

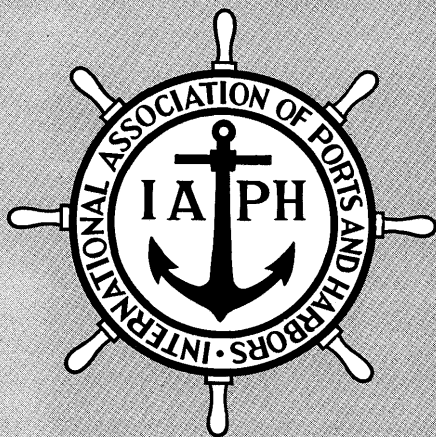
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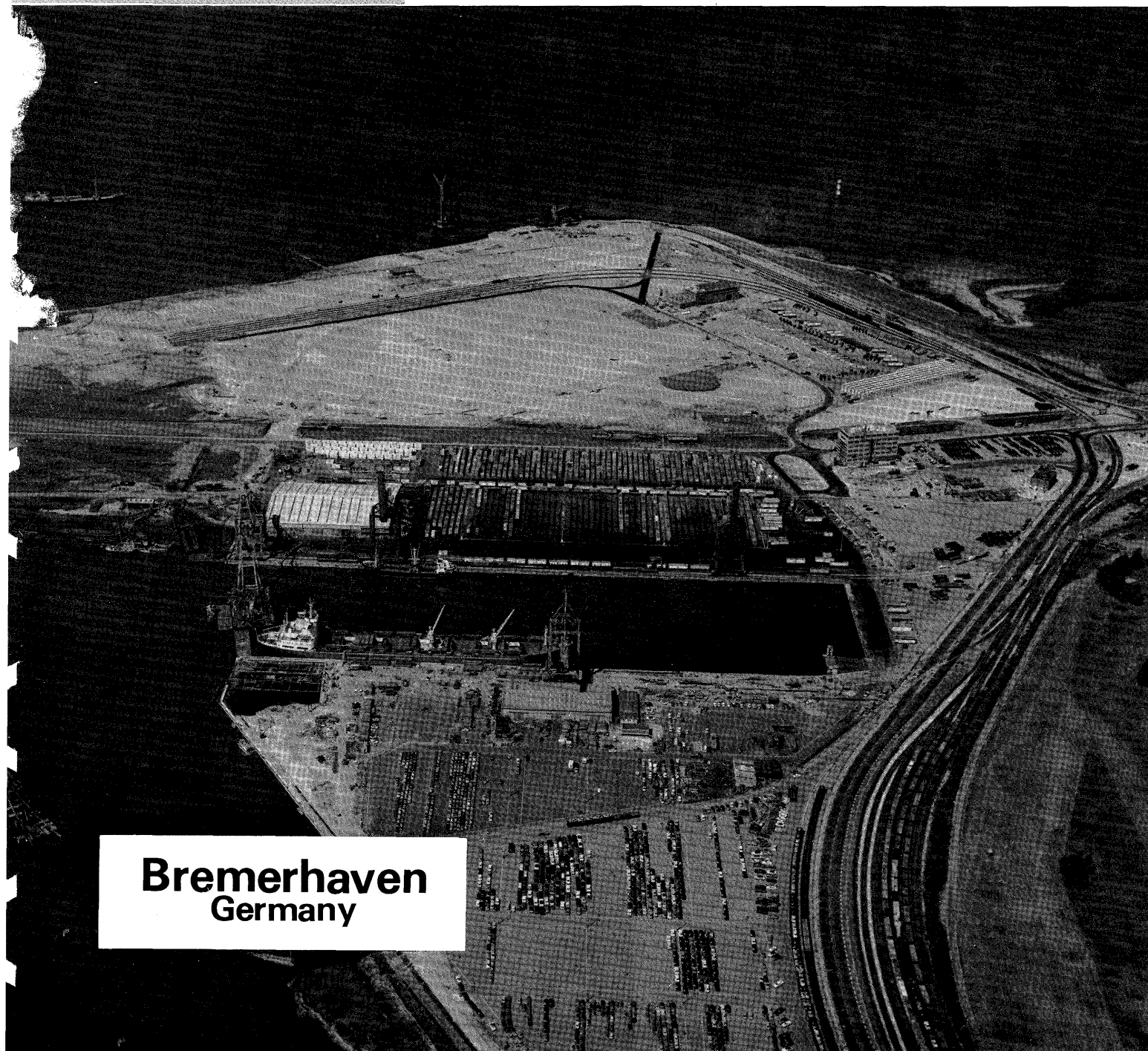


