

PORTS *and* HARBORS

July, 1970 Vol.15, No.7

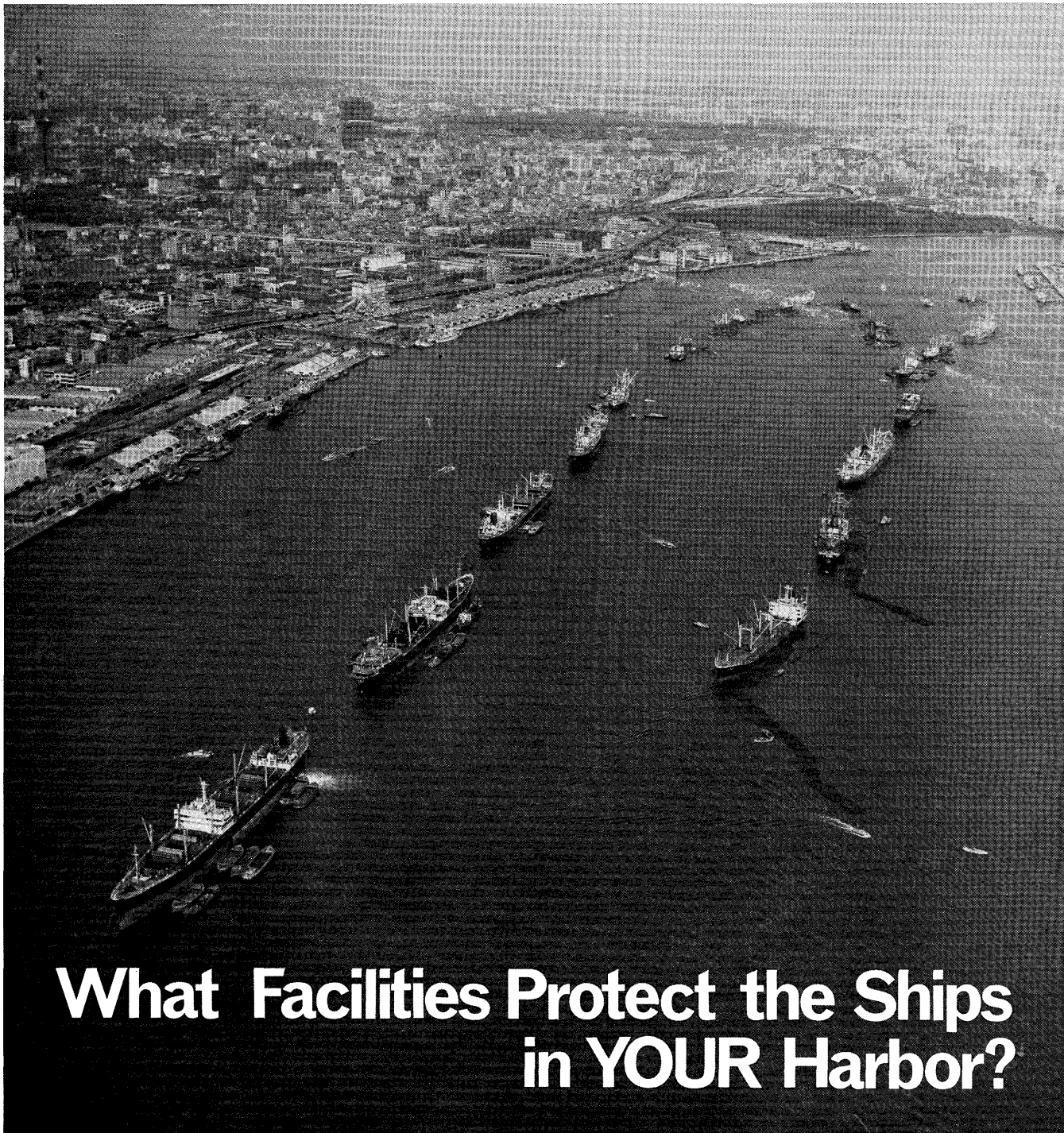


Portland, Oregon
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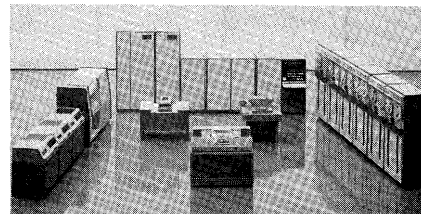
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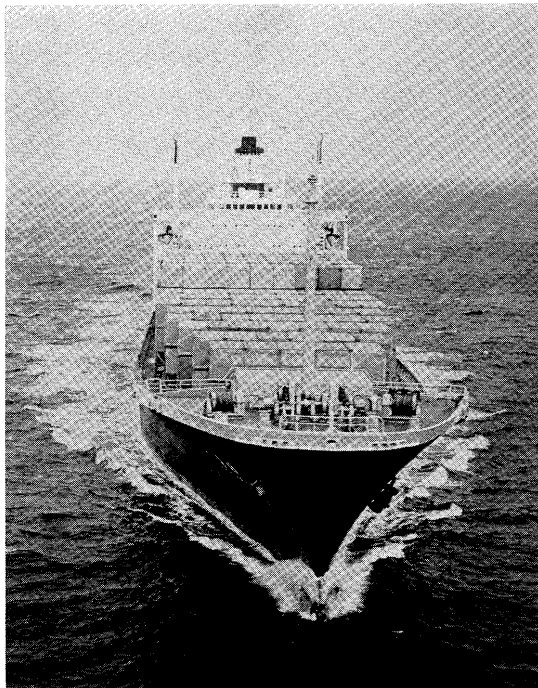
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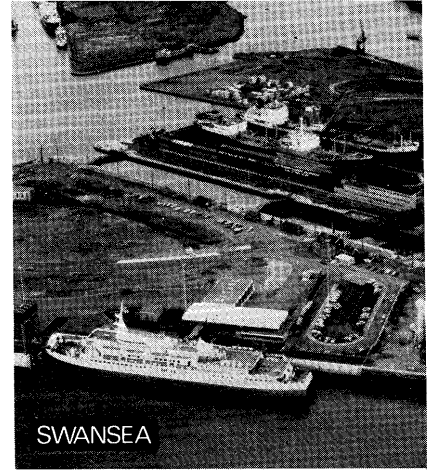
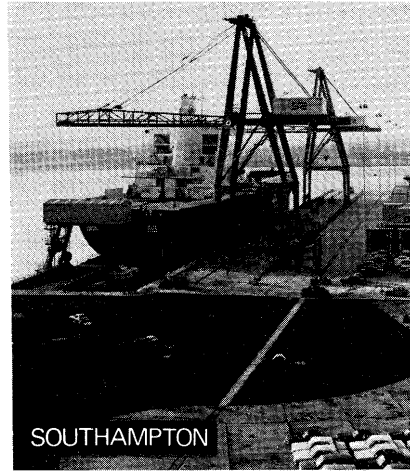
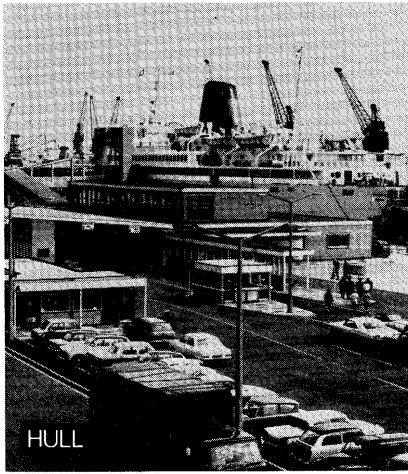
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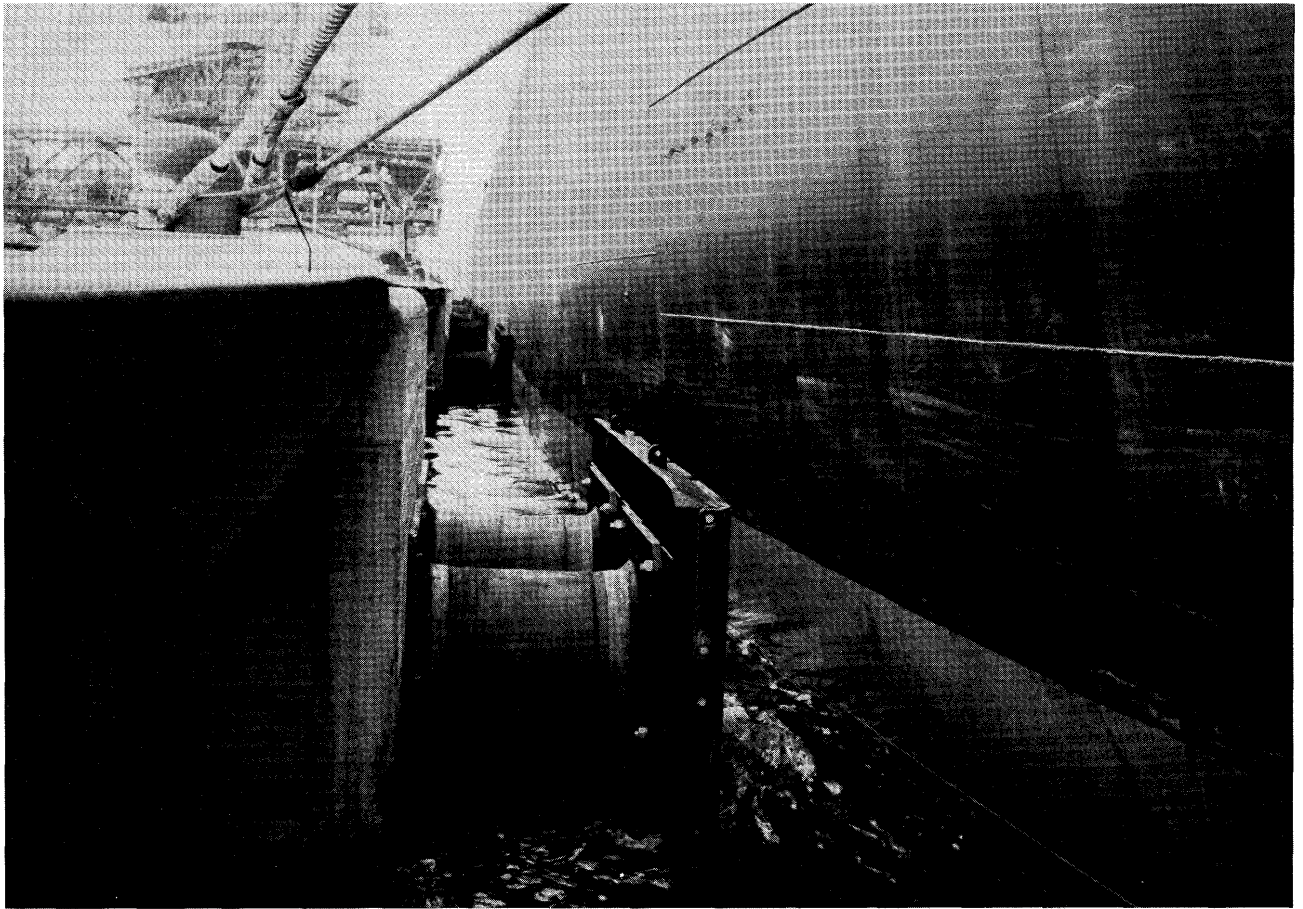


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CONTENTS

Forum:

Statement by Director-General of Police and
Security, National Harbours Board of Canada
By Donald N. Cassidy 7

Topics:

The Channel Is Ready at Rotterdam 13
Things to Come at Los Angeles and Other Ports
By Robert G. Robinson 15
Japan's First Computerized Ship (From IHI Bulletin) 24

Ports:

Port of Piraeus 10
Annual Report 1969
Bremer Lagerhaus Gesellschaft 16
Far Away Places
Port of Toronto 18
Portland Ideal Port for Containers 20
1969 Foreign Trade (Port of New York) 23

Orbiter Probe (International News): 27~42

IAPH News 27
Book Review 29
Single Point Mooring 38
Container Traffic at Antwerp 39
First LASH Ship at Amsterdam 42

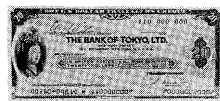
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PORTS *and* HARBORS

Forum on Port Problems :

Statement By
Donald N. Cassidy
Director-General of Police and Security
National Harbours Board of Canada
at Public Hearings of
the New York Waterfront Commission
at the Port Authority Building
Port Newark, N.J. April 15, 1970

I am Donald N. Cassidy, Director General of Police and Security for the National Harbours Board, Ottawa, Ontario, Canada.

I am responsible for the administration and direction of all police and security operations throughout the ports under the jurisdiction of the National Harbours Board Act R.S.C. 1952 and amendments. At the major ports under our jurisdiction we have police detachments which may have one or more smaller ports under their care for police purposes. Consequently, we have five field offices located at the Ports of Halifax, Saint John, Quebec, Montreal and Vancouver, with a police service available to smaller ports on a systems basis.

We take all reasonable and economically justifiable measures to preserve the peace and to prevent the commission of illegal acts on our property. We maintain our own police force of duly sworn police officers to patrol and guard our property, to investigate incidents of illegal nature which take place on our property, to prosecute offenders and to co-operate with various law enforcement agencies as may be required to gain added security, exchange of information and assistance during emergencies.

The members of our police force have all the powers, authority, protection and privileges of a police officer under the Criminal Code of

Canada.

The Police Force operates without influence detrimental to fair and impartial law enforcement and the administration of justice. It brings the greatest impact through the employment of crime prevention and investigative techniques to enhance the safety of persons, security, protection of property and revenue of the National Harbours Board and the ports over which it has jurisdiction.

The reorganization of our police force along its present lines took place early in 1968. Prior to this the NHB had security men at the major harbours who were responsible to the Port Managers concerned chiefly for the discharge of such functions as the safety of NHB property and control of traffic on harbour roads. Training was minimal and the staffing standards could under this concept be allowed to be less rigid than those applied by professional police forces.

The change to a professional type police force was made after careful investigation, examination and study of reports of increased criminal activity and experimentation for several years.

While we have stopped, or at least checked, known serious criminal activity, the theft of general cargo remains somewhat of a problem, not in the sense of major thefts but in the form of pilferage.

In 1969 my Board approved a course of action recommended

- (a) to improve the quality of cargo protection thereby reducing theft to an acceptable level; and
- (b) to adopt uniform methods of handling our own requirements for watchman and gate guard duties.

These recommendations were made as we had confirmed that pilferage, in our opinion, could not be effectively controlled as long as the protection of cargo and gate controls to complexes or terminals encompassing groups of wharves and sheds remained the responsibility of private security agencies and their guards and watchmen. It pointed to the futility of continuing to allow these groups to operate in our ports and the advisability of the National Harbours Board entering the field of cargo protection.

We recommended that private security agencies and their guards and watchmen should be eliminated from our ports and replaced with members of an NHB security force.

Under the proposal there would be a two-tier law enforcement structure.

The first tier of the law enforcement structure would be the professional NHB Police and the second tier, NHB Security. The security guards would be selected, trained and have the powers of a special constable and function under the command and supervision of the regular NHB Police.

Under this concept the NHB security guards would handle our own requirements for watchmen or gate guards and we would rent out their services to steamship companies, steamship agencies or terminal operators to perform their cargo protection duties.

These recommendations were based on our experience which demonstrated unequivocally that theft and pilferage would never be brought under control at our ports as long as the police effort was

fragmented by a mixture of police, watchmen and private security guards performing the law enforcement function. Aside from the various crime prevention techniques, such as perimeter gate controls and cargo control measures, any further reductions in theft and pilferage would be difficult as long as this fragmentation of the total law enforcement effort remained.

Although the police have a responsibility to prevent crime, including theft and pilferage, in our ports the actual responsibility of watching people and cargo in leased areas belongs to the lessee. To meet his needs for cargo protection the lessee generally employs watchmen or contracts with a private security agency to perform the function for him, with the exception of the railways who use their own policemen.

Our police officers go into the leased areas only

- (a) when a crime is reported;
- (b) to make investigations;
- (c) to enforce NHB By-laws;
- (d) to give extra protection to cargo vulnerable to criminal activity when its movement through the port has been reported to our Police Force, i.e., firearms, liquor, and other 'hot' items susceptible to theft.

A survey at one of our major ports indicated that one lessee did not employ any watchmen; two lessees used salaried employees for watching duties; two others had formed a joint security company; and the remainder employed the services of six different private security agencies.

Only one security agency co-operated with our Police Force for the reason that it was owned by the lessee and was not in competition with other private security agencies.

Our experience showed that private security agencies and their employees seldom asked for police assistance or volunteered information which would help the police. There are several reasons for this attitude:

- (a) reporting thefts to the police is sometimes misconstrued as exposing the inefficiency of the private security guards which might jeopardize the

agency's contract with the lessee;

- (b) private security guards are responsible only to their agency and if the agency does not report the theft to the lessee he may never find out anyway;
- (c) if the theft is not reported the cargo will probably be classified as 'shortlanded' with the blame for the shortage shifting to the carrier;
- (d) fear of reprisals from offenders, their associates or accomplices should the private security guard report them and call for police assistance.

The police, on the other hand, are not permitted to exchange information on criminals and criminal activity with persons who are not bona fide law enforcement officers. Therefore, they cannot exchange these data with private security guards or the agencies employing them as the guards are not sworn police officers. It is very serious for a policeman to give information concerning law enforcement matters to persons not entitled to the information, and there are laws and regulations prohibiting us from doing so.

As a result, private security guards or watchmen receive little if any information from the police on potential thieves whose activities should be watched. Conversely, and in default of receiving information from private security guards or watchmen, police action is limited to the investigation, detection and prosecution of offenders and to preventive patrolling, checking documents or truckers, and random inspection of trucks on the harbours.

The average watchman or private security guard faces a potentially dangerous situation. Lacking the powers of a regular police officer his presence and orders are frequently not respected. It is unlikely that they will ever be given any form of police powers in our country. In fact, some of our provincial laws do not permit any form of police powers being given to private security guards. Apparently there have been abuses by private security guards, and their lack of discipline and competence makes it

unlikely that they will ever be given any kind of police authority.

As long as the protection of cargo, which can be considered a form of crime prevention, remains with the private security agencies, who, in order to remain competitive, employ poor personnel, the high standards required in cargo protection will not be reached.

How much courage and stamina can be expected from a security guard or watchman if threatened or intimidated? Only the courageous and physically fit will resist or call for police assistance without fear of reprisal.

At one of our major ports an attempt has been made to raise the standards of security guards and watchmen. Minimum qualifications and education standards have been established and the lack of a criminal record is one of the requirements to obtain an agency license or a guard permit to work on our property. These guards are also required to report any criminal activities. Such reports are seldom made, and it is impossible to prove that a guard was aware that a crime had been committed and that he failed to report it.

In our system the members of the NHB Security Force are appointed special constables. These appointments are available under provincial acts.

In our opinion our security guards require the powers of a special constable to be effective. These powers permit:

- (a) the detention of suspicious persons for investigation by the police;
- (b) the respect and obedience of port workers, and in particular truck drivers and their assistants, to either remain in the cab of the truck or outside sheds rather than wander about in cargo area;
- (c) the search of vehicles and contents of vehicles if there is reasonable doubt that a crime has been committed;
- (d) the production of personal identification of port workers, truck drivers and suspicious persons;
- (e) the eviction of persons refusing to comply with regulations and trespassers;

- (f) the exchange of information with the police on known criminals and suspected persons;
- (g) the linkage with the port police via portable radio;
- (h) the supervision of the loading and unloading of cargo at the tailgate of trucks and railcars;
- (i) the bringing to the attention of the proper person that broken cartons require co-opering;
- (j) the enforcement of our port by-laws;
- (k) the protection of persons enforcing the law as peace officers within the meaning of the Criminal Code.

The security guards take training in the following subjects:

- (a) duties and responsibilities;
- (b) self-discipline, conduct and neatness in uniform;
- (c) handling fire fighting equipment;
- (d) cargo documentation;
- (e) search of vehicles, packages, etc;
- (f) port by-laws, particularly trespassing, smoking in sheds, parking regulations;
- (g) powers of arrest and detention;
- (h) crime prevention;
- (i) detection of offences and offenders;
- (j) surveillance of suspicious persons;
- (k) recording incidents in notebooks and reporting them to the port police;
- (l) protecting confidential sources of information;
- (m) protecting evidence;
- (n) passes, permits and personal identification;
- (o) discipline in sheds;
- (p) public relations;
- (q) elementary first aid;
- (r) emergency duties;
- (s) operation of portable radios.

In summary, there are two distinct areas where NHB security guards are used:

- (a) cargo protection to replace watchmen and private security guards employed by lessees on a cost recovery basis paid by the lessee;
- (b) manning gates and regular watching duties required by

the port authority with the cost as a regular operating expense.

As the port authority we control the physical security of our ports.

We firmly believe there must be four levels of physical defences to control the movement of persons and vehicles for the safety and security of the port workers and port users, the protection of our property and the property of others.

We feel this can only be achieved by one or more of a total security system which includes:

- (a) perimeter fencing and gates;
- (b) fencing and gating internal complexes of groups of wharves, sheds and piers;
- (c) truck marshalling yards;
- (d) controlling all locks and keys;
- (e) good lighting;
- (f) no parking of privately owned vehicles in or near the sheds or piers.

We believe that gates at the perimeter of the port should be kept to a minimum and manned by security guards supervised by the port police. The gates should be closed and locked during silent hours and on weekends with the bare minimum kept open to traffic and controlled by security guards.

The gates at the entrance or exit to complexes should also be manned during business hours and closed and locked during silent hours.

Where needed there should be truck marshalling yards where all trucks must report and await a call to pick up or deliver cargo to terminals.

We believe in absolute control by the port authority of all locks and keys. When a lessee gives up a shed the locks should be changed.

We believe in good lighting, particularly at gates and other vulnerable areas, and the lighting of all roadways.

The privately owned vehicles of port workers and port users must be controlled and wherever possible there should be parking lots fenced off from cargo areas.

