services on the North American route, but this percentage, which was more then 90%, was reduced by the introduction of a fully containerized service to Australia. The total number of containers handled were transported by 7 full-container services, 23 semi-container services, and 3 feeder services. It became very evident that the container traffic was being handled more and more in Bremerhaven rather than in the docks of Bremen.

Although turnover in the Ports of Bremen was all in all satisfactory, it must not be forgotten that the rival ports on the estuary of the Rhine were able to achieve considerably higher rates of growth in sea transport. These rates of growth were due to a further increase in the volume of transit goods handled by these ports, which consisted, to a great extent, of goods from the Federal Republic of Germany. The BREMER LAGERHAUS - GESELLSCHAFT points out once more, as they did in 1970, that it is necessary to remove the differences in the competitive situation of the German seaports compared with the ports on the Rhine estuary. It is stated that the efforts made by the German seaports to maintain and to strengthen their competitive situation must be supported by a transport policy which is directed at removing these distortions in the competitive situation. Unfortunately it seems that no start has been made on solving these problems.

Apart from the economic and technical factors, which are very much influenced by the government's transport policy, the capital investments made by the seaports themselves play a very important role in remaining competitive. Investment policy is indeed an important factor influencing the competitive situation of the ports to one another. Seaports can only remain competitive, if they are extremely adaptable in their investments. Because of this, the BREMER LAGERHAUS - GESELLSCHAFT have continued their previous investment policy. The main aim of their investment policy is to make the necessary investments not only in order to promote the new, interesting modes of transport, such as container transport, LASH-services, and roll-on/roll-off-traffic, but also to increase efficiency in the handling of conventionally shipped cargoes. Therefore the extension of Shed No. 20 in Bremen by 11.000 square metres was stated in 1970 and will be finished in the spring of this year. Furthermore the reconstructed Shed No. 17 in the Überseehafen was put into operation at the beginning of 1971, and the consolidated cargo distribution centre, the "Weserbahnhof", was expanded by 6.000 to 19.000 square metres of storage area. All these projects are to contribute towards increasing the productivity of the handling of general cargoes.

In Bremerhaven, on the other hand, the main investment projects are to be found in the sphere of the Container Terminal, the "Containerkreuz Bremerhaven". Before the first berth on the open river was completed in April 1971, the container vessels calling at Bremerhaven had been loaded and discharged at the "Nordhafen" berths. Here the east quay was extended by 50 metres and was equipped with a container gantry crane. The Osthafen quay, which has a length of 260 metres, is now in operation for the handling of car transportation vessels. At the same time two further container gantry cranes were put into operation on the west side of the Nordhafen. At the entrance to the "Containerkreuz Bremerhaven", the gatehouse was officially opened. Here in the one building all those concerns and institutions which are involved in container traffic have their offices. This is so very necessary for the flow of information and data, which is extremely important factor in container traffic. A data-processing system, which is specially programmed to the needs of this container terminal, has been installed in this gatehouse. Around the Stromkaje itself (River Quay), maintenance and repair shops were taken over by the BREMER LAGERHAUS - GESELLSCHAFT. Also a marshalling area of about 300.000 square metres was completed. Work was started on the erection of the first container gantry crane on the Stromkaje at the end of 1970. In the other berthing areas a large number of single projects were completed in order to renovate present facilities and increase productivity. Moreover, two new floating cranes with a capacity of 100 tons each, one in Bremen and one in Bremerhaven, were put into operation in the middle of last year.

The BREMER LAGERHAUS-GESELLSCHAFT states further that the number of employees in-

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Orbiter Probe

FIATA World Congress

Zurich:—The 12th World Congress of FIATA (International Federation of Forwarding Agents Association, 29, Brauerstrasse, Zurich, Switzerland) will take place in Trieste, Italy September 27-30 under the slogan "Users and Carriers Need Forwarders". (FIATA News, 1.7.1971)

Improvement of Ports

Caracas:—The Ministry of Public Works recently authorized $20 million for port improvements throughout the country. Among the ports to benefit are Puerto Cabello, Cumana, Porlamar, La Guaira, Maracaibo and La Vela. (C.A. Venezolana de Navegacion, August)

DW Memo

... **Singapore** is booming as both the manufacturing and distribution center of Southeast Asia. While I was there recently, American President Lines loaded its first outbound 40-foot container at Airco's Singapore division. The new container terminal is six months ahead of schedule, and should be operational by the end of 1971.

... **Tokyo** businessmen have been experiencing a slight recession as a result of our own here in the U.S. As a result, I was told, the Japanese are aiming at a sharp increase in the European market. Sony has already joined Canon in locating a major distribution center in the Netherlands.

... **Madrid** was the scene of the recent Xth ICHCA International Conference, which I attended as one of six members of the U.S. delegation. Addressing himself to the subject "Transportation Coordination in the 70's", Dr. Harold Jurgensen forecasts a tremendous increase in international trade over the next decade. He urged that transport facilities at ports be expanded to meet the demand.

... **Amsterdam's** Schiphol Airport is increasingly becoming a major crossroad of European airfreight traffic. KLM, for one, anticipates a continuation of its 15% annual growth rate in international air cargo.

The October issue of DISTRIBUTION WORLDWIDE will report in depth on these and other areas in an issue entirely devoted to International Transportation and Distribution.

In this issue, we'll be promoting the growth of international trade and telling our shipper-readers how they can expand their markets overseas through the use of new and improved distribution techniques. We'll be reporting on actual case histories, and we'll be discussing inland transportation as well as intercontinental modes.
(John T. McCullough, DW Editor & Publisher)

Port Rep. in Europe

Baltimore, Md., August 9:—The Maryland Port Administration today announced the appointment of H. Frank Vonderach, Baltimore manager for one of the nation's largest freight forwarders, as its new trade development representative in Europe.

Mr. Vonderach will assume his duties as assistant manager in the MPA Brussels office on September 1, 1971, Joseph L. Stanton, Maryland Port Administrator, said. He will operate out of the same office as, and serve as an assistant to, David K. Tosic, the agency's field manager in continental Europe.

Born in Switzerland 41 years ago, Mr. Vonderach is a naturalized United States citizen with 18 years experience in foreign trade. For the last nine years he had been in charge of D.C. Andrews & Co. of Maryland, Inc., international freight forwarders and Custom House brokers, with responsibility for sales and service in Maryland, Pennsylvania, Virginia and the District of Columbia.

Fluent in German, French and English, Mr. Vonderach will supplement Mr. Tosic's efforts in covering an ever expanding market area for the port of Baltimore. The Brussels office is responsible for trade solicitation throughout Europe with the exception of the United Kingdom, Scandinavia and the Iberian peninsula, which is covered by the MPA office in London.

The port agency also has an office in Tokyo and three trade solicitation offices in the United States outside of Baltimore. All are under the supervision of Charles I. Hughes, director of Trade Development.

The MPA, an operating arm of the Maryland Department of Transportation, has begun the process of adding much needed assistant managers to all its field offices that do not already have them in order to provide the port of Baltimore with the necessary sales punch required in this highly competitive and expanding fields. Mr. Vonderach's appointment leaves only the Tokyo and Chicago offices of the MPA still with authorized vacancies. (News from Maryland Port Administration)

(Continued from Page 22)

creased to 4.011 (3.189 in Bremen and 822 in Bremerhaven) in 1970. Apart from their contractual payments, the employees and retired employees profited from voluntary benefits. Structural changes in transportation necessitated greater efforts with respect to the training of the employees. For this reason the training programmes, both inside and outside the Company, were improved and intensified.

As is further stated in the annual report of the BREMER LAGERHAUS-GESELLSCHAFT, both the supervisory board and the board of directors suggest that the annual general meeting of shareholders, which will be held on 25th June, 1971, should agree to distribute DM 400.000 to the shareholders, after transferring DM 262.200,14 Pf. to the voluntary reserves. This corresponds to a dividend of 8%.

IMCO As Seen by IAPH

Reports by observers from IAPH at IMCO sessions

Report No. 14

Date: 5-9 July, 1971
Place: I.M.C.O. Headquarters, London
Session: 11th Session of the Sub-Committee on Navigation (NAV XI/9), 24th Session, Agenda item 4, Maritime Safety Committee, I.M.C.O.
Observers from I.A.P.H.: Commander L.C. Hill, Harbour Master, Mersey Docks and Harbour Board, and Lt. Cdr. R. B. Richardson, Harbour Master, Port of London Authority.

Text of Report

Item: Matters relating to traffic separation.

Various new local schemes were recommended for adoption. In particular much attention was given to modifications of the existing Dover Strait scheme and its extension into the English Channel and Southern North Sea. Provision of a deep draft route West of the Sandettie for Northbound vessels was also recommended to be reserved for vessels with drafts in excess of 17 metres, though some delegates reserved their position on this. Recommendations to avoid deep draft vessels overtaking each other on this route were suggested as being desirable, and the establishing of a radio reporting system for vessels intending to use the route thought to be worth consideration.

Item: Routeing of Deep Draft vessels.

The government of Denmark has established a system of reporting the approach and progress of deep draft vessels on passage through Danish waters. Much interest was expressed in this system which it was widely thought might be a useful pattern for traffic surveillance in other problem waters.

Item: Revision of Collision Regulations.

To avoid undue prolongation of the time required to introduce the new regulations, once agreed, the Sub-Committee recommended that a final data be fixed at the full Conference, allowing for a fixed period for acceptance or non-acceptance prior to that date. In general, number of ships was regarded as a better criteria than tonnage, in deciding substantial unanimity required by the procedures of the organization. Procedures for amendments to the new rules were also discussed. Defined time-lapses for acceptance were again proposed and it was emphasised that such amendment procedures must avoid the necessity of a full Conference.

Item: International promulgation of Nav. Warnings to shipping.

Responsibility for the rapid initiation and dissemination of navigational warnings on national, regional and international basis, and review of radio watch-keeping organisation to cover this was referred for further study by the Secretariat as well as the Sub-Committee on Radio Communications.

Item: Reports on Collision Casualties.

The Sub-Committee recommends that Administrators should be invited to keep registers of factual information concerning collisions which could be of assistance in revising the collision regulations or future studies and which could be submitted to the Organization as required.

New Type of Ore

Duluth, Minn., August 23:—The Port of Duluth-Superior, the iron ore capital of the Great Lakes for 100 years, handled an entirely new type of ore Monday—an experimental cargo of lead concentrates from the Maritime Provinces of Canada destined for Idaho and British Columbia.

The Seaway Port Authority of Duluth reported that the test shipment of 3,300 tons was carried by the Canadian motor vessel Kingdoc and unloaded Monday by Hallett Dock Co., Duluth.

A spokesman for **Philipps** Brothers, New York, shipper of the ore, said the lead was mined in New Brunswick and partially refined prior to being loaded aboard the Kingdoc at Belledune, N.B.

The cargo, discharged directly from ship to rail cars at Hallett Dock No. 5, will be routed to smelters in Bradley, Idaho, and Trail, B.C., where it will be converted into lead metal.

Philipps Brothers, a division of Engelhard Minerals and Chemicals Corp., is a leading importer and exporter of ores and metals and has offices in 27 foreign countries.

The Kingdoc, a combination Great Lakes-coastal bulk carrier owned by N.M. Paterson & Sons, Thunder Bay, Ont., is expected to clear the Twin Ports late Monday to load grain at Thunder Bay.

Hallett operates three large docks along the Duluth waterfront which handle a variety of products ranging from bulk cargo to finished steel.

Largest Grain Cargo

Duluth, Minn., August 23:—The Norwegian bulk carrier Nanfri cleared the Port of Duluth-Superior Saturday (August 21) with the largest overseas grain cargo ever shipped through the 10 elevator systems in the Twin Ports.

A spokesman for Federal Marine Terminals, Inc., Duluth-Superior stevedoring firm, said the ship carried 20,863 long tons of soybeans and corn from the Continental Elevator in Superior to be discharged at a North European port.

The previous port record was 20,565 tons of grain loaded in 1970 by the Norwegian bulk carrier Rolwi, a sistership to the Nanfri.

The Nanfri, Rolwi and a third vessel, the Andwi, are each 709 feet in length and are the largest ocean-going ships to enter the Great Lakes-St. Lawrence Seaway system.

All are owned by Rolf Wigands Rederi, Bergen, and chartered by Federal Commerce & Navigation Co. Ltd., Montreal.

Shipper of the Nanfri's record cargo was Continental Grain Co.

Now a Port Authority

Houston, Texas: — The Harris County Houston Ship Channel Navigation District is no more!

By a unanimous Act of both houses of the Texas Legislature duly signed by Governor Preston Smith, the former governing body of the 56-year-old Port of Houston last month became the Port of Houston Authority and the five Navigation and Canal Commissioners who run it became simply Port Commissioners.

In a companion Act, also unanimously passed by both the House and Senate and signed by the governor, the new Port of Houston Authority was granted broad new powers in fire prevention and traffic control along the Houston Ship Channel.

This latter legislation came as a result of many years of discussion, study and efforts by various groups to establish some uniform authority in the two fields of fire and traffic control. The Port of Houston Authority will now look for a cooperative effort by all these groups as it seeks to implement its new powers.

Under the new Act, the Port of Houston Authority is authorized specifically to "provide for the prevention, detection, control and fighting of fires and explosions on and adjacent to waterways, channels and turning basins within its jurisdiction."

It gives authority to "promulgate and enforce ordinances, rules and regulations therefor . . . both within and without corporate boundaries . . . for the protection of life and property from damage by fire and explosion."

On traffic control the Port of Houston Authority is empowered "to acquire, purchase, construct, enlarge, extend, repair, maintain, operate or develop traffic control facilities" for the operation or development of the Authority's ports and waterways or in aid of its navigation and commerce.

Financing of the traffic control is to be out of "available revenue" and the Authority is prohibited from using bond revenue funds for this purpose.

The traffic control provision further asserts that the preservation and conservation of inland and coastal waters within the jurisdiction of the Port of Houston Authority are "public rights and duties" and that the Authority "be authorized to exercise the powers of government . . . in aid of navigation."

The Act noted that the ports and waterways and harbor and terminal facilities of the Authority are "in keen competition" with similar facilities within and without the state and that the Authority has shown "success in attracting commerce and stimulating navigation of its inland and coastal waters." (Port of Houston Magazine, May)

3 Men Promoted

Houston, Texas:—Three Port of Houston executives have been promoted to new positions, Executive Director George W. Altvater announced at the June meeting of the Port Commission.

Altvater, who has been deputy director of the Port, moved up to the top job June 1, following the recent resignation of J. P. Turner to become special consultant to the Port Commission.

Under the realignment, C. E. Bullock, who has been director of operations, was named deputy port director-operations, and Richard P. Leach, director of engineering and planning, was named deputy port director—engineering and planning. Henry M. Broadnax, who has been general sales manager, was promoted to director of trade development.

"The Port of Houston is fortunate to have an extremely able and competent staff and I am glad we are able to promote from within," Altvater said. "These three men will have additional duties and responsibilities which will strengthen the management and functioning of the port."

Bullock, 58, has been in the transportation industry for 35 years. A native of Mississippi, Bullock came to Houston in 1933 as a clerk and later supervisor in a steamship office. In 1941 he joined the Port Terminal Railroad Association, the operating group for the port area switching operation, and worked his way up to general manager. During World War II Bullock served with distinction in the U.S. Marine Corps. In 1959 Bullock joined the Port of Houston staff as operations manager and later as director of port operations.

Leach, 42, is a registered professional engineer. He was born in Mexico City and after a year his parents moved to Houston. Leach is a graduate of Rice University, where he also earned a master of science degree, and he has attended graduate school at the University of Houston. During the Korean War he served in the Navy and he was discharged with the rank of lieutenant commander. After several years' experience as a designing engineer, Leach joined the engineering department of the Port of Houston in 1958. Before his promotion he was director of engineering and planning.