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PORTS *and* HARBORS

October, 1970 Vol.15, No.10

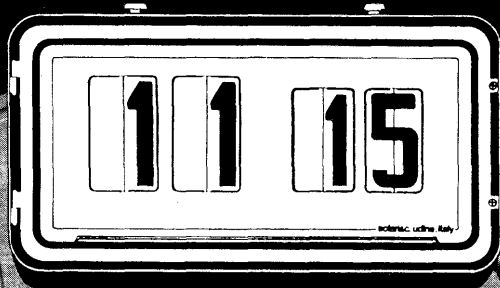


Bremerhaven
Germany

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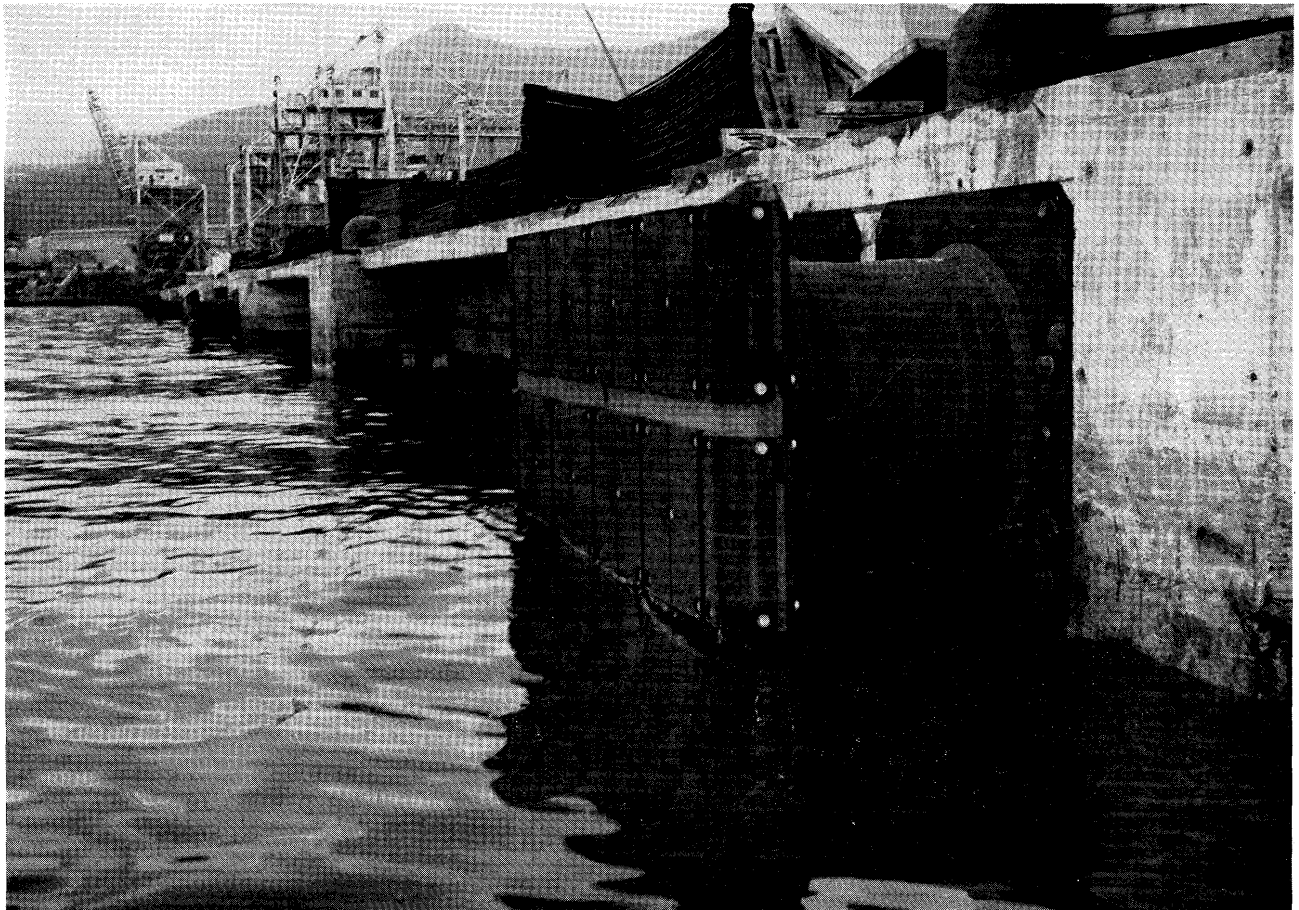
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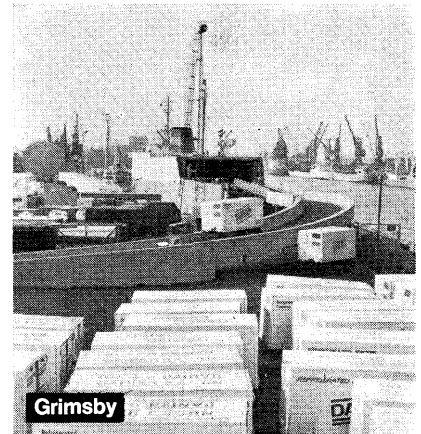
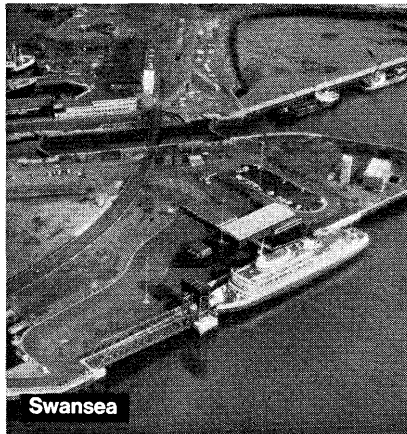
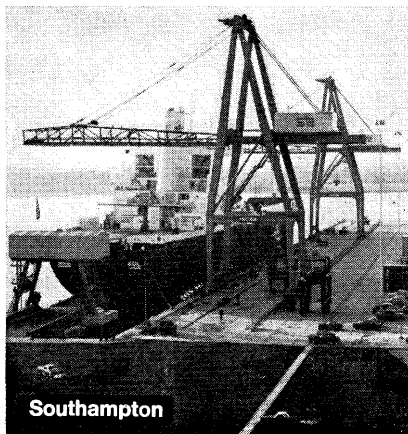
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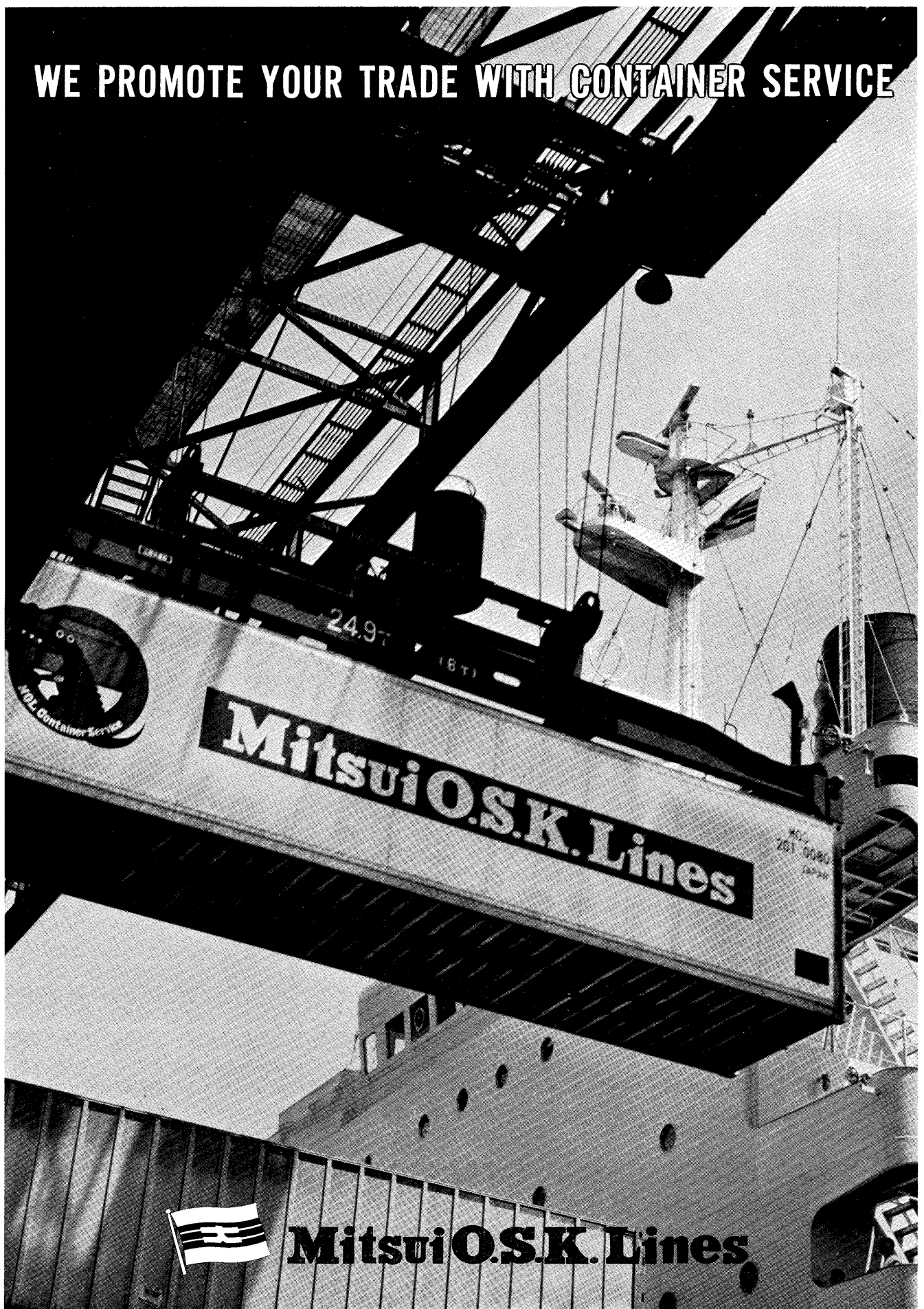
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The Cover :