As the port authority we erect and pay for boundary gating and fencing. We will erect fences and gates at complexes at a cost to the lessee.

In addition to the enforcement of the Criminal Code, federal

statutes and provincial acts, our police also enforce our own by-laws which cover such things as trespass, passes, disturbances, loitering, intoxication, gambling, accepting gratuities, traffic control and parking of vehicles.

We are currently examining the possibility of registration, licensing and identification of all port workers and port users.

Our police force is hampered in its efforts by the lack of reports on thefts or suspected thefts of cargo.

To overcome this problem we recommended to port users the establishment of Marine Cargo Loss Bureaus at the major ports. These bureaus would collect reports on overlanded, shortlanded and damaged cargo and collate, analyze and disseminate cargo information within the port community and between ports. The police would be immediately notified of those losses of a criminal nature for investigation, detection and prosecution of offenders. Under the arrangement envisaged the lessees and terminal operators would be compelled to report missing cargo. We are currently looking at the operational application of the system which has been developed in co-operation with shipping agencies, marine underwriters and port users.

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Port of Piraeus

A modern port—a modern city: The initiative taken over the last few years, especially since the National Revolution of 21 April 1967, has these aims in view when working for the reformation of Piraeus, and the achievements to date have been considerable, thus prophesying a bright future for both the City and the port.

Day by day, everything is changing in Piraeus. The city itself is continually spreading. With the various projects under execution and the current building boom, thanks to which many new, multi-storeyed buildings are being added to those already existing, Piraeus is rapidly taking on the appearance and atmosphere of a modern and vital European city.

The port, also, beyond the normal and exemplary operation expected of it, continues to modernize itself with the aid of new projects being executed at a steady rate.

Piraeus As An Administrative And Economic Centre

Within the bounds of the Piraeus peninsular, the city and the port from a geographical and economic unity, as they have done from ancient times. Thus, their course throughout the ages has been a common one. Today, also, the destiny of both city and port is a common one by the dictates of History and by physical need. Their evolution is, therefore, parallel and their future one, for all time.

The built-up area of Piraeus, the population of which was 410,000 at the 1961 census, now has over 500,000 inhabitants. The distance separating the centre of Piraeus from that of the Greek capital is about 10 kilometres and the two cities are in direct and continuous communication by means of an electric railway, buses and other means of transport. Piraeus is also the starting point and terminus of all Greek coastal shipping and railway routes and is only 11 kilometres from Athens Airport through which

domestic and international air services operate.

The built-up region of Piraeus includes, apart from the Municipality of Piraeus, those of Nikaia, Korydalos, Keratsini, Drapetsona, Perama and St. John Rentis. Piraeus is the seat of Metropolis, Prefecture and Court of the First Instance. In the Province of Piraeus, divided, administratively, into five sub-prefectures, besides the region of Greater Piraeus, are included the peninsular of Methana, the coastal region of Trizin and the islands of Salamis, Aegina, Poros, Hydra, Spetsai and Kythira, all of which are closely bound, in the economic sense, with the port and city of Piraeus.

Piraeus is the seat of the Ministry of Mercantile Marine and the district offices of the various State services. Also established in Piraeus are the Higher Industrial School, the School of Naval Midshipmen and the Higher School of Shipbuilding.

Due to its heavy port traffic, Piraeus plays an important role in the National Economy and the area surrounding the port itself contains many industrial units, especially in the Athens- Piraeus- Elefsis triangle where most of the industrial strength of Greece is concentrated. Commercial activity in Piraeus is also highly developed and lively, mainly due to its advantageous position and the intensive commercial, especially import, traffic of the port.

Piraeus is also the seat of many shipping companies and agencies, insurance companies, large commercial houses and branches of all the Banks. Also established in Piraeus are the International Maritime Union, the Greek Chamber of Shipping, Local Chambers of Commerce & Industry, Trades & Crafts, the Piraeus Produce Exchange, the Pan-Hellenic Maritime Union and various maritime and seamen's organizations, offices of the Greek Register of Shipping, British Lloyd, the Lloyd's Register of Shipping, the American

Bureau of Shipping and other foreign registers, as well as Consular offices of various countries.

Archeological Sites and Tourist Interest

Two museums operate in Piraeus, the Archeological and the Naval museums. The local Archeological Museum is situated on Philellinon Street near the Harbour of Zea and includes a fine collection of archaic works of art. Many other fine discoveries from the Piraeus region, however, are on display at the Athens National Archeological Museum, due to lack of space at the local museum.

A new building to house the Piraeus Museum is already under construction near the present building, fronting onto Harilaou Trikoupi Avenue. When the new building is ready the wonderful works of classic and Hellenistic art, discovered in July 1959, will be transferred from the National Museum in Athens and will add considerable archeological and already housed in a new building by the "marina" of Freattis and is rich in works of every kind relative to the naval history and tradition of the Nation, from ancient times through to today.

Of the archeological sites of Piraeus, those of special interest are the ancient theatre, near the Archeological Museum, and the pre-historic, under-ground rock-constructions, the Syranghion—near Castella—and the so-called "Cave of Arethousa" on the western side of the hill of Mounichia which has not, however, as yet been developed for full exploitation as a tourist attraction. Also, along the coast-line of the Piraeus peninsular and at other sites along the Piraeus waterfront, there are still remains of the ancient city "Long Walls" while, two years ago, some remains of the "Acropolis" of ancient Piraeus were discovered on the hill of Mounichia.

Of the buildings of modern Piraeus, those worthy of special attention are the Cathedral of the Holy Trinity, the Public Theatre, the buildings of the Ministry of Mercantile Marine, the Seamen's Pension Fund, the National Bank of Greece, the Piraeus Chamber of Commerce and Industry, the Piraeus Association, the Anti-Cancer Re-

search Institute, the Piraeus Town Hall on Korai Square, and many others. The new twelve-storey P.P.A. building on Karaiskaki Square and the multi-storeyed building to house the new Piraeus Commercial Centre on the site of the old public market place have both been scheduled for construction in the near future, near the site of the old "Town Hall" (Orologion) which was demolished in 1968.

The most beautiful areas of the city, which are also of special touristic interest, are the districts around the harbours of Zea-Freattis and Mounichia (Freattis, Passalimani, Castella, Turkolimano) the area round the gardens of Terpsithea and the uniquely picturesque coast-line of the Piraeus Peninsular itself. On the hill of Mounichia, (commonly known as Prophet Elias), the present Municipal Authority has recently constructed an open-air theatre, in the manner of the ancient theatres, capable of seating 2,000.

The Port

In 1930, when the Port of Piraeus Authority was established, apart from all matters concerning the construction and maintenance of harbour-works which, up to 1930, were in the hands of the Piraeus Port Committee, the exploitation of the port (loading/discharge, storage, etc.) also became the responsibility of the P.P.A. Such exploitation had previously been in the hands of private parties, with the result that the port was then in a chaotic state of polyarchy with the attendant, adverse consequences on its progress and evolution. Since the establishment of the P.P.A. remarkable improvements were made in the execution of the port's various functions and services by concentrating all matters regarding such operations and their exploitation under one powerful organization and the foundations were laid for the progress and development which followed.

During the first decade from the establishment of the P.P.A. (1930-1940), various harbour and building projects were executed. During the war period, however (1940-45), the port was totally destroyed and the immediate post-war years were one continual struggle to re-build the

port. The 1945-54 period is quite correctly known as the period of reformation of the port while, from 1954 onwards, by the execution of a series of mammoth projects on the basis of a plan drawn up by Mr. Demosthenes Pippas, Professor of Harbour Construction of the National Metsovion Polytechnic and Vice-Chairman of the P.P.A. it became possible to transform the port to cope with the continually increasing demands made on its services by its ever-increasing traffic. Already, the P.P.A. Management, facing the matter of the port's expansion and equipage with the latest technological developments, has, with realism and foresight, charged Mr. Demosthenes Pippas with the task of drawing up a long-term programme of harbour-works projects with the aim of creating the "great port" while, in the meantime, the Management has approved the scheduled programme of projects judged to be of immediate urgency for execution from 1968 to 1972. Execution of these projects began last year and continues smoothly, according to plan.

P.P.A. Jurisdiction And Responsibilities

P.P.A. jurisdiction today covers the coast-line from the head of the Piraeus Peninsular (to be precise, from the landward end of the Themistocles Harbour-wall) to the Perama water-front, including the Main Port, and all its Annexes, Hercules Port and the Perama Coast itself. Also under the jurisdiction of the P.P.A. are the Bay of Ambelakia (Salamis), the Kynosoura Coast on the same island and part of the Apropyrgos Coast where the TEXACO OIL Co's installations are established.

The P.P.A. is responsible:

- a) for the construction and maintenance of harbour works, i.e., quay-ways, storage sheds and buildings, dry-docks, buildings and installations of the port, as well as their equipage with all the necessary machinery and other means for its operation.
- b) for the approach, anchorage and berthing of vessels and the assignment of points of loading/discharge of same.
- c) for the loading/discharge, storage, safe-keeping and delivery of

the goods imported and exported through the port.

d) for services and facilities to vessels entering the port.

e) for facilities to passengers moving through the port by sea.

f) for the general management, security and exploitation of the port and supervision of its smooth and proper operation, having the right to impose dues and charges on vessels, goods and passengers for the use of the port, the right to draw up regulations governing all port work and the right to impose and enforce such regulations.

Administrative Organs And Articulation Of Services

The Port of Piraeus Authority is a legal Entity of Public Interest, with increased powers of jurisdiction, operating under the supervision of the Ministry of Mercantile Marine (Statutory Law No 1/21.11.68). At the time of publication of this Bulletin, July 1969, it is directed by a seven-member Board of Directors, made up in accordance with the relative ministerial order, of the Chairman, the Professor of Harbour Construction of the National Metsovion Polytechnic, the Chief Harbour-Master, Piraeus, the Director of Customs, Piraeus, one representative for all the various Chambers (Maritime, Commerce and Industry of Piraeus, and the Chamber of Commerce & Industry of Athens), one representative of the Employee's & Labourers' Centre of Piraeus, and one representative of the Pan-Hellenic Union of Shipping Agents. The Board of Directors is the supreme organ of direction of the P.P.A., and administers its property and decides on all matters outside the jurisdiction of the P.P.A., and administers its property and decides on all matters outside the jurisdiction of the P.P.A.'s other organs.

The Executive Committee issues decisions on the execution of projects and purchases up to a value of 300,000 drachmas, conducts the announcement of tenders for purchase or sale and awards same provided they do not exceed the above-mentioned amount. This Committee consists of the Chairman of the Board of Directors, the Chief Harbour-Master, Piraeus, and the Board-member representing the Pan-Hellenic Union of Shipping Agents.

The P.P.A. Services are supervised by the General Manager who represents the P.P.A. before the State Authorities, supervises the exploitation of the port, the execution and maintenance of all buildings, installations, machinery and other means of the Organization, as well as the operation of such, in general. On the basis of the current Articulation of Services, there are ten Directions or Departments in all (Management, Financial, Supply & Administration, Control, Loading/discharge, Shipping, Free Zone, Statistics & Studies, Planning & Construction, and Machinery & Equipment), the Legal and Surveyors' Services, the Mechanized Accounting Centre and the Secretarial and Public Relations and Press Services. Of the above departments, for the purpose of their better coordination, those of Loading/discharge, Shipping, Free Zone, Statistics & Studies and the Mechanized Accounting Centre are grouped to form the Exploitation Service while those of Planning & Construction of Works and Machinery & Equipment form the Technical Service.

The Free Zone Of Piraeus

The Free Zone of Piraeus has been operating since 1932 and all matters relative to its operation are covered by article 5 of the Emergency Law No 1559/50 "on the Port of Piraeus Authority" as amended by Statutory Law 3398/55, article 6, paragraph 2. The Free Zone is commercial: i.e., transit and bonded, allowing importation of goods into the Greek interior or transshipment of same to foreign destinations, either in original state or after re-classification, processing, re-packing, sorting, cleaning or division of same into smaller lots or units.

The land and sea region of the Free Zone is considered as foreign territory from the point of view of Customs control and, in consequence, no control is exercised by the Customs within the area itself on any goods carried into or stored there, with the exception of monopoly goods.

Special P.P.A. regulations govern the administration, receipt, delivery, transfer, bonded-storage, declaration as unclaimed, compensation, etc., of goods imported into the Free Zone

of Piraeus, as well as all storage and other dues and charges on same. For further information, interested parties may refer to the Free Zone Management (tel: 462-652).

State Services Of The Port

Apart from the P.P.A., the following State Services are established in Piraeus, functioning relative to the operation of the various port services and with shipping in general:

a) The Ministry of Mercantile Marine: the port services come under the authority of this Ministry which has been established in Piraeus for some years, at the corner of Queen Sofia Avenue and Sotirios Dios Street, near the Harbour of Zea.

b) Piraeus Central Harbour-Master's Authority: the jurisdiction of this service covers the port, the nearby bays and coastline and the Greek National Waters from the Perama coast to that of Lagonisi.

c) Piraeus Customs Authority: having 10 Customs houses and 3 branches of the State Chemical Laboratory.

d) Port Sanitary and Hygiene Service: under the authority of the Piraeus Sanitary & Hygiene Dept.

e) Port Meteorological Service: established at the Central Harbour-Master's offices, Piraeus. This service issues a daily meteorological bulletin for the convenience of all interested parties and extra bulletins whenever dangerous weather conditions are imminent.

f) Port Fire-fighting Service: with numerous stations, fire-tenders and fire-floats standing by for any emergency. On all mechanical equipment and at all storage places and other buildings of the P.P.A., there are automatic fire-extinguishers and, in an emergency, the automatic alarm system can be set off from any of the 16 alarm points throughout the port.

Finally, there are many other services in the port area, such as the port Police and Tourist Police Forces, Commercial Vessels' Inspection, the State Sea Transport Dept, the Seamen's Employment Bureau, the Greek Seamen's Pension Fund, the Seamen's Home, etc.

The Port Of Piraeus And Its Annexes

The Piraeus Port group, in its wider sense, extends along the coast from Phaleron to Perama. The section from Phaleron Delta to the Themistocles Harbour-wall no longer comes under the jurisdiction of the P.P.A., the section from Phaleron Delta to Alexandra Square now being administered by the Greek National Tourist Organization, the balance from Alexandra Square to the Themistocles Harbour-wall being ceded to the Municipality of Piraeus, with the exception of the Harbour of Zea-Freattis which has been under the jurisdiction of the National Tourist Organization since 1966.

The greater part of the port's traffic in general, is concentrated in the Central or Main Port, situated at the centre of the group of bays and inlets along the Piraeus coastline. Loading/discharge operations are also carried out at the various Annexes of the port and Hercules Port, thereby partly relieving congestion in the Main Port. The following paragraphs give a detailed description of the Main Port and its Annexes.

The Main Port

The Central or Main Port (37° 56' 34" N.: 23° 38' 32" E.) is naturally safe, not being subjected to dangerous winds. Prevailing winds are usually of average strength and strong winds are rarely experienced anywhere but in the Outer Harbour. Storms are not experienced. Visibility in the port region is good and the occasional early-morning mists disperse quickly. Fog, thick enough to affect the movement of shipping, is almost never experienced. The usual flood-tide measure is about 0.30 metres above 0 level and seasonal tides are not experienced.

On the isle of Psyttalia (37° 56' 31.5" N.: 23° 35' 35" E.), situated near the entrance to the port, there is a light-house giving out a steady white beam, visible for 20 miles, alternated by three white flashes per 30". Also, at the entrance to the port, there are two beacons, one on the end of the Themistocles Harbour-wall giving out a green light, the other, on the end of the King George (Krakari) Harbour-wall,

giving out a red light, both being visible for a distance of 12 miles and flashing once every 6".

The Central or Main Port is long and narrow in shape, lying directionally N.E. to S.W., the overall length being 2,400 metres and average width about 550 metres. Water surface area amounts to 1,110,000 sq. metres, of which 140,000 sq. metres are taken up by the Alon Basin at the N.E. end. The Great Port, taking up the central sector, covers about 530,000 sq. m. while the Outer Harbour covers the balance of 440,000 sq. m. at the S.W. end where the entrance is situated. Two harbour-walls or break-waters protect the port itself: the Themistocles Harbour-wall on the right of vessels entering, and the King George (Kra-kari) Harbour-wall on the left.

Quay-ways in the Main Port amount to a total length of 8,333 m., 4,123 m. being commercial, for cargo vessels, 2,890 m. for passenger vessels and the balance, 1,320 m., auxiliary. These latter are used for vessels in waiting or undergoing minor repairs, as well as for other port needs.

Hercules Port

North-west of the Main Port, at a distance of about 2 miles, is the sector known as Hercules Port (formerly St. George Bay, Kerat-sini). This port is also safe and is further protected by two harbour-walls.

Water surface area in Hercules Port amounts to 640,000 sq. m.

Hercules Port has four piers and a total length of quay-way amounting to 4,783 m. On the south side of this port, a protective mole of natural rock has been built to a length of 100 m., for the berthing of local small-craft, rowing boats, etc., The large new Pier V, has just recently been completed.

Loading/discharge of coals, anthracites and metallic ores is carried out at this port, as well as of other goods to and from Home ports. Such goods are carried by small cargo motor-ships or diesel-auxiliary sailing craft. Fish are also handled here at the special fish-landing which has been operating for the last five years. The exploitation of the fish-landing is in the hands of the Ministry of Industry, under the provisions of a special law.

The Channel Is Ready Rotterdam-Europoort Accessible to Ships of 250,000 Tons dw.

(Reprinted from Rotterdam-Europoort-Delta 1969 no. 4)

Just before the end of 1969, Rotterdam-Europoort became accessible to ships in the 200,000 to 250,000 dwt class. This resulted from the fact that during the past three years a deep access channel has been cut in the bed of the North Sea beyond the entrance to the New Waterway, which now enables ships with a draught of 62 feet to reach Rotterdam-Europoort.

The first ship of this draught to officially arrive at Rotterdam was the s.s. "Melo" of Shell Tankers Led., with a carrying-capacity of 209,000 tons dw. A reception was held on board the ship on December 19, during which the Chairman of the Stichting Havenbelangen, Rotterdam (the Foundation for Port Interests), Mr. A. Blusse van Oud-Alblas, presented a memento to the tanker's Captain, Mr. C. G. Bradley. The welcoming ceremony had a subdued character because of the recent loss suffered by Shell Tankers when the tanker "Marpessa" sank off the west coast of Africa.

Great economic importance

Despite the sober welcome, the arrival of the "Melo" in Rotterdam-Europoort was an event of great economic importance. Thanks to the deep channel stretching beyond the New Waterway entrance, Rotterdam, and because of it a large part of Western Europe, has once again been assured of the cheap-as-possible supply of the important raw material, crude oil. The certainty of future crude oil supplies resulted in the oil companies drastically expanding their investments in the Rotterdam port area, a step taken shortly after the decision fell early in 1967 to make Rotterdam accessible to ships of 62' draught.

Thus within one or two years, the processing-capacity of the Shell refinery in Rotterdam had been

boosted from 18 to 25 million tons crude oil per year, that of the Esso refinery from 8 to 16 million tons and the Chevron refinery from 5 to 12.5 million tons per year. Meanwhile, the capacity of the Gulf refinery has also been expanded from 1.5 to more than 4 million tons per year and the British Petroleum Company has announced plans to boost the capacity of its refinery in Rotterdam-Europoort from 5 to 15 million tons per year. The combined capacity of the five oil refineries in the Rotterdam area three years ago was 32.5 million tons per year. It is now 62.5 million tons per year, and in two year's time—when the B.P. refinery expansion is completed—it will total 72.5 million tons per year.

European function

This capacity explosion in the oil industry established in the area of the port of Rotterdam, which, together with additional facilities, represents a total investment of more than 1,000 million guilders, underlines the economic importance of the access channel at the entrance of the New Waterway linking Rotterdam with the North Sea. It is obvious that the deep channel accentuates in no small way the European function of Rotterdam. Shell, Esso and B.P., on an even greater scale than hitherto, will distribute crude oil and oil products throughout Europe via the port of Rotterdam. Transit transports and

transshipment will rise sharply during the next few years. But this is not merely confined to oil and oil products. Transport of dry bulk goods is also taking place in continually larger ships, so Rotterdam, because of its newly-dredged channel beyond the New Waterway, will be of even greater European importance to this transport than it already is.

Part of project

The dredging of the access channel formed part of the gigantic project being carried out at the entrance of the New Waterway, which will be completed in 1974. Apart from the channel, the project includes the damming of the Maasvlakte flats, which will mean an extension of the Rotterdam port area right into the North Sea, and the construction of a new harbour entrance giving a combined/separated access seaway to the harbours in Europoort and the New Waterway. In the original plans, a channel beyond the entrance of the New Waterway was planned for ships with a draught of 57 feet. But in the beginning of 1967, the Dutch government decided to cooperate with Rotterdam on the further deepening of the channel so that it would be suitable for ships with a draught of 62 feet.

When dredging of the channel started early in 1967, the access channel to the harbour entrance of Rotterdam was suitable for ships of 47' draught (about 100,000 tons dw.). A scheme was designed under which the Europoort harbours would be accessible to ships with a draught of 53 feet in 1968, for ships of 59 feet draught in 1969, and for ships with a draught of 62 feet at the beginning of 1970. To achieve this, in addition to the dredging programme, a plan for the removal of underwater wrecks had to be carried out.

Smooth-running

That the channel was completed at the end of last year instead of at the beginning of 1970 (it only has to be given a "finishing touch" here and there), can serve as proof that the dredging programme and the wreck-clearance plan progressed

smoothly. The entire project was under the supervision of the Harbour Entrance department of the Ministry of Waterways, and was carried out by a combine of contractors called Hook of Holland (CH 3), in which the Koninklijke Maatschappij "Adriaan Volker" N.V., the N.V. Baggermaatschappij Bos & Kalis, and Van Hattum & Blankevoort N.V., participated. The project is financed by the Municipality of Rotterdam. The combine worked with two of the largest suction dredgers in the world—the "Geopotes IX" and the "Prins der Nederlanden". The two suction dredgers removed some 70 million cubic metres of sand, even though the "Prins der Nederlanden" was only employed at the Hook of Holland since May 1968. The dredgers worked night and day and virtually without any interruptions. There were some weeks in which they removed more than half a million cubic metres of sand. All the sand sucked up from the channel, with the exception of about one million cubic metres which was dumped for the extension of the northern pier at the Hook of Holland, was taken out and tipped in the North Sea.