Brodnax, 39, is a native Houstonian who spent his youth in Dallas, where he was graduated from Southern Methodist University. He has had 12 years of experience in the transportation field. Broadnax was assistant general manager and general sales manager of the Port of Galveston prior to coming to the Port of Houston in January, 1968, as general sales manager.

"All three of these men have proved that they are capable and qualified and devoted to serving the customers of the Port of Houston," said Altvater. "With this new leadership I am sure that the Port of Houston will continue to lead in service to shippers and provide the most modern facilities for handling cargo." (Port of Houston Magazine, July)

Strike Cuts City Payroll

Los Angeles, Calif., August 4:—Change in working conditions at the Port of Los Angeles because of the longshoremen's strike resulted in action today (Wed., Aug. 4) by the Los Angeles Board of Harbor Commissioners which reduces the work schedule for all Department employees by one day each pay period (every two weeks), with a corre-

sponding reduction in pay.

The ten percent reduction in hours (from 80 to 72 every two weeks) and earnings will continue until it is determined by the Board that changes in Port operations will allow reinstatement to normal levels.

Although the current longshoremen's strike, which began July 1, has resulted in the halting of the use of Port facilities, there remains the need for all employees to remain available in order to carry on the functions of the Department, according to the formal resolution adopted by the Harbor commissioners.

In the discussion prior to the adoption of the resolution, it was pointed out that financial loss to the Port of Los Angeles because of the strike is estimated at around $700,000 a month. The ten percent reduction in employee hours and pay will result in a savings of about $58,000 a month.

Additionally, the Harbor Department this week pared its budget for the current fiscal year by $1,707,100 by reducing expenditures wherever possible. The money is being set aside in a separate fund under control of the Harbor Commission to meet essential operation costs for the balance of the fiscal year.

Included in that move are an employment freeze; giving employees time off for any emergency overtime hours worked, rather than cash payments; equipment purchases; materials and supplies, and other line items in the Department's budget.

Effective date for the reduced working hours and salaries for employees is August 8. (Port of Los Angeles)

Commissioner Honored

Los Angeles, Calif.:—Los Angeles Harbor Commissioner Frank C. Sullivan was honored today (Wednesday, Aug. 4) by his fellow commissioners following a year as president of Los Angeles Harbor's executive body.

A resolution handed to Sullivan by his successor, Commission President John J. Royal, commended the public relations consultant "for his many contributions as a commissioner and as president of the board" and looked forward "to his continued participation and contribution as a member . . . in the future."

Sullivan was named to the Harbor Commission two years ago and served as its president from July 29 last year through this past July 28.

The resolution noted the public relations, promotion and executive experience Sullivan brought to the commission and the ways in which he utilized his background for the benefit of the port and the City of Los Angeles.

Particular note was taken of Sullivan's accomplishments as commission president in two fields, water quality control and development of international trade through the port.

Sullivan has also been a leader in establishing trade agreements with foreign and particularly Japanese ports, leading to increased trade via the Port of Los Angeles. (Port of Los Angeles)

Pier Rehabilitation

New York, N.Y. Aug. 12:—A contract for the rehabilitation of two piers to provide temporary passenger ship terminal facilities during the construction of a Consolidated Passenger Ship Terminal on the Hudson River in mid-Manhattan was awarded today by the Port Authority Commissioners. Work on Piers 84 and 86, which are adjacent to the site of the new terminal, can begin immediately after the agreement between the Port Authority and the City of New York for the construction and operation of the Consolidated Passenger Ship Terminal has been signed by the City and approved by the Federal Maritime Commission. The announcement was made today by James C. Kellogg III, Chairman of the bi-state agency, following the monthly Board meeting.

Plans for the Consolidated Passenger Ship Terminal, developed by the Port Authority at the request of Mayor John V. Lindsay, call for the reconstruction of Piers 88, 90 and 92 between 48th and 52nd Streets, to provide six ship berths with comfortable and convenient passenger facilities. In addition, Pier 40 at Houston Street will be improved as a companion three-berth facility, thus providing a total of nine steamship berths to accommodate transatlantic and cruise liners.

Under the cost plus fixed fee contract awarded today, repairs will be made to Piers 84 and 86, between 44th and 46th Streets, for their use in accommodating passenger ships during the construction of the permanent terminal. The award was made to the V.R.H. Construction Corporation of The Bronx, the low bidder, who will be reimbursed for repair costs estimated to be approximately $600,000 and receive a fixed management fee of $14,800 for performing the work. The contract calls for the repair of roof drains, windows, cargo doors, heating, electrical and sprinkler systems, and escalators and elevators in the Pier 84 and 86 sheds. The work is scheduled to be completed by December.

The new Consolidated Passenger Ship Terminal will cost an estimated $35,900,000. The Port Authority will construct and operate the terminal under a 20-year lease with the City. The bi-state agency will collect user charges from the steamship lines to cover the rental payments to the City and operating and maintenance costs.

The passenger ship terminal will be adjacent to the City's new convention and exhibition center to be built on the Hudson River on the site of Piers 84 and 86 between 44th and 46th Streets.

Subject to the approval of the Federal Maritime Commission, it is expected that construction of the terminal will begin later this year, with completion in about two years. (News from The Port of New York Authority)

New Container Facility

New York, N.Y., May 13:—The development of the Elizabeth-Port Authority Marine Terminal, already the world's largest and most modern containership terminal, moved ahead today with the announcement that a new 87-acre container facility would be operated beginning in mid-1972 by Maher Stevedoring Co., Inc. for the container services of the Zim Lines.

James C. Kellogg III, Chairman of the bi-state agency announced plans for the new terminal following the monthly Board meeting of the bi-state agency. Mr. Kellogg said that the Maher-Zim facility will have 1,600 feet of berthing area at Berths 80 and 82, along Newark Bay. The Port Authority will build special container handling facilities at the site, including cargo consolidation buildings, crane rails and foundations, rail track, an entry complex with scales and gatehouse, maintenance garage, longshoremen's shelter and related fencing and electrical utilities.

Maher Stevedoring Co. will lease the new terminal for 20 years at a rental to be determined by actual construction costs.

From its new Elizabeth terminal, Zim Lines will provide container services to the Mediterranean, Africa and the Far East with six new container ships now under construction.

Maher Stevedoring Co., Inc. has provided terminal services at the Port Authority's marine facilities for some 23 years. At Port Newark, the firm operates one of the largest lumber terminals on the East Coast, and also provides stevedoring operations for Zim Lines, Japan Line, Mitsui-O.S.K., Tokai Shipping, Black Star, Ugland, States-Marine Isthmian, Pacific Star Line, Sanko Steamship Co., Ltd. and American Israeli Shipping Co In Brooklyn, the company handles States-Marine Isthmian and Thai Shipping at the Erie Basin-Port Authority Marine Terminal.

With these facilities, the Elizabeth-Port Authority Marine Terminal will have 17 vessel berths. An additional 8 berths are under construction and will be available in stages over the next two years, thereby completing the Elizabeth development.

Last year, the Elizabeth Marine Terminal handled over 6,408,000 tons of cargo. This activity provided jobs for 2,990 people who earned $22,860,000. In addition, an estimated 500 construction workers earned $6,900,000 at the seaport last year.

Upon completion, Elizabeth's 25 berths are expected to handle more than 9,000,000 tons of cargo a year. This movement of commerce will provide employment for almost 5,000 people with an estimated payroll of over $37,500,000.

The Port Authority's investment in the Elizabeth marine terminal will amount to $175,000,000 upon completion of the facility in 1973. (News from The Port of New York Authority)

Terminal Purchased

Oakland, Calif., July 29:—The $20 million purchase by the Port of Oakland of Seatrain Line's 33-acre container terminal became final today with the closing of escrow in New York and Oakland.

The facility had been the only shipping terminal on the Oakland waterfront not owned by the Port.

The Port has negotiated a lease and preferential assignment of the complex back to Seatrain. The agreement gives Seatrain primary use of the terminal facilities, but allows either the Port or Seatrain to assign the marine terminal area on a secondary basis to another steamship line. A portion of the parcel will be exclusively leased by Seatrain for office and container freight station facilities.

To make the purchase the Port earlier this month sold $20 million in certificates of indebtedness at an effective average interest rate of 8.026 percent to a syndicate headed by Kuhn, Loeb, & Co., Merrill Lynch, Pierce, Fenner & Smith, Inc., and Salomon Brothers.

The certificates of indebtedness are secured by the longterm lease with Seatrain of California, Inc., and will be additionally secured by surplus Port revenues, if available, up to $1 million for any 12-month period.

Under the lease, Seatrain will pay the Port approximately $1.75 million annually.

The terminal is located on the Oakland Estuary in the Port's Middle Harbor area adjacent to a 52-acre parcel of land currently being developed by the Port as another major container terminal.

The new facility, which will be known as Middle Harbor Terminal, is designed to be compatible with the Seatrain base so that together they will offer 85 acres of container facilities including four in-line berths served by four container cranes.

When Middle Harbor Terminal is completed next year, the Port of Oakland will have nearly 280 acres of container facilities served by 12 container cranes.

Oakland already is the world's second largest container port, behind only New York. (Port of Oakland)

New Crane in Operation

Philadelphia, Pa., July 9:—The new Kocks crane, the largest of its kind in the world, located at Packer Avenue Marine Terminal, will load and unload container cargo for the first time from an all container ship, the M. V. ALSTER EXPRESS, on Tuesday, July 13, at the Port of Philadelphia, City Representative and Director of Commerce S. Harry Galfand announced today.

The operation will begin at 8 a.m. will continue through the day until about 4 p.m. The vessel is part of the Hapag-Lloyd weekly container service between Philadelphia, the United Kingdom and the Continent.

The new crane is a twin to the Kocks crane already in operation at the Tioga Marine Terminal which has been in use for breakbulk cargo.

Prior to the construction of the crane at Packer Avenue, containers as well as other cargo were handled by the world's largest rubber-tired crane, a Le Tourneau lift 152 ft. high. This crane will also be used on Tuesday in working the M. V. ALSTER EXPRESS.

The Packer Avenue Marine Terminal is under lease to the Lavino Shipping Co., and at present consists of three general cargo berths and two marginal container berths are under construction. (City of Philadelphia News Release)

Import Retail Shop

San Diego, Calif., August 9:—A retail operation will open for business soon at a temporary location on the Tenth Avenue Terminal of the Port of San Diego, it was announced today.

Arnold Pantus, president of Dockside Distribution Services, Inc.,

SAN FRANCISCO MARITIME LEADERS ELECTED—New president of the 122 year-old Marine Exchange of the San Francisco Bay Region, Edward D. Ransom (left), greets three of the shipping service organization's new directors: John Hays, partner of Dorr, Cooper & Hays, admiralty attorneys; Worth B. Fowler, president of American President Lines, and Frank D. Troxel, president of Seatrain Lines of California. Not pictured are two other additions to the Board of Directors: Jorgen Frederiksen, vice president of the East Asiatic Company, Inc., and Miss Miriam Wolff, port director of San Francisco. Also elected were 1st vice president John Page, president of General Steamship Corp., Ltd.; 2nd vice president K. S. Lynch, vice president, Pacific Far East Line; 3rd vice president Lloyd O. Haefner, vice president, Johnson & Higgins of California, and treasurer William F. Ward, vice president, Bank of America. Robert H. Langner was reelected executive secretary. Ransom, a leading attorney, is partner in the maritime law firm of Lillick, McHose, Wheat, Adams, & Charles.

said a wholly owned subsidiary, Dockside Warehouse Company, will feature imported items from the Far East including: sporting goods, outdoor cooking items, garden supplies, fine glassware, and toys.

"This will be a natural extension of customer services now provided by Dockside," Pantus said. "Our clients are mainly firms, who distribute merchandise nationally through our facilities. We consider this an additional service to the trading community."

Permanent quarters adjacent to the 10th Avenue Terminal will be established by the importer for his clients and retail operations at a later date. (Port of San Diego News Release)

ROSE Recommendations

San Francisco, Calif., June. 24:—Recommendations of a three month study of navigation safety and measures to minimize the possibility of accidents and pollution dangers to the environment have been endorsed by the Association of Bay Area Governments and the Marine Exchange of the San Francisco Bay Region.

The recommendations were made by a special task force of key public and maritime specialists under the sponsorship of ABAG and the Marine Exchange.

The study examined the Golden Gate's navigation system and shipping operations, electronic navigation aids and needed legislation. The task force, called Regional Organization on Shipping and the Environment (ROSE), will continue its inquiry as needs and conditions dictate.

Marin County Supervisor John McInnis, speaking for ABAG's Executive Committee, said, "These recommendations are desirable to accomplish in the San Francisco Bay Area and we in ABAG and local government should use our best efforts to see that these measures are forwarded in Sacramento and Washington."

Edward Ransom, newly-elected president of the Marine Exchange, noted the ROSE task force report had also been approved by that regional maritime service agency. A leading admiralty attorney and partner of Lillick, McHose, Wheat, Adams and Charles, Ransom termed ABAG's concurrent action "constructive and responsible".

"Increasing awareness of the dangers inherent in moving the vast quantities of materials—particularly petroleum—required by our economy must be responded to by applying every safety precaution possible. The ROSE recommendations are a fine start. Now we must see them put to work. ABAG and the Exchange will continue to cooperate in the effort.

ROSE recommendations include:

- VHF radiotelephone equipment should be available on the bridges of all public and private deep draft vessels. All pilots now have communication capability by means of portable transceivers.
- Participation in formalized harbor safety and advisory services be mandatory.
- Harbor Advisory Radar (HAR) established in 1960 by the Coast Guard be further developed. A new Marine Traffic Center on Yerba Buena Island is scheduled to go into operation about October, 1972. New HAR equipment will have greatly increased capability and sophistication.
- New Federal authority be provided to assure that requirements and safety measures are established and complied with.
- State actions should be limited to matters of pilotage, pollution and other areas appropriate to local and traditionally non-Federal activity, and which are not sensitive to the need for national standardization and international conformity.
- New authority, rules, advisory services and procedures should be applied uniformly to all traffic and operations, including public vessels and small carft.
- Special rules for vessels with specific cargoes (other than those already existing for explosives) are not deemed feasible.
- Where possible, segregation by use of lanes or other means between small craft and deep draft ships should be sought.

ROSE found that a great deal

could be done with existing authority of the Coast Guard as to navigational aids and improved operational techniques. Specific recommendations to the Coast Guard to utilize existing power and to provide additional aids to navigation to separate inbound and outbound traffic are contained in the ROSE report.

Record Tonnage

Savannah, Ga., August 2:—Breaking all existing records, the Port of Savannah handled 6,810,770 tons of cargo in 1970. In reaching this all time high in tonnage, the Georgia Ports Authority, who handles approximately 35% of the Savannah tonnage, reported an 8% increase in cargo at their Savannah facilities.

In releasing the tonnage figures, J. D. Holt, Executive Director of the Georgia Ports Authority, stated, "In less than 24 years since the inception of the State's port program, Savannah has become the largest general cargo port on the South Atlantic.

"We are particularly pleased with this year's increase in tonnage, as the quest for import-export commodities becomes more and more competitive with ports throughout the nation. Our continued growth and leadership are due primarily to the efforts of the personnel in our Trade Development offices in Atlanta, New York, Chicago, Bonn, West Germany, and Tokyo, Japan.

"Our current construction projects in Savannah include a container terminal, a dry bulk facility, and a LASH mooring terminal. These three projects represent an additional $15.5 million investment in Savannah's future.

"I feel that with the completion of these facilities, we can increase the Authority's Savannah tonnage and economic impact by 50% within the next three to four years." (Georgia Ports Authority)

Geogia Ports Week

Savannah, Ga.:—Citing the many accomplishments of the Georgia Ports Authority and the tremendous impact on the State's economy of Georgia's port operations, Governor Jimmy Carter has proclaimed August 23-29 as Georgia Ports Week.