The container terminal at Bremerhaven.

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PORTS *and* HARBORS

Forum on Port Problems:

British Port Industry Now "World Leader"

National Ports Council Annual Report London

The extent of the major physical renewal carried out at Britain's ports in the 1960s is still not fully appreciated, according to the National Ports Council in their Annual Report, published today. The Council claim that as a result of these developments, in many respects the British ports industry may now regard itself as a world leader.

To keep up with the steady increase in traffic and the introduction of new technologies, further port development can be expected in the future, and the Council point out that the cost of maintaining a modern British port system comes high. Ports will face serious financial problems during the next few years. Says the Report:-

'The large development programme which is still continuing, the likely demands for progressive improvement of facilities, coupled with the very high interest rates now ruling, and the comprehensive reconstruction of manning structures, wages and terms of employment, confront the ports with a situation in which, giving all due weight to the benefits to be expected from increased management and operating efficiency, disposal of out-of-date assets and other measures within the control of management, it appears clear to the Council that it will be difficult to achieve a satisfactory and continuing financial net surplus.

'Action will be called for on three fronts: alongside a vigorous and sustained drive to improve efficiency and reduce costs, port prices will have to be kept continuously under review on a realistic basis, and the Council have no doubt that there is

a case for re-examination, as soon as possible, of the burden of capital costs falling on the industry'.

The Council are required to carry out a detailed appraisal of all major port development projects which port authorities submit for approval to the Minister of Transport. Since they were established the Council have considered 93 schemes, with a value of over £281 million. The Report lists schemes submitted during 1969, which include:

British Railways Board

Development of roll-on/roll-off berth at Heysham (estimated cost, £825,000).

Mersey Docks and Harbour Board

Installation of impounding system for Seaforth Dock (£607,375) and construction of grain terminal at Seaforth (£3,668,040).

(Both of these schemes are within the total estimated costs for the £33 million Seaforth scheme).

Construction of car ferry and container terminal at Victoria Dock (£2,035,260).

Forth Ports Authority

Revised scheme for new lock at Grangemouth (£8,010,000).

International Hoverports Limited

Construction of Hoverport at Pegwell Bay (£1,500,000).

British Transport Docks Board

Additional works at oil terminal jet-ties at Immingham (£2,050,000).

Extension to Southampton Western Docks, to provide three further container berths and associated facilities (£11,419,000).

Tees and Hartlepool Port Authority

Development of ore terminal at Redcar in conjunction with the Brit-

ish Steel Corporation (£4,464,000).

Medway Ports Authority

Construction of deep-water berths at Sheerness (£2,350,000).

As in the previous year, the majority of schemes submitted during 1969 were for bulk cargo, but several important general cargo schemes were submitted as well, in particular the proposals for new deep-sea container berths at Southampton. Also of interest were proposals for a further increase in facilities for accompanied car tourist traffic embodied in schemes for Heysham and Liverpool.