The smooth-running dredging operations can be attributed to the steeper slopes of the channel which was subsequently found possible, and to the silting-up which was less than expected. The latter is reason for hoping that future maintenance work on the access channel will amount to less than the calculated 8 million cubic metres sand per year.

Two parts

The access channel consists of two parts. Up to about 12 kilometres from the coast, it has a depth of 22 metres under low low-water-spring tide (LLWS), and further in sea, over another 32 kilometres, a depth of 23.5 metres under LLWS. The width of the channel varies from 400 metres near the harbour entrance, to 600 metres at 12 kilometres from the coast. The width of the channel beyond 12 kilometres was based on one sea mile. Experiments with a "Decca Navigation Survey Chain", coupled with simulation tests, achieved such good

results that it is justified to keep to a narrower width. As soon as the radio position-finding system, specially designed for navigation in the channel route, is definitely introduced shortly, it is expected that the smaller width of the approach channel will also be definitive.

The difference in height between the bottom of the channel and the surrounding seabed slopes down from 5 metres near the present harbour entrance to 0 metres at 12 kilometres from the coast. The rims of the channel inside the future outer-harbour, both on the north side as well as the south side over a distance of some three kilometres, are fortified with marine shingle to prevent sanding-up. More than two million tons of shingle was required for this.

Megaripples

The only difficulties encountered were the dredging operations further out at sea, beyond the 12 kilometres point from the coast. It is here that the area of the so-called megaripples or underwater sand-dunes begin, the tops of which lie less than 22 metres under LLWS. The difference between the tops and dales of the seabed sometimes amount to 7 metres. Little is known about the behaviour of these ripples. They appear to move across the seabed. Experts view these ripples as "mysterious phenomena". Nevertheless, work at this point of the channel was successfully completed by sucking the tops of the ripples to a depth of 23.5 metres under LLWS. This work was a setback inasmuch that more sand had to be sucked than was originally anticipated.

The channel is now ready. It required a total investment of 190 million guilders, made up of 100 millions for the original channel (for ships of 57 feet draught) and nautical equipment, and 90 millions for the deepening of the channel to make it navigable for ships of 62 feet draught.

Rotterdam has meanwhile asked permission to further deepen the channel and make it accessible to ships with a draught of 65 feet. This project could be completed in April 1971.

Things to Come at Los Angeles & Other Ports

By Robert G. Robinson

**Director, Public Relations Division
Port of Los Angeles**

Los Angeles, Calif., April 22:—The Pacific Ocean, the world's largest body of water, covers more than 64 million square miles. On its borders and near its shores live more than half of the world's population—about two billion people, all of whom are dependent on the Pacific Ocean and its resources for survival.

Although the science that deals with the oceans, their resources and phenomena is finding new popularity in today's world, oceanography is by no means a new science, any more than navigation is new as the science of getting ships or airplanes from one place to another.

The phenomena and the resources of oceans are many, but those involved in ocean shipping and world trade are quick to point out that the greatest resource is its trade routes.

For centuries man has depended on the world's great sea lanes for a more equitable distribution of the Earth's wealth—its food, raw materials and the variety of useful and essential products that man, himself, has created.

In recent years, as world population has grown and more countries have become industrialized, it became obvious to shippers, steamship lines and port operators that ocean-borne transportation and cargo-handling methods were indeed ready for some changes. Today, shipping is in the midst of perhaps the most important advance since the change from sail to steam.

This change, or revolution as some people see it, is called "containerization." Basically, it is simply packing things in large boxes and transporting them faster and more economically.

The idea probably originated

during World War II, when United States Armed Forces adopted large packing crates to send household furnishings to men with families overseas. These first containers for the military were boxes of furniture for houses of various sizes—four, five, six or more. They were packed by experts and they solved a lot of problems.

Today, while the concept itself is a simple one, containerization is highly specialized, complex and innovative.

It has taken nearly 12 years for the full impact of the containerized movement of freight both by sea, land and air to reach the transportation industry.

The Port of Los Angeles plunged into the era of containerization in 1960, when it cooperated with the Matson Navigation Company in building the first container terminal on the West Coast. The construction actually followed Matson's initial shipment of containers (20 of them) aboard the M.S. "Hawaiian Merchant" from Los Angeles to Hawaii in August, 1958.

Now, every major shipping line has adapted to containers. Many of them operate specially-designed, all-container vessels, while others have converted their conventional freighters to container-carrying ships. Containers are presently being handled at practically all Los Angeles Harbor terminals.

There are now five special container facilities at the Port of Los Angeles, with two more under construction. Container traffic at the Southern California port has virtually avalanched from 7,000 containers handled in 1960 to 70,000 in 1968 and about 170,000 last year. That figure is expected to more than double within five years.

Reports indicate that every major port on the Pacific Coast is ex-

periencing the same rapid growth in containerization, due to its obvious economic advantages and its total acceptance by shippers.

The six major U.S. West Coast ports of Los Angeles, Long Beach, Oakland, San Francisco, Portland and Seattle now have a total of 18 container terminals. Combined they represent an investment of \$130 million, with nearly 600 acres devoted exclusively to container storage and operations. The same ports have a total of 11 more full-container facilities either under construction or planned for development. When completed, these ports will have invested more than a quarter of a billion dollars in containerization with more than a thousand acres of container facilities.

In the last two years the combined number of containers handled at these same ports has doubled, from 200,000 in 1968 to 400,000 last year. By the end of 1970, the number could double again.

Even so, the shipping industry moves into the immediate future with other innovations.

One of the newest container or cargo-handling systems, a method known as LASH (Lighter Aboard Ship), is dramatically changing port and shipping concepts throughout the world. LASH vessels take on barges with a carrying capacity of about 400 tons, contrasting with those ships which carry the small 20-ton containers. LASH barges cannot utilize the standard container facility due to their size—about 60 feet long and 30 feet wide. Consequently, the Port of Los Angeles is now building a new LASH facility to accommodate this unique system.

Another concept appearing on the horizon is the twin-hull vessel, "Trisec," capable of spanning the Pacific in less than half the time required by today's oceangoing ships. Powered by aircraft-type gas turbine engines and using a new hull design that will permit speeds of 50 knots, "Trisec" consists of three basic structures: underwater pontoon hulls, above-water hull struts and the main hull for cargo or passengers.

"Trisec" containerhips will be able to transport perishable cargo across the oceans at nearly highway

speeds. And they will use only 50 percent of the power required by ships with conventional displacement-type hulls. In port, the vessels can berth over finger piers or between two docks and be simultaneously off-loaded from bow, stern and both sides, thus giving them quick turn-around capability.

LASH and "Trisec" vessels, nuclear-powered merchant ships, automated container vessels with computerized controls, hydrofoil liners and jumbo versions of present-day supertankers and bulk carriers—these will all be familiar visitors at many world ports within the next 10 years. Some of them have already called at Los Angeles and other West Coast ports.

Total expenditures for port development on the U.S. Pacific Coast alone over the past 25 years were nearly \$1.5 billion. And for all U.S. ports: just short of \$5 billion.

What will the investment be in another 25 years? The end of expansion and growth in commercial shipping and transportation is nowhere in sight.

Already a \$500 million facility, the Port of Los Angeles is pursuing an ambitious long-range expansion plan which will result in its largest earth-moving project—the reclamation of 80 million cubic yards of dredge material to create a land mass in the Outer Harbor which will double the present cargo-handling capability of the port.

These 1,500 acres of new land and the terminals and facilities that will occupy them will cost in excess of \$200 million. Completion is scheduled for the 1990s, but the earth-moving is already underway and will be accelerated as dredged material from the Main Channel becomes available. This main harbor artery itself is scheduled for deepening to accommodate the deeper draft vessels expected in the Seventies.

A billion tons of cargo have moved in and out of the Port of Los Angeles in the last 50 years. At its present rate of growth, the port will probably move its two billionth ton by the end of this century—in less than 30 years.

This accomplishment, however, will depend on the continued devel-

Annual Report 1969

Bremer Lagerhaus Gesellschaft

(Released Tuesday 12th May, 1970)

The Bremer Lagerhaus-Gesellschaft, Bremen, closed 1969 with a result that was all in all satisfactory. This is clearly shown by the report of the Board of Directors of the Company for the business year of 1969, which will be submitted to the press on Wednesday of this week.

First of all, the BLG states in their report that the overall economic process of the Federal Republic of Germany, which began to show a steady upward trend in 1968, turned into intense commercial activity in 1969. The symptoms of this boom which are relevant for traffic via the seaports, such as persistent growth of demand overseas and an immense increase

in imports, also caused the total amount of goods handled by the Ports of Bremen to increase a great deal. After all the 20-million-tons mark was exceeded for the first time in Bremen/Bremerhaven, which is an increase of 9% in comparison with 1968. In addition the amount of general goods handled, a factor which is so important for any seaport, showed an increase of 7%, so that the proportion of general goods handled was 54% of the total amount of goods handled, a percentage which remained so remarkably high.

Generally speaking the development of the turnover of goods in the Ports of Bremen has shown a steady upward trend since 1967:

	1967	1968	(against 1967)	1969	(against 1968)
General cargo:	9,526	10,435	+ 909	11,146	+ 711
Bulk cargo:	7,864	8,553	+ 689	9,594	+1,041
Total:	17,390	18,988	+1,598	20,740	+1,752
Thereof:					
Export	6,292	7,026		6,941	
Import	11,098	11,962		13,799	

opment of new methods of cargo handling. If those who are in the business of distributing the world's wealth are to keep pace with the increase of the world's population and the need and demand of that population, the shipping and maritime industries must continue to develop the concepts and transportation systems that are necessary to do the job.

Fifty years ago few men could visualize transporting men to the moon. How many men today can visualize the transportation systems needed and in use in another half-century?

Whatever they may be, they will continue to utilize that greatest of the oceans' resources: those ancient, but ageless, reliable and dependable trade routes of the sea, and the ports where they begin and end.

As explained in detail further, the Bremer Lagerhaus-Gesellschaft achieved a share of 9,068,000 tons of the total amount of goods handled in the Ports of Bremen, which reached the figure of 20,740,000 tons. In comparison with the year before an increase of 734,000 tons or 9% could be recorded. A most pleasing development in 1969 was the increase of the total amount of general cargo handled of 630,000 tons (458,000 tons in Bremen, 172,000 tons in Bremerhaven), whilst 104,000 tons were on the grain sector. The largest rate of growth is to be found in the number of containers handled by the Bremer Lagerhaus-Gesellschaft. 73,334 containers of the 20', 35' and 40' types (117,926 containers on a 20-foot basis) with a tonnage of 822,129 tons were shipped via Bremen/Bremerhaven. The number of con-

tainers handled in 1968 was 46,873 containers with 465,000 tons. Because of these rates of growth—56% according to the number of containers and 77% according to the tonnage—the share of goods shipped in containers rose to 9% of the total amount of general goods handled. Over 90% of these containers were shipped on the route between the Ports of Bremen and the U.S. East Coast. In this line, along with the Sea Land Service, Inc., the Container Marine Lines, the Atlantic Container Line and the Hapag-Lloyd Container Lines, two container lines are now in operation, which started their full-container services in 1969: the Moore-McCormack Lines, Inc., and the Seatrains Lines, Inc.

A comparison with the other German seaports generally shows a satisfactory situation, as is further stated in the annual report of the Bremer Lagerhaus-Gesellschaft. However a critical valuation must also include a comparison with the rival ports on the estuary of the Rhine. It is evident that general goods, which are so especially important and interesting because of their value added quota, have achieved higher rates of growth in the western seaports than in the Ports of Bremen. For example, Rotterdam could record an increase of 1.6 million tons in the transit traffic of general goods, 13% more than in 1968.

The decisive reason for this development, which is still continuing intensely is still to be found in the continuation of the distortions of competition with regard to transport to and from these ports, and here we can find definite disadvantages for the Ports of Bremen. After the initial successes of the German transport policy in the year before, the decisive steps were not taken. It must indeed be guaranteed that the basis for the calculation of costs, so important for the price formation, is the same for transport to and from the German seaports. In view of the permanent structural changes in sea transport, the solution to this problem must be found more urgently than ever before.

As the Bremer Lagerhaus-Gesellschaft further states, there is still

the demand that the Federal Government should improve the land and sea connections with the Ports of Bremen. Indeed the trend towards the formation of transit chains of transport with a view to accelerating the transportation of goods require a steady expansion of transport connections. Here for example we can place above all the deepening of the River Weser and the rapid construction of the autobahn from Bremen to Bremerhaven.

Apart from these economic and technical data, which are very much influenced by the transport policy of the government, the capital investments of the seaports themselves have played a very important role in remaining competitive. The Ports of Bremen, just like all other seaports, had to adapt themselves to the efforts towards the rationalization of transport, which are becoming more and more intense, both generally and especially in shipping transport. All this is made necessary by the high flexibility of investment projects on the one hand and on the other hand by the modification of organisation and methods of management. Up to now this has been successful.

The rationalization measures taken by the shipping companies can without doubt be seen most clearly in the field of container traffic. In this field, the unitization of the cargo and the integration of the chain of transport have been carried through to the greatest extent. But also in roll-on/roll-off transport and in the conventional handling of general cargo there have been considerable changes, which have required investments in order to adapt to these changes. Therefore we would find, along with the projects to promote containerisation, investments that would help to increase the speed of loading and unloading of other special vessels and of conventional freighters. Among the most important investments of the Bremer Lagerhaus-Gesellschaft in 1969 we can find a third container gantry-crane, a terminal building at the container terminal in the Neustadt Docks, Bremen, as well as the construction of maintenance and repair buildings for the container handling equip-

ment. The reconstruction of Shed No. 17 in the Überseehafen and of Shed No. 20 A in the Neustadt Docks, as well as the expansion of the consolidated cargo distribution shed, "Weserbahnhof", caters for the needs of the conventional handling of general goods. These investment projects will be completed at the beginning of 1971. In addition to this, a floating crane with a capacity of 100 tons was put into operation at the beginning of this year. A further floating crane is to follow in a few weeks.

However the focal point of all the investment projects is to be found in the area of the container terminal in Bremerhaven. There the west side of the Nordhafen with a quay of 400 metres in length, two container bridges and a transit shed for general cargoes for the loading and unloading of containers has been completed. A third container bridge will be in operation in the middle of this year. On the east side of the Nordhafen the extension of the east quay to 330 metres and the construction of a transverse pier will have been completed and also a container bridge will have been erected, so that especially combined roll-on/roll-off and container vessels can be loaded and unloaded there. The loading of the car-carrying vessels will then be effected on the new transverse pier.

A large part of the investments in Bremerhaven are being used, however, for the construction of the new "Terminal on the Sea", direct on the outer River Weser. Here behind a quay, which is 700 metres long and has 4 container bridges, a marshalling area of 300,000 sq. metres is being completed. Further an office building and a terminal building as well as a maintenance and repair building for the container handling apparatus belong to the new container terminal in Bremerhaven. A total of about 20 van carriers and the same number of trucks and chassis will be used at the terminal. The first berth at the "Terminal on the Sea" will be put into operation at the end of 1970 or at the beginning of 1971, the second berth in the autumn of 1971.

As is further stated in the annual
(Continued on Next Page Bottom)

Far Away Places

*From 155 Ports and 59 Countries
To 146 Ports and 65 Countries*

**From Port of Toronto News, January
The Toronto Harbour Commission
Ontario, Canada**

Toronto, Ontario: — At 1430 hours on November 23, 1969, the Russian m/v PYATIDYESYATIL-YETIYE KOMSOMOLA tied up at Marine Terminal 27.

An unusual occurrence in the Port of Toronto? No, but a most extraordinary name. From the Russian tongue, the translation means "the 50th Anniversary of the Communist Youth Organization".

Swinging from the deep, dark holds of the Russian freighter were 5,300 cartons of spirits of various kinds from Genoa; from Naples, 2,400 cartons of laundry soap and 810 barrels of cherries; from Naples and Valencia, 315 tons of tomatoes and tomato paste along with tons of footwear and glassware.

Russian vessels are common in Toronto Port and with a look at the Port on any given day, you will see ensigns from scores of countries spanning the globe undulating in the cool Lake Ontario breezes.

Just around the corner at Marine Terminal 28, the British m/v FAIR HEAD was emptying her holds of 358 tons of Scotch Whiskey which had been loaded at Glasgow, Scotland for Canadian consumption; scores of cartons of razor blades and household effects, 15 tons of electrical motors and several tons of

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 the 25th June, 1970, should agree to distribute DM 400,000 to the shareholders, after transferring DM 280,143,70 pf. to the voluntary reserves. This corresponds to a dividend of 8%.

precision tools picked up at Dublin, Ireland.

At Marine Terminal 35, the m/v TSUNESHIMA MARU from far-away Japan discharged nearly 19,000 cartons of tuna fish from Shimizu, Japan as well as scores of typewriters, sewing machines and hundreds of cartons of soy sauce, toys and saki loaded at Nagoya, Yokohama and Kobe.

Fork-lift trucks and dockworkers swarmed around the German m/v LEARINA handling tons of photographic supplies from Antwerp, glass from Bremen, Mercedes Benz automobiles, barrels of beer and canned meat from Hamburg. Nearby, the m/v KING LEONIDAS displaying the Greek ensign, was discharging its cargo of steel beams from Continental Europe and the Cuban m/v JIGUANI was preparing to set sail after being loaded with Canadian powdered milk and cheese.

At times like this, confusion and disorganization appears to reign. But a closer inspection reveals a well-organized and definite operation being unfolded with long lines of transports and rail cars handled daily. Instructions shouted above the roar of a hundred dockside noises direct men, machinery, equipment and thousands of tons of international cargo.

But what has triggered this frenzy of activity and made the Port of Toronto a truly international shipping focal point which is a port of call for nine of every ten foreign vessels passing through the St. Lawrence Seaway?

In 1958, 287,768 tons of overseas cargo were handled in Toronto and by 1968, nearly 1,400,000 tons pass-

ed over the Port's docks. In barrels, bales, boxes, on pallets and in containers, more cargo was moving across the docks in 1969 than in any other year in the Port's operation. By late November 1969, over 15% more overseas cargo had been handled by the Port than over the same period in 1968. Port officials expect 1969 will be the biggest year ever for Toronto with the final total exceeding 1.5 million tons.

The efficient services and advantages offered by the Port of Toronto are obviously many and worthwhile from the viewpoint of the customer.

From the day the present St. Lawrence Seaway system was officially opened by Her Majesty, Queen Elizabeth II and the then President of the United States, Dwight D. Eisenhower, in 1959, the Port has grown from a primary lake port on the Great Lakes to a major world port. As a result, the Port Authority soon realized a more powerful and effective security system would be needed to protect the massive increase and variety of cargoes moving through the Port.

In 1966, the Toronto Port Police department was formed under the auspices of the Police Act of Ontario, and, by the authority of the Ontario Police Commission, the Port Police were sworn in as constables for the Port of Toronto and as special constables for the Province of Ontario. Unlike its forerunner, a small security force with limited powers, the Port Police now have widespread authority and jurisdiction over the land controlled by the Port. As a security organization, the police personnel act as peace officers but have the authority vested in them to move beyond the Port area to make an arrest or to continue investigation of an offense which originated in the waterfront area. To accomplish this, a detective branch of the Service was formed.

As the only port security system of its kind on the North American continent, international implications of this most successful experiment soon came to the fore. In December 1968, the Port sponsored

a symposium on the problem of crime in ports in North America which was attended by police and port security personnel from several major ports in Canada and the United States.

Emerging from this meeting was the establishment of a steering committee to investigate the possibility of forming an International Association of Port Police — not just for North America, but world-wide.

The cargoes handled at the Port's five marine terminals and other designated areas come from all over the world. Whether the products are handled by the 300-ton "Atlas" crane, the 50-ton capacity floating marine derrick or by the ship's own gear, the Port realizes an effective and efficient handling of the goods is a must in order to attract potential customers to use the various facilities at their disposal.

With containerized movements through the Port increasing nearly five-fold since 1966, many open areas at the terminals were being put under severe pressure which had originally been designed for open storage for cargoes not requiring inside storage areas.

As a result, the Port has designed and awarded a contract for the construction of a container handling warehouse to be located immediately south of Marine Terminal 51 for the exclusive handling of containers. All containers from the Port's general cargo terminals can then be processed at one consolidation and distribution centre. In addition, refrigerated space is being provided for perishable cargo.

The stuffing and destuffing of containers will be performed in a bonded area with undercover loading and unloading facilities for both rail and motor vehicles. Situated on the doorstep of, and with direct links to, Canada's trans-continental railways and roads, the warehouse will become a consolidation point for the import and export of containerized cargoes or for regular storage in the unbonded areas.

Upon completion of this 93,000

square foot warehouse in June of 1970, which is the first of a three-phase program, several areas at the Port's five Marine Terminals can then be freed to handle the annual increase in palletized and prepalletized cargo. Up to the present time, special sections have been set aside for the container operation. As a result, the terminals will then have an increased capacity without actual physical expansion.

And if 1969 is any indication of future shipping trends at Toronto, this space will be well utilized.

Quick, efficient handling of large amounts of cargo can only be accomplished if a pool of excellent, hard-working waterfront workers are available. This is the fortunate position the Port finds itself in with respect to its labour force. Careful handling of the customer's goods is the motto which has kept many companies using the Port of Toronto and has attracted scores of others, both in Canada and abroad. By guaranteeing good labour in the rapid handling of goods, Toronto has achieved great strides in moving into the position as one of the principal international inland ports.