Savannah, Ga.:—Authority members pictured with the Governor, viewing the GPA's traveling exhibit are (left to right) J. D. Holt, Executive Director, Savannah; Robert H. Tharpe, Sr., Chairman, Atlanta, and M. Fred Whelan, Director of Trade Development, Atlanta. (Georgia Ports Authority)

The Georgia Ports Authority operates deepwater terminals at Savannah and Brunswick and inland barge facilities at Augusta, Bainbridge and Columbus.

Last year, Georgia's deepwater ports handled over 8 million tons of cargo and ranked number one on the South Atlantic with general cargo in foreign commerce.

Commodities from Georgia and a thirteen state hinterland flow through Georgia's ports, creating vast complexes of international freight at Savannah and Brunswick.

Georgia's ports and port related industries pump one million dollars a day into the State's economy.

Giant Terminal

Melbourne:—Liner Services Pty. Ltd.'s container terminal/depot complex at Appleton Dock, built at a cost of $1½ million, is expected to be fully operative this month.

The new project is an extension of the present depot and terminal facilities of the company, which was built at a cost of $1½ million more than two years ago.

The present extensions have become necessary, because of the additional new type ships, both container and roll-on roll-off, which are expected to use the company's facilities in increasing numbers within the next two years.

The Commissioners of the Melbourne Harbor Trust have leased 28 acres of land, behind and adjacent to its new common user berth No. 1 East Swanson Dock, to Liner Services. Liner Services are expected to make full use of this berth as well as No. 2 East Swanson Dock, when it is completed in mid 1972.

The company at present handles jumboised Scandia type ships trading to Europe for Swedish Australia Line, Australia West Pacific Line vessels trading to Japan and the American owned Farrell Lines' "Mariner" class freight ships trading to the United States, as well as the German owned Columbus Line, trading to U.S. ports and Europe.

A true indicator of the company's need to expand its present terminal/depot facilities is the throughput tonnage figures handled at "B" Berth Appleton Dock. This berth

is on a first call agreement to Liner Services and in 1969 handled 294,-506 tons of import and export cargo, as compared to 433,040 tons of import and export cargo in 1970.

The present mixed fleet worked by Liner Services will be gradually phased out of service, and will be replaced within a two year period with "pure" cellular and roll-on roll-off ships.

Columbus Line is introducing three cellular ships, the first of which the "Columbus New Zealand" is due in Melbourne on her maiden voyage early this month.

Farrell Lines will place four cellular ships into the U.S.-Australia trade route as from the latter half of this year, while Wilh. Wilhelmsen Lines will, by early 1972, have the first of its five roll-on roll-off ships in service in and out of the Port of Melbourne.

The new facility has a depot shed and two-storey office block, gatehouse and maintenance shed covering four acres. Paving of the external areas, large enough to accommodate 3,500 containers, has been completed.

The new cargo shed will only cater for import cargo, and is considered to be of a revolutionary design covering an area of 156,000 square feet and measuring 650 feet wide and 240 feet high. The shed is divided lengthwise into three 80 feet wide areas, the two on the sides catering for cargo unloaded from containers with the centre area giving access for transport to pick up cargo consignments.

Three stacing areas with a capacity of 2,800 containers including facilities for 200 refrigerated containers have also been constructed. (Melbourne Harbor Trust Port Gazette, June)

Sister-Port Confabs

Tokyo, August 24:—The Port of Kobe's 33-member delegation to this year's seminar for promotion of sister-port ties with the ports of Rotterdam and Seattle left for Rotterdam by air yesterday with Kobe Mayor Tatsuo Miyazaki as its head.

Rotterdam Municipality is the sponsor of this seminar, the third of an annual series started in 1969, which is to run for four days from Aug. 30.

Kobe Municipality sponsored the first seminar in 1969 and Seattle Municipality, the second in 1970.

The three major international port cities are called on to host this annual series of seminars on a rotative basis.

In this year's seminar, 15 delegates from the Port of Seattle and 22 from Rotterdam are to take part along with the 33 Japanese.

Kobe Municipality formed a sister-port alliance with Seattle in May 1967 and with Rotterdam in October 1970.

The annual seminar series is intended to promote the flow of information on various phases of port and harbor administration, according to Kobe Municipality.

Four Japanese delegates will present views on four subjects for debate at this year's meet.

The subjects and speakers are: "Movement and Storage of Dangerous Cargo" by Yasuhiko Yasuda, director of the Kobe Port and Harbor Bureau (KPHB); "Development of Container Trade by Containerships of the Third Generation Onward" by Mayor Miyazaki; "Harbor Traffic Control and Navigational Safety" by Takuro Hatao, Kobe's harbor master; and "Pollution Controls and Preventation" by Takao Kishi, director general of the KPHB.

After the general debate session the Kobe and Seattle delegates will go on an inspection tour of local port and harbor facilities including container terminals and dock workers' training facilities. (Shipping and Trade News)

Mission for Europe

Tokyo, August 24:—An eight-member mission consisting of representatives of the Osaka Port Authorities, financial circles in the Kansai district and Osaka shippers was Sunday dispatched to Europe by the Osaka municipal government to promote the Port of Osaka's international commerce.

The mission led by Shinsaburo Fukuyama, Deputy Mayor of Osaka, is scheduled to visit Copenhagen, London and Amsterdam during their 10-day itinerary.

They will call on the headquarters of major European shipping companies and shipping conferences to give them more information of the Port of Osaka along with its newly expanded Nanko (Southern Port) facilities to help activate the port's foreign trade.

The group is expected to return to Tokyo by air on Sept. 3. (Shipping and Trade News)

Port Seminar

Tokyo:—The 8th Group Training Course in Port and Harbor Engineering, 1971 is now in session in Tokyo to last from August 2 through November 25 under the sponsorship of the OTCA (Overseas Technical Cooperation Agency), a semi-Government agency of Japan. There are 13 participants, one each from Aden, Costa Rica, El Salvador, Guatemala, Indonesia, Mexico, Nicaragua, Peru, The Philippines, Sudan, Thailand, United Arab Republic, and Venezuela.

On August 10, a reception was held at Seiyoken, Uyeno, Tokyo from 6.00 p.m. where several ambassadors of the countries represented, Dr. Yoshiaki Kurisu, Director-General of Bureau of Ports and Harbors, Ministry of Transport, Dr. Hajime Sato, Director-General of Japan Port and Harbor Association (IAPH Deputy Secretary General) and others were present.

Mechanizing Ports

Vladivostok, Mar. 26:—The comprehensive mechanization of ports on the Pacific Coast of the USSR has been started.

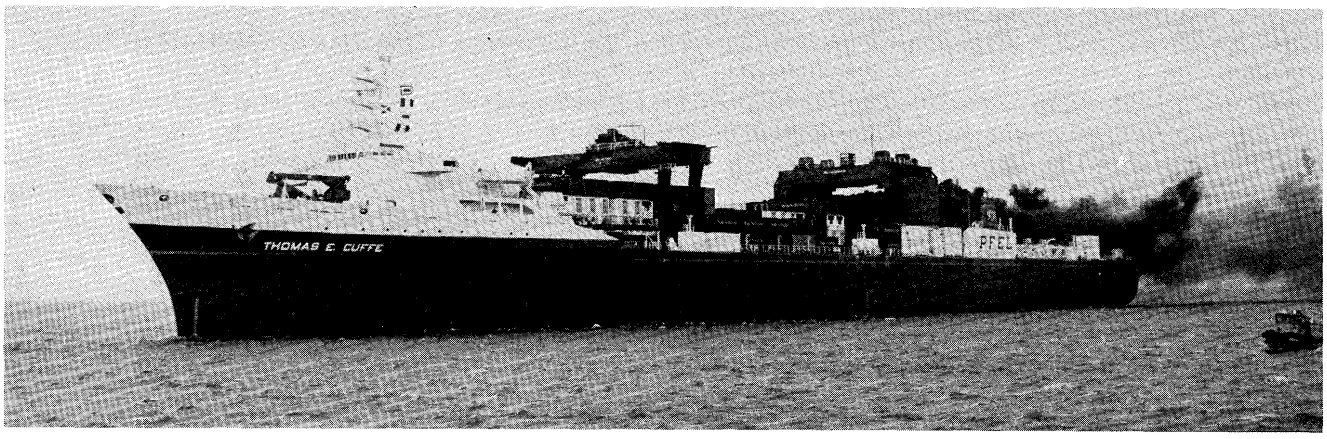
The plan provides for the introduction of the ship-railway car loading technological set-up with all the ships in the new five-year period (1971-1975).

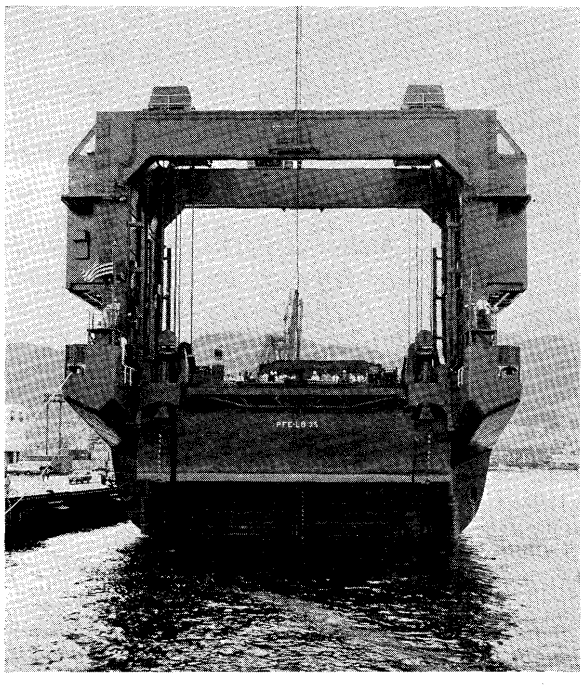
For loading of timber, containers are used on the Vladivostok-Petropavlovsk-Kamchatsky route.

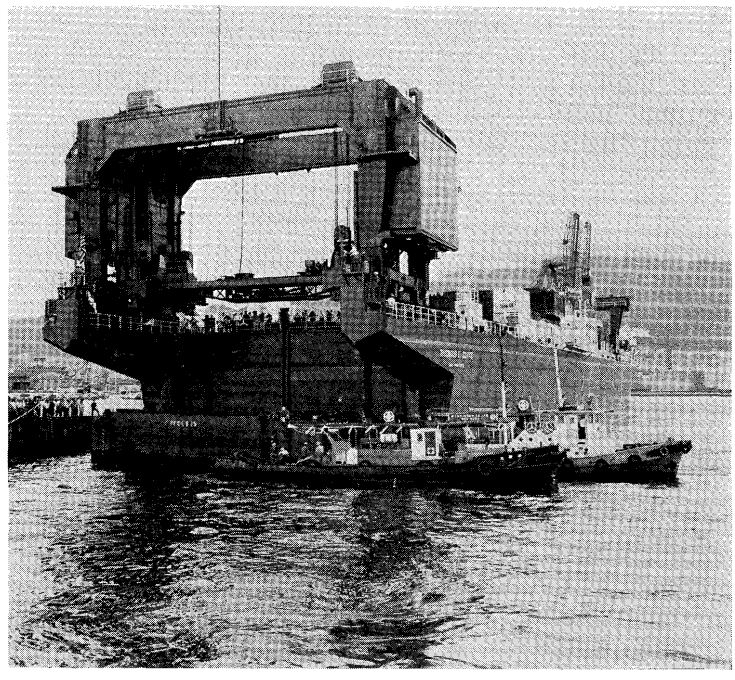
This makes it possible to fully mechanize the loading and discharge of flour, cement and sugar.

Specialized wharves for transshipment of containers and timber are being built or designed.

Engineers expect that the implementation of the plan will hasten the transshipment of bulk cargoes 10-15 fold, and of container cargoes







Kobe:—The Thomas E. Cuffe (26,400 gross ton, Registry Port: San Francisco) entered No. 4 pier of the Maya Piers, Kobe Port, on August 31 (Tue.) morning in rain. It had delayed in arriving here by one day owing to the season's 23rd typhoon and entered the berth immediately after the typhoon had passed the Kobe-Osaka area. This was the first LASH-ship that had ever visited Japan. After discharging six empty lighters at Kobe, taking 15 minutes a lighter, it left for Pusan, Korea, at about 1:00 p.m. in the afternoon of the same day. (News Release from Port & Harbor Bureau, Kobe City Government)

and timber by 50-100 per cent. (Shipping and Trade News)

Fighting Pollution

Hong Kong, 2 August:—The new pollution control unit of the Marine Department is expected to go into full operation early next year. Already 500 feet of oil booms and 10,000 gallons of emulsifiers to be used to contain and disperse oil spillage have been ordered and these are expected to be in stock within two months.

The department is also awaiting approval by the Finance Committee for the construction of a special launch casting HK$1 million (£68,-700 sterling; US$165,000).

The Pollution Control Unit is responsible for safeguarding waters in and around Hong Kong against the hazards of all forms of surface pollution.

Its duties are to conduct hydrographic surveys of certain dangerous areas in local waters, to carry out research into matters relating to pollution, to arrange and organize oil pollution exercise, and to investigate oil spillage with a view to prosecutions. (The Week in Hong Kong)

New Commission Chairman

Penang: — After nine years as Chairman of the Penang Port Commission, Dato Laksmana Haji Mohd. Razalli bin Haji Mohamed Ali Wasi, S.P.M.P., J.M.N., P.J.K., J.P., retired on 22nd May 1971. His Majesty The Yang di-Pertuan

Agong has appointed Tan Sri Abdul Jamil bin Rais, P.M.N., P.J.K., to succeed him.

The new Chairman takes over as Head of the Pang Port Commission with a wealth of experience behind him. He was with the Malaysian Civil Service and held the appointment of Chief Secretary to the Government before he was appointed as Malaysian High Commissioner in London in 1967. He relinquished this appointment to take up this new post.

Tan Sri Abdul Jamil bin Rais was the first career officer to be the Malaysian Government's representative in Britain. Due to his administrative ability he quickly rose from the ran of a Malay probationer to the top job of Chief Secretary to the Government.

As a High Commissioner in Britain, he has helped to bring about much closer relationship between Britain and Malaysia. An example of the recognition of his efforts was the special invitation to Tan Sri Abdul Jamil and his wife to be overnight guests of Queen Elizabeth and the Duke of Edinburgh at Windsor Castle—a rare honour for any diplomat.

The Chairman, on his first visit to the Penang Port Commission, immediately took the opportunity to familiarise himself with the Commission's activities. Accompanied by the General Manager and some senior officers of the Commission, he inspected the Commission's installations at Swettenham Pier, Butterworth Wharves, Prai Wharf and the Bagan Dalam Dockyard. He met the senior officers of the Commission and was briefed on the Port and ferry operations by the heads of departments. (Berita Pelabohan, July)

Port General Manager

Penang:—The Penang Port Commission's General Manager, Inche Ismail bin Ngah Marzuki, J.M.N., represented the Penang Port Commission in two conferences held in Montreal, Canada, and Madlid, Spain. He left Penang via Tokyo for Montreal, where he attended the 7th Bienniel International Association of Ports and Harbours Conference from 7th to 12th June 1971. Immediately after this conference, he proceeded to Madrid, Spain to attend the 10th Bienniel International Conference of International Cargo Handling Co-Ordination Associations from the 14th June to 18th June 1971. All major ports of the world were represented in these two conferences of which the Penang Port Commission is a member of both these organizations.

In between these conferences, the General Manager took the opportunity to stop at various ports to observe the container handling and other port facilities. (Berita Pelabohan, July)

U.N. Officials at Karachi

Karachi:—The Karachi Metropolitan Region Master Plan Committee, led by Mr. Masood Nabi Nur, S.K., C.S.P., Commissioner, Karachi, visited the Port on 4th August, 1971, with a view to study Development projects of Karachi Port and interperate planning of the Port/City interface. The visiting team comprised of the Commissioner, Representatives of U.N. Project Management, Director-General, Karachi Development Authority, Administrator, Karachi Municipal Corporation, Chairman, Karachi Cantonment Board, and Dy. Director, Military Lands & Cantonments. The Visitors were shown round the Port by Commodore Anwer Saeed, T.Pk., P.N., Chairman, Karachi Port Trust, and Mr. Aftab Alam, Engineer-in-Chief, K.P.T.