Among the bulk schemes, the Council particularly welcomed the proposal for a major new iron ore terminal on the Tees. It was clear that the Tees scheme was the first of a series of proposals to be made by various ports in conjunction with the British Steel Corporation which should, in the early 1970s, provide Britain with an efficient pattern of modern iron ore terminals; so rectifying what the Council had considered to be an outstanding major defect in national port facilities.

Port Talbot and the Redcar terminal will enable the principal present steel manufacturing areas to be supplied by ore carriers of the largest class. Other schemes under consideration should ensure that within a comparatively few years all major steel-producing areas are equally well placed.

The Council say that the new developments at Southampton will establish Southampton as a major cargo port. When it is completed the port will offer a total of four container berths, and there is considerable scope for further container berths at Southampton as need arises. The scheme is a particularly good illustration that although a fully-equipped and purpose designed container berth is much more costly than the conventional cargo berth of the past, the cost per ton of cargo dealt with at the berth is much less because of the high

throughput.

The growth of unitised traffic through British ports is illustrated by the fact that the total of 9,000,000 tons recorded in 1968 was an increase of 50 per cent on 1967. Differentiating within the unit traffic, container traffic showed an increase in 1968 of 59 per cent to 6,000,000 tons; the increase in the case of foreign container traffic was 79 per cent; in the case of Northern Ireland and coastal container traffic already substantially containerised the increase was naturally less steep, at 29 per cent.

By the end of 1969, British ports had seven modern deep-sea container berths equipped with transporter cranes, with a further 12 under construction or in an advanced state of planning. Serving the short-sea trade were nine high-capacity transporter-equipped berths and another 80 roll-on/roll-off berths or simple container berths (equipped with scotch derricks) handling unit transport.

Suggestions that British ports cannot match their Continental competitors in accommodating the very large vessels now coming into service in the bulk trades are rejected by the Council. The report points out:

'The problem of ship size generally is one which is frequently referred to with the implicit assumption that this country is at a disadvantage compared with the Continent. This is not true. The largest super-tankers afloat can be handled at British ports, while as to the future, this country has greater potential for port development than several of its European competitors. For example, the restrictions imposed by the shipping channels and traffic of the Dover Straits and the Southern part of the North Sea do not affect a large part of the British coastline. If it becomes desirable that British refineries should be served by tankers even as large as 1,000,000 tons deadweight, facilities could be provided without unreasonable expense'.

The report adds that British ports will also be able to cater for container ships of any foreseeable size.

The report identifies four major long-term issues affecting port development. These are:-

Maritime Industrial Development Areas

- Very large tankers
- Barges and barge carriers
- Obsolescent port facilities

Maritime Industrial Development Areas

The report devotes a chapter to Maritime Industrial Development Areas (the Council's MIDAS concept), including a summary of the recent report by Professor M. H. Peston on which a detailed cost/benefit study into the concept, recently announced by the previous Government, will be based.

Very Large Tankers

With regard to tankers, the report points out that ships of the 250,000-ton class can be handled fully-laden at Milford Haven and at Clyde terminals, and the technique of part-discharging enables all other major terminals to deal efficiently with ships of increased size. But the implications of the possible introduction by the later 1970s of still larger ships needs careful study. The next step in size may be a very considerable one, to as much as 750,000 tons, a draught requirement of about 90 feet.

The Council believe the most convenient means of dealing with ships of this size is the use of relatively long crude oil pipelines in association with single-point off-shore buoyed moorings. Alternative schemes of this type have recently been proposed to serve the Shell Refinery at Stanlow on the Manchester Ship Canal. The depth of water in either case would be sufficient to accommodate ships of as much as 1,000,000 tons deadweight.

Barges

The first barge-carrying ship was received in the Medway late in 1969. The berth for the mother ship need only be a buoy, and the barges, individually or in trains, can be unloaded, or loaded, at shallow berths. Very large ocean-going barges are also being developed; these seem to offer a number of advantages for short-sea services, including the more intensive use of the power unit—the tug—and crew economies. The report points out that both systems seem to offer the ports the possibility of continued use of older and shal-

lower facilities as an alternative to new port investment to cater for orthodox ships of equivalent carrying Power.

Obsolescence

Traditional berths may be put into disuse as a result of the introduction of containerisation, unitisation and the use of larger bulk carriers, but because of the rate of technological change even comparatively new developments may be rendered obsolete. For example the Queen Elizabeth II Dock on the Manchester Ship Canal, although still extensively used for other purposes, was originally built to replace the existing crude oil berths for tankers on the Ship Canal, catering for larger tankers in the 30,000-ton class. Almost at once, however, it was necessary for terminal facilities to be re-developed further down the Mersey at Tranmere to handle 65,000-ton ships, and already the Tranmere terminal has had to be reconstructed, and the Mersey dredged, to accommodate still larger tankers. Another example is the iron ore berth on the Tyne, built less than 20 years ago and, next to the new terminal at Port Talbot, the best iron ore terminal in the country. For all that, it seems certain to be replaced by about 1973.

The report calls attention to the social effects of dock closures:-

'Physical expansion and contraction are comparatively easy; it is the social and human problems which present the most serious difficulties. For this reason it is essential that the effect of closures or new procedures are foreseen both in social and labour terms. Socially, dock closures may have critical effects upon communities and local civic pride; while for labour, the effect may be fewer jobs or a complete change in methods of work.

The problems may appear to be intractable—and so they will be if those concerned are not brought into consultation and adequate provision is not made for people's livelihoods, status and security, to prevent a critical collapse of confidence'.

7th July, 1970.