To promote the services and advantages of Toronto, the Port Authority has established foreign representatives in various countries around the world. At present, Port offices have been set up in Genoa, Italy; London, England; The Hague, The Netherlands; Tokyo, Japan; and New York City, U.S.A.

Augmenting the work accomplished by these representatives, several trade missions to various countries are completed each year by members of the Board and the Port's General Manager, E. B. Griffith, Q. C. These trips, designed to meet many of the shipping people personally, have proven to be highly successful in encouraging shipping through the Port of Toronto.

Heading the list of the world-wide trading areas geographically is Continental Europe, which accounts for nearly 40% of the total cargoes passing through Toronto.

Roughly 20% of Toronto's trade originates or terminates in the Mid East and Far East and this appears to be one of the fastest growing geographical areas in the world in terms of Toronto trade. Third on the list is the United Kingdom which totals approximately 17% of the total cargoes. Products to and from the Mediterranean area run just under 10% while the Baltic countries account for nearly 5% of all cargoes passing over Toronto docks. The balance of approximately 8% is split rather evenly among the Caribbean area, South and West Africa, Australia-New Zealand and South America.

Personalized service for both present and potential clients in Canada and abroad by Port officers is a key to the Port's operation and success since entering the world trading field in 1959.

By telephone and letter, customer comments indicate their approval of the services offered at the Port of Toronto.

Commenting on the facilities and service in general, a large forwarding company in Beirut, Lebanon writes "... more than happy to work with firms operating through Toronto Port ... congratulations for the fine job you are undertaking."

Personal calls and meeting by Port officers who act as a liaison between the individual customer and the Port Authority prompted a Toronto-based importer to write "... decided change for the better in the speeding up of delivery at the docks, the reduction of pilferage, partial deliveries, etc. and much closer cooperation between importers and the Toronto Harbour Commission."

Prompt action as a result of a telephone call can only cement good customer relations. A major importer of glass wrote "For many days we had been attempting to locate this shipment but without success and according to our office, you succeeded in eight minutes."

The Port of Toronto knows the satisfied customer is the key to a successful future.

Portland Ideal Port for Containers

The container revolution is upon Portland, Oregon. And the Commission of Public Docks, responsible for much of the city's waterborne commerce, is ready!

A pair of container facilities are currently in operation. Another is ready for construction as soon as business warrants. The final pieces of equipment in the current procurement program have arrived.

A recently completed 21 acre, two-berth terminal has a 40-ton straight line container and general purpose crane and two 50-ton capacity whirley cranes backed up by the paved and lighted open storage area. By spring, a 90,000 square foot covered storage space will be available.

In addition, more than a fifth mile of rail track has been installed and a container freight station is planned for container stuffing and delivery and pickup.

The second facility in operation has six acres of paved, lighted and fenced yard. Lifts are a 33-ton straight line container crane and a 65-ton whirely.

Both straight line cranes reach 103 feet from the bull rail.

Planned is a 20 acre facility with two straight line cranes. It will be developed as business warrants. Next to a newly developed import automobile handling facility, grading and filling already has been completed at the container site.



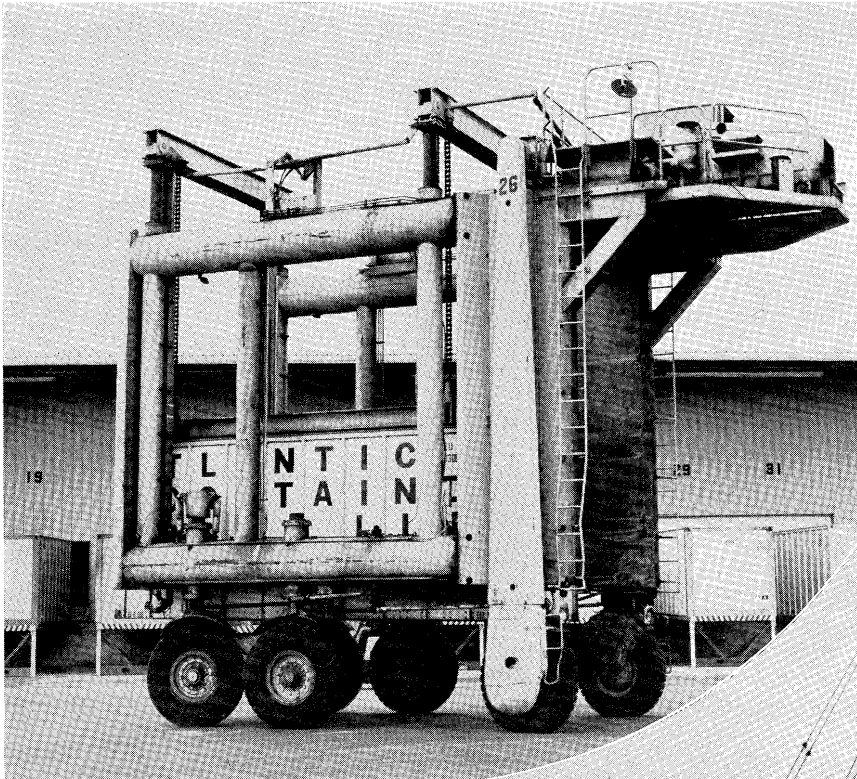
ARTIST'S OVERLAY shows plans for container terminal and automobile facility. First stage calls for 20 acre storage, cranes and 850-foot dock. Additional expansion is available if needed (labeled Future Expansion Area). Development is scheduled as business warrants.

Because of Equipment, Facilities



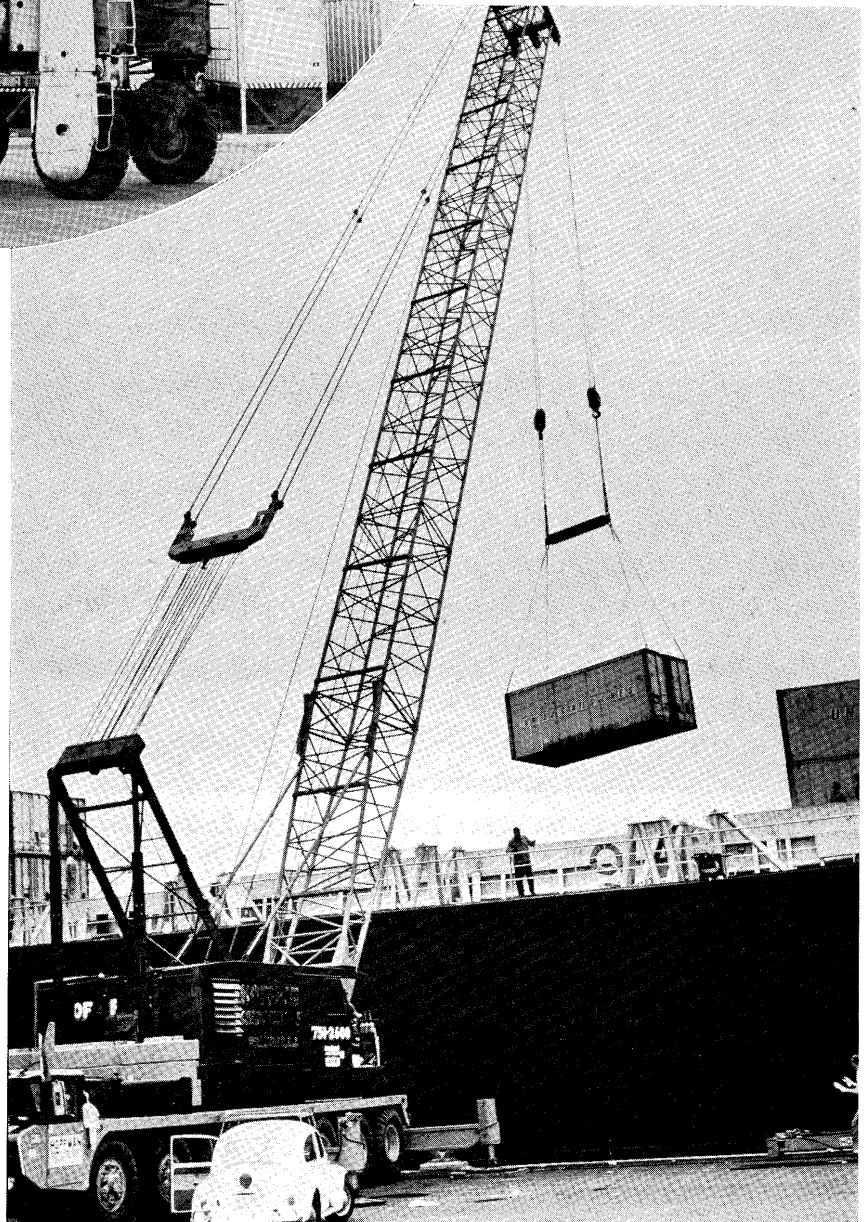
Container facility at Terminal 2 berths 5 and 6 was completed, except for container freight station, in early 1970. In foreground is 90,000 square foot transit shed and 55-ton rated capacity whirley crane. 26-acre facility boasts paved and lighted backup area, a second 55-ton whirley and 40-ton container crane as well as steel reinforced concrete dock.

Portland Is Ready for Containers



↓ This mobile crane, capacity 175 tons, is available for container use. It is heaviest lift on Columbia river system.

↑ DOCK COMMISSION has four straddle carriers like this. Capable of stacking 20-foot containers three high and 40-foot containers two high, carriers are used at Terminals 1 and 2.



1969 Foreign Trade

New York, N.Y., Apr. 29:—Airborne exports and imports through the Port of New York reached an all-time high in 1969, but oceanborne foreign trade declined slightly due to the 56-day longshoremen's strike and to changes in the national economic climate.

The 1969 foreign trade figures, made public today by James C. Kellogg, 3rd, Chairman of The Port of New York Authority, were compiled and analyzed by the bistate agency from basic data of the Bureau of Census, U.S. Department of Commerce.

In 1969, airborne exports and imports climbed to a record 317,745 tons, an increase of 29.5 per cent over the 245,449 handled in 1968. This commercial air cargo was valued at \$4.78 billion, 18.3 per cent more than the previous year. These air cargo increases, though substantial, would have been even greater had there not been congestion at the region's airports. Last year's record volumes of airborne foreign trade continued the rapid upward trend that was already evident in 1960 when 32,376 long tons were flown into or out of the Port District. The decade of the 60's therefore ended with nearly a tenfold increase in New York's foreign air cargo volumes.

Oceanborne foreign trade moving through the bi-state port in 1969 totaled 53,897,682 long tons, 5.3 per cent less than the 56,891,307 reported for 1968. Last year's oceanborne cargo was valued at \$13.1 billion, \$1 billion below the 1968 value.

Total foreign trade, via ocean and air, handled in the New Jersey-New York Port District last year amounted to 54,215,427 long tons, valued at \$17.9 billion. This was a decline of 5.1 per cent from the 57,136,756 long tons handled in 1968; the 1969 value was 1.3 per cent less than the \$18.1 billion valuation of the previous year.

"The matchless containership terminal at Elizabeth," Mr. Kellogg said, "the vast marine facilities for

container and breakbulk cargo at adjacent Port Newark, and the spacious modern piers along two and a half miles of Brooklyn waterfront on the New York side of the bi-state harbor, are all part of the Port Authority's program which has provided the New Jersey-New York Port with the most efficient marine facilities in the world, geared to the speedy and economical movement of oceanborne cargo. A flourishing national economy and stable waterfront labor conditions in the Port District will enable the Port of New York to maintain its leadership as America's gateway for international commerce in the face of strong competition from Atlantic, Gulf and Great Lakes ports."

"The rapidly rising World Trade Center, under construction by the bi-state agency in lower Manhattan," Mr. Kellogg added, "will

encourage the development of this foreign trade by more efficiently bringing together all those services that are vital to the export-import process."

In addition, Mr. Kellogg noted that air cargo facilities at John F. Kennedy International Airport were continuing to be expanded to accommodate the dramatic growth of the air freight industry.

Oceanborne Foreign Trade

General Cargo. The 15,085,595 long tons of oceanborne general cargo exports and imports that moved through the New Jersey-New York Port District in 1969 represented a decrease of 7.8 per cent, or 1,283,200 long tons, from the 16,368,775 long tons in 1968. The \$12.5 billion value of this general cargo was 6.8 per cent less than the 1968 valuation of \$13.5 billion.

General cargo consists of high-value commodities, much of it packaged, which produce the most revenue for the port's export and import firms, international banking facilities, insurance companies, and waterfront labor.

Oceanborne general cargo ex-

TABLE I
Port of New York Oceanborne Foreign Trade (1959-1969)
(Thousands of long tons)

Year	General Cargo	Total Cargo	(bulk & general)
1959	13,092	42,473	
1960	13,737	41,215	
1961	12,994	38,733	
1962	13,902	41,890	
1963	13,499	43,917	
1964	13,838	45,616	
1965	13,988	50,729	
1966	15,436	54,557	
1967	15,184	53,539	
1968	16,369	56,891	
1969	15,086	53,898	

TABLE II
Port of New York Airborne Foreign Trade (1960-1969)
(In long tons)

Year	Exports*	Imports*	Total
1960	—	—	32,376
1961	—	—	39,902
1962	28,047	21,793	49,840
1963	35,748	25,965	61,713
1964	53,432	30,923	84,346
1965	95,076	50,392	142,465
1966	105,499	57,840	163,339
1967	119,819	67,005	186,824
1968	148,508	96,941	245,449
1969	182,603	135,142	317,745

*Airborne exports and imports were not reported separately until 1962.

ports dropped 5 per cent to 5,496,122 long tons from the 5,784,721 long tons handled during 1968. General cargo imports totaled 9,589,453 tons in 1969, a 9.4 per cent decrease from the 10,584,054 long tons handled in 1968.

Bulk Cargo. A total of 38,812,107 long tons of bulk cargo moved through the Port of New York in 1969, a 4.2 per cent decline from the 40,522,532 tons in 1968. Last year's tonnage had a value of \$584.8 million, 9.7 per cent less than the \$647.4 million value of 1968 bulk cargo. This decline in bulk volumes is primarily attributable to petroleum.

While the Port District's foreign trade consists of a substantial volume of traffic in bulk commodities such as petroleum, grain and ores, this cargo produces less port revenue because it can be handled in mass quantities with a minimum of port service.

Airborne Foreign Trade

Exports through the Port's air cargo facilities in 1969 amounted to 182,603 long tons, an increase of 23.0 per cent over the 148,508 long tons in 1968; their total value was \$2.9 billion, 22.9 per cent more than the \$2.3 billion in 1968. Major export commodities included office machinery, electrical machinery, scientific instruments, sound recorders, plastic materials, aircraft and parts, electrical motors and generators.

Airborne imports totaled 135,142 long tons, 39.4 per cent higher than the 96,941 long tons handled in 1968. They were valued at \$1.9 billion, 11.8 per cent more than last year's value of \$1.7 billion. Principal inbound commodities were clothing, footwear, office machinery, appliances, telecommunications apparatus, woven fabrics, and textile and leather machinery.

Virtually all of the airborne foreign trade was handled at John F. Kennedy International Airport, the Port District's gateway for international air trade and travel. The export and import air cargo reported comprised commercial shipments only. Cargo such as household and personal effects of diplomatic and military personnel, pets, race horses and government property were not

Japan's 1st Computerized Ship

From IHI Bulletin, April, 1970

Tokyo:—IHI has been cooperating with its sister company, Tokyo Shibaura Electric Co. (Toshiba), in research to find new fields of computerization in ship operation. A part of the findings is now being utilized in the construction of the "Seiko Maru", a large oil tanker ordered from IHI by the Sanko Steamship Co., which, on completion, will be put to a joint test by the shipowner, shipbuilder and manufacturers.

Automation in ship operation has also been under study in other countries, and partially computerized vessels are already in service. The new ship is to be computerized more comprehensively for practical purposes with a view to improving safety and navigational functions and increasing the economy of ship operation. It is Japan's first vessel to be fully equipped with a computer system.

In autumn 1967, the Ministry of Transport set a target for the development of completely automated ships as a future ship operational requirement, and has since been leading the development of highly centralized control systems (super-automation) for that purpose by massing efforts of researchers, universities, shipping companies, shipbuilders and various manufacturers concerned, in a comprehensive research committee.

A subcommittee, named SR-106, has been initiated in the Shipbuilding Research Association of Japan as the working arm of that committee. Also, the Japan Ship's Machinery Development Association has been assisting the committee in developing the necessary equipment.

IHI, being involved in every effort mentioned, has now set out to

include. Shipments to or from United States territories such as Puerto Rico via air or ocean also were not classified as exports and imports. (News from The Port of New York Authority)

realize Japan's first fully computerized ship by combining the results of its own studies and those of the other organizations.

In view of the fact that the "Seiko Maru's" computer control system is intended for experimental purposes, the conventional remote control system will also be installed for added safety. The complement therefore will not be reduced. The project, however, is intended as a first step towards efficient operation of any similar ship with a crew of only about 15.

The computer control system to be installed on the "Seiko Maru" is characterized by a system that can handle a number of jobs simultaneously. The computer is Toshiba's TOSBAC 3000, the latest model for process controlling with a capacity of a 16 bit/word and 16K-word core memory.

Principal specifications

Type:	Crude oil tanker
Length, b.p.:	260 m
Breadth, molded:	43.5 m
Depth, molded:	22.8 m
Draft, molded:	17 m
Gross tonnage:	abt. 73,300 t
Deadweight:	abt. 138,370 t
Main engine:	IHI-Sulzer 10RND90 type diesel engine, 28,000 BPS
	1 set
Service speed:	15.4 knots
Complement:	32 persons
	+spare (4 persons)
Delivery:	Sept. 1970

Specifications of the computer system

The "Seiko Maru" will be under a year-long experimental operation for various adjustments of machinery and the collection of operation data. A practicability assessment of the ship will be made at the end of the one-year period. The items to be adopted are as follows:

(1) Anticollision system

Special radar installed on the ship tracks as many as 10 ships simultaneously, indicating on its display console the course, the

speed, etc. of each ship scanned, and also on the CRT display console the number of each ship and the velocity vector.

In the case of a projected danger of collision with any of them, an alarm is automatically given and instructions for avoiding it are given.

A double safety check is made when the navigating officer confirms the instructions.

The system has been jointly developed by Toshiba, Oki Electric Industry Co., Ltd., Japan Radio Co., Ltd. and Fujitsu Ltd.

(2) Position fixing system by NNSS

This system automatically calculates the position of the ship through receiving relevant data from transit satellites and measuring the Doppler's shift. It is now being made at Toshiba.

(3) Dead reckoning by DRP calculator

The position of the ship is estimated through this system by integration of the data on the direction of the ship obtained from the gyrocompass and the data on the velocity of the ship from the electromagnetic log. The projection is made automatically and continuously.

Hokushin Electric Works, Ltd. is in charge of completing it.

(4) Computation of navigation

This off-line system computes the distance to the destination, the hours needed to cover it and the cruising range by the use of the Great Circle sailing method and the Mercator sailing method. It can also calculate the position of the ship by astronomical observation. The calculated values are shown on a navigation data display panel.

(5) Loading control

The cargo oil loading operation, including the discharging of permanent ballast, is controlled from beginning to end so that the loading rate may be at maximum. Necessary data is readily typed out.

(6) Unloading control

The unloading operation including ballasting is automatically controlled by the computer from the beginning of cargo handling to the completion of stripping action, and the relevant data typed out. The cargo oil pumps are operated through computer control to minimize loading time.

The stripping work is carried out by the main pump through the use of "SELF-STRIP", an IHI-developed automatic stripping system. The "AUTOCALLER" developed by IHI, which indicates completion of the stripping, has also been adopted for fully automatic operation.

(7) Calculation for data on ship's condition

Displacement, tank capacity, trim, bending moment, shearing force, etc. are calculated by the input of the data obtained from the console used for this purpose.

These calculations also can be carried out by either the input of the estimated values or direct on-line feeding of the actual values of the draft and the tank level.

(8) Calculation of optimum loading condition

The optimum loading condition of cargo oil and ballast is calculated by the computer in consideration of the ship's strength, draft, fuel oil consumption, etc. The calculation is carried out on the basis of the data obtained from the console for this purpose and the results are typed out. This is an off-line program.

(9) Computerized diagnosis

This program, to maintain the health of all the crewmembers, diagnoses cases of sickness about the patients' conditions on fed information, and instructs in typed form the names of the suspected sickness, the necessity for further examinations and appropriate treatment. The program is an adequately tested, highly reliable one designed by experts of the hospital of Tokyo University, one of the most prestigious in Japan.

(10) Data logging of the engine part

The program scans a number of machines in the engineroom and indicates their performances on a logging sheet in a typed form at fixed intervals. The time for typing the data out also can be chosen at will.

(11) Emergency measures for engine plant trouble

Through this program, the check-points of the engine plant are scanned at fixed intervals in order to locate any failure. Important points are under constant supervision.

Should trouble occur, an alarm is given and the temperature and pressure of associated parts are examined to find the cause of the failure. The cause is found by this check and the directions are typed out. If required, necessary measures such as slowing down of the main engine, changing-over of the pump, etc. are carried out automatically.

All these performances are automatic. The same system also keeps the refrigerating plant of the stored provisions under constant supervision.

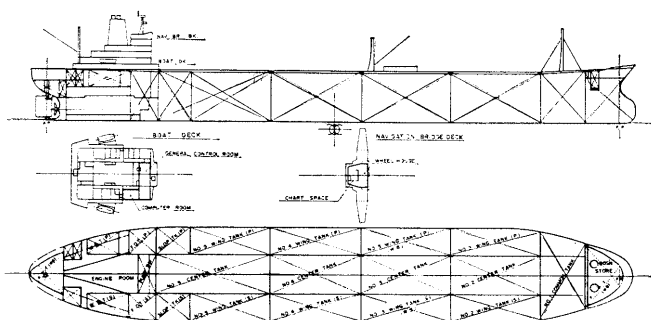
(12) Torque control of the main engine

The main engine is automatically controlled to maintain normal output for efficient operation during navigation. However, in case its torque is forced to increase due to fouling of the hull or for other reasons, the program works to automatically control the engine revolutions within the allowable safety range of the torque.