As a first step, the Committee obtained on-the-spot information about the progress in construction of Additional Deepwater Berths Nos. 22 to 24 at West Wharf. They were shown the recently constructed quay-wall designed for a dredged depth of 38 feet and capable of accommodating the largest of general cargo vessels, the 700-feet long R.C.C. tunnel, constructed at depth of 40 feet below the ground from the sea-face to K.E.S.C. sub-station, heavy duty transit and storage plinths, modern reinforced concrete roads and tarmac flush dock tracks for quay-cranes and railway wagons.

These berths have been constructed at a cost about Rs. 6 crores and are due for commissioning by the end of this year. As a part of these schemes two lighterage berths were commissioned in 1968.

The Engineer-in-Chief, K.P.T., Mr. Aftab Alam, gave a comprehensive outline of K.P.T.'s immediate, short-term and long-term plans for development, including the programme of Hydraulic & Oceanographic investigations being carried out by Karachi Port Trust.

Mr. Aftab Alam informed the Visitors that feasibility studies for the Oil Terminal and the Dry Cargo Wharfage Complex were in the advance stage, and were due for finalisation by the end of this year. (K.P.T. News Bulletin, August 15)

Reducing Pollution

Auckland, N.Z., August 4:—Education of ships' masters about the problem of oil spillage as well as legal enforcement of the Auckland Harbour Board's policy would reduce oil pollution in the Waitemata Harbour, according to the board's general manager, Mr. R. T. Lorimer.

"It is our experience that the cause of most of the oil spillages from merchant vessels stems from inadequate supervision or failure to observe established procedures," he said.

Mr. Lorimer told a monthly meeting of the Board that "no regulation or bylaw" would ever completely eradicate oil spillage, because of human error.

"It is unlikely that further restrictive legislation would bring any further improvement," he said.

"The Board's officers are constantly aware of the problem and their concern is to keep to an absolute minimum, by all legal and other means available to the Board, the pollution of its harbour waters by oil spillage."

Mr. Lorimer said the growing public concern over all aspects of pollution would assist, particularly if the concern was reflected by substantial Court fines.

He said that in 1968 there were 32 oil spills in the harbour, in 1969 there were 35 spills, and last year 29. So far this year there had been 16. Of the 22 offenders who were traced in 1969, 18 were merchant vessels.

Port of Wellington, N.Z., Expansion Under Way

Mr. Lorimer said one major shipping company had issued instructions to its ships masters of precautionary measures to be taken when oil operations were being carried out.

A copy of the precautions had been translated into Japanese and issued to the masters of Japanese vessels when they arrived in port.

Since the beginning of this arrangement in July 1970 there had been no reports of oil discharges from Japanese vessels, said Mr. Lorimer.

A proposal to seek amendment of the General Harbours Regulations or the Oil in Navigable Waters Act had not been pursued on the advice of the Board's solicitors, he said.

At present detergent was used to disperse oil spillages in the Harbour, and this had proved most effective. (Auckland Harbour Board)

Container Operation

Auckland, N.Z., July 1:—The Auckland Harbour Board's new Container Terminal began operating late in June, with the arrival of the Columbus New Zealand, the first fully cellular container ship to call at New Zealand.

A total of 410 containers were exchanged and the Auckland Harbour Board was highly satisfied with the first test of the facility.

"The exchange was made at a net rate of 28 containers an hour," said the assistant general manager of the Harbour Board, Mr. D. N. Morgan. "This figure is calculated on the actual time during which the portainer crane and the ship's gantry crane were working. It does not include time for such work as lifting and replacing hatch covers, or mealbreaks."

"As a first trial of the portainer crane and other equipment, we believe that the handling of the ship was an excellent effort by all concerned," he said.

Mr. Morgan said the Board expected the rate to improve as operators became more familiar with equipment, and as further equipment on order became available. Additional tractor-trailer units will

be operating when the next container ship ACT 3, arrives at the Port on August 23.

The Board's portainer crane shifted 65% of the containers which were exchanged for the Columbus New Zealand and its availability meant that the whole of the ship could be worked. The gantry crane on the ship is not able to work on the most forward hatches or on the hatches aft of the superstructure.

Of the 12 ships which are to work the East Coast North America container service, nine do not have gantry cranes, and the portainer will be needed to handle all containers carried on those ships. Its twin-lift capacity and cycle of operation will permit a net handling rate of up to 60 containers per hour.

Mr. Morgan said that having completed this first exercise, the Board was confident it had an efficient container terminal with a design that was in every way up to the Board's expectations of what it could achieve for the Port, the shipping lines, and the country as a whole. (Auckland Harbour Board)

Board's Slipway

Whangarei, N.Z.: — Northland Harbour Board's 1500-ton slipway, which was built as a necessary adjunct to the National Oil Refinery at Marsden Point, has become something of an industry in itself.

The slipway, which was opened in 1964, is required to handle the Board's four powerful tugs associated with the refinery operation and the berthing of tankers. But its use has extended to the servicing of vessels from many parts of the world, as well as catering for New Zealand-owned shipping.

Designed to handle ships of up to 270 ft. in length and 1500 tons weight in shipping conditions, the slipway has had, as its heaviest load to date, the 1585-ton Australian dredge WD 53.

The dredge was assisted while in distress north-west of Cape Maria Van Diemen and escorted to Whangarei by Board tugs in 1967.

The repair of the Danish vessel m.v. Gamma, stranded off Mercury Island, was a recent major item for the slipway. The works included extensive renewal of bottom plating and framing.

With a total length of 750 ft. from top to bottom, the slipway has a minimum draught over outer ends of 18 ft. m.l.w.s. ranging to 25 ft. m.h.w.s.

Speedy Service

Sealed bearings on cradle wheels allow sandblasting of ship's hulls, with consequent speeding up of cleaning and painting. Vessels of 1000 tons displacement frequently slip, clean down, paint and unslip within 24 hours.

The main contractor for the slipway's construction was Downer and Company Limited, with Tapper and De Wit the consulting engineers.

The 250 ft. cradle, which was designed and built by A. & G. Price Limited, Auckland, is capable of division into two sections of 150 ft. and 100 ft. respectively. It has a total of 360 wheels. The width of the cradle is 45 ft. and the outer rail centres are at 28 ft.

Sliding bilge blocks can be positioned to suit the vessel hauled. (Points North, July)

"Hinterland" Available

Antwerp:—In the month of April last an International Conference devoted to the theme: "Packing, unit load and transport in connection with physical distribution" was arranged in Antwerp.

Under the general chairmanship of Mr. G. van Elegem some 185 experts from 11 European countries have discussed the reports drawn up by 15 personalities and specialists of the packing, transport and goods handling sectors.

The complete text of these reports, followed by a summary in three other languages has been published in number 67 of the quarterly periodical "Hinterland" which just appeared. The publication includes some hundred pages, which are abundantly illustrated, and constitutes in that way a source of information of a very high documentary value.

The persons and firms being interested in the theme, treated during the Conference, can obtain copies of "Hinterland" by applying to the publishing company P.V.B.A. "PUBLITRA", Brouwersvliet 33, B-2000 Antwerp. Selling price: BF 100/copy (+6% Value Added Tax). (Hinterland)

Economic Mission

Antwerp:—On 10th May last an Antwerp economic mission left for the United States aiming at a two-fold goal, viz. to persue the Antwerp presence policy in the United States (as a follow-up to the initiatives taken in 1965 and 1969) and to establish a number of contacts and give up-to-date information to both the traditional and potential customers of the Port of Antwerp. The mission especially wants to emphasize the tree following trumps:

—the possibilities offered by the port of Antwerp as a centre of physical distribution for American goods to be sold in Europe;

—the excellent shipping connections and the ability of Antwerp to adapt itself to the scale increase and the new techniques;

—the attraction which Antwerp exerts on industries wanting to settle down in Europe.

The delegation was composed of 37 representatives of the Government, the Province of Antwerp, the Antwerp City Council and the Antwerp economic circles (port, commerce, industry and finance). The programme of the mission, set up in co-operation with the Belgian American Chamber of Commerce in the U.S.A. and the Belgian consular representatives in that country included Port of Antwerp Days in several important American cities, such as New York, New Orleans, Houston, Atlanta and Chicago. (Antwerp Port News)

British Transport Docks Board Annual Report 1970

Increased Traffic: Operating Surplus £4½ Million; But Overall Deficit of £1.6 Million

A 9½ per cent increase in the tonnage of cargo passing through the Board's ports—to a new record figure of over 86 million tons—was achieved in 1970 by the 19 ports operated by the British Transport Docks Board.

Gross receipts by the Board were £4 million more than in 1969, but higher costs, including increased interest charges, and the transfer to reserves of £835,000 to cover depreciation on a replacement cost basis, resulted in a net deficit of £1.6 million, after crediting exceptional profits of £200,000. The operating surplus after historic cost depreciation was £4½ million.

The Board's report to the Secretary of State for the Environment, published today (Wednesday, 30th June), states that operations in 1970 were severely affected by the national dock strike last summer and the unforeseen four-month closure of Newport Docks for reconstruction of the lock entrance. In addition, the report says that "sharp rises in working expenses, including higher wages and salaries not adequately matched by increased productivity, were not fully recovered despite increases in charges at all the ports."

(Sir Humphrey Browne, C.B.E., who was appointed Chairman of the British Transport Docks Board on 1st May said today that the 1971 performance to date showed some improvement. The results for the year would, however, depend upon the extent to which the Board could recover the cost of increased wages and other charges and on the level of trade.)

Trade

The increase in traffic from 78.7 million tons to 86.2 million was due to additional tonnages passing through the Humber and South Wales ports.

The performance in South Wales would have been even better but for the closure of Newport Docks. With the willing co-operation of the staff and port users concerned during the closure, about 75 per cent of the traffic normally handled was diverted to other South Wales ports, states the report.

The principal increases in trade at the Board's ports were in petroleum and iron ore, which rose by 6.8 million tons and 1.5 million tons respectively. Coal shipments fell by 0.8 million tons.

On the general cargo side, several new shipping services were attracted to the Board's ports during the year and existing services were expanded. A 20 per cent increase was recorded in container and unit load traffic which rose from 2.5 million to 3 million tons.

Port Development

Capital expenditure on port developments during 1970 amounted to £10.3 million, bringing the total investment by the Docks Board since it was set up in 1963 to over £83 million, of which 41 per cent has been provided from its own resources.

Most important of the works completed during the year was the new Port Talbot Harbour, which was formally inaugurated by Her Majesty The Queen on 12th May. The new harbour, designed initially for the reception of iron ore, can accommodate ships of up to 100,000 tons deadweight, with a potential capacity for vessels of more than 150,000 tons.

Work began at Shouthampton on a second major instalment of terminal facilities for container traffic, consisting of three berths with a total quayage of 3,000 ft. and a storage area of some 70 acres.

Personnel

The total number of staff employed by the Board and its subsidiaries at the year end was 11,075, including 3,023 registered dock workers, compared with 11,394 a year earlier.

Pay claims settled during 1970 for manual and salaried grades, and the introduction of a new salary structure for management staff following job evaluation, added some £700,000 to the salary and wages bill for 1970 and will cost the Board £1 million in a full year.

Registered dock workers employed by the Board and their subsidiary and associated companies at Hull and Southampton were covered by settlements reached in those ports between employers and the Trades Unions concerned for the implementation of Stage II of the Devlin Committee's recommendations. These were directed towards the removal of practices inhibiting the mobility of labour and the general adoption of shift working.

Training and Education

The Board's established training schemes were continued but a number of alternations were made, both to the programmes at the Staff College and to associated courses in the major ports, to meet changing needs and to take account of current developments in training techniques.

Thirty courses were held during the year at the Staff College and were attended by a total of 405 students, including sixteen from other authorities. Three management seminars on corporate strategy were held, one at the College and two at Hull, and were attended by 52 senior officers. In addition, courses were arranged in the port areas to supplement those at the College for shop stewards and staff representatives in the interest of further developing the good relationships with the Trades Unions.

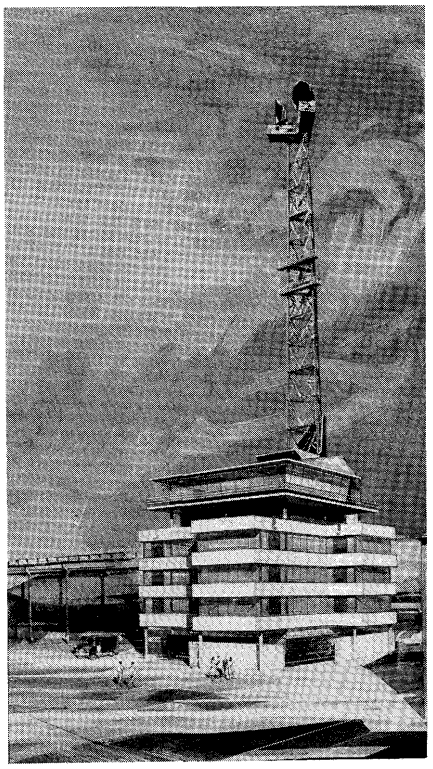
Integrated Port Communications System for Southampton

British Transport Docks Board

Ships using the Port of Southampton will have the benefit of one of the world's most sophisticated harbour surveillance and shipping information systems, fully integrated with Trinity House Pilots and H.M. Coastguard, when a new scheme being carried out by the British Transport Docks Board is completed early in Spring 1972.

This was revealed in Southampton today following the award of contracts totalling over £¼ million to Decca Radar Limited and Marconi Communications Systems Limited for radar and VHF radio/telephone equipment for the port's new Integrated Port Communications System. The two contracts will run concurrently, with Decca Radar providing advanced computer assisted radar facilities and Marconi supplying a maritime VHF network.

The Port Communications System is being set up by the Docks Board in consultation with the Corporation of Trinity House, shipping interests, and technical specialists, and will permit close operational links with both the Southampton Pilots and H.M. Coastguard. Based on a new Port Communications Centre at present under construction at the dock head (No. 37 Berth) overlooking Southampton Water, it will provide full radar and VHF radio coverage of the port area over the twenty or so miles from the container berths at the Western Docks Extension to the Nab Tower in the Solent.



Port Communications Centre—Southampton.

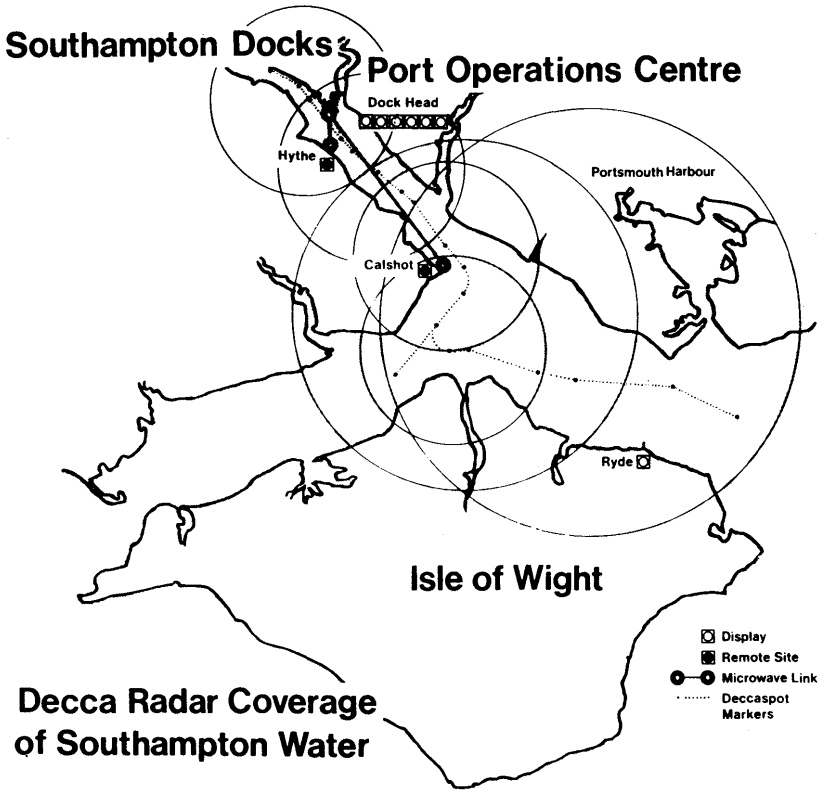
This project is being carried out under the direction of Mr. D. J. Doughty, the Board's Chief Docks Engineer at Southampton.