Statement on the Proposed “Ports and Waterways Safety Act of 1970”

**By Alfred Hammon, Supervisor of Development
Planning, The Port of New York Authority**

**Before the Subcommittee on the Coast Guard, Coast
and Geodetic Survey and Navigation**

*House of Representatives, Congress of the United States
Washington, D.C., August 11, 1970*

Washington, Aug. 11—The Port of New York Authority today announced its endorsement of President Nixon's proposed “Ports and Waterways Safety Act of 1970” which calls for increased federal controls over harbor navigation. The Port Authority's position was detailed in testimony on the pending measure presented this morning by Alfred Hammon, the bi-state agency's Supervisor of Development Planning, before a Subcommittee of the House of Representatives' Merchant Marine and Fisheries Committee.

I am Alfred Hammon, Supervisor of Development Planning of The Port of New York Authority. The Port of New York Authority, as a joint public agency of the States of New York and New Jersey, is responsible for the development of transportation and terminal facilities and the promotion and protection of commerce in the New York-New Jersey Port District. The Port District is a 1500-square mile area with boundaries approximately 25 miles from the State of Liberty.

In accordance with the Comprehensive Plan enacted by the two States in 1922, the Port Authority is directed to study and encourage the development, improvement and maintenance of waterways and related facilities which are used principally for commerce in the Port District, and in particular, by ocean-going vessels. Accordingly, the Port Authority is very much interested in the proposed “Ports and Waterways Safety Act of 1970”, and in particular, in the navigational aspects of Section 2 (b), subsections (1), (2),

and (5), as well as sub-section (4) relating to minimum equipment requirements for structures and facilities. However, our views on Section 2 (b) (4) will be presented through The American Association of Port Authorities, so that my statement will be confined to the navigational aspects of the bill as they affect the Port of New York.

Summary

The “Ports and Waterways Safety Act of 1970” has the highly commendable objective of seeking to reduce harbor oil pollution through safer vessel, terminal and harbor operations. Section 2 (b) in subsection (1) would require the institution of marine traffic controls; subsection (2) would extend controls over anchoring and mooring operations, and sub-section (5) would authorize the establishment of safety zones. The Port Authority supports these goals in principle in the interests of improved maritime and harbor safety; provided, however, that actual control facilities and procedures are developed in close cooperation with local port and maritime organizations so that they will be realistic reflections of local needs and capabilities. At present these controls and procedures are only broadly indicated in the legislation under consideration, with few clues as to the degree and nature of their implementation.

The Port Authority also notes that the President's Message to the Congress of the United States on May 20, 1970 made in relation to this bill, lists the Port of New York among those ports recommended for the

establishment of harbor advisory radar (HAR). The initial area mentioned in related publicity surrounding this subject was the Kill van Kull-Newark Bay section of the Port of New York.

For several years the Port Authority has worked informally with the Coast Guard's National Plan for Navigation Office exploring the feasibility of such a facility in this hazardous area. Our joint efforts have resulted in a report, submitted by the Port Authority to the Coast Guard on June 19, 1970 on a concept for developing and operating a radar facility for the Kill van Kull-Newark Bay area. To the extent the passage of the “Ports and Waterways Safety Act of 1970” advocates further development of such a concept, the Port Authority gives its enthusiastic support and offers its cooperation.

Navigation in the Port of New York

The Port of New York has a shoreline frontage of navigable water totaling 755 miles, of which 460 miles are in the State of New York and 295 miles are in the State of New Jersey. From the Atlantic Ocean, the inner Harbor can be entered via Lower New York Bay, Long Island Sound or Raritan Bay. The Lower New York Bay entrance, served from seaward by Ambrose Channel and the alternate Bayside-Main Ship Channel, is the most common route for ocean vessels. These three entrances are served by a complex inner Harbor channel system. (see attached map). The deep-water segments of these channels range in bottom width from 150 through 2000 feet. They are controlled by mean low water project depths ranging from 25 to 45 feet. In 1968, the total channel network of the Harbor served 174.8 million short tons of international and domestic waterborne commerce.

The Port of New York's channel system is called upon to handle all forms of ocean traffic—passenger liners, containerships, break-bulk general cargo vessels, petroleum tankers and dry bulk cargo carriers. In 1969, according to the Maritime Association of the Port of New York, 20,220 ocean vessels arrived at and departed from the Port of New York. This does not include the shifting of vessels among terminals, ship-

yards, anchorages and similar-intra-Harbor movements, nor does it include the vast traffic in tugboats and barges, workboats, river and harbor tankers, excursion boats, ferries, public vessels and recreational craft. The Port of New York led all other ports in the nation in terms of ocean traffic, with the next ranking port accounting for 10,761 arrivals and departures.

It is expected that the Port will continue to progress and thus maintain its preeminent position as a general cargo port, with very large containerships increasingly replacing break-bulk general cargo vessels on many foreign and domestic trade routes. Total passenger ship activity will remain more or less constant, while the future of ocean bulk cargo traffic, most of which is inbound, is somewhat less clear. Without question, however, bulk carrier sizes, particularly petroleum and liquid natural gas tankers, will continue to increase in size.

The Port of New York is and will continue to be a complex network of crossing and joining Federal channels, marked in various degrees by sharp turns, narrow constrictions, rip currents, narrow or low bridges and heavy concentrations of ocean traffic. At night or during periods of low visibility, navigational dangers in such areas increase considerably. In many instances hazardous conditions are not physically remediable. Where remediable, they can often be eliminated or modified only at tremendous cost. Further, as ships such as tankers and containerships become longer, wider, deeper and faster, they tend to intensify these hazards, particularly since the economics upon which their construction and operation are founded stimulate rapid and undelayed port turnarounds. Traffic, fog, rain and snow impede rapid port turnarounds and can cost up to \$1,000 per hour in vessel time, not to mention the cost in dollars of injury and loss of time when accidents occur.