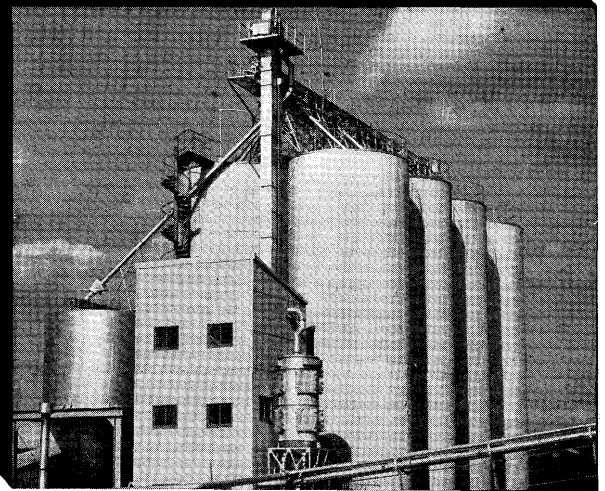
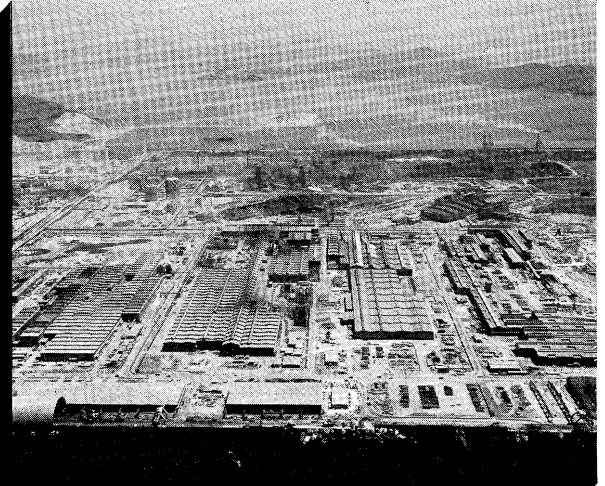
Arrangement

An especially planned computer-room, equipped with a central processing unit, processing input-out-

(Continued on Page 27 Bottom)



General Arrangement of "Seiko Maru"



Three basic industries – all in one company

Nippon Kokan is a steelmaker, shipbuilder, and designer, engineer and constructor of heavy industrial equipment, leading each field with advanced technology and up-to-date facilities.

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Orbiter Probe

IAPH News :

Travelers

- A reception in the name of Mr. Edward J. King, Executive Director, Massachusetts Port Authority (Port of Boston) was held in Imperial Hotel New Wing, "Kotobuki-no-ma" Room, Tokyo on Friday, May 8, 1970, 1800~2000 hours. At the receiving line, Mr. King was followed by Mr. Thomas T. Soules, Port of Boston Director and Mr. John F. Halloran, Public Relations Director. Mr. Yasunori H. Matsui, Far East Manager, stood by. The executive trade group spent about a week with shipping and government officials in Tokyo, Kyoto and Osaka discussing the many advantages of shipping to and from the Port of Boston.

- On Thursday, May 7, a reception was hosted by H.E. Baron F. Cogels,

(Continued from Page 25)

put units and relay panels, is built to perform all the control work and calculation routines mentioned above. The console panel for controlling navigational operations is set in the wheelhouse, while all the other console units are arranged in the general controlroom on the boat deck.

Both engine control and cargo control are thereby performed in the general controlroom. In conventional ships, the engine controlroom is located in the engineroom itself. The conception of this ship will lead towards the eventual elimination of the conventional system of dividing the crewmembers between the deck and engine departments.

In the future they will be combined under a designation covering only general purpose officers (GPO) and general purpose crew (GPC).

Ambassador of Belgium in Tokyo, at his residence from 6.30 p.m. in honor of the Belgian Economic Mission. In the reception room, Mr. R. Vleugels, General Manager of Port of Antwerp, as well as members of the "Assiport" were seen exchanging greetings with guests in pleasant conviviality. The Mission had been engaged in public relations activities in Osaka, Kobe, Nagoya and Yokohama before showing up in Tokyo May 7. After two full days of information-giving in Tokyo, the group departed for Europe May 8.

1969 Traffic Report

Ottawa, April 10, 1970: — The 1969 St. Lawrence Seaway Traffic Report, released today, shows a decrease in cargo moving through both sections of the Seaway, due largely to strike action affecting iron ore shipments, and a substantial dip in the volume of wheat and other grain movements.

However, St. Lawrence Seaway Authority officials feel the 1969 drop, coming on the Seaway's

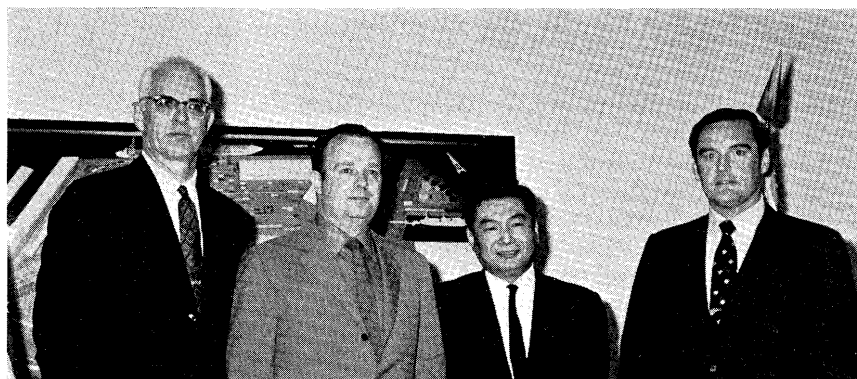
10th anniversary, should not be considered a permanent reversal from the 10-year trend.

Cargoes on the Montreal-Lake Ontario section of the Seaway decreased by 14.5 per cent, with 26.1 per cent less tonnage upbound and a 5.7 per cent increase downbound compared to 1968. Bulk cargoes, at 33,959,000 tons, comprised 82.8 per cent of St. Lawrence traffic, a decrease of 15 per cent from the previous year.

In the Welland Canal section of the Seaway, a decrease of 4,542,000 tons was registered. Cargo tons were reported to be down by 26 per cent upbound, while an increase of 7.1 per cent was recorded downbound. There were 341 less vessel transits compared to the 1968 figure. Bulk cargo accounted for 88.4 per cent of the total traffic, and general cargo for 11.6 per cent.

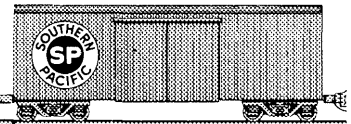
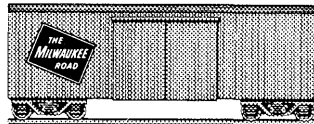
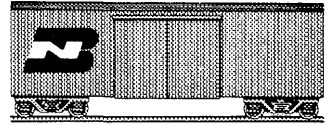
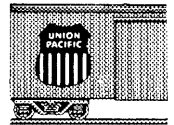
For both sections combined, 60,816,000 tons of cargo were carried on vessels through the Seaway system in 1969, with a total of 9,094 ship transits. Of this sum, domestic carryings came to 46,070,600 tons (Canada-U.S.A.), while foreign traffic was responsible for 14,745,400 tons. Ocean-going ships carried 24.2 per cent, and lakers 75.8 per cent of the cargoes compared with 23 per cent and 77 per cent respectively in 1968.

Principal commodities through the St. Lawrence locks were iron
(Continued on Page 29 Bottom)



In the reception Room "Kotobuki-no-ma", Imperial Hotel, Tokyo, May 8, 1970, left to right: Mr. Thomas T. Soules, Port of Boston Director, Mr. John F. Halloran, Public Relations Director, Mr. Yasunori H. Matsui, Far East Manager, and Mr. Edward J. King, Executive Director, Massachusetts Port Authority. (See above also.)

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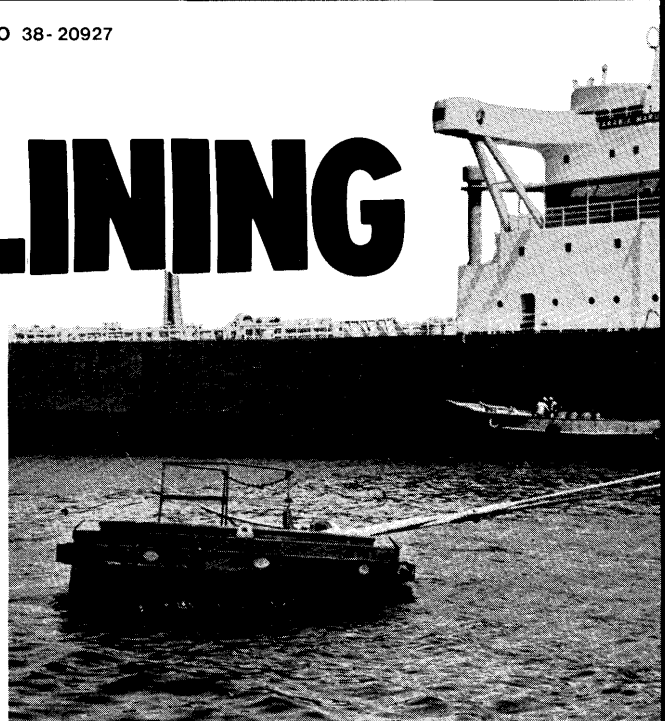
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BOOK REVIEW :

Publications of National Ports Council, Britain

1. Research Project on Port Structures* *(Continental Methods Cheaper, say Consultants)*

London, 19th March:—This report reviews a number of features which influence the cost of maritime structures, especially quay walls, locks and port transit sheds, and makes a number of recommendations which should assist engineers in the design of such structures. The report examines the design of over 60 quay walls and 43 transit sheds of fairly recent design. The number of locks constructed in recent years is comparatively small and only 9 have been studied in the report. The report is in two volumes and illustrations and particulars of cost of the various structures are included in volume II which forms a useful reference work.

The report contains a great deal of information which will be valuable to engineers engaged in the design and construction of ports and harbour works. The consulting engineers have been able to pinpoint several factors which particularly influence the cost of maritime structures, and have been able to make recommendations which should enable engineers to reduce the cost of quay walls, locks and—to a lesser

* Research Project on Port Structures by Bertlin & Partners, publishes by the National Ports Council, 17 North Audley Street, London W1Y 1WE. Price 15 guineas (£15.75).

(Continued from Page 27)

ore, wheat, manufactured iron and steel, corn, fuel oil and soybeans, accounting for 69.5 per cent of traffic. In the Welland section, iron ore, bituminous coal, wheat, manufactured iron and steel, corn and soybeans accounted for 73.4 per cent of total traffic. (The St. Lawrence Seaway Authority)

extent—transit sheds.

The comparative studies indicate, in broad terms, ranges of cost within which it would generally be possible to construct quay walls and locks under a wide range of conditions. It is emphasised that the information in the report is not intended to be used as a substitute for detailed design studies based upon a full investigation of each site carried out under the direct supervision of the engineer responsible for design.

The difference between codes of practice used in various countries is discussed and as far as it is possible to compare designs and costs in widely varying site conditions, the report concludes that there is reason to believe that quay designs based upon the Danish Rules, or the German Recommendations for Waterfront structures, can be more economical than those based on Civil Engineering Code of Practice No. 2 which has not been revised since 1951. Computer analysis carried out by the Danish Geotechnical Institute indicated that substantial economies might have been possible in some recent cases. The German Recommendations have been written exclusively for waterfront structures and have found wide acceptance in the work of domestic and foreign harbour designers as they have been translated into a number of languages.

The consulting engineers found that the maintenance costs of quay structures are not unduly high and that there is more scope for savings in initial capital costs. A suggestion is made for a possible reduction in the capital cost of lock entrances, particularly in poor ground, by adopting an unorthodox design, which is illustrated in the report.

The consulting engineers were asked to consider means whereby the overall cost of construction and maintenance of port structures over their useful working life could be

reduced, having particular regard to the uncertainty as to the duration of useful life of such structures. They conclude that the design of quay walls for really short life is not possible because of the substantial forces which have to be resisted. Under many circumstances the use of steel pile structures, designed by the most refined methods, with special protection in the zones of worst corrosion, offers the most economical design with ample life. The design of a quay structure in a form that will permit adaptation at a later date for other uses is not considered generally practicable. In individual cases, the cost of providing a deeper quay initially should be examined, taking into account the probability of requiring extra depth of water and the benefits arising if larger vessels are used. In many cases the provision of considerable extra depth beyond definitely foreseeable requirements could be justified, as no significant increase in cost would be incurred.

The report refers to the lack of flexibility introduced by a lock in the case of impounded basins, and suggests that locks should be built to generous dimensions, but that such dimensions should be based on economic analysis of the probability of a requirement to handle larger vessels during the lifetime of such structures. Recommendations are made for effecting economies in the design and construction of locks and for types of entrances for impounded basins. The report contains an example of a "net present value analysis" of the benefits of providing locks designed for larger vessels. The analysis was carried out to give a general picture of the economics of building quay walls and entrance locks larger than the known requirements, and to demonstrate the value of these analyses in port planning.

The consulting engineers list a number of areas in which they consider that further research would be of value as the savings from such research are likely to be substantial. (Several proposals are at present under consideration by the National Ports Council with the appropriate bodies concerned, and the

Council have already commissioned a further study of jetties and breakwaters which could be of importance in relation to the present trend for new port facilities to be provided downstream of existing berths and to the possible development of maritime industrial areas where facilities for large bulk carriers would of necessity be constructed closer to exposed waters.)

Items recommended for further research and action in various fields include:—

(i) A long term study of soil pressures on actual structures, which would be carried out by instrumenting structures when they are built. (The Council already are contributing to the cost of such an investigation of the walls of the new dock of the Mersey Docks and Harbour Board at Seaforth).

(ii) Various soil mechanics studies to investigate the stability of slopes under tidal conditions and long-term changes in soil properties.

(iii) The development of computer programmes for modern methods of designing earth retaining structures.

Under the heading of New Techniques and Current Research, the report concludes that little research directed to port structures is in progress in this country. New ideas and techniques developed in other aspects of civil engineering are being applied in marine works, but perhaps not always as quickly as might be wished. The consultants discuss the possible value of establishing a Chair of harbour engineering at a United Kingdom University under which research and post-graduate training in this field would be carried out. The example of Denmark is cited as one of the few countries to have done this, with valuable results in the detailed engineering of port structures.

The Council recognise that the revision of existing engineering Codes of Practice must necessarily take some time and they have approved, in consultation with the Ministry of Transport, the preparation of a Memorandum for the guidance of port engineers in the design of harbour structures covered by this report, and the subsequent

studies which are now in course of preparation.

2. Maritime Industrial Development Areas

(Urges Study of Specific Sites)

London, 9th April: — Specific coastal sites where Maritime Industrial Development Areas (MIDAs) might be located should be subjected to detailed economic study, according to a report* published today by the National Ports Council.

The report, by Professor M.H. Peston and Mr. R. Rees, of London University, points out that the exact location of a MIDA is one of its most important characteristics. It would be meaningless to evaluate the concept in the abstract.

“The viability, costs and benefits of specific potential MIDAs must be analysed and compared. The result of this will not only determine the desirability of a MIDA investment, but also its location”, writes Professor Peston.

Ten potential sites for MIDAs were identified in an earlier survey commissioned by the Council, in conjunction with the Ministry of Transport, from Sir William Halcrow and Partners. The Halcrow report has not been published, but the Secretary of State for Economic Affairs told the House of Commons last July that the sites in question were: — Cromarty Firth; Outer Firth of Tay; Upper Firth of Forth; Tees Estuary; Lune Estuary; Humberside; the Wash; Cardiff-Newport; Thames-Medway and Weston-Super-Mare—Clevedon; and that a separate study had shown the Clyde Estuary also to meet the necessary physical criteria.

The Peston Report describes the

* Feasibility Study of a Cost Benefit Assessment of Maritime Industrial Development Areas, by Professor M.H. Peston and Mr. R. Rees. Published by the National Ports Council, 17, North Audley Street, London, W1Y 1WE, Price 30s.

physical features of a MIDA as deep-water navigation and dock facilities, equipment and methods of work geared to rapid transhipment of bulk and containerised cargoes, a large area of land suitable for siting industrial installations, and suitable transport and communications facilities within the area and with the rest of the country.

“An obvious advantage is the possibility of exploiting to the full the economies of large-scale sea transport, rapid and efficient cargo-handling methods, rapid turn-round of ships, etc. In short, all the advantages of a modern port designed to take large vessels carrying bulk cargoes, and including container facilities.”

The report adds that such advantages are not unique to a MIDA, and a full economic study is necessary to decide whether a MIDA would be the best way to provide them.

The Report says that industries attracted to a MIDA would fall into two classes, a primary set consisting of bulk importing industries to which a port location is attractive in itself, and a secondary set consisting of industries having strong linkages with one or more of those in the primary set.

The Report calls attention to the danger of basing U.K. policy on Continental experience:—

“It is easy to point to Continental experience and by analogy assert that it is immediately translatable into policy making in the U.K. There are, however, characteristics of the Continental countries which are significantly different from the U.K. Among these are the extent and nature of trade, the extent and nature of inland transport, the availability of labour, and the type, size and location of domestic markets.

“In addition, the pre-MIDA situation, so to speak, on the Continent was not necessarily identical to the existing situation in the U.K. in terms of the number and potential of existing ports and of the possible development of trade and industry”.

In sum, the report adds, the out-

ward success of the Continental experience may be because the port development there was in direct response to other economic forces rather than because it itself was the chief independent force at work.

"The MIDA itself may be a valuable development, but this can be shown only by means of a cost-benefit study, and not by analogy with other developments in different places and at different times".

The purpose of Professor Peston's study was to determine whether a full-scale study of the costs and benefits of MIDA schemes was practicable, and to indicate how such a study should be carried out.

The Report suggests that after considering the viability of several potential locations it should be possible to decide whether to drop certain locations from consideration, on the grounds of obvious non-viability. A full-scale cost-benefit analysis would then proceed in respect of the remaining possible locations.

The Report was submitted last December to the Government's inter-departmental working group which is making a preliminary review of the economic and industrial aspects of MIDAs. In a Preface the Council say that at the time of going to press an announcement was awaited from the Government on whether Professor Peston's recommendations should be accepted. They add:

"The Council sincerely hope that these recommendations are approved by Ministers, and that the responsible Government Departments will implement Professor Peston's proposals without further delay".

Nearly Ready

Vancouver, B.C.:—Port of Vancouver is being lifted into the age of deepsea containerized shipping this month with completion of the first container crane installation at Centennial Pier.

The 40-ton capacity giant—standing as tall as a 20-storey building—is a bridge type diesel-electric gantry of Starporter design.

The total project represents investment of \$5 million, including a million dollars for the crane, another million spent in shoreside handling equipment by the pier operator.

Backing up the container crane is a 15-acre blacktop storage and assembly yard lit by 1,000 watt mercury vapour floodlights on 50-foot towers. Half of transit shed number five (50,000 square feet) will be used as a container freight station.

Operating with hoist speed of 100 feet per minute, with a 113'6" reach from dockside, the crane is expected to be handling 40,000 to 50,000 container per year by 1973.

The crane will be operated by Empire Stevedoring Ltd., and major use of the facility is expected to be made by Japanese vessels.

The Japan Six Lines are building three new container vessels for trans-Pacific service. Two of the ships will have capacity to hold 750 20-foot containers while the third will hold 1,000 containers.

With the three vessels in service, it is expected that one will be at the container berth every ten days. (News from the Port of Vancouver)

\$9 Million Plant

Alameda, Calif., May 20:—PACECO, A Division of Fruehauf Corporation, has announced a new nine million dollar production facility to be built in the Bernard Bayou industrial area of Gulfport-Biloxi, Harrison County, Mississippi. The new plant to be operational in 1971, on 100 acres, will be capable of producing the full PACECO Division product line. The principal products to be produced in the new facility include specialized container handling cranes, PACECO Portainers, Transtainers, and Shipstainers. In addition, dredges, barges and tugboats, as well as gates, hoists and cranes for hydroelectric power dams will be produced.

Mr. C. D. Ramsden, President & General Manager of PACECO, has concurrently announced the appointment of Mr. Jack I. Joyner, General Manager, of the PACECO Gulfport facility. Mr. Joyner is a

native of Mobile, Alabama, and most recently was Vice President and General Manager of City Iron Works, Division of Goslin Birmingham in Connecticut.

Approximately 700 people will be employed as rapidly as the facility can be completed and the personnel trained. This will create an estimated monthly payroll of \$500,000. Employment of personnel will begin this Fall. Sales are expected to reach a level of \$25 million annually.

PACECO, an international leader in the container handling field, has its main offices and plant in Alameda, California, and manufactures through licensees and subsidiaries in England, Australia, Japan, Italy and India.

PACECO has designed and built more than 80 Portainers (pierside container handling cranes) for 60 major ports throughout the world. PACECO Container Terminal Systems based upon the use of both Portainers and Transtainers (terminal cranes) can be seen in operation on four continents of the world. In addition, PACECO has developed systems using Transtainers for large railroad terminals where piggybacks and containers are handled.

In the dredge field PACECO has designed, developed and patented the world's deepest digging hydraulic suction dredges, two of which excavated over 230 ft. deep in the Volta River, Ghana, Africa. In general marine work, PACECO has designed and built some of the largest ocean going barges and tugboats, and has also built mobile as well as stationary off-shore drilling platforms for service in Alaskan waters. In the hydroelectric field, PACECO equipment is installed at practically every major damsite in the United States as well as in many foreign countries. (Paceco News)

Record Coal Shipment

Baltimore, Md.:—A new record coal shipment loaded at the B&O Railroad's new \$11 million coal terminal in Curtis Bay is en-route to Japan on board the M.V. MYTHIC, a 66,000 DWT, 846 foot

long bulk carrier chartered from Triton Shipping Co.