Radar Installations

Decca Radar are to equip two unmanned radar stations—at Hythe and Calshot—from which will be transmitted by microwave link to six 16 in displays in the operations room at the Port Communications Centre.

At Calshot the radar station will be incorporated into a new Coastguard Station, with a 25 ft. scanner mounted above the concrete building at a height of 110 ft. A second 25 ft. scanner will be installed at Hythe above a steel lattice tower of the same height as at Calshot. Remote control of both stations will be effected by microwave link to the Port Communication Centre.

The six displays to be installed by Decca in the operations room will be console mounted and all will be able to receive data from either unmanned station, two normally being fed from Hythe and four from Calshot. All the main electronic units will be duplicated for maxi-



mum system availability.

The Decca Computer Assisted Measurement System will be provided for all six displays, and the newly-developed Deccaspot facility will be available on all pictures received from Calshot. The former system uses a small Honeywell computer to enable rapid and accurate measurements to be made of any point, such as a ship's position, relative to any other point on the display. Deccaspot, a method employing a series of bright spots on the display to depict with great accuracy any permanent feature required, will be used to delineate the centre of the navigation channel from Southampton Docks down into the Solent to the Portsmouth Forts in the east and East Lepe in the west.

VHF Radio Network

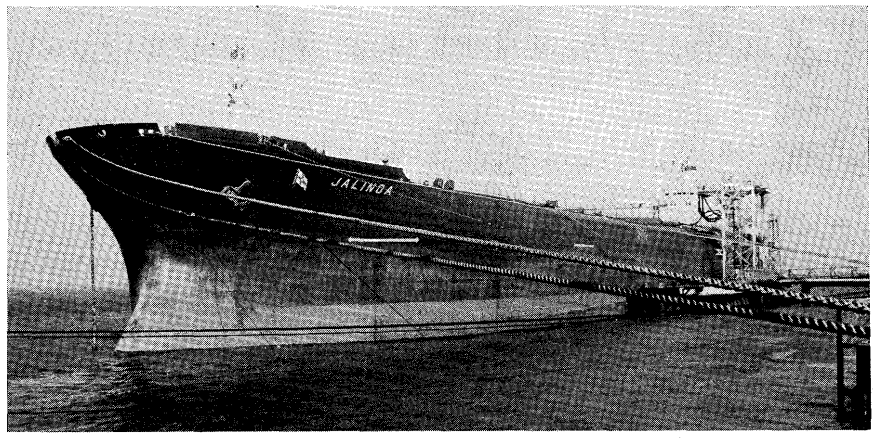
Marconi are to install a transmitting station for the VHF radio network at Dock House in the Eastern Docks and a separate receiving station some five miles away at Titchfield, in order to minimise interference between channels. Links with the Port Communications Centre will be land line from Dock House and by UHF radio bearer from the receiving station.

In the operations room, controls for the VHF R/T will be installed both in the radar consoles and at the central desk, enabling the operator at a display to be in continuous radio communication with an approaching ship.

Port Communications Centre

The new Port Communications Centre is being constructed at No. 37 Berth by A. J. Dunning & Sons (Weyhill) Limited and is scheduled for completion by the end of 1971. The six-storey building, surmounted by a 200 ft. mast carrying microwave aerials, daylight signals, and signal lights, will be the operational control centre for the harbour surveillance and communications system, and will provide accommodation and offices for the pilots and the Dock and Harbour Master and his staff. Additional accommodation on the operations (top) floor for the Chief Operations Officer and the Duty Pilot will facilitate close consultation between them.

Largest Ship to Enter The Humber



London, 8 July:—The largest vessel to enter the Humber to date, the 258,850-ton Norwegian tanker Jalinga, berthed at the British Transport Docks Board's Immingham Oil Terminal. The Jalinga arrived at 16.00 hrs. on Saturday, July 3 with a part cargo of 106,000 tons of crude oil from the Persian Gulf for the Lindsey Oil Refinery. Discharge commenced at 18.10 hrs. the same day and was completed by 20.15 on Sunday, the Jalinga sailing for the Persian Gulf shortly after midnight. Jalinga is 1,109 ft. 3 ins. in length and has a beam of 170 ft. 2 ins. She arrived at Immingham with a draft of approximately 40 ft. During 1970 the port of Immingham dealt with nearly 14 million tons of petroleum. (British Transport Docks Board)

Exploding a Myth

London, June: — Last year the Port of London Authority made a film—nothing unusual in that—we have made a number of films, and have always recognized their importance as a means of communication.

But this one is different. It was made very quickly; distributed and shown internationally with matching speed; it incorporates the urgency of newsreel with the style of a documentary.

The PLA made 'From Tilbury to the World' to explode a myth—the misconception that the much publicised ban on a particular berth in one section of the docks meant the whole port was at a standstill. It also made the film to announce the inauguration of a new shipping service and has become an important addition to our film library.

The enclosed case history shows how the problems were recognized, overcome, and the film made. It was an interesting, challenging and successful experience. The case history has been published in the interests of good industrial public relations techniques.

We hope you will find it interesting and helpful. (PLA)

NEW BOOK:

Using The Ocean

London: — Our over-populated earth is fast using up its natural resources. To survive man must turn to the sea, that virtually untapped giant which covers 70 per cent of the world's surface. For seawater and the sea contain almost all the raw materials which modern technology demands.

In USING THE OCEANS ten distinguished contributors discuss current oceanographic research whilst strongly condemning the present polluting of the world's waters. Topics include the likelihood of obtaining nuclear power from the sea and the feasibility of man's living permanently under the waves. There is detailed study of modern diving exploration, from scientific and commercial applications to the more glamorous skin-diving. Entertainment is included in the light-hearted account of the future "homo-aqua-

(Continued on Next Page Bottom)

More Comecon Trade Through Port of Hamburg

(Ship via Hamburg, June)

Economic relations between Hamburg and its traditional partners in Eastern Europe are marked by rising transit figures and a growing volume of trade. This year as well Hamburg delegations, headed by Economics Senator Helmuth Kern, visited the Trade Fairs in Budapest and Poznan. The fiftieth Poznan Fair this year saw the fifteenth delegation from Hamburg since 1945. At Brno the Hansa City will be represented at the International Autumn fair from September 11th to 20th.

In Prague, „Hamburg Business Days" will be arranged for the first time from October 25th to 28th. The programme includes symposia to make economists and experts in management and administration familiar with the services offered by the seaport and marketing centre, Hamburg. A press conference and a Hamburg reception, exhibitions, film shows and other events are on the agenda.

Hamburg representatives travelled this year to the Budapest Fair for the seventh time. Transit trade between Hamburg and Hungary went up by 60 per cent. in 1970, the value of goods exchanged by 24 per cent. to around DM 500 million. Some 230,-000 tons of goods were imported and exported via Hamburg for Hungary.

Both in Budapest (21st to 31st May) and Poznan (13th to 22nd June) Hamburg was represented by a stand or pavilion, where interesting ship's models were on show and information material was distributed to the numerous visitors. Film shows and illustrated papers in the corresponding home tongues gave an impression of Hamburg and its citizens to the general public. Last year, the Hamburg stand in Budapest was inspected by over 100,000 visitors.

As before, Czechoslovakia is the most important transit customer of the port of Hamburg after the GDR. From 1948 to 1970, ten million tons of goods were exported from the CSSR via the Elbe port. From 1965 to 1970 alone Hamburg importers bought goods worth DM 300 million in Czechoslovakia, and the exports of CSSR firms to Hamburg at DM 68 million reached a new peak last year.

Thanks to the trade agreement concluded between the Federal Republic and Czechoslovakia trade is now largely liberalized. A contract concluded this spring in Prague by Werner Schröder, Vice-President of the Association of Hamburg Port Operators, and Cechofracht gives reason to expect that Czechoslovak transit shipments via Hamburg will continue to rise. From 1969 to 1970, they increased by 16% to 1.4 million tons.

Poland is one of Hamburg's most important transit customers and business partners. The Elbe port is firmly incorporated in the system of Polish liner services, and the number of Polish ships calling at Hamburg goes up year by year. Hamburg firms have a considerable share in trade between the Federal Republic and Poland, and many a large order of Polish industry is handled by commercial establishments in Hamburg.

Total transit shipments routed via Hamburg for Poland, which in 1968 passed the 100,000-ton mark for the first time, amounted to over 125,000 tons last year. With a share in total imports of over 33 per cent. in the past few years, Hamburg importers play an important part in Polish exports to the Federal Republic. In all, goods worth DM 336 million were traded between Hamburg and Poland in 1970.

The German Democratic Republic, too, is making great efforts to increase export shipments via Hamburg. Total turnover rose by 23 per cent. to DM 4,500 million last year. Transit traffic went up from 1.7 to as much as 3 million tons, or by 75 per cent. Incidentally, Hamburg's total cargo turnover rose by 15 per cent. to 47 million tons in 1970.

Container Crossroads

Bremerhaven:—No more apt expression can be found for the new container-terminal on the sea at Bremerhaven; which is the northern intersection for the economic blocks of the EEC, EFTA and COMECON. The ideal location raises the leading container handling point of Bremerhaven above the neighbouring ports, writes the Bremen Senator for Ports in the North German trade journal "Wirtschaftskorrespondent". In addition one must count the thriving cargo position, which again, is due to the auspicious port-siting and the convenient traffic connections to the industrial and economic centres in the hinterland. At the present time Bremen is being served by 11 full-container and 21 semi-container lines, of which 8 full-container and 11 semicontainer services operate in Bremerhaven. Senator Dr. Borttscheller writes that since the commencement of the container trade across the Atlantic in May 1966, the total number of containers han-

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tus".

Though of wide popular appeal, this book is of special interest to those wishing to make a career in oceanography, containing a comprehensive list of university departments with courses in marine science.

An eight-page section of photographs, a detailed table of underwater accomplishments and a full bibliography are provided. USING THE OCEANS gives the informed layman a solid background in oceanography and is a useful reference for the academic. Edited by Dr. T. F. Gaskell. Price £1.25, published by Queen Anne Press Ltd., 49/50 Poland Street, London W1A 2LG. All orders to the publisher must be accompanied by payment unless they are submitted in the name of a company or organization.

dled in the two terminals, Bremen and Bremerhaven, was 275,800 of the 20, 35 and 40-foot types up to the end of 1970. This is equivalent to 450,300 units of the 20-foot type. The quantity of cargo handled in this action (including the container weights) amounted to 3.06 million tons. Last year, too, the seaport group of Bremen/Bremerhaven was albe to expand still further its leadingposition in the overseas container trade and to increase its lead over the other continental ports. (Bremen Air Mail, June)

New Russian Ports

Bremen:—The steady expansion of foreign trade connections and of the merchant fleet of the Soviet Union has led to the construction of new ports. Thus, on the Northwest coast of the Black Sea, south of Odessa, has arisen the port of Iljitschowsk during recent years; which is clearly for the purpose of relieving Odessa. In the past year the 24 quays here have handled 900 ships of between 12,000 and 70,000-ton burthen, with 10 million tons of cargo. This means that Iljitschowsk has developed into being one of the five biggest ports of the USSR. Liner services from here run to 70 ports in Bulgaria, Jugoslavia, Arabia, Italy, Cuba, Japan, East Germany and the Canary Islands. The Soviet Union also intend to establish a major port on their Pacific coast, from whence the maritime trade will be conducted with Australia, India and South East Asia. The Bremen Institute for Maritime Economy suspects that this new port will be in the vicinity of Nachodka on the Westcoast of the Sea of Japan. Incidentally the port of Nachodka was also only constructed after the second world war. Probably the new port will also deal with the container trade moving through the Soviet Union between Europe and Japan. (Bremen Air Mail, June)

Remarkable Growth

Bremen/Bremerhaven: — The Antwerp Shipping Association published an interesting review in their 1970 annual report in respect of the development of European Atlantic ports over the last 30 years. In a comparison on the development in dry cargoes for the ports of Amsterdam, Antwerp, Bremen, Dunkirk, Ghent, Hamburg and Rotterdam—for 1938 as against 1969—Rotterdam (+93%) lies pretty far behind Dunkirk (+276%), Amsterdam (+206%), Bremen (+113%) and Ghent (+94%), but ahead of Antwerp (+91%) and Hamburg (+12%); giving an average for these 7 ports of +89% between 1938 and 1969. Amsterdam, Bremen and Dunkirk exceeded this average by far. (Bremen Air Mail, June)

New Floating Grain Elevator

Hamburg: — The Hamburger Getreideheber - Gesellschaft mbH. which operates 15 floating grain elevators with capacities up to 450 tons per hour has ordered a new elevator for delivery in August 1972. It will again be constructed by the MIAG, Mühlenbau- und Industrie GmbH., Brunswick, in cooperation with the Norderwerft Johann Rathje Köser, Hamburg. Divided into two systems of 200 tons each, its hourly capacity will be at least 400 tons for heavy grain. In addition, the elevator is designed to handle crushed grain, expellers and oilseeds. (Ship via Hamburg, June)

New Container St.

Hamburg:—Following the completion of a container packing station covering about 3,000 square metres at the Overseas Centre, a marshalling area of 20,000 square metres with paved-in tracks is now ready for use. Van carriers handle loaded containers direct from and to rail wagons.

It is expected that last year's increase in container traffic of 50% will soon be surpassed. Already today about 600 containers are packed each month at the Overseas Centre. (Ship via Hamburg, June)

Europe-Indonesia Service

Amsterdam, 28th June: — The fortnightly service by Koninklijke Nedlloyd n.v. between Northwest Europe and Indonesia is to be expanded. In cooperation with the East Asiatic Co. of Copenhagen and the Swedish East Asia Co. of Gothenburg, there will now be an expanded service between Northwest Europe (with Amsterdam as sole Dutch port) and at least four Indonesian ports: Belawan, Djakarta, Surabaja and Semarang. This new joint service will start in mid-July with a sailing of the "Madison Lloyd" of Nedlloyd. This voyage will be preceded by a sailing of the "Hainan" of the Swedish East Asia Co. which will load in Rotterdam for the last time.

Amsterdam agents are Ruys & co for Nedlloyd and Cornelder's Scheepvaart Mij. for the Scandinavian Lines. (Vereniging "de Amsterdamsche Haven")

Young Port Managers

Amsterdam:—Fifteen Indonesian "middle management" port aides began an intensive 15 week training programme in and around the Port of Amsterdam earlier this month. Sponsored by the Dutch government and the Port of Amsterdam, the programme will enable the young port managers to see how the port operates as well as offer practical experience in port administration.

The first five weeks of the programme will consist of general training at the Royal Tropical Institute. There, lectures will be given on specific port problems and the participants will be given general information and an opportunity to brush up their command of the English language.

Most of September will be spent gaining practical experience in all departments of the port management. From September 20, the Scheepvaart Vereeniging Noord (Shipping Association North), made up of various private enterprises in the port, will take over and the group will spend three days a week working in various firms in the port, learning about general cargo handling.

The first week in November will be spent in the management training centre "de Baak" in Noordwijk, and the programme will wind up

with a week-long evaluation period at the adult training school in Bergen.