Past Harbor Radar Experiments

Various Port interests have long recognized these growing navigational problems. In 1951 and 1952, the Port Authority operated an experimental harbor advisory radar (HAR) station located at Fort

Wadsworth, Staten Island, in an effort to determine whether navigation hazards could thereby be reduced. The experiment provided for the tracking of vessels along the Ambrose-Anchorage Channels into the lower Harbor by shore-based radar, with advisory information given to participating ships via radiotelephone communications. While the experiment provided very useful data, the limited availability and use at that time of shipboard radiotelephones, and the limited number of ships that could be handled per station operator, were among the factors that helped to bring the experiment to an end.

Later, from 1962 to 1965, the U.S. Coast Guard conducted a similar experiment using Radio and Television Aid to Navigation (RATAN) stations located on Sandy Hook and Bayonne. RATAN provided television transmissions of an aerial radar view of sectors of the Harbor, showing shoreline, buoys, vessels and other radar images. This "animated harbor chart" could be received by vessels equipped with low cost, UHF-TV receivers. Supplementary advisory information among ships and the RATAN station was available as needed through the use of VHF-FM shore and shipboard radiotelephones. RATAN eliminated the need for shore-based vessel tracking and for numerous highly trained operators, and reduced the reliance on radiotelephone communications by televising a considerable spectrum of navigational data. In addition, visibility, casualty and other special data could also be televised, and the system provided radar images of traffic around channel bends, above bridges etc. Unfortunately, both shipboard VHF-FM radiotelephones and in particular, UHF-TV receivers, were not in widespread use, and of course, the needed TV equipment is not even today a part of a ship's traditional navigational equipment. Also, the RATAN stations were reportedly given only limited and temporary operating authority from the Federal Communications Commission. When this authority expired and Federal funds were exhausted, the experiment was ended and the equipment placed in storage. The Port Authority considers RATAN to be an ex-

cellent system and one well suited to the Port of New York.

Radiotelephone Communications

The use of HAR or RATAN is strongly dependent upon the use of a widespread navigational VHF-FM radiotelephone system. Such a system was introduced in the Port of New York in 1964 as an experiment in which the Port Authority made 15 portable radiotelephone units available to the Sandy Hook Pilots for vessel pilotage on the Kill van Kull-Newark Bay waterway. The units operated on Channel 13, the navigational frequency. A base station was located on the Central Railroad of New Jersey liftbridge which crosses lower Newark Bay.

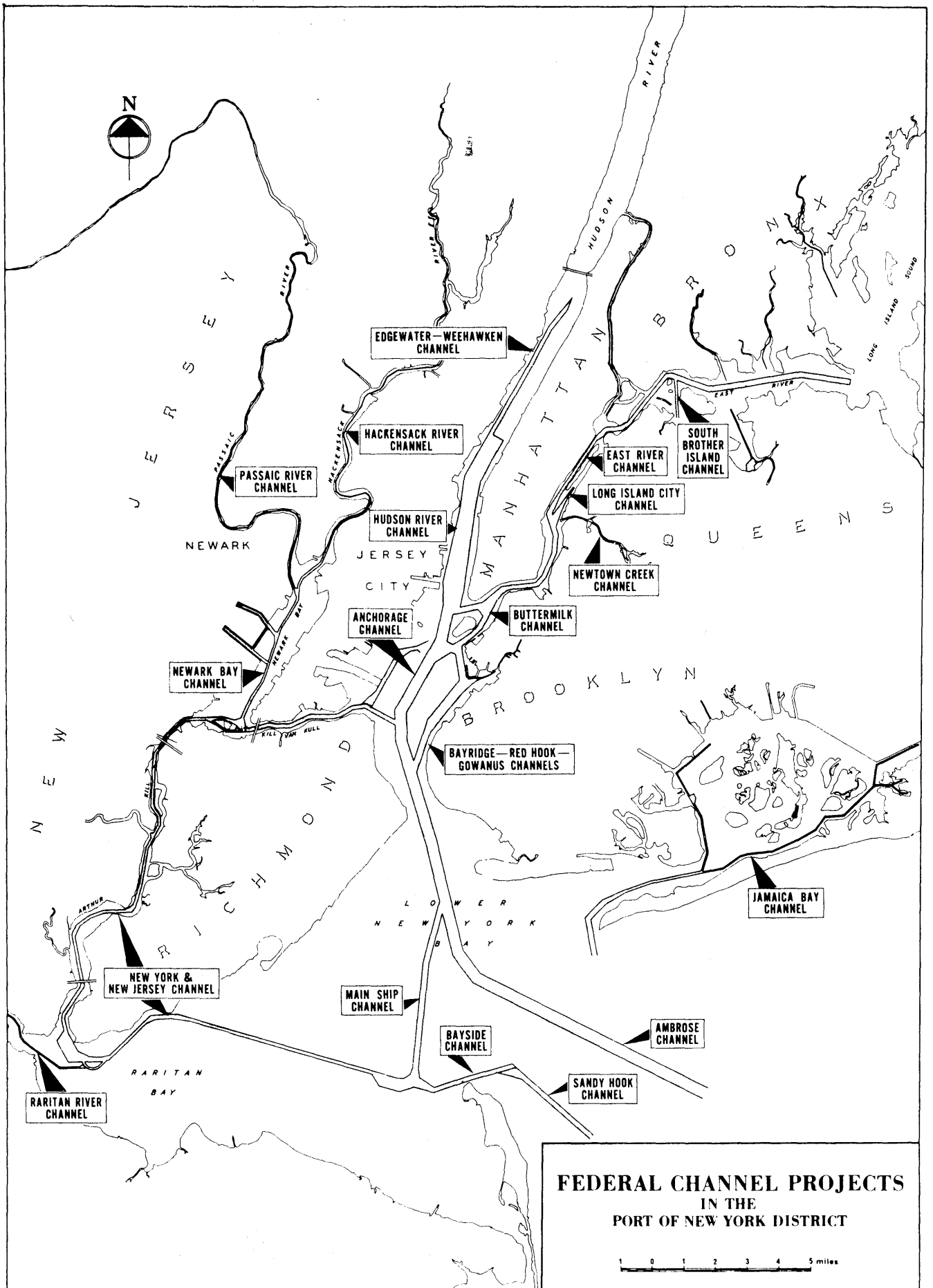
This equipment proved to be so useful that on December 15, 1968, the Sandy Hook Pilots acquired their own units for use throughout the entire Harbor. In addition, most ocean vessels not subject to compulsory pilotage, as well as harbor craft, have VHF-FM radiotelephone units with a capability to receive and transmit navigational and maneuvering information on Channel 13 throughout the Port of New York.