Some 58,077 long tons of fine, high grade metallurgical coal, 962 carloads, was loaded in less than 30 hours at the new terminal, according to John S. Connor, Inc., major coal forwarding firm and shipping agent. The former record was 53,480 long tons loaded on the JAPAN GRAN last January.

The new B&O facility is capable of loading coal for export at the rate of 6,000 tons per hour, double its former capacity. Additionally, the terminal handles loading of barged coal for use at power stations in the port area and for the Bethlehem Steel Corporation Sparrows Point mill.

Ramsay, Scarlett & Company is the Baltimore agent for the vessel. (Port of Baltimore News Release)

FMC Chairman

Beaumont, Texas:—Mrs. Helen Delich Bentley, chairman of the Federal Maritime Commission, will speak in Beaumont on the evening of Friday, May 15, under auspices of the Propeller Club.

Details of the meeting are being worked out by members of that organization, of which Capt. Charles R. North, Gulf Oil Company executive, is president.

Mrs. Bentley, a former newspaperwoman who held down the post of Maritime Editor of The Baltimore Sun for 18 years, is the first woman to serve in a key Government position in the maritime field and also the first woman to be appointed by a President to serve as chairman of a regulatory agency.

She was nominated by President Richard M. Nixon on August 9, 1969, to be a member and chairman of the FMC for the remainder of the term expiring on June 30, 1970. The United States Senate on October 3, 1969, confirmed her appointment.

A native of Ruth, Nevada, a copper mining town high in the mountains of White Pine County, Nevada, Mrs. Bentley is a paradox in that she grew up 8,000 feet above sea level, but now is recognized world wide as an expert on the sea.

Because of her unusual ability

and record, the University of Maryland this year (1970) conferred an Honorary Degree of Doctor of Laws upon Chairman Bentley. This is the first time in American maritime history that such an award has been bestowed upon a Federal maritime official. Mrs. Bentley is the first woman to be so honored.

When the University of Maryland cited her with the Honorary Doctorate degree, the citation read:

“A leader in a field long dominated by men, Mrs. Bentley is widely recognized as the journalistic expert on the nation’s maritime industry.

“We honor her today as an adopted daughter of the Free State who has risen from prominence in her native Nevada to a Presidential appointment capping a distinguished career.

“Mrs. Bentley’s long-time concern for maritime problems, stemming from a casual assignment as a young reporter to ‘go down and look at the port’, led to her recent appointment as board member and Chairman of the Federal Maritime Commission. Her years of influence as syndicated waterfront columnist and Maritime Editor of the Baltimore Sun have been credited with the passage of considerable maritime legislation.” (Welcome Aboard)

For Boston-Japan Trade

Boston, Mass., April 29:—Intensive efforts to improve and expand Boston-Japan maritime trade began this week with the arrival in Japan of a special three-man executive trade group from the Massachusetts Port Authority (Massport).

Mr. Edward J. King, chief executive officer of the Boston-based organization, arrived in Tokyo on May 5 and will spend about a week with shipping and government officials in Tokyo, Kyoto and Osaka discussing the many advantages of shipping to and from the Port of Boston.

He is accompanied by Thomas T. Soules, Port of Boston director and John F. Halloran, public relations director.

Among the advantages of shipping directly to and from the New

England port, Mr. King listed:

- 1) New, complete facilities for loading, unloading and handling any size or type of containerized cargo (a new Japanese-built, 75-ton capacity Hitachi container crane is now being constructed in Boston for completion in November.)
- 2) a growing New England market for many Japanese products, that is available to Japanese companies only, if shipping service to Boston can be increased.
- 3) it is cheaper, faster and easier for New England and Far East importers to use the Port of Boston than New York.
- 4) dependable waterfront labor force, (No strikes or work stoppages have occurred since signed labor contracts were obtained in April, 1969.)
- 5) extensive railway facilities at the piers.
- 6) uncongested pier and backland areas adjacent to all major interstate highways.

Mr. King said that in addition to discussing the Port’s features he is also interested in Japan’s container service requirements of 1971~72 so that the Port of Boston can help meet these needs.

The Port of Boston has long realized the importance and potential of trade with Japan. In 1968 the Massachusetts Port Authority opened its offices in Tokyo appointed Yasunori H. Matsui manager of its Far Eastern affairs. In March of this year, Massport participated in the opening of “The Hub” tea-room in the Tokyo International Center to help further stimulate trade relations between the Port of Boston and Japan.

As a result of these efforts Boston now has service, provided by six steamship lines, with Yokohama, Kobe, Nagoya, and Osaka.

During the latter part of their visit the trade group will be joined by Mr. R. E. Mooney, Massport director of aviation. They will attend the annual international meeting of the Airport Operators Council International in Kyoto, representing Boston’s Logan International Airport, owned and oper-

ated also by the Massachusetts Port Authority. It is anticipated that the Port Authority representatives will meet with executives of Japan Air Lines to discuss the possibility of direct Boston-Japan air cargo and passenger service. (News from Massport)

New Container Terminal

Charleston, S. C., May 8:—The port of Charleston's new \$4 million public container terminal at North Charleston will be completed by January 31 next year.

"The new container terminal will make Charleston fully competitive with any other South Atlantic port and consolidate Charleston's position as the number one container port in the area," Captain Capers G. Barr, general manager of the South Carolina State Ports Authority, said today.

The new terminal is a part of the \$30 million ports expansion program authorized recently by the South Carolina General Assembly. Start of the construction of the terminal was authorized late last year by the State Budget and Control Board.

The terminal is being specially built for containerization which is a mechanized method of shipping developed in recent years in which van-like containers are loaded directly aboard ships.

The value of containerization to the port of Charleston has been visibly demonstrated by the operation of Sea-Land Service, Inc. at the Columbus Street Terminal over the past four years.

The pier for the terminal will be 1,024 feet long, large enough to handle the largest containerships, and will be 60 feet wide for handling the large container boxes.

Adjacement to the pier will be 25 acres of paved open storage for accommodating several hundred containers at one time.

A specially designed container crane at the pier will load and unload ships. The container crane will have a 113 foot outreach and a 60 foot backreach.

In progress at the terminal now construction crews are clearing the large open storage area and a drag-

line is engaged in filling part of the open storage area. Harders Construction Company of Panama City, Florida, is the main contractor on the terminal, low bidder at public bidding in February with a bid of \$2,697,000.

The crane is being built by Star Iron and Steel Company of Tacoma, Washington, low bidder at public bidding in December, with a bid of \$925,600.

Two 50-ton gantry cranes at State Pier 16, a 559-foot existing pier which will become a part of the terminal, are being converted from electric power to diesel power by Tesco of Charleston, low bidder in public bidding in December under a \$121,400 contract.

Additional costs of constructing the terminal, including site improvements will bring the overall project to a total cost of \$4 million.

Site of the construction is the area at the North Charleston Terminal between State Pier 16 and the grain elevator. The new terminal will incorporate State Pier 16's 559 foot pier and add an additional 465 foot extension.

Kaiser Engineering Company of Oakland, California, consultants to the Ports Authority last year for a master plan of port facilities, recommended construction of the terminal and forecast that within several years the facility will be capable of handling 500,000 tons of container cargo by itself.

Lyles, Bissett, Carlisle and Wolf of Columbia are consulting architects and engineers to the Ports Authority on the project. (S.C. State Ports Authority)

Inflatable Dunnage

Duluth, Minn., Friday May 15:—A new German ship, specifically designed for Great Lakes trade, experimented with a new method of stowing cargo in the Port of Duluth Friday in the midst of her maiden voyage.

The Zephir, owned by Hugo Stinnes Co., Hamburg, Germany, and operated by Great Lakes Transcaribbean Line, Chicago, was expected to depart Duluth late Friday or Saturday for Thunder Bay,

Ontario, on the next leg of her voyage to ports in the Caribbean and the north coast of South America.

The 7,500-ton ship, launched four weeks ago in Lubeck, Germany, loaded 1,700 tons of bagged powdered milk at Northern Pacific Dock No. 2 in Duluth.

Instead of stowing the cargo in the holds bag-by-bag, as in conventional shiploading, the cargo was stowed while still resting on pallet boards. Then, to prevent cargo shifting, large plastic-lined paper bags were placed in the open-space areas of the holds and were inflated by use of an air compressor.

Company officials explained that, in theory, the inflatable dunnage would expedite loading operations and—despite the loss of available cubic capacity for cargo—could eventually mean considerable growth in the line's tonnage through the Port of Duluth-Superior. (Seaway Port Authority of Duluth)

12th Season Opened

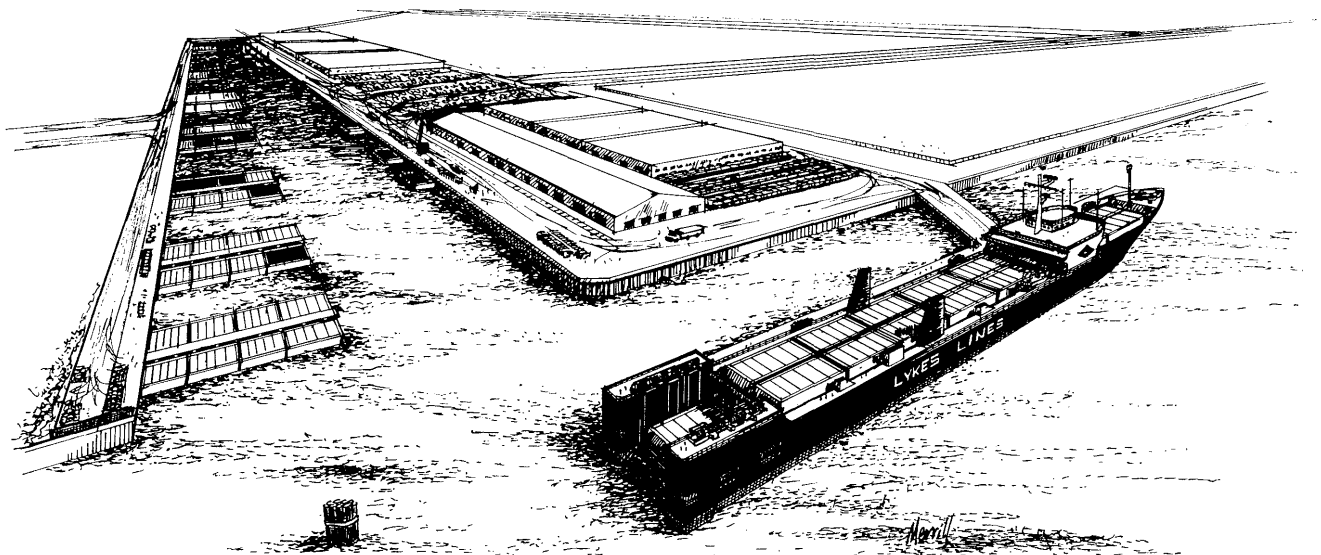
Duluth, Minn., April 24: —Duluth-Superior, largest grain port on the Great Lakes, launched its 12th season as a world port April 23 with the arrival of the Norwegian motor vessel Norse Carrier for a cargo of grain by-products destined for Rotterdam, Holland.

The Norse Carrier, a 541-foot combination automobile-bulk carrier owned by Odd Godager & Co., Oslo, and timechartered by Volkswagen GMBH, Wolfsburg, Germany, matched the April 23 opening of import-export trade through this port in 1969.

After traditional welcoming ceremonies aboard the ship involving port and civic officials, the Norse Carrier began loading 12,100 tons of beet pulp pellets at Duluth's General Mills Elevator for the I.S. Joseph Co., Minneapolis.

Beet pulp pellets are considered a grain by-product, but are handled by the 10 elevator systems in Duluth-Superior similarly to "legitimate" grain cargoes.

Prospects of up to 40 million bushels of government-owned barley moving through the port this year



Galveston, Texas, May 1:—Artist's conception of the new SEABEE terminal on Pelican Island at the PORT OF GALVESTON, to be built by the Port to handle the first Lykes SEABEE vessels by the end of 1971. LYKES BROS. STEAMSHIP CO. announced the selection of Galveston as the site of their West Gulf SEABEE terminal last week. All barges for the Lykes SEABEES loaded in West Gulf Ports, from Brownsville to Lake Charles and including Galveston and Houston, would be brought to the Galveston terminal for consolidation. Construction of the SEABEE terminal is the first project in a \$17 million modernization program being undertaken by the PORT OF GALVESTON as the result of a favorable tax bond election held last March. (News from The Port of Galveston)

to overseas countries could boost Duluth-Superior's export grain tonnage to near the record levels of 1965 and 1966 when grain exports reached four million tons. Grain exports during the past three seasons have averaged 2.5 million tons and were regarded as only "so-so" years.

Interlake movement of grain by domestic vessels began during the first week in April. (Seaway Port Authority of Duluth)

Trade for Peace

Minneapolis, Minn., May 20: — Duluth Port Director C. Thomas Burke today called for the nations of the world to join together at "the world trade marketplace" as a means toward solving global tensions while, at the same time, improving the United States' status in international trade.

Burke, addressing the Minnesota World Trade Association's annual World Trade Week meeting here, asserted that "world trade does in fact open the door to world peace."

The youngest port director in the

nation at 36, Burke emphasized that import and trade quotas of all kinds are "unsupported by either fact or logic." And he suggested that the United States and communist-bloc countries could enter into trade agreements involving non-strategic products in order to bring international peace. (Seaway Port Authority of Duluth)

High Income

Galveston, Texas, April 10: — Net income for 1969 at the Port of Galveston was \$607,746, C. S. Devoy, Port Director, announced today.

Terming 1969 the best year financially for the Galveston Wharves since 1961, Devoy said the 1969 figure compared to net income of \$224,937 for 1968 and \$85,196 during 1967.

Revenues of \$5,000,758 for 1969 were \$50,998 above 1968 revenues, and \$904,431 more than 1967 revenues.

Operating expenses of \$4,110,181 in 1969 were \$323,115 less than 1968 expenses. Traffic and general

expenses in 1969 of \$583,316 compare with \$573,081 in 1968.

Net income is reached after the application of the \$160,000 annual payment to the City of Galveston and Wharves' interest of \$122,831 on debt.

Loading and unloading of freight during 1969 of 527,534 tons was down from 540,990 tons in 1968. Wharves and docks tonnage of 1,841,211 tons was also below 1968 figures of 1,951,484 tons, but above 1967 figures of 1,676,394 tons.

The Wharves switching railroad handled 32,846 cars in 1969 compared with 40,785 cars in 1968, and 38,928 cars in 1967. Sulphur exports in 1969 of 160,000 tons were well above 1968 figures of 106,000 tons.

The year 1969 began with a long dock strike. (News from The Port of Galveston)

1970 Port President

Oakland, Calif.: — William Walters was installed as the 1970 president of the Oakland Board of Port Commissioners.

Walters was appointed to the Port Board in October 1968 for a four-year term and served as vice president during 1969. He succeeds Robert E. Mortensen as president.

Also named officers for the year were Peter M. Tripp, first vice president, and Y. Charles Soda, second vice president.

Walters is a practicing attorney and a partner in the law firm of McDonald, Brunsell and Walters, Oakland, and is a member of the State Bar and the Alameda County Bar Associations. He is a graduate of the University of San Francisco School of Law. (Port of Oakland, February)

Sister Ports

Oakland, Calif.:—The Port of Oakland has established sisterport affiliations with the Port of Keelung, Taiwan, and the Port of Auckland, New Zealand.

The sisterport relationship developed with the two Pacific ports as a result of a recent trade mission to the Far East and "down under" by officials from the Port of Oakland.

"Our affiliation with Keelung developed spontaneously during the trade mission's visit there, and stems from an exchange of visits to the two ports," explained Port Executive Director Ben E. Nutter.

Officials from Keelung, which is the port for Taipei, Taiwan's capital city, and other government and steamship line executives from the Republic of China, were in Oakland last fall for a seminar on containerization. The Chinese businessmen learned first-hand technical aspects of the complete container system, including terminal construction and management.

A friendly relationship between executives of Oakland and Auckland, plus many similarities between the two cities led to the establishment of the sisterport affiliation in New Zealand.

Besides the names of the two cities sounding very much alike, it was learned that both ports were located on landlocked harbors, Oakland has same latitude north of the equator as Auckland has south of the equa-

tor, the climate and population are similar, and cargo tonnage passing through the two ports is about equal, Nutter said.

Special documents, including a resolution passed by the Oakland Board of Port Commissioners officially naming the two ports as sisterports of Oakland, and interesting mementoes and photographs are being exchanged by the ports.

The sisterport affiliations should lead to better understanding and long-range benefits through international commerce, Nutter said. (Port of Oakland, February)

Trade Growth

New Orleans, La., March 31:—The Port of New Orleans has shown an annual growth of about 5.5 per cent in both the tonnage and value of its foreign trade, during the ten-year period from 1960 through 1969, according to U.S. Department of Commerce figures.

Even more spectacular were the growth totals registered for imports via the Port of New Orleans. The tonnage growth was 6.33 per cent and the value growth was 7.56 per cent.

A complete table showing Port of New Orleans foreign trade for the calendar years 1960 through 1969, all based on U.S. Department of Commerce records, is now available.

It shows export totals in both dollar value and tonnage for each of the ten years, and the average annual growth over the ten-year period. It does the same for imports.

In addition, the table gives the annual tonnage and dollar value of exports and imports to and from each area of the world. Areas included are:

Europe, Asia, South America, Central America (including Mexico and the Caribbean), Africa, Australia and Oceania, Canada and Latin America.

The tabulations, compiled by the port's statistician, Clarence J. Kirby, show, among other things, that the port's total foreign trade in short tons for calendar 1969 was 18,813,000. The value of that trade, for the same year, and compiled in U.S. dollars, was \$2,629,000,000.

Imports totaling 6,908,000 tons in

1969 along with a valuation of \$1,056,000,000 helped to establish a total growth rate of 6.945 per cent in that category.

Areas showing the most spectacular growth in sending imports to the U.S. via New Orleans were Australia and Oceania, with a ten-year growth of 29.67 per cent in tonnage and 83.89 per cent in value. Asiatic countries, with Japan as the leader, showed a growth rate of 20.11 per cent in tonnage imported via New Orleans, with a value growth rate of 15.22 per cent.

Other areas showing high growth rates in imports via New Orleans were South America with a 12.44 per cent average yearly growth in tonnage and Africa with a tonnage growth average of 12.11 per cent, followed by Canada with 11.00 per cent.

In the value category for imports, several areas in addition to Australia and Oceania showed sizeable increases in the annual rate of increase. These were: Asia—15.22 per cent; Europe—10.22 per cent; Africa—11.11 per cent; Canada—10.11 per cent. The Australia and Oceania growth total was 83.89 per cent.

U.S. exports via New Orleans also showed sizeable growth rates for the ten-year period. In tonnage, Africa showed the highest rate of increase, registering an average of 19.67 per cent. Australia and Oceania were next in this category, with 10.78 per cent, followed by South America, with 9.89 per cent and Asia with 8.11 per cent.

In the value of U.S. exports via New Orleans, Africa led in the rate of average yearly growth, with 12.00 per cent. Not far behind in this category was Asia, with 7.33 per cent; South America, 3.33 per cent; Latin America, 2.67 per cent; Central America, 2.56 per cent; and Europe, 2.33 per cent.

The complete tabulation contains the tonnage and valuation, exports and imports, for each of the ten years, for each area of origin or destination, and the yearly percentage of growth. Copies are available on request only, to the Board of Commissioners of the Port of New Orleans. (Port of New Orleans)



Los Angeles, Calif.:—John F. Parkinson, assistant general manager of the Port of Los Angeles, receives Bronze Plaque Award for accomplishments in international trade promotion from John Vaughn, chairman of the board of directors of the Los Angeles Area Chamber of Commerce. Award recipient was kept secret until the day of presentation at a World Trade Week luncheon. (Port of Los Angeles)

Trade With Japan

New Orleans, La., March 31:—Japan again leads all nations in trade with the port of New Orleans, according to a port statistics study comparing 1969 to 1968.

Japan imported more than 2.5 million tons of cargo from the United States via New Orleans in 1969. This is 21.8 per cent of total New Orleans exports and is a 29 per cent increase for Japan over 1968.

New Orleans received over a million tons of Japanese exports in 1969, which is 16.2 per cent of the New Orleans total and a 0.3 per cent increase for Japan over 1968.

For many years, Japan has been the leader in both imports and exports. Other leading customers of the port are Italy, Venezuela, West Germany and Mexico.

Japan also leads in dollar value of both imports and exports, with \$378

million worth of 1969 traffic with New Orleans, 14.4 per cent of the total.

Among world areas, Latin America is the port's leading partner in imports, with more than 3.6 million tons. Europe is the leading export market, with 5.4 million tons.

Principal cargo going to Japan from New Orleans is grain. The port receives general cargo of all kinds from Japan. (Port of New Orleans)

Chairman Re-elected

New York, N.Y., Apr. 9:—The Commissioners of The Port of New York Authority today re-elected James C. Kellogg, III of New Jersey to his third term as Chairman, and named Hoyt Ammidon of New York Vice Chairman. The elections were held at the Commissioners' Annual Meeting at 111 Eighth Avenue this afternoon.

Mr. Kellogg has been a Commissioner for the past fifteen years and was Vice Chairman for eight years. Mr. Ammidon has been a Commissioner since 1968.

The Board of Commissioners of the Port Authority has twelve members, six of whom are appointed by the Governor of New Jersey and six by the Governor of New York for overlapping terms of six years. They serve without compensation.

Austin J. Tobin was re-elected Executive Director, a post he has held since 1942. He began his Port Authority career in the agency's Law Department forty-three years ago.

Sidney Goldstein was re-elected General Counsel. He has been a member of the Port Authority's Law Department for thirty-six years and General Counsel since 1952.