Most of the young Indonesians are from Tandjung Priok, Indonesia's largest import port and "sister-port" to Amsterdam. (Amsterdam Newsletter, August)

Port Traffic

Lourenço Marques: — Handled 12 661 205 tons of cargo in 1969, 605 148 tons more than in the previous year of 1968.

From January to October, 1970, 1 755 ships called at the port, handling 11 449 922 tons, 980 726 tons more than in the same period of the previous year.

During the 1965-1969 five years period 54 108 835 tons of cargo were handled in this port, 14 722 850 tons of which through the Matola ore wharf.

It is expected that the 14 million tons mark will be reached soon. (Boletim Portos, Caminhos de Ferro e Transportes de Moçambique, November, 1970)

New Idea

Lorenço Marques:—Henceforth, on the flagpole of the Wharf Inspection Offices of Lourenço Marques, the flag of one of the local forwarding firms will be unfurled. This is a completely new idea.

The respective firm's flag will flutter there for one month, thus marking the efforts of the firm which imports each month the largest volume of general cargo.

This idea was put into effect last May and, as a curious type of competition, certainly deserved the praise of the firms concerned, whose efforts will thus be exemplified. And from now on such outstanding activities will be recorded in these columns.

We therefore note the names of the firms which, so far, have been given the honour of seeing their own flag flying for a certain length of time at the Lourenço Marques harbour.

Of the tonnage handled in May, June, July, August, September and October "Freight Services Ltd." led the field in May, June, September and October—months in which their flag was flown in the harbour.

In July and August the flag of the firm "Miller, Weedon & Salm Ltd." fluttered there.

The photographs which records this news shows, together with the Harbour's head office staff, Mr. A. E. Davidson, Director of the "Freight Services Ltd." whom we offer our congratulations on their excellent results.

In the same way, the appreciation of the harbour administration must also go to "Miller Weedon & Salm Ltd." which, during the second and third months of the competition, achieved the plane of honour. (Boletim Portos, Caminhos de Ferro e Transportes de Moçambique, November, 1970)

NW Mediterranean Ports

Barcelona:—Barcelona was represented at the important meeting held in Genoa on the 26th and 27th (November) to deal with the formation of a Committee over the Co-ordination of the north west Mediterranean Ports.

The Committee has been formed to develop an information network among the ports and also the co-ordination of activities. It also wishes to promote the image that the Mediterranean Maritime coast is a door to industrial Europe.

Agreement was reached that the Committee would be formed from interested bodies from Spain, France and Italy, presided over by the respective Presidents of the ports of Barcelona, Marseilles and Genoa. A rotary system for election of president was set up and the first President will be Mr. Leon Betous of Marseilles, elected by majority vote.

Three immediate tasks for the Committee to tackle are as follows:

1. The study of economic and industrial development in the Mediterranean countries belonging to this maritime coast, this work will be handled by the French Delegation.
2. A review of maritime transport in the Mediterranean, this project will be studied by the Italian Delegation.
3. The study of commercial and industrial publicity for Mediterranean ports this work will be handled by the Spanish delegation.

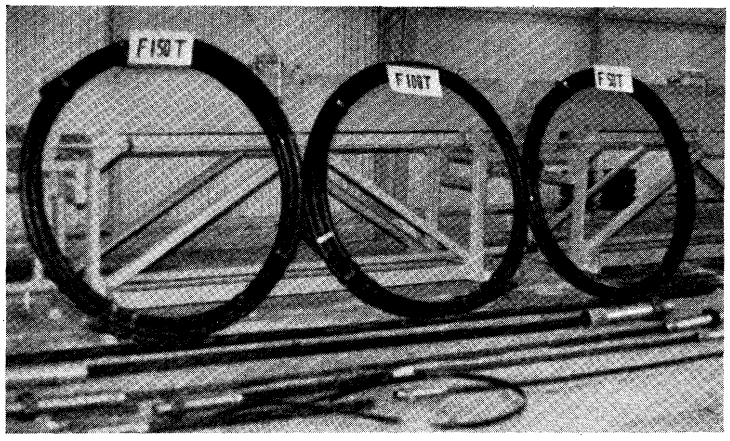
Spain was represented at this meeting by the President (Mr. Arturo Suqué) and Vicepresident (Mr. Pablo Roig) of the port authority of Barcelona accompanied also by their Director (Mr. González Isla); the President of Maritime affairs in the Chamber of Commerce (Mr. Masiques); the President of the Economic Division of the Merchant Navy Union (Mr. Molinas) and Secretary of the Chamber of Commerce (Mr. Aulet).

France was represented by the port authority and also the Chamber of Commerce of Marseilles, a Delegation from Sete, and several Dockers Unions.

Italy, for their part, by the Consortium of the port of Genoa and the board of the port of Imperia, Chambers of Commerce from Genoa, Savona, La Spezia, Imperia, Milan, Turin, Florence, Bologna and Livorno.

On Their return, the Spanish Delegation stated that they had received a very warm welcome there especially from the President Mr. Giuseppe Dagnino of the consortium, and they had held many meetings and made several visits to port installations. (Puerto de Barcelona Boletin Informativo, December, 1970)

Exploited New Type Tie-Rod Epock-Making Named "*Tible*"



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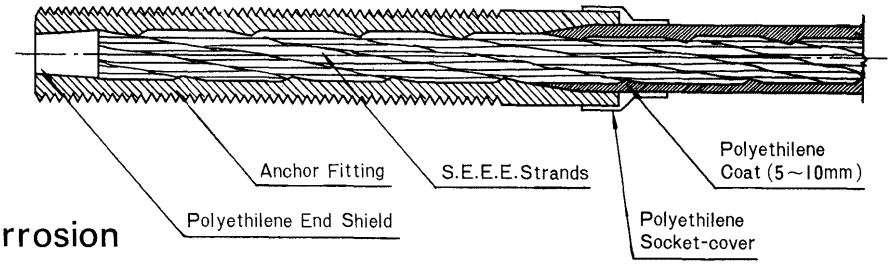

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昭和44年11月15日第三種郵便物認可
昭和46年9月20日発行
第16巻第9号附録

Present and Future Container Facilities in Major Ports of the World (5)

• Supervised by Mr. Ben E. Nutter, Chairman of the Committee on Containerization of IAPH
• Compiled by Miss Kimiko Takeda, Under Secretary of IAPH Head Office
(Presented roughly in the order of arrival.)

Port Alberni, CANADA

PORT OF: Port Alberni DATE: April 29 1971
DESIGNATION OF TERMINAL: Port Alberni Terminals
OPERATOR OF TERMINAL: Port Alberni Harbour Commissioners

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	2	1	
Length of each berth	1650	600	
Land area of each terminal	Berth 1 1/2 Acres	Berth 3 10 Acres.	
Dimensions of each terminal	3 Acres	10 Acres	
Depth of water at berths	36 feet LW	40 feet LW	
CONTAINER CRANE			
Number of container cranes	Nil		
Lifting capacity of each	Nil		
Reach on waterside from front edge of berth	Nil		
Reach on landside from deck rail			
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation			
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions			
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)			

Signature:

Halifax, CANADA

PORT OF: HALIFAX DATE: May 14, 1971
DESIGNATION OF TERMINAL: LEASED
OPERATOR OF TERMINAL: HALTERM LTD

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1	1	
Length of each berth	850 feet	850 feet	
Land area of each terminal	28 acres	28 acres	Completion due Mid 1971
Dimensions of each terminal	1100 x 1100 feet (Irregular shape)	1100 x 1100 feet (Irregular shape)	
Depth of water at berths	50 feet	50 feet	
CONTAINER CRANE			
Number of container cranes	1	1	
Lifting capacity of each	45 long tons	45 long tons	
Reach on waterside from front edge of berth	115 feet	133 feet	
Reach on landside from deck rail	37 feet	40 feet	
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	Public terminal leased to private terminal operator		
2. Preferential use			
3. Open to all callers	X		
MODE OF OPERATION			
Transtainer operation		Modes of operation is being developed	
Straddle Carrier operation	X		
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	200' x 150'		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	YES		

Signature:

Saint John, CANADA

PORT OF: SAINT JOHN DATE: MAY 14, 1971.
DESIGNATION OF TERMINAL: LEASED
OPERATOR OF TERMINAL: BRUNTERM LTD

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths		1	
Length of each berth		850 feet	
Land area of each terminal		6.5 acres	13 acres
Dimensions of each terminal		675 x 475 (Irregular shape)	
Depth of water at berths		36 feet	
CONTAINER CRANE			
Number of container cranes		1	
Lifting capacity of each		40 long tons	Due to commence operation short
Reach on waterside from front edge of berth		115 feet	
Reach on landside from deck rail		37 feet	
MODE OF MANAGEMENT			
1. Exclusive lease for specified users		Under Lease to private operator as Public Terminal	
2. Preferential use			
3. Open to all callers		X	
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation			
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions		NO	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)		YES	

Signature:

Quebec, CANADA

PORT OF: QUEBEC DATE: MAY 14, 1971
DESIGNATION OF TERMINAL: LEASED
OPERATOR OF TERMINAL: TRANSPORT TERMINALS LTD (C.P.R.)

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	2		
Length of each berth	600 and 682 ft		
Land area of each terminal	15 acres		
Dimensions of each terminal			
Depth of water at berths	37 feet		
CONTAINER CRANE			
Number of container cranes	1		
Lifting capacity of each	35 long tons		
Reach on waterside from front edge of berth	115 feet		
Reach on landside from deck rail	35 feet		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	Terminal leased for		
2. Preferential use	X		
3. Open to all callers	X		
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation	X		
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	NO		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	YES		

Signature:

Montreal, CANADA

PORT OF: MONTREAL DATE: MAY 14, 1971.

DESIGNATION OF TERMINAL: LEASED

OPERATOR OF TERMINAL: MANCHESTER LINERS LTD

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	650 feet		
Land area of each terminal	18 acres		
Dimensions of each terminal	510' x 1,230' (Irregular shape)		
Depth of water at berths	30 feet		
CONTAINER CRANE			
Number of container cranes	2		
Lifting capacity of each	25 and 35 long tons		
Reach on waterside from front edge of berth	80 feet and 80 feet		
Reach on landside from deck rail			
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	Leased to Terminal Operator		
2. Preferential use	X		
3. Open to all callers	X		
MODE OF OPERATION			
Transtainer operation	Rail loading		
Straddle Carrier operation	X		
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	100' x 144' 60' x 268' (L shaped)		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	YES		

Signature: [signature]

Vancouver, CANADA

PORT OF: VANCOUVER DATE: MAY 14, 1971

DESIGNATION OF TERMINAL: LEASED

OPERATOR OF TERMINAL: EMPIRE STEVEDORING

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	687 feet		
Land area of each terminal	15 acres		
Dimensions of each terminal			
Depth of water at berths	40 feet		
CONTAINER CRANE			
Number of container cranes	1		
Lifting capacity of each	40 long tons		
Reach on waterside from front edge of berth	113 feet		
Reach on landside from deck rail	37 feet		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	Leased to private Terminal operator as public terminal		
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation	X		
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	NO		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	YES		

Signature: [signature]

Buffalo, N.Y., U.S.A.

PORT OF: BUFFALO DATE: APRIL 16, 1971

DESIGNATION OF TERMINAL:

OPERATOR OF TERMINAL: NIAGARA FRONTIER TRANSPORTATION AUTHORITY

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	6		
Length of each berth	2-1179', 1-1167' 1-1400', 1-1000', 1-1160'		
Land area of each terminal	210 acres		
Dimensions of each terminal	84,000 - 284,000		
Depth of water at berths	27'		
CONTAINER CRANE			
Number of container cranes	1		
Lifting capacity of each	50 tons		
Reach on waterside from front edge of berth	50'		
Reach on landside from deck rail			
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	Niagara Frontier Transportation Authority		
2. Preferential use			
3. Open to all callers	Yes		
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation			
Chassis operation	Yes		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions			
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)			

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Toledo, Ohio, U.S.A.

PORT OF: Toledo, Ohio, U.S.A. DATE: April 30, 1971

DESIGNATION OF TERMINAL: Facility No. 1, Toledo-Lucas County Port Authority

OPERATOR OF TERMINAL: Toledo Overseas Terminals

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	8		
Length of each berth	500 feet.		
Land area of each terminal	125 acres		
Dimensions of each terminal	4100 feet x 2000 feet (irregular shape)		
Depth of water at berths	27 feet at Low Water Datum Plane for Lake Erie		
CONTAINER CRANE			
Number of container cranes	None. Use two gantry cranes.		
Lifting capacity of each	110 tons 72.5 tons		
Reach on waterside from front edge of berth	78 feet		
Reach on landside from deck rail	100 feet		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	X (7 berths)		
2. Preferential use			
3. Open to all callers	X (1 berth)		
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation			
Chassis operation	X		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	Transit Sheds 159,000 sq. ft.		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	Yes		

Signature: William C. Beckett

William C. Beckett - Mgr. of Statistics

San Juan, PUERTO RICO

Port of : MAYAGUEZ, PUERTO RICO

Designation of Terminal: Mayaguez Pier

Operator of Terminal : Sea-Land Service, Inc.

	in operation	under construction	future plan
Terminal			
Number of berths	1		
Length of each berth	538		
Land area of each terminal	320,202.51ft.^{2}		
Dimensions of each terminal			
Depth of water at berths	18' -30'		
Container Crane			
No. of Container cranes	1		
Lifting Capacity	27.5 ton		
Reach on waterside--	102 ft		
Reach on landside---	80 ft.		
Mode of Management			
1. Exclusive lease	marshalling. Area: 1		
2. Preferential use	Berth: 2		
3. Open to all callers			
Mode of Operation			
Transtainer			
Straddle carrier			
Chassis	X		
Container packing or Freight Station			
Dimensions.			
Rail Road Connection	No		

Signature: Executive Director

San Juan, PUERTO RICO

Port of SAN JUAN, PUERTO RICO

Designation of Terminal: Isla Grande

Operator of Terminal : Berwind Lines Inc.

	in operation	under construction	future plan
Terminal			
Number of berths	1		
Length of each berth			approximately over 5 acres future expansion
Land area of each terminal	348,480 ft.^{2}		
Dimensions of each terminal			
Depth of water at berths	22' - 30'		
Container Crane			
No. of Container cranes			
Lifting Capacity			
Reach on waterside--			
Reach on landside---			
Mode of Management			
1. Exclusive lease	marshalling. Area: 1		
2. Preferential use	Berth: 2		
3. Open to all callers			
Mode of Operation			
Transtainer	roll on-roll off		
Straddle carrier			
Chassis			
Container packing or Freight Station			
Dimensions.			
Rail Road Connection	No		

Signature: Executive Director

San Juan, PUERTO RICO

Port of SAN JUAN, PUERTO RICO

Designation of Terminal: Isla Grande

Operator of Terminal : Caribe Hydro-Trailer, Inc.

	in operation	under construction	future plan
Terminal			
Number of berths	1		
Length of each berth	112 ft.		approximately over 3 acres future expansion
Land area of each terminal	240,633. ft.^{2}		
Dimensions of each terminal			
Depth of water at berths	22'- 30'		
Container Crane			
No. of Container cranes			
Lifting Capacity			
Reach on waterside--			
Reach on landside---			
Mode of Management			
1. Exclusive lease	marshalling. Area: 1		
2. Preferential use	Berth: 2		
3. Open to all callers			
Mode of Operation			
Transtainer	roll on-roll off		
Straddle carrier			
Chassis			
Container packing or Freight Station			
Dimensions.			
Rail Road Connection	No		

Signature: Executive Director

San Juan, PUERTO RICO

Port of : SAN JUAN, PUERTO RICO

Designation of Terminal: TMT Berth (Isla Grande)

Operator of Terminal : TMT Trailer Ferry, Inc.