Critical Areas

The members of the New York Towboat and Harbor Carriers Association on February 28, 1969, voluntarily agreed, in the interests of safety, to monitor Channel 13 on their vessel VHF-FM radiotelephone equipment, when entering certain "critical areas" in the Port of New York. Initially, two such areas were established. One lies in the East River extending from East 34th Street in Manhattan to 138th Street in the Bronx; the other is at the mouth of Newark Bay in the triangular area bounded by the Bayonne Bridge across the Kill van Kull, the Baltimore & Ohio Railroad Bridge across the Arthur Kill, and the channel entrance to Port Newark on Newark Bay. The Association is prepared to designate additional "critical areas" should a proven need arise.

Tugs and harbor craft represented by the Association broadcast their name, destination and nature of their burden upon entering blind turns in these areas via Channel 13, and monitor possible responses so as

(Continued on Page 12)



(Continued from Page 10)

to avoid navigational encounters with unseen vessels ahead.

The Kill van Kull and Newark Bay

The Kill van Kull is the northern segment of the New York and New Jersey Channels between St. George and Howland Hook on Staten Island. It is also the seaward link with the Newark Bay Channel and the Hackensack and Passaic Rivers to the north. Vessel traffic has grown on Newark Bay from 16,376 movements in 1958, to 26,525 in 1968. Of this, deep-draft vessel movements, that is, ships drawing 19 feet or more of water, increased from 1,398 to 2,015. Similarly, maximum loaded passenger and dry cargo ship drafts grew from 35 to 36 feet, and tankers from 34 to 36 feet, reflecting an increase in vessel sizes. Tankers and container ships up to 700 feet in length and 90 to 100 feet in width now regularly traverse this channel. By the end of 1971, container ships 944 feet long and 105 feet wide are scheduled to begin operations on the Bay.

Vessels entering the Bay must make a 110-degree turn from the Kill van Kull into Newark Bay at Bergen Point, pass through the 216-foot wide west drawspan of the Central Railroad of New Jersey bridge which is less than one mile up the Bay Channel, and clear a 400 to 500-foot wide channel (which is presently being widened to 700 feet and being provided with 300-foot wide bridge holding areas on the west side) enroute to middle and northern terminals. Above Port Newark, tankers and bulk cargo vessels must clear the 300-foot wide span of the Lehigh Valley Railroad Bridge. The entire Bay Channel is only about 4.7 miles long, a highly contested waterway.

Several oil and bulk terminals and the vast Port Newark and Elizabeth-Port Authority Marine Terminal general cargo and container complexes are served by the Kill van Kull-Newark Bay waterway. The Newark and Elizabeth terminals, when completed in 1973, will have 61 ocean vessel berths. In 1969, they handled 8.3 million tons of general and container cargo. By 1973, this

will grow to 11.0 million tons and they will be the Port's prime general cargo and containership center. This will cause even greater ocean vessel traffic in the relatively difficult approach channels.

Radar as an Aid in Harbor Navigation

HAR or RATAN could be advantageously utilized on the Kill van Kull-Newark Bay Channel complex. As already noted, the widths of these channels when fully improved will at best range only from 700 to 800 feet. These waterways have several sharp and blind bends and are crossed by two constrictive drawbridges. They combine to form the seaward approach to the fastest growing and largest single marine terminal complex in the Harbor which will continue to attract increased ocean traffic and larger vessels.

A Port Authority analysis of Third Coast Guard District records of vessel collisions and groundings in New York Harbor shows that accidents which conceivably might have been avoided or minimized by HAR or RATAN, amounted to \$46,000 in damages in 1966; \$19,900 in 1967; \$184,600 in 1968; and \$414,100 to July 1969. The 1966 cost does not include the "Alva Cape-Texaco Massachusetts" collision, fire and loss of 32 crewmen. That disaster may run to over \$3 million in costs.

The data show a marked rise. Of the 23 vessel accidents that occurred during the 3½-year period, 18 were collisions totalling \$622,600 in costs, while only two involved groundings at a total cost of \$42,000. Of the 18 collisions, eight occurred on the Kill van Kull and Newark Bay at a total cost of \$216,000, again, excluding the "Alva Cape-Texaco Massachusetts" disaster, which occurred at the junction of these two waterways. Accordingly, vessel collisions on this water resulted in an annual cost of about \$70,000. If the "Alva Cape-Texaco Massachusetts" collision costs were included in the average, the figures would be much higher. Of these eight collisions, seven included ocean vessels. The degree to which these could have been prevented or reduced with the use of HAR or RATAN cannot be accurately determined, but it is fair to assume that in-

formation available to mariners from such a system would have made a positive contribution toward a reduction.

Another safety consideration achievable through HAR or RATAN is simplified navigation. By providing the mariner with an enlarged and more timely understanding of vessel traffic, vessels using the waterway are afforded an earlier opportunity to identify forthcoming navigational encounters, to identify specific vessels and to arrange their maneuvers in advance of final, close-in and less flexible requirements under the Rules of the Road. With such advance "navigational planning", mariners are freer to devote more attention to immediate operational problems in which decisional lead time is less.

Hopefully, the kind of devastating collision that occurred between the "Alva Cape" and "Texaco Massachusetts" might be avoided in the future by carefully considered applications of Section 2 (b) (1), (2) and (5) of this bill. Thank you for the privilege and opportunity of presenting the views of The Port of New York Authority on these important aspects of the significance of the proposed "Ports and Waterways Safety Act of 1970" to the Port of New York.