Chairman Kellogg was first appointed a Commissioner of the Port Authority by Governor Robert B. Meyner in 1955. He was reappointed by Governor Meyner in 1960 and by Governor Richard J. Hughes in 1966. He is Senior Partner in the brokerage firm of Spear, Leeds and Kellogg, and President and Chairman of the firm of J. C. Kellogg and Sons, Inc. (News from The Port of New York Authority)

2nd Container Berth

Norfolk, Va., April 7:—The second container berth at Norfolk International Terminals (NIT), receiving its finishing touches now, is ready to begin accepting ships.

James N. Crumbley, general manager of the Norfolk Port and Industrial Authority, said tentative plans call for a dedication ceremony April 10.

The new berth cost \$2.5 million, and dredging the water in front of it to the proper depth cost another \$500,000.

It will give NIT a total of 1,600 feet of container berthing space, 850 feet more than it had.

Behind the berths a marshalling yard capable of holding 5,000 containers stacked three high is nearing completion. The first two of four rail-mounted "Transtainers," big cranes used for stacking and unstacking containers, are being erected and are expected to be in operation shortly.

The rail-mounted cranes are the only ones of their type in the nation. NIT already has three rubber-mounted Transtainers.

Crumbley said the rail-mounted machines will give the terminal greater efficiency in handling containers, while the rubber-mounted will provide flexibility.

The new machines cost approximately \$650,000 for the four, and the marshalling yard cost about \$400,000. (Virginia State Ports Authority Far East Office Tokyo)

Port Development Rep.

San Diego, Calif., April 17:—A veteran of 13 years in the shipping and transportation industry, Henry E. Hess will join the Unified Port District's Marketing Department May 1 as its first Port Development Representative.

The selection was made after screening of 40 applicants for the position by officials of the Port staff and interviews by a volunteer board of local business leaders. Final selection was made by Marketing Manager, William T. Stonehouse. The

post pays \$13,874 per year to start.

"Hess has the well-balanced background of sales and technical experience that we feel is essential to the job ahead," Stonehouse said. "His knowledge of shipping and transportation problems not only will be an asset to the potential users of the Port but is certain to build new business for the Port's cargo-handling facilities," he said.

A bachelor, Hess has a background of experience with the Grace Line, Maersk Line, Retla Steamship and the Balfour, Guthrie Steamship Agency of Los Angeles, the firm he will be leaving to join the Port District.

The 39-year-old Hess has resided in California 16 years. He attended Los Angeles City College, El Camino College in Hawthorne and is a 1961 graduate of the Los Angeles Traffic Institute, specializing in the study of traffic and the movement of freight and cargo. (Port of San Diego News Release)

Record Grain Export

Seattle, Wash., April 7: — The Port of Seattle has been exporting grain so fast in the past two months that Cargill's Plant Superintendent, John Foley literally hasn't had time to catch his breath. For February and March, 264,572 tons of grain have been shipped from the Port's Pier 25 facility, which is somewhat of a record.

February had 9 vessels under the spouts every day of the week for a total load-out of 141,508 tons. Among the record breakers was the brand new "Korea Pacific", a South Korean vessel which took out 42,292 tons. March showed a similar strong month of shipments with 123,064 tons.

Bulk of the grain goes as commercial cargo but there is a fair amount shipped out as PL-480 (Public Law 480) which means a gift of food to the needy in Asia, from the United States.

The first 3 months of 1970 shatter a few records with their 343,281 tons compared with a recent high record for 1968 of 293,838, the year the "Manhattan" took on a huge load of 115,000 tons itself. If statistics can be trusted, 1970 could give the

Port of Seattle an annual load-out of 1.3 million tons compared with the record year 1967 when 955,000 tons were exported.

And when the Port's big Pier 86 grain facility gets into operation in September this year, things will go even faster and heavier because the new terminal can load out grain twice as fast and into ships that draw nearly twice as much water at berth... 73 feet. (Port of Seattle)

A New Look

Melbourne:—By the end of this year, the Port of Melbourne will have an entirely new look, as changes which have been taking place over the past few years crystallise into a different pattern.

The traditional port facilities of a LINEAR development — featuring comparatively narrow wharf aprons backed by a transit shed fronting on to a comparatively narrow roadway — is giving way to an AREA development, in which large land areas, with highly sophisticated equipment and methods, back on to a relatively small number of highly specialised berths catering for container and unit-load ships and cargo handling methods.

By the end of this year, the major areas associated with container and unit-load cargo handling, both afloat and ashore, will be Swanson Dock/Appleton Dock, Webb Dock, sections of Victoria Dock and North Wharf.

The hub of the port is shifting from Victoria Dock to the Swanson Dock/Appleton Dock area, which has about 250 acres which have been, and still are, being developed for container and unit-load handling. With an increased utilisation of the specialised berths and their back-up areas, the utilisation of the majority of conventional berths will gradually dwindle and the berths fall into redundancy.

In addition to the major new areas, there are several other and smaller areas which have been working container and unit-load ships and cargo for a number of years, confined entirely to the coastal trade.

It is perhaps appropriate that the

year 1970, which ushers in a new decade, will also usher in a "new" port.

The changeover from conventional ships, cargo handling methods and port facilities is gaining momentum as more shipping interests announce additional and new tonnage of the container and unit-load type which will provide increasing utilisation of the Port of Melbourne's terminal areas.

Currently port engineers are concentrating on the construction of new container unit-load berths on the east side of Swanson Dock immediately opposite the existing container berths and terminal already in operation on the west side.

The first berth on the east side, extending over 800 feet, is expected to be in operation by November, and facilities will include a port-owned twin-lift container crane, while work will continue on the No. 2 Berth, extending over 850 feet.

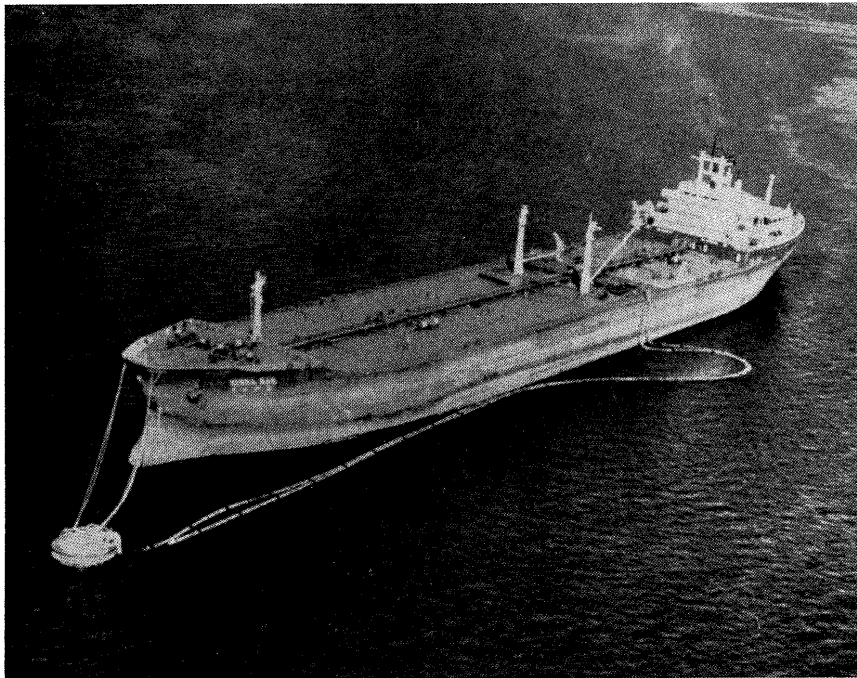
One company entering the container trade is Farrell Lines, which has been operating in the Australia-East Coast America service for the past five years. The company has already named the four container ships which are to be introduced into the Australian service in 1971. The ships are the "Austral Ensign", "Austral Endurance", "Austral Envoy" and "Austral Entente", which will have the capacity to carry 872 20-ft. containers, as well as unit-load and heavy lift cargo. The first of the four ships, "Austral Envoy", will be launched in December.

Meanwhile another American shipping company, Matson Lines, has announced that contracts amounting to \$US 50.5 million have been let for the construction of two large container ships for the Oceanic Steamship Company, the Matson Lines' subsidiary, whose ships have been regular callers to the Port of Melbourne in the company's service between Australia, New Zealand and the United States west coast.

The new container ships will be 719 feet long and be able to carry 638 24-ft., 318 40-ft. and 282 refrigerated containers.

Another shipping company to

Single Point Mooring



announce new tonnage is the Union Steam Ship Company of New Zealand, which is operating roll-on, roll-off, lift-on, lift-off cargo services in both the coastal trade and the overseas trade to New Zealand out of Melbourne.

Building of a larger and faster version of their existing "Seaway" type vessels is to start soon at an Australian shipyard, after final designs and specifications have been worked out.

It is intended to place the new ships on a firm timetable with two voyages out of Melbourne to Hobart and one voyage between Hobart and Sydney in each fortnightly period. The vessel will be designed to handle loads of 15 to 25 tons.

Plans will also make provision for the increasing tonnage of newsprint from the Australian newsprint mills in Tasmania, as well as for the shipments of I.S.O. containers to Melbourne for transshipment in overseas container ships. (Melbourne Harbor Trust Port Gazette, May)

Single Point Mooring

Sydney, 13th May: — A single point mooring for use by large oil tankers will be established in

Botany Bay.

This was announced today by the President of the Maritime Services Board, Mr. W.H. Brotherson, who said that the Board, at its meeting held in Newcastle yesterday, had decided to award a \$930,000 contract to I.H.C. Holland (Aust.) Pty. Ltd., for the provision and installation of the mooring. About one quarter of this figure will be provided by the oil companies using the installation, who will provide the flexible pipelines for the system.

Mr. Brotherson said that the single point mooring to be established in Botany Bay would be the first of its type in any port of the Commonwealth.

He said that a floating flexible pipe will be attached from the ship to a manifold at the top of the mooring and this will permit various companies installing their own submarine pipelines to convey oil and oil products from the ship at the mooring to their shore based installations.

As the manifold will revolve through 360°, it will be possible for ships to swing with the tide and wind and to remain at the mooring and continue to pump during

periods of bad weather and high seas.

Mr. Brotherson said that the design of the buoy would provide, initially, for ships of 80,000 tons but later it will cater for ships of 120,000 tons as needed.

The single point mooring is a further step in the development of Botany Bay as a port and Mr. Brotherson said that, when it comes into use early in 1971, a large crude oil pipeline now running across the Bay to serve the oil industries will be removed to allow of the deep channel dredging into the northern foreshore and so facilitate the major port development of the Board in that area. (The Maritime Services Board of N.S.W.)

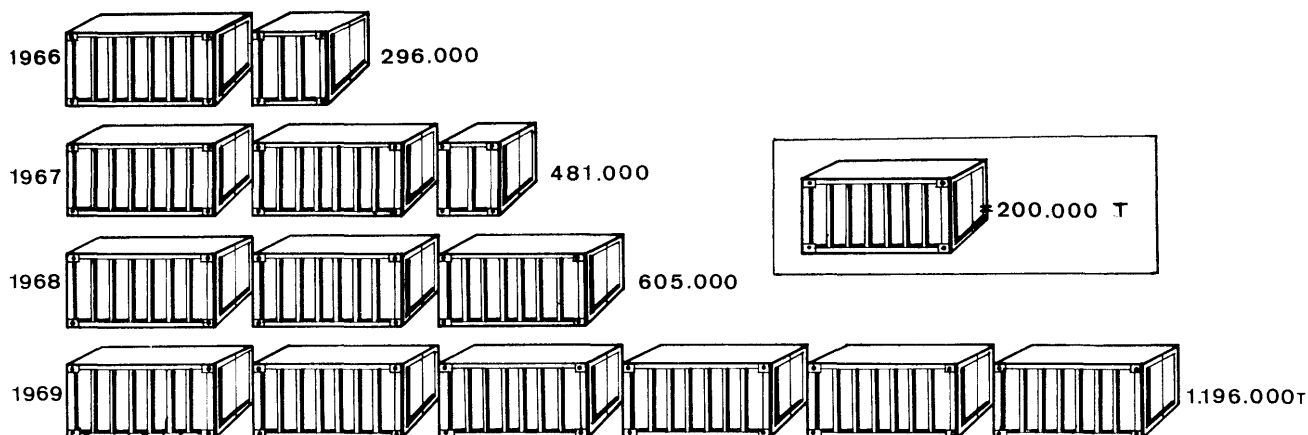
Off to Washington

Karachi:—The Chairman K.P.T., Commodore Mahmud-ul-Hasan, Sk., T. Pk., P.N. (Rtd), accompanied by the Chief Accounts Officer, K.P.T., and the Engineer-in-Chief, K.P.T., proceeded to Washington on 21st January, 1970, for negotiations on the I.D.A. Credit for the Third Project Scheme of Karachi Port. During the absence of the Chairman K.P.T., the Vice-Chairman K.P.T., Mr. Gul Abdullah, T.Pk., P.R.S., will carry out the current duties of the Chairman. (K.P.T. News Bulletin)

100,000 Loaded Vans

Antwerp:—The favourable evolution of the container traffic in Antwerp, which appeared already from the figures for the first ten months of 1969 was further accentuated during the months of November (with 11,729) and December (with 17,428 handled containers). In 1969 100,442 containers were transhipped (51,369 incoming and 49,073 outgoing) as against 57,447 units (32,191 incoming and 25,256 outgoing) in 1968, from which it appears that as compared with 1968 container traffic doubled in Antwerp in 1969. In those 100,442 containers a net tonnage of 1,195,576 tons of goods was transported (594,065 t incoming and 601,511 t outgoing) whereas in 1968 the corresponding figure was 604,682 (328,121 t incoming

Container Traffic At Antwerp



and 276,561 t outgoing). As it is known the Antwerp statistics never include neither the empty containers nor the weight of the loaded containers. About the empty containers no figures are available for 1969. However, at an estimate the total weight of the loaded containers was $\pm 250,000$ t. From this it results that in 1969 the gross tonnage (loads + weight containers) amounted to $\pm 1,450,000$ t, which is certainly a better basis of comparison with respect to the gross figures published by other European ports. The monthly average being 4,787 containers in 1968 increased remarkably in 1969 and amounted to 8,370 containers per month. Noteworthy is also the monthly average for the fourth quarter of 1969 being 13,224 units.

In addition also in 1969 the balance between incoming and outgoing units was maintained: on an average 4,280 containers per month were unloaded and 4,087 loaded or together 8,376 units as against 4,786 containers (2,682 unloaded and 2,104 loaded) per month in 1968.

Finally it should be remarked that the average tonnage per container which amounted to 10.5 t in 1968 rose to 11.9 t in 1969. (Antwerp Port News, March)

Monthly Meeting

Edinburgh, 19th May: — The Board of the Forth Ports Authority

held their monthly meeting at Burntisland on Monday, 18th May, their policy being to have periodical meetings away from the Docks Headquarters at Leith.

The Oceanspan Report was among the various subjects discussed and it was agreed the Forth Ports Authority would participate along with Clydeport and the Scottish Council (Development and Industry) in a follow-up study of the second phase of "Oceanspan".

On the retirement of Captain N. Scobie, Harbour Master, Grangemouth, who was one of the Forth Ports Authority's representatives on the Forth Pilotage Authority, it was agreed his successor, Captain A.P. Hyndman, would succeed on the Pilotage Authority.

At lunch following the Board meeting the Authority had as their guests Mr. Pollock, County Clerk, Fife, Mr. Duncanson, Provost of Burntisland, Mrs. Hadden, Town Clerk, Burntisland, and Mr. Hogg and Mr. Davidson, Provost and Town Clerk respectively of Buckhaven and Methil.

Provost Nicholson of Kirkcaldy and Mr. Chapman, Town Clerk, were also invited to be the guests of the Board but due to prior engagements were unfortunately unable to attend.

In the afternoon members of the Forth Ports Authority and senior officials took the opportunity of in-

specting the Port of Methil. (Forth Ports Authority)

Cargo Manager

Liverpool, March 23: — A new department to embrace the whole of its cargo-handling operations is to be established by the Mersey Docks and Harbour Board.

Co-ordinating this work will be Mr. R. Donald Bradford who has been appointed Cargo Group Manager to take charge of the new department from 1st April.

The steady increase in cargo-handling operations since the Dock Board adopted its own docks labour force in 1966, has prompted this new self-contained unit. The Board, which began with 750 dockers, now employs a permanent work force of more than 2,000.

Mr. Bradford has been Deputy Docks and Commercial Manager since April 1967.

Mr. Aubrey Donald, at present Assistant Docks and Commercial Manager (Cargo Handling), will become Cargo-Handling Manager.

The department's activities will extend from the Glandstone Container Terminal in the North to Queen's Dock in the South, and at Birkenhead. Next year is expected to see a big increase in operations when the new £35 million Seaforth docks expansion scheme opens its gates to more container liners, bulk grain carriers and other ships.

The Dock Board is also engaged

Europe-Africa

in large-scale Coastwise operations.

After beginning cargo-handling on its own account in April 1966 the Board acquired, in December 1968, two operating companies, Scruttons (Cargo Services) Ltd., and Freight Conveyors Mersey Ports Stevedoring Ltd., and is now one of the largest port employers.

Mr. Bradford's previous appointments with the Board have included Northern representative, based in Yorkshire, Deputy Chief Traffic Manager and also Commercial Officer.

During the last war he was commissioned in the Royal Engineers, serving in many branches of military docks operations in various ports including Suez, Port Said and Cyprus. At one time he was in command of No. 1004 Docks Operating Company and was Docks Superintendent Port Said.

Mr. Bradford is married with three children and lives in Formby, Lancashire.

Mr. Donald commenced his career with the Port of London Authority in 1937 as a Traffic Officer and in 1953 he was seconded to the Nigerian Government as a Dock Superintendent. Following the formation of the Nigerian Ports Authority he was appointed to that organisation and became their Deputy Chief Traffic and Commercial Manager. Mr. Donald is an Associate Member of the Institute of Transport and a Member of the Institute of Materials Handling. He is a Deputy Commissioner in the St. John Ambulance Brigade, holding the Order of St. John. (Mersey Docks and Harbour Board)

Foulness Project

London, 8th April: — Noel N.B. Ordman, Port of London Authority Director of Planning, strongly favours a MIDAS (Marine Industrial Development Areas) scheme for Foulness creating a seaport, airport and industrial complex.

In a paper, to be delivered at the one-day conference of the Metropolitan Section of the Institute of Transport on April 9th, he says: "I am an enthusiast for the Foulness development. To me as a planner, the Foulness project would provide

a well-nigh unique opportunity for a development in which transportation planning could be accorded its full role from the onset. I sincerely hope that the opportunity will be granted".

The conference, with the theme "Freight transport in a changing Metropolitan environment", is being held at the North Western Polytechnic, Camdon Town and Mr. Ordman's paper titled "Land Transport in Relation to Ports" is one of four being presented in the sessions.

Describing container berths as "land hungry" he explains that this is one of the factors influencing the shift of port development from centres of conurbations to less developed areas. He cites the P.L.A.'s Tilbury Docks extension which provides the required extensive berth support areas and the balanced phasing out of the up-town docks on the Thames.

Mr. Ordman sees the ideal as being integrated and balanced development in estuarial sites for ports, where road and rail services, manufacturing, urban and amenity growth is planned and complementary.

He says that London port development seawards will not lead to the reduction of facilities in the up-river docks beyond those already announced and therefore the problems of access to these docks cannot be neglected. (news from PLA)

London-Far East Service

London, 24 March:—A new exports reception scheme designed to speed up to the loading of vital exports to the Far East will soon be introduced by P & O Lines Limited and the Port of London Authority.

The Vehicle Appointments scheme will reduce costly delays to exporters' transport by enabling loading appointments to be made with the PLA for lorries bringing in export shipments for P & O cargo liners in the Royal Docks. Freight space bookings must however be made directly with P & O Lines or their Agents.

This is the first time that the new system has been used for ships loading in London for the Far East. The first P & O Lines cargo liner to load

under the scheme will be the 21-knot 14,000 ton STRATHARDLE which will receive cargo from 9 to 14 April.

William Caunter, Marketing Manager of the PLA quoted figures from a recent survey not previously released to confirm the success of this type of system. He said, "Analysis of the schemes operated in the Port of London during 1969 shows that nearly 99% of the vehicles with appointments were dealt with on the day of arrival. Bad weather adversely affecting dock operations mainly accounted for the very small percentage not completed on the day of arrival".

Mr. D. Durnford-Slater, Manager of P & O Lines commented, "Our customers benefited when we became the first shipping line to re-route ships via the Panama Canal after the closing of Suez. They will now benefit again as we are first to introduce a Vehicle Appointments scheme for the Far East trade. The elimination of delays to lorries delivering cargo will clearly assist British exporters in getting their goods to the highly competitive markets of the Far East on time".

P & O Lines Limited, a member of the P & O Group, the world's largest shipping organisation, operates ten cargo liners on three separate services to the Far East covering Malaysia, Singapore, the Philippines, Hong Kong, Taiwan and Japan. (Joint Press Release from PLA and P&O Lines Ltd.)

Container Traffic Up 50%

Bremen, 11th May:—The leading European Bremen/Bremerhaven port-group in the Atlantic container trade showed a numerical unit-increase for 1969 (over 1968) of 56 percent. In 1969 73,311 containers were handled here, which corresponds to 118,000 containers of the 20-foot variety. In terms of tonnage an increase was even reached of 77 percent in 1969 over 1968 (1969 annual accomplishment: 820,000 tons). According to the official figures the Bremen/Bremerhaven port-group should 'again considerably exceed' these figures in 1970. (Bremen Air Mail)

Cargo Turnover

Bremen, 11th May:—The cargo turnover for the Bremen/Bremerhaven seaport group increased in the first quarter of 1970 by 14.8% over that for the same period of the previous year. The month of March 1970 saw, for the first time, the turnover in ocean cargoes exceed the 2-million ton mark. The total for the first quarter of 1970 was some 5.77 million tons of cargo handled, of which 2.91 million tons consisted of general cargo and 2.86 million tons were bulk commodities. (Bremen Air Mail)

Meyer Line

Bremen, 24th April: — A double anniversary, which does not happen every day, was celebrated by the Meyer-Line, Oslo (Shipping broker in Bremen: Carl Scholle) in Bremen a few days ago. M.S. "Havtjeld" (11,300 dwt), which was put into service in 1962, not only called at the Port of Bremen for the fiftieth time, but also effected the 850th departure of the Meyer-Line, since this company restarted their regular liner service between Bremen and the U.S. East Coast in 1948. In these 22 years the Norwegian shipping-line has transported cargoes with a total tonnage of more than 1,3 million tons between Bremen and the U.S.A.