	in operation	under construction	future plan
Terminal			
Number of berths	1		
Length of each berth	330'		approximately over 5 acres future expansion
Land area of each terminal	449,680 ft^2		
Dimensions of each terminal	31,320 ft^2 (shed#22)		
Depth of water at berths	16'		
Container Crane			
No. of Container cranes			
Lifting Capacity			
Reach on waterside--			
Reach on landside---			
Mode of Management			
1. Exclusive lease	marshalling. Area: 1		
2. Preferential use	Berth: 2		
3. Open to all callers			
Mode of Operation			
Transtainer	(roll on-roll off)		
Straddle carrier			
Chassis			
Container packing or Freight Station			
Dimensions.			
Rail Road Connection	No		

Signature: Executive Director

San Juan, PUERTO RICO

Port of : SAN JUAN, PUERTO RICO

Designation of Terminal: Berth C

Operator of Terminal : T. T. T. (Transamerican Trailer Transport, Inc.

	in operation	under construction	future plan
Terminal			
Number of berths	1	2	2
Length of each berth	600 ft.	600 ft.	600 ft.
Land area of each terminal	626, 714 ft.^{2}	680, 710 ft.^{2}	812, 494 ft.^{2}
Dimensions of each terminal			
Depth of water at berths	30'	30'	30'
Container Crane			
No. of Container cranes			
Lifting Capacity			
Reach on wateraide--			
Reach on landside---			
Mode of Management			
1. Exclusive lease	marshalling. Area: 1		
2. Preferential use	Berth: 2		
3. Open to all callers			
Mode of Operation			
Transtainer	(roll-on-roll-off)		
Straddle carrier			
Chassis			
Container packing or Freight Station			
Dimensions.	100, 000 Sq. ft. Stripping shed		
Rail Road Connection :	No		

Signature:
Executive Director

San Juan, PUERTO RICO

Port of : SAN JUAN, PUERTO RICO

Designation of Terminal: Berth D

Operator of Terminal : Sea-Land Service, Inc.

	in operation	under construction	future plan
Terminal			
Number of berths	1		
Length of each berth	600 ft.		
Land area of each terminal	265, 329 ft.^{2}		
Dimensions of each terminal			
Depth of water at berths	30'		
Container Crane			
No. of Container cranes			
Lifting Capacity			
Reach on wateraide--			
Reach on landside---			
Mode of Management			
1. Exclusive lease	marshalling. Area: 1		
2. Preferential use	Berth: 2		
3. Open to all callers			
Mode of Operation			
Transtainer			
Straddle carrier			
Chassis			
Container packing or Freight Station			
Dimensions.	200 x 500 ft. Stripping shed		
Rail Road Connection :	No		

Signature:
Executive Director

San Juan, PUERTO RICO

Port of : SAN JUAN, PUERTO RICO

Designation of Terminal: Berth E, F, G, H

Operator of Terminal : Sea-Land Service, Inc.

	in operation	under construction	future plan
Terminal			
Number of berths	4	2	1
Length of each berth	600 ft. each	600 ft each	600 ft.
Land area of each terminal	673, 854 ft.^{2}	673, 854 ft.^{2}	—
Dimensions of each terminal			
Depth of water at berths	30'	30'	30'
Container Crane			
No. of Container cranes	4	1	
Lifting Capacity	27. 5 tons	27. 5 tons	
Reach on wateraide--	102 ft.	102 ft.	
Reach on landside---	80 ft.	80 ft.	
Mode of Management			
1. Exclusive lease	marshalling. Area: 1		
2. Preferential use	Berth: 2		
3. Open to all callers			
Mode of Operation			
Transtainer			
Straddle carrier			
Chassis	X		
Container packing or Freight Station			
Dimensions.	25, 590 ft^2 Gamge and Control bldg.		
Rail Road Connection :	No		

Signature:
Executive Director

San Juan, PUERTO RICO

Port of : SAN JUAN, PUERTO RICO

Designation of Terminal: Isla Grande

Operator of Terminal : Seatrain Lines of Puerto Rico, Inc

	in operation	under construction	future plan
Terminal			
Number of berths	1	1	
Length of each berth	695 ft.	666	
Land area of each terminal	601, 247 ft.^{2}	230, 281 ft.^{2}	
Dimensions of each terminal			
Depth of water at berths	30'	30'	
Container Crane			
No. of Container cranes	1	1	
Lifting Capacity	125 tons	125 tons	
Reach on wateraide--	N. A	N. A.	
Reach on landside---	N. A.	N. A.	
Mode of Management			
1. Exclusive lease	marshalling. Area: 1		
2. Preferential use	Berth: 2		
3. Open to all callers			
Mode of Operation			
Transtainer			
Straddle carrier			
Chassis	X		
Container packing or Freight Station			
Dimensions.			
Rail Road Connection :	No		

Signature:
Executive Director

Adelaide, AUSTRALIA

PORT OF: ADELAIDE South Australia. DATE: 14 April 71

DESIGNATION OF TERMINAL: Outer Harbor Instamatic Berth

OPERATOR OF TERMINAL: Department of Marine & Harbors, South Australia

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths			one.
Length of each berth			1000ft.
Land area of each terminal			Based on shortfall in ground beside ... not agreed. ...
Dimensions of each terminal			
Depth of water at berths			35ft initially (45ft ultimately)
CONTAINER CRANE			
Number of container cranes			1
Lifting capacity of each			Not settled
Reach on waterside from front edge of berth			
Reach on landside from deck rail			
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers			yes
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation			Probably
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions			Not yet settled
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)			Yes

Signature: [illegible]

Cairns, AUSTRALIA

PORT OF: CAIRNS, NORTH QUEENSLAND, AUSTRALIA DATE: 30.4.71.

DESIGNATION OF TERMINAL: CONTAINERISED SHIPPING FACILITIES.

OPERATOR OF TERMINAL: THE CAIRNS HARBOUR BOARD.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	450'		
Land area of each terminal	2 acres		
Dimensions of each terminal			
Depth of water at berths	29' L.W.O.S.T.		
CONTAINER CRANE			
Number of container cranes	1		
Lifting capacity of each	25 ton		
Reach on waterside from front edge of berth	87'.		
Reach on landside from deck rail	110'		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use	To the Australian National Line.		
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation	With 20 ton forklift		
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	Assembly area away from the wharf.		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	No.		

Signature: [illegible]
(B.J.Sargent)

Taranaki, NEW ZEALAND

PORT OF: TARANAKI (NEW PLYMOUTH) DATE: 15th APRIL 1971

DESIGNATION OF TERMINAL: BLYDE WHARF

OPERATOR OF TERMINAL: TARANAKI HARBOURS BOARD/PRIVATE STEVEDORE

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths		One	
Length of each berth		1400 ft.	
Land area of each terminal		Up to 15 acres triangular, 1400 ft. x 150 min. & 700 max.	
Dimensions of each terminal			
Depth of water at berths		36 ft. LWOST	
CONTAINER CRANE			
Number of container cranes		1/70-ton crawler crane giving 20 ft. at 50 ft. from front edge of berth or ship's cranes	
Lifting capacity of each			
Reach on waterside from front edge of berth			
Reach on landside from deck rail			
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers		Yes	
MODE OF OPERATION			
Transtainer operation		Not determined	
Straddle Carrier operation			
Chassis operation		Yes probably	
CONTAINER PACKING OR FREIGHT STATION			
Dimensions		Nil	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)		Yes	

Signature: [illegible]

Colombo, CEYLON

PORT OF (COLOMBO) DATE: (29.4.71)

DESIGNATION OF TERMINAL: (QUEEN ELIZABETH QUAY)

OPERATOR OF TERMINAL: (PORT(CARGO) CORPORATION

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	Probably in the year 1975	One	
Length of each berth		1000 ft.	
Land area of each terminal		10 acres	
Dimensions of each terminal		1000 ft x 400 ft	
Depth of water at berths		42 ft.	
CONTAINER CRANE			
Number of container cranes		One Multipurpose 30 Ton Rail mounted crane	
Lifting capacity of each		-30 Tons	
Reach on waterside from front edge of berth		Maximum Radius 90'-0"	
Reach on landside from deck rail		At tender stage	
MODE OF MANAGEMENT			
1. [illegible]		-	
2. [illegible]		-	
3. [illegible]		Open to all callers	
MODE OF OPERATION			
[illegible]		Not decided yet	
CONTAINER PARKING OR FREIGHT STATION		-	
RAILROAD CONNECTION TO TERMINAL		-	

[illegible] Port Masters & Manager
CHAIRMAN
PORT (CARGO) CORPORATION

Dar-Es-Salaam, TANZANIA

PORT OF: DAR-ES-SALAAM DATE: 24.4.1971

DESIGNATION OF TERMINAL: D'SALAAM CONTAINER TERMINAL

OPERATOR OF TERMINAL: E.A. HARBOURS CORPORATION

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	NIL	2	
Length of each berth		600 ft.	
Land area of each terminal		500,000 ft.	
Dimensions of each terminal		800 x 600'	
Depth of water at berths		40'	
CONTAINER CRANE			
Number of container cranes	NIL	1	No immediate future plans
Lifting capacity of each		30 Tons	
Reach on waterside from front edge of berth		app. 90'	
Reach on landside from deck rail		app. 100'	
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	NIL	—	No immediate future plans
2. Preferential use		—	
3. Open to all callers		Yes	
MODE OF OPERATION			
Transtainer operation		—	
Straddle Carrier operation		Possibly	
Chassis operation		—	
CONTAINER PACKING OR FREIGHT STATION			
Dimensions		Not known	
RAILROAD CONNECTION TO TERMINAL (Yes) (No)		Yes	

Signature:

RESEARCH AND DEVELOPMENT OFFICER

Mombasa, KENYA

PORT OF: MOMBASA DATE: 24.4.1971

DESIGNATION OF TERMINAL: KIPEVU CONTAINER TERMINAL

OPERATOR OF TERMINAL: E.A. HARBOURS CORPORATION

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	NIL	2	
Length of each berth		600 feet	
Land area of each terminal		500,000 ft.	
Dimensions of each terminal		800' x 600'	
Depth of water at berths		40'	
CONTAINER CRANE			
Number of container cranes	NIL	1	No immediate future plans
Lifting capacity of each		30 Tons	
Reach on waterside from front edge of berth		app. 90'	
Reach on landside from deck rail		app. 100'	
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	NIL	—	No immediate future plans
2. Preferential use		—	
3. Open to all callers		Yes	
MODE OF OPERATION			
Transtainer operation		—	
Straddle Carrier operation		Possibly	
Chassis operation		—	
CONTAINER PACKING OR FREIGHT STATION			
Dimensions		Not known	
RAILROAD CONNECTION TO TERMINAL (Yes) (No)		Yes	

Signature:

RESEARCH AND DEVELOPMENT OFFI

Douro, PORTUGAL

PORT OF: DOURO - PORTUGAL DATE: MAIO de 1971

DESIGNATION OF TERMINAL:

OPERATOR OF TERMINAL: Administração dos Portos do Douro e Leixões

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	328 ft.		
Land area of each terminal	2,4 acres of total area		
Dimensions of each terminal			
Depth of water at berths	- 18 ft. (7 a.m.)		
CONTAINER CRANE			
Number of container cranes	1		
Lifting capacity of each	30 tons		
Reach on waterside from front edge of berth	55,8 ft.		
Reach on landside from deck rail	98 ft.		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	Terminal is open to all containers ships which call DOURO		
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation	One ridelonder for containers of 20' or 30'		
Straddle Carrier operation			
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	Goods are handled on the quay or outside at storage		
RAILROAD CONNECTION TO TERMINAL (Yes) (No)	NO		

Signature:

Leixões, PORTUGAL

PORT OF: LEIXÕES - PORTUGAL DATE: MAIO de 1971

DESIGNATION OF TERMINAL:

OPERATOR OF TERMINAL: Administração dos Portos do Douro e Leixões

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	2		3
Length of each berth	2 x 492 ft.		558 + 1082 ft.
Land area of each terminal	1980 + 70100 sq.ft. of useful area		14,4 acres of total area
Dimensions of each terminal			
Depth of water at berths	- 33 ft. (7 a.m.)		-23 and -36 ft.
CONTAINER CRANE			
Number of container cranes	2 conventional cranes		Foreseen equipment containers crane
Lifting capacity of each	15 and 94 tons		
Reach on waterside from front edge of berth	49 ft.		
Reach on landside from deck rail	59 ft.		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	Both of them are open to all ships which call Leixões		Terminal will be open to all ship
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation	Containers handling is made with conventional cranes		Foreseen equipment for handling container
Straddle Carrier operation			
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	Goods are handled outside or at the quays at reach of cranes		
RAILROAD CONNECTION TO TERMINAL (Yes) (No)	One terminal has railroad connection		Foreseen railroad connection to terminal

Signature:

Kitakyushu, JAPAN

PORT OF: KITAKYUSHU DATE: June 30, 1971

DESIGNATION OF TERMINAL: Tanoura Container Terminal

OPERATOR OF TERMINAL: Kanmon Container Terminal Co., Ltd.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1 B		2B
Length of each berth	300m		300m
Land area of each terminal	63220m²		126000m²
Dimensions of each terminal	290m X 252.5m		630m x 200m
Depth of water at berths	-12m		-12m
CONTAINER CRANE			
Number of container cranes	1 set		4set
Lifting capacity of each	37.5 ton		37.5 ton
Reach on waterside from front edge of berth	3.5m		3.5m
Reach on landside from deck rail	27m		27 m
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	Open to all callers		Open to all callers
2. Preferential use			
3. Open to all callers	Container ship preferential use		Container ship preferential use
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation	Straddle Carrier operation		Straddle Carr operation
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	Freight station 2400m²		Freight Station 6000m²
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	No		yes

Signature: Shinjiro Furuse

Karachi, PAKISTAN

PORT OF: KARACHI DATE: 13 MAY 1971

DESIGNATION OF TERMINAL:

OPERATOR OF TERMINAL:

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	Nil	Nil	Tentative plans u: Western Breakwater Scheme: 2 nos.
Length of each berth			850 cft each berth
Land area of each terminal			25 acres.
Dimensions of each terminal			850 ft length & 2. acre area.
Depth of water at berths			36 to 40 feet.
CONTAINER CRANE			
Number of container cranes			1 per berth
Lifting capacity of each			30 tons Cantilev type.
Reach on waterside from front edge of berth			Will be finalised prior to mechani- sation.
Reach on landside from deck rail			
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			Common use berth operated by Karachi Port Trust.
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation			Will be finalised prior to mechani sation to build in latest improvements.
Straddle Carrier operation			
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions			Yes. 150,000 s f
RAILROAD CONNECTION TO TERMINAL (Yes) (No)			Yes..

Signature:
Secretary.
Karachi Port Trust.

Manila, PHILIPPINES

PORT OF: Manila, Philippines DATE: April 15, 1971

DESIGNATION OF TERMINAL:

OPERATOR OF TERMINAL: Bureau of Customs

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		1
Length of each berth	241.76 meters		243 meters
Land area of each terminal	irregular		3-265 m x 243 m.
Dimensions of each terminal	5.5 Hectares		19.32 Hectar
Depth of water at berths	32 feet		40 feet
CONTAINER CRANE			
Number of container cranes			1
Lifting capacity of each			50 M.T.
Reach on waterside from front edge of berth			33.2 meters
Reach on landside from deck rail			24 meters
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers	x		x
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation			
Chassis operation	100 unit for 40 ft. container		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	100 ft x 420 ft.		100 ft x 200ft.
RAILROAD CONNECTION TO TERMINAL (Yes) (No)	Road		Yes

Signature:

Callao, PERU

PORT OF: C A L L A O DATE: Abril 30, de 1971.

DESIGNATION OF TERMINAL: C A L L A O

OPERATOR OF TERMINAL: E M P R E S A N A C I O N A L D E P U E R T O S (ENAPU-PERU

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	12		6
Length of each berth	De 182mts. a 427mts.		De 400mts. a 6
Land area of each terminal	De 1458mts.² a 5460mts.²		----
Dimensions of each terminal	De 182mts.x50mts. a 427mts.x 274mts.		----
Depth of water at berths	De 29' a 34'		De 32' a 35'
CONTAINER CRANE			
Number of container cranes	7 elevadores móviles		10 elevadores lea
Lifting capacity of each	De 10 tons.a 20 tons		De 20tons.a 40
Reach on waterside from front edge of berth	----		----
Reach on landside from deck rail	----		----
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	----		----
2. Preferential use	----		----
3. Open to all callers	SI		SI
MODE OF OPERATION			
Transtainer operation	SI		SI
Straddle Carrier operation	SI		SI
Chassis operation	SI		SI
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	Almacén 10:130mts50 mts. Almacén 11:11Cmts.x 37mts. Anexo 11: 6000mts.2		
RAILROAD CONNECTION TO TERMINAL (Yes) (No)	SI		SI

Signature:

Dublin, IRELAND

PORT OF: DUBLIN DATE: 21st May, 1971

DESIGNATION OF TERMINAL: B. & I. Container Terminal

OPERATOR OF TERMINAL: British and Irish Steam Packet Co. Ltd.,

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths		2	
Length of each berth		400 feet	
Land area of each terminal		Total 24 acres	
Dimensions of each terminal			
Depth of water at berths		20' feet H.L.S.T.	
CONTAINER CRANE			
Number of container cranes		1 (Transporter) 1 (Derrick)	
Lifting capacity of each			
Reach on waterside from front edge of berth			
Reach on landside from dock rail			
MODE OF MANAGEMENT			
1. Exclusive lease for specified users		X	
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation		X	
Chassis operation			
CONTAINER PACKING OR FREIGHT STATION			
Dimensions		88000 square ft.	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)		YES	

Signature: R. O'Sullivan

Dublin, IRELAND

PORT OF: DUBLIN DATE: 21st May 1971

DESIGNATION OF TERMINAL: Bristol Seaway Container Terminal

OPERATOR OF TERMINAL: Bristol Seaway Ltd.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	400 feet		
Land area of each terminal	4 acres		
Dimensions of each terminal	386' x 450' (mean) (Irregular shape)		
Depth of water at berths			
CONTAINER CRANE			
Number of container cranes	1 (Transporter)		
Lifting capacity of each	30 ton		
Reach on waterside from front edge of berth	57' 4"		
Reach on landside from dock rail	93 feet		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	X		
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation	X		
Straddle Carrier operation			
Chassis operation	X		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	33000 square feet		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	No		

Signature: P. O'Sullivan

Dublin, IRELAND

PORT OF: DUBLIN DATE: 21st May, 1971.

DESIGNATION OF TERMINAL: A.S.N. Berth

OPERATOR OF TERMINAL: Atlantic Steam Navigation Company

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	796' feet		
Land area of each terminal	about 4 acres		
Dimensions of each terminal	-		
Depth of water at berths	32' L.W.S.T.		
CONTAINER CRANE			
Number of container cranes	1 (Derrick)		
Lifting capacity of each	25 ton		
Reach on waterside from front edge of berth	60 feet		
Reach on landside from dock rail	90 feet radius		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	X		
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation	X		
Chassis operation	X		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions			
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	No.		

Signature: P. H. O'Sullivan

Dublin, IRELAND

PORT OF: DUBLIN DATE: 21st May, 1971

DESIGNATION OF TERMINAL: British Rail Container Terminal

OPERATOR OF TERMINAL: /British Railways.

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	475 feet		
Land area of each terminal	8 acres		
Dimensions of each terminal	812 feet x 415 feet (Irregular shape)		
Depth of water at berths	20 feet L.W.S.T.		
CONTAINER CRANE			
Number of container cranes	2 (Transporter)		
Lifting capacity of each	30 tons		
Reach on waterside from front edge of berth	58 feet		
Reach on landside from dock rail	67 feet		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	X		
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation	X		
Straddle Carrier operation			
Chassis operation	X		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions			
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	NO		

Signature: P. H. O'Sullivan

Dublin, IRELAND

PORT OF: DUBLIN DATE: 21st May, 1971

DESIGNATION OF TERMINAL: Container Crane Ocean Pier

OPERATOR OF TERMINAL:

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		
Length of each berth	No restriction		
Land area of each terminal	5 to 8 acres available		
Dimensions of each terminal			
Depth of water at berths	32feet H.L.S.T.		
CONTAINER CRANE			
Number of container cranes	1 Derrick crane		
Lifting capacity of each	35 ton		
Reach on waterside from front edge of berth	78 feet		
Reach on landside from deck rail	35 tons at 120'radius 20 tons at 140'radius		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers	X		
MODE OF OPERATION			
Transtainer operation			
Straddle Carrier operation	X		
Chassis operation	X		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions			
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	YES		

Signature:

Bremen, GERMANY

PORT OF: DATE:

DESIGNATION OF TERMINAL: Container Terminal Bremen (Neustädter Hafen)

OPERATOR OF TERMINAL: Bremer Lagerhaus-Gesellschaft

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	3	--	--
Length of each berth	220 m	--	--
Land area of each terminal	117 000 sqm.	--	--
Dimensions of each terminal			
Depth of water at berths	32 '		
CONTAINER CRANE			
Number of container cranes	3		
Lifting capacity of each	25 t and 45 t		
Reach on waterside from front edge of berth	30m / 29 m	28m / 42m	30m / 42m
Reach on landside from deck rail			
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	open to all callers		
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation	—		
Straddle Carrier operation	yes		
Chassis operation	yes		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	25 000 sqm		
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	yes		

Signature:

Bremen, GERMANY

PORT OF: BREMERHAVEN DATE: 7 th May 1971

DESIGNATION OF TERMINAL: Containerkräuz Bremerhaven

OPERATOR OF TERMINAL: Bremer Lagerhaus-Gesellschaft

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	4	1	1
Length of each berth	34om, 2oom, 2oo m,	35om. 35om	35om
Land area of each terminal	82 ooo sqm,		
Dimensions of each terminal	125 ooo sqm, 250 ooo sqm.	2oo ooo sqm	1oo ooo sqm
Depth of water at berths	38 ' and 49 '	49'	49'
		(49' refers to sea chart level)	
CONTAINER CRANE			
Number of container cranes	6	1	2
Lifting capacity of each	2 x 45 t, 4 x 54 t	54 t	
Reach on waterside from front edge of berth	33 m 38 m	38 m	
Reach on landside from deck rail	39 m 39.5 m	39.5 m	
MODE OF MANAGEMENT			
1. Exclusive lease for specified users	open to all callers		
2. Preferential use			
3. Open to all callers			
MODE OF OPERATION			
Transtainer operation	--		
Straddle Carrier operation	yes		
Chassis operation	yes		
CONTAINER PACKING OR FREIGHT STATION			
Dimensions	6 5oo sqm	6 5oo sqm	
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	yes	yes	

Signature:

Dunkirk, FRANCE

PORT OF: DUNKIRK DATE: 30 JANVIER 1971

DESIGNATION OF TERMINAL: PORT AUTONOME DE DUNKERQUE

OPERATOR OF TERMINAL:

	IN OPERATION	UNDER CONSTRUCTION	FUTURE PLAN
TERMINAL			
Number of berths	1		3 (by 1974)
Length of each berth	1 106 feet		1 000 feet
Land area of each terminal	20 acres		38 acres
Dimensions of each terminal	irregular shape		not yet decide
Depth of water at berths	43 feet		43 feet
CONTAINER CRANE			
Number of container cranes	2		6
Lifting capacity of each	52 t 2 cwts.		+Ro/Ro facilit idem
Reach on waterside from front edge of berth	100 feet		(According to size of the fu (ture containe carriers
Reach on landside from deck rail	52 feet		
MODE OF MANAGEMENT			
1. Exclusive lease for specified users			
2. Preferential use			(not yet
3. Open to all callers			determined
MODE OF OPERATION			
Transtainer operation	1		
Straddle Carrier operation	yes		idem
Chassis operation	yes		
CONTAINER PACKING OR FREIGHT STATION		A new road centre	
Dimensions		will be operated very shortly in Lille-Lesquin (46 miles from Dunkirk). A road centre is also considered in	idem
RAILROAD CONNECTION TO TERMINAL			
(Yes) (No)	+ a connecting road (35 feet in width)	Dunkirk	- by rail - by motorway - by wide gad canal

Gothenburg, SWEDEN

Port of Gothenburg Date: 30 th April, 1971

Designation of terminal: Skandia Harbour

Operator of terminal: Skandiaterminalen AB

	In operation	Under construction	Future plan
Terminal			
Number of berths	8	2	1
Length of each berth	140-227 m	185 m	185 m
Land area of each terminal	340.000 m^2	95.000 m^2	25.000 m^2
Dimensions of each terminal	800x530 m	400x200 m	550x450 m
Depth of water at berths	7-11 m	12 m	12 m
Container Crane			
Number of container cranes	3		3
Lifting capacity of each	27 t, 35 t, 35 t		
Reach on waterside from front edge of berth	32,5 m		
Reach on landside from deck rail	1 st 26,0 m 2 st 43,0 m		
Mode of Management			
1. Exclusive lease for specified users			
2. Preferential use			
3. Open to all callers	x	x	x
Mode of operation			
Transtainer operation	x	x	x
Straddle Carrier operation	x	x	x
Chassis operation	x	x	x
Container packing or freight Station			
Dimensions	12.000 + 3000 m^2	-	7.000 m^2
Railroad connection to Terminal (Yes) (No)	yes	yes	yes

Signature: .....

Gothenburg, SWEDEN

Port of Gothenburg Date: 30th April, 1971

Designation of terminal: Skandia Harbour

Operator of terminal: TOR LINE

	In operation	Under construction	Future plan
Terminal			
Number of berths	2 x)		
Length of each berth	225 m		
Land area of each terminal	83.500 m		
Dimensions of each terminal	220x380 m		
Depth of water at berths	8 m		
Container Crane			
Number of container cranes			
Lifting capacity of each			
Reach on waterside from front edge of berth			
Reach on landside from deck rail			
Mode of Management			
1. Exclusive lease for specified users	x		
2. Preferential use			
3. Open to all callers			
Mode of operation			
Transtainer operation			
Straddle Carrier operation			
Chassis operation	x		
Container packing or freight Station			
Dimensions	2.500 m^2		
Railroad connection to Terminal (Yes) (No)	yes		

x) of which one dolphin berth

Signature: .....

Gothenburg, SWEDEN

Port of Gothenburg Date: 30th April, 1971

Designation of terminal: Skandia Harbour

Operator of terminal: Hull/London Terminalen

	In operation	Under construction	Future plan
Terminal			
Number of berths	1		1
Length of each berth	173 m		150 m
Land area of each terminal	80.000 m		50.000 m
Dimensions of each terminal	225x360 m		265x190 m
Depth of water at berths	7 m		7 m
Container Crane			
Number of container cranes			
Lifting capacity of each			
Reach on waterside from front edge of berth			
Reach on landside from deck rail			
Mode of Management			
1. Exclusive lease for specified users	x		
2. Preferential use			
3. Open to all callers			
Mode of operation			
Transtainer operation			
Straddle Carrier operation	x		
Chassis operation	x		
Container packing or freight Station			
Dimensions	9.000 m^2		
Railroad connection to Terminal (Yes) (No)	yes		

Signature: .....

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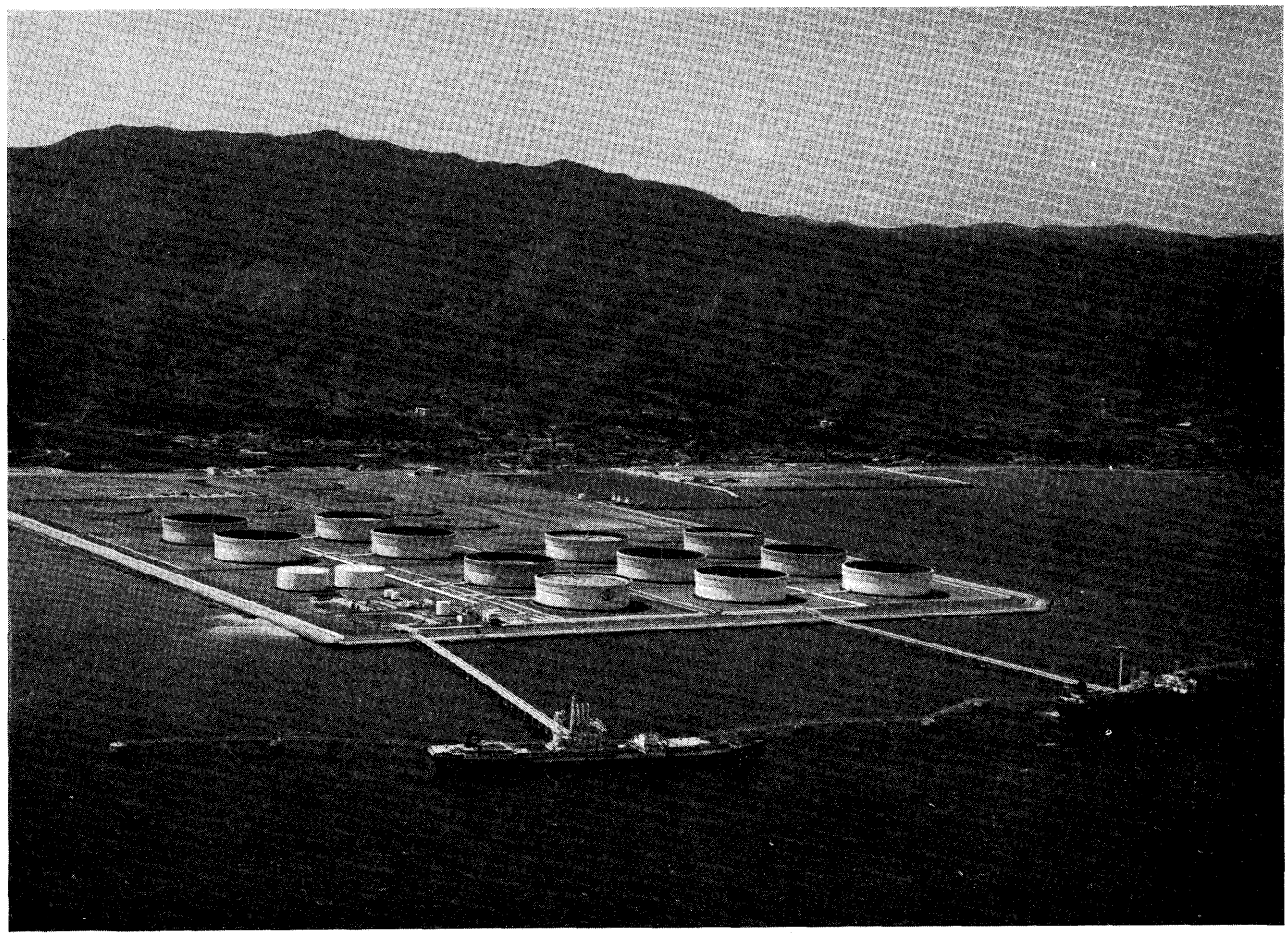
Port of *KIIRE*



STOP POLLUTION OF THE SEAS!

This is an aerial shot of our new crude oil staging terminal situated in beautiful Kagoshima Bay in south Japan. The installation is built on land reclaimed from the sea and is, therefore, an expensive piece of real estate. We make no bones about it—we are in business to make money and quite assuredly the profit motive projected the construction of the terminal.

Those who have read this far will please note that on a choice piece of the water front we have built the largest slop disposal plant in Japan to receive the results of our "load-on-top" operations, L.O.T., as we all know, generates no returns on capital investment but we are believers of the adage that teaches us an ounce of prevention is worth a pound of cure. Happily, we are not alone. Others in the Japanese petroleum and tanker industries are equally anxious to stop the willful and damaging pollution of the seas and coastlines which sustain the wellbeing of mankind and, for sure, as a result of our concerted efforts much has been accomplished.

A great deal more must be done. It will and must be so.

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