At present the Meyer-Line can offer a weekly liner service from Bremen to New York and Philadelphia with the vessels "Havtjeld", "Havtroll", "Havjo", "Havsul", "Havskaar" and "Havlom". All these vessels are modern cargo liners with special facilities for unit loads. Apart from this, 50 containers per ship can be carried.

For the Meyer-Line the Port of Bremen has become over the years more and more important. This importance is demonstrated above all by the fact that the 29% increase in productivity concerning the handling of vessels of the Meyer-Line was the largest rate of growth in comparison with all the other continental ports. (via Bremen Bremerhaven)

Container Terminal

Bremen, 24th April:—There was a heavy pressure of work at the container terminal in Bremerhaven last week-end. The terminal was again able to show how particularly efficiently it works, as not less than three full container-ships were loaded and discharged in the time from midday on Friday till midday on Sunday. The vessels in question were the "American Lancer" (22,275 G.R.T.) of the United States Lines, the "Mormacsky" (11,758 G.R.T.) of the Moore-McCormack Lines, Inc., and the "Mosel Express" (13,396 G.R.T.) of the Hapag-Lloyd Container Lines; a total of 1,126 containers were either loaded or unloaded to and from U.S. East Coast.

In addition to this achievement in efficient handling at the container terminal, all three ships benefited from the ideal geographical position of Bremerhaven. For example, M.S. "American Lancer" of the United States Lines needed only 2 hours and 45 minutes in all for the journey from the Weser lightship to berthing in the Nordhafen in Bremerhaven (west side). It took only 30 minutes to get the vessel through the lock at the entrance to the docks, as the ship arrived at high tide. Again, on the outward journey, it took exactly 55 minutes for the ship to get from the west side of the Nordhafen to the Bremerhaven roadstead, which was also very quick. (via Bremen Bremerhaven)

Full Container Ships

Hamburg, May 8: — The ship-owners Christian F. Ahrenkiel, Hamburg, placed an order for two full container ships with Blohm + Voss AG.

These full container ships are repeat constructions of the container ships MS "ELBE EXPRESS" and MS "ALSTER EXPRESS" completed by Blohm + Voss for the Hamburg-America Line early in 1969.

At a carrying capacity of approx. 11,200 tdw on a draught of 7.89 m the container capacity is 736 of 20'

ISO containers. The cargo holds of the ship are dimensioned for transportation of 300 40'-containers and 136 20'-containers.

The main propulsion plant will be a single-acting two stroke engine, MAN type K 9 Z 78/155 E with a maximum continuous output of 15.750 BHP, giving the fully loaded vessel a service speed of 19 kn. The engine plants are designed for 16 hours of unattended operation.

With these two constructions the owners Christian F. Ahrenkiel will be given container ships of a design that proved its excellent suitability in more than one year of hard service at the Northern Atlantic. These ships are still of a size that enables them to call at several ports on either side of the route making them sufficiently flexible for worldwide operation.

The shipyard Blohm + Voss succeeded in concluding a contract for true repeat constructions of a well proven design thus utilizing all the advantages a series construction provides.

Delivery of the first newbuilding has already been scheduled for December 1971, whereas the second ship will be commissioned by mid-1972. (Blohm + Voss AG)

1st LASH SHIP at Amsterdam

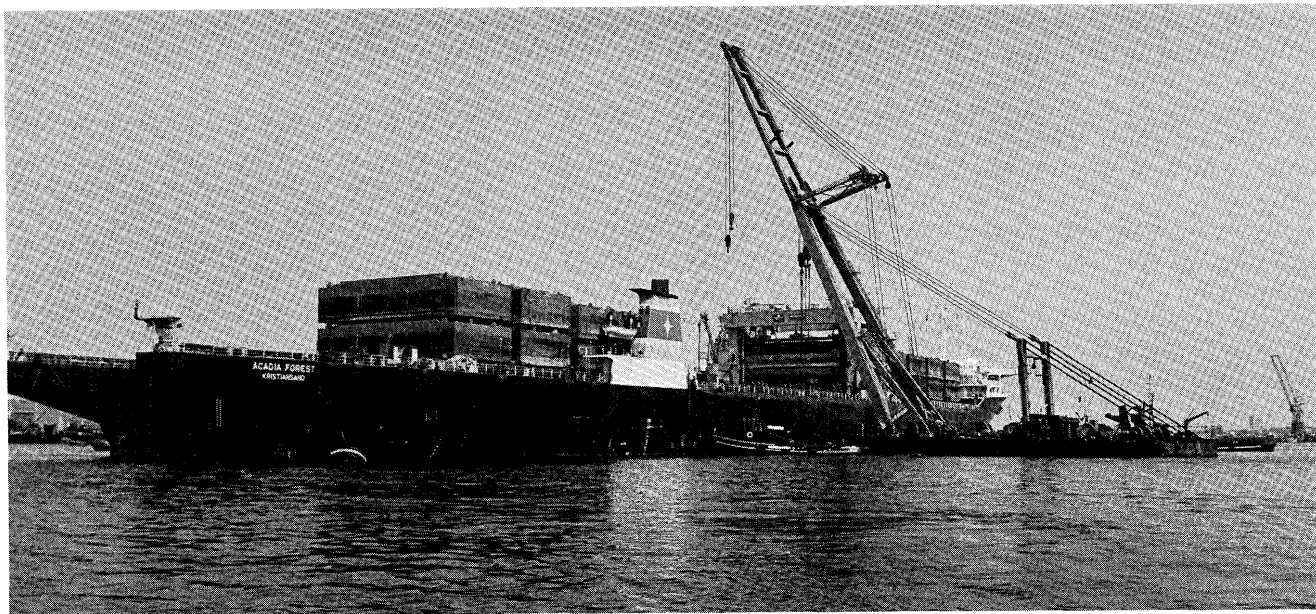
Amsterdam, May 12: — The "Acadia Forest" world's first vessel of the "lighter aboard ship" (lash) system, called at Amsterdam early this month.

A complete drilling platform was taken on board to be shipped to Morgan City on the U.S.-Gulf.

The rig, owned by Loffland Bros. Inc., was divided into five units of 150 to 260 tons and lifted on board by the new floating crane of N.V. Gebr. Goedkoop. The transport was arranged by the Dutch supply company "Octopus" and technical care was taken by Holland Repair and Servive N.V. (Hors). Agents for the Acadia Forest were Messrs. Ruys & Co.

Central Gulf's "Acadia Forest" was suitable because of her wide, flush hatch covers. An advantage

First LASH Ship at Amsterdam



as well as the fact that loose gear and equipment belonging to the drilling rig could be stowed in two of the lash-barges.

This visit demonstrated that LASH-ships are completely at home in the tideless Amsterdam harbour and that the port is most suitable for operations with this type of ship.

This visit opened most promising aspects for the port of Amsterdam. (Vereniging "de Amsterdamsche Haven")

Cargo Handlers' School

Amsterdam: — There are many elements that go into the making of a good port: geographic position, ease of navigation, hinterland connections, buildings and equipment and a communications system—all are vital. But no matter how good the facilities, no port can survive without a good labour market—ranging from the highest executive talent to the man who actually handles the cargo—the talented dockworker.

Not so long ago it became apparent that a talented chairman was easier to find than a talented dockworker. The chairman was seemingly always there, but the cargo-handlers often weren't because they were unskilled "able-

bodied" workers employed on an irregular basis. The dockworker was unskilled primarily because of the lack of any mechanised aids and secondarily because of the casual nature of the work.

Therefore shortly after World War II, Amsterdam Port officials realised that this was indeed the case—and they did something about it. A Textbook on Dockwork, the first of its kind anywhere, was published and port officials began work on an ambitious project to train existing dockworkers.

Out of this the "Havenvak-school", literally, the dockworkers' school, was born as a logical extension of the plan to train existing dockworkers: for the Havenvak-school trains young men for a career in the increasingly sophisticated task of cargo-handling.

Since its inception, thousands of young dockworkers have gone through the school which includes a sort of apprentice-dockwork as well as the three 'R's. The school offers a two-year course for boys 14-years-old and older in which they study: Dutch, English, Arithmetic, Geography, History, Dockknowledge, metal and wood-working and other subjects. Then after those two years, the youth works four

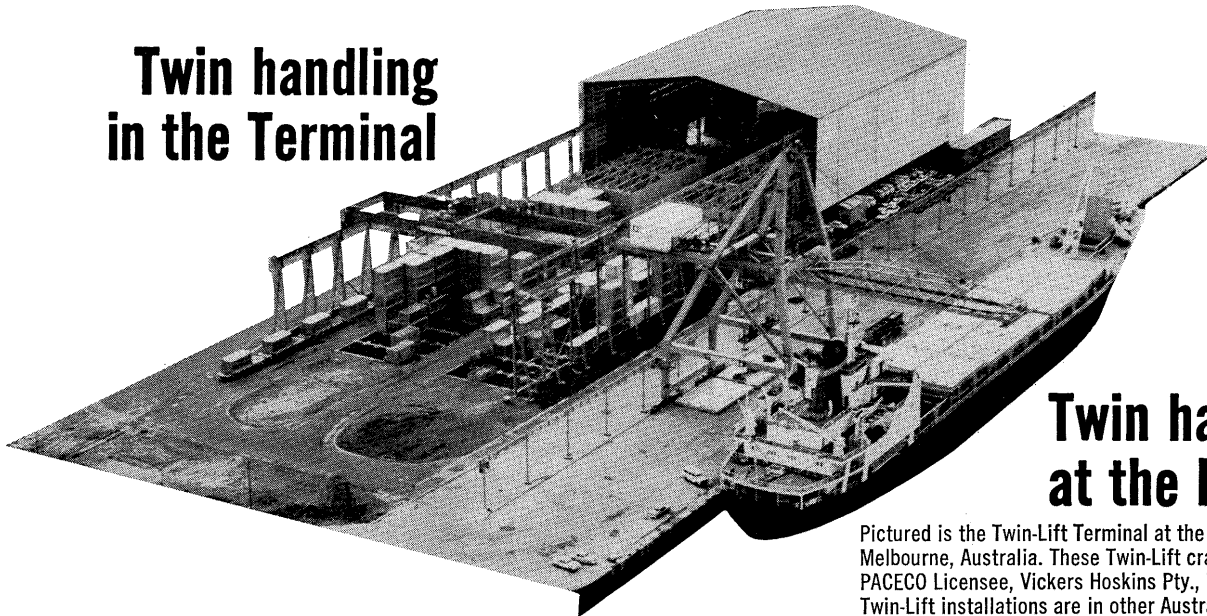
days a week on all sorts of harbour jobs and returns to school one day and one night a week.

During the apprenticeship period, the youth receives pay from the Association of Port Employers and spends several weeks doing each type of port job from unloading cargo in the sheds to acting-gang-foreman. The emphasis of the programme is to teach teamwork without supervision. And the programme has succeeded in making the dockworker a skilled and reliable worker.

At the end of the course a practical and theoretical examination is held, the successful apprentice earns a State-Certificate and a School-Certificate. Successful apprentices are also eligible to take advanced training, including a course for hatchwaymen and a course for checkers. Advanced training is also available to dockworkers who did not attend the Havenvakschool.

The Havenvakschool is just another example of how Amsterdam harbour is constantly seeking ways for improvement; never content with the status quo, the people of the Amsterdam harbour are constantly trying to make the port better. (Haven Amsterdam, October 15, 1969)

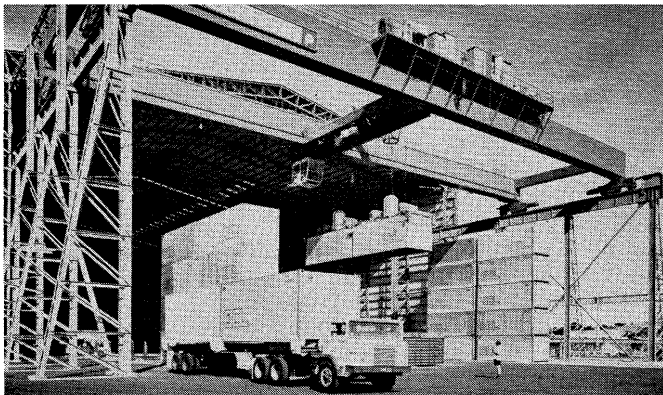
**Twin handling
in the Terminal**



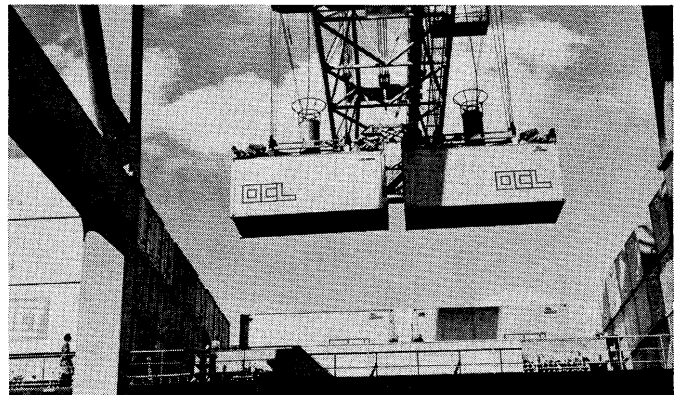
**Twin handling
at the Pierside**

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

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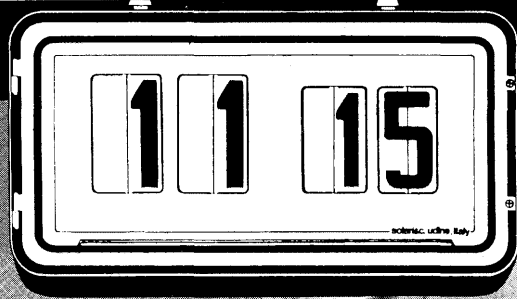
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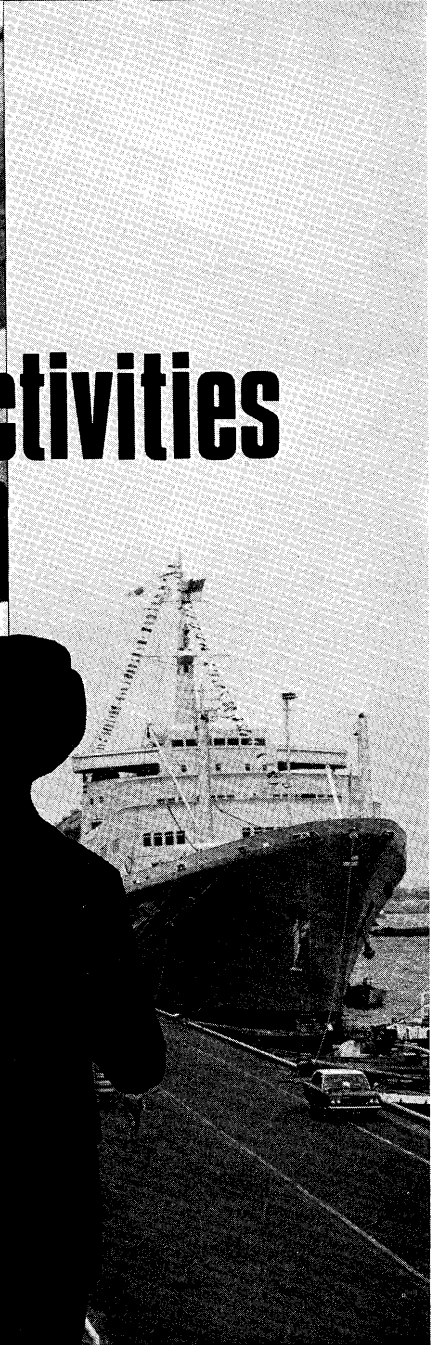
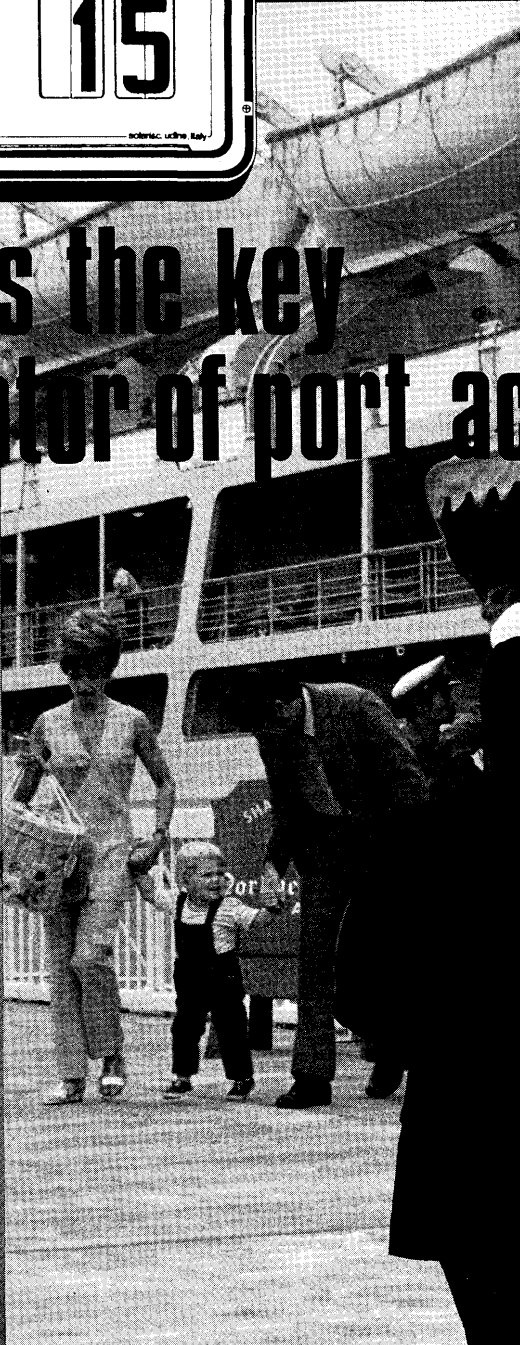
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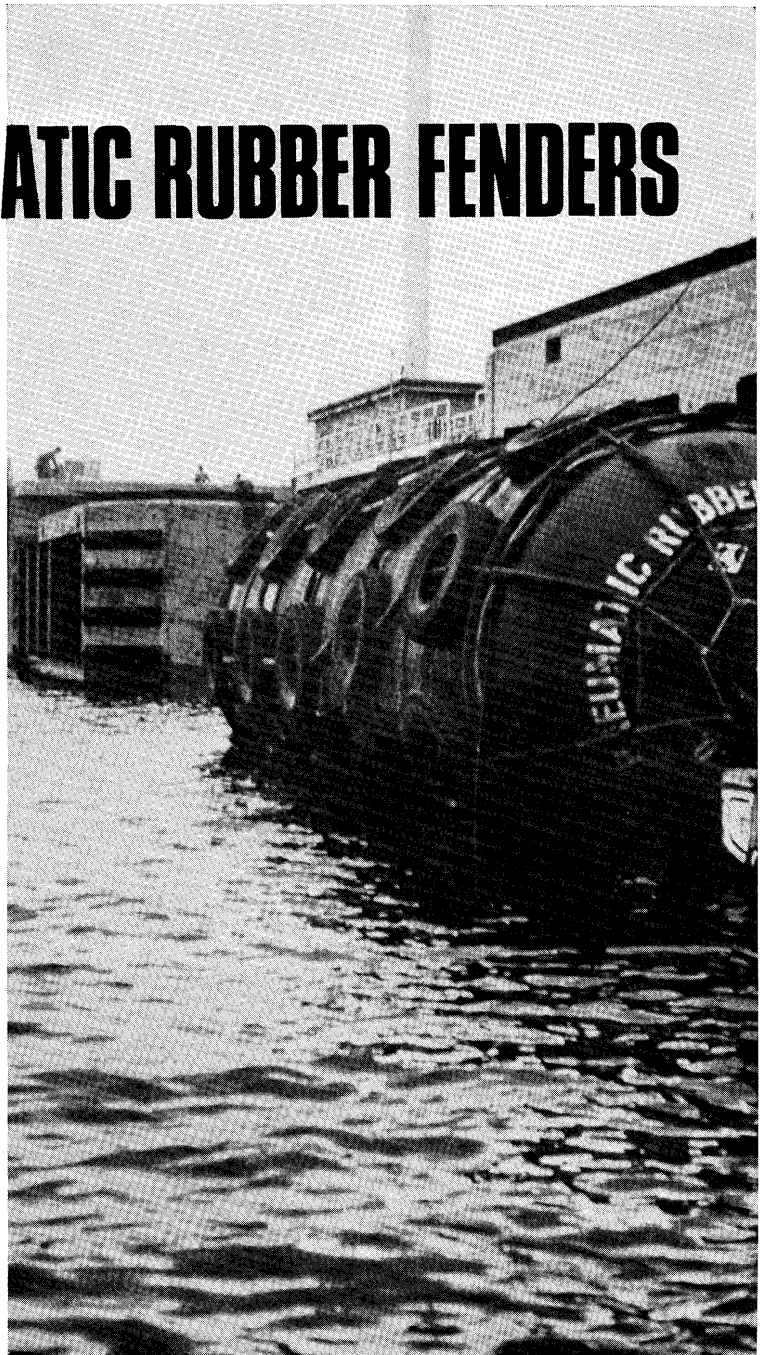
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