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The Sea-Bees

Bremen:—Barges or sea-bees are the terms used by the large American shipping company, Lykes Lines, when referring to the numerous transportation lighters which will cross the Atlantic on their large parent ships and first be set to water in the coastal areas, for subsequent simultaneous loading and discharge in one or more ports—so shortening the overall transportation time from the present 60 days to, then, 30. The first LASH-ships, with their many lighters, will already be serving Bremerhaven still in 1970,—that port on the Atlantic German coast, in the Weser estuary, which, thanks to its extraordinarily favourable situation is particularly advantageous for this new type of ocean carriage. (Bremen Air Mail, August)

Report By the Chairman

Mr. A. G. McCrae

Clyde Port Authority 1969

We can look back on 1969 as a year of opportunity and progress and, indeed, with some satisfaction at the results of the policies formulated in our early years as a unified estuarial Authority.

The Metra/Weddle Report was received by the Clyde Estuary Development Group in January, 1969 and sparked off renewed interest and realisation of the potential of the Estuary both within and furth of Scotland. The future of the Estuary was debated in Parliament and we were much involved with Scottish Members, Scottish Trades Union Congress and other parties concerned and anxious to be informed of our plans for the exploitation of our great natural deep water asset.

The principal interest was our proposal to the British Steel Corporation to construct an iron ore import terminal at Hunterston. We have been in consultation with the Corporation throughout the year and their recent announcement that they have decided in principle to proceed with this project, subject to planning permission, was received with much satisfaction.

The Review which follows reports in full on the Public Inquiries which have been held during the year relative to industrial development in the Clyde Estuary. Our disappointment at the rejection of the Murco Petroleum Company's application is only tempered by the knowledge that they are currently examining other sites in the Clyde area. Their desire to use the deep water of the Clyde for mammoth tankers is unchanged and we still hope that another area acceptable for oil refinery development will be found.

Much has been said and printed on the conflict of industrial development with the need to preserve the amenity and beauty of the Clyde Estuary. The Authority, aware of the restrictions which this must in-

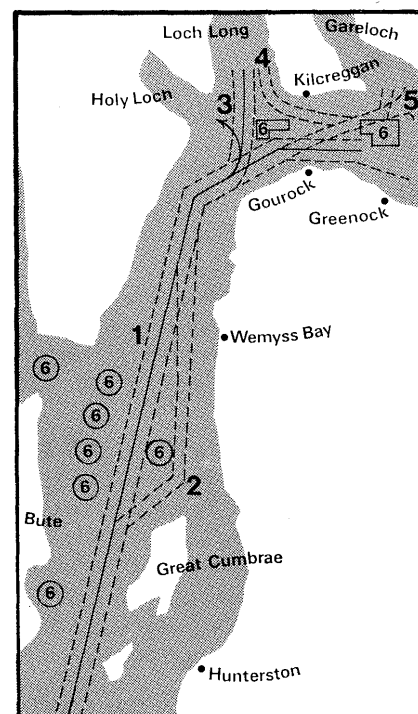
evitably impose on their development prospects, are much concerned that the planning procedures are causing delay to the progress which they anxiously seek. The difficulties are recognised but we urge the Government to act with the utmost speed possible.

Our first large capital project, the Container Terminal at Greenock, came into operation in March and the Review shows the outstanding success which has been achieved in little more than a year and the continued enquiries by shipowners which we are receiving. This has led us to prepare a scheme for an extension of the Terminal which is now awaiting approval from the Minister of Transport under the Harbours Act. The Terminal is rapidly approaching full capacity and additional berthage, back-up space and equipment will soon be required.

The viability of the present facility is already assured and we have no doubt that the additional £1.3 m. required for the extension will be an equally sound investment. A high level of efficiency and enthusiasm by management and workers at the Terminal, providing as they do a round the clock service, has played a major part in achieving this success.

Since the turn of the year we have seen the publication of the "Ocean-span" report prepared by Sir William Lithgow, Bart., a member of the Authority, for the Scottish Council (Development and Industry). One of the major and most interesting themes in this report is the concept of the Forth/Clyde landbridge and the co-ordinated development of the two Estuarial Ports to which I made reference in my report for 1968. We are now considering a follow-up study in co-operation with the Forth Ports Authority.

With all the promising new devel-



The new Recommended Channels for vessels in the Clyde Estuary

- 1 Firth of Clyde Channel
- 2 Skelmorlie Channel
- 3 Loch Long Channel
- 4 Kilcreggan Channel
- 5 Ardmore Channel
- 6 Designated Anchorages

opments in the Estuary there is perhaps a tendency to overlook the fact that we should have no resources or indeed people to make them possible were the Upper Reaches failing to earn for us our bread and butter. Throughout the year problems in London and Liverpool have unfortunately occupied much of the news concerning British Ports; good news being what it is, little is heard of successful operations elsewhere. The Glasgow docks continue to be an example of the very best in that respect with the Scottish Transport & General Workers' Union playing a vital role in making this so. We continue to attract much shipping to our river and handled over five million tons general cargo, iron ore and grain during 1969 in Glasgow docks area. Once again the financial results reported are satisfactory although our surplus is less than previous years due to the heavy impact of high interest charges. In no small measure this has been achieved by good management and by the efforts of the General Manager and all the offi-

cials and staff of the Authority. Once more the Authority wish to record their thanks to them.

I would express our appreciation also to the management and staff of our subsidiary companies, James Spencer & Co. (Stevedores) Ltd. and the Ardrossan Harbour Company Ltd.

The latter again earned for us a good return on our investment but unfortunately Spencers ran into a considerable loss as the Review explains.

The ports Bill is now before Parliament and may well receive the Royal Assent during the summer. This in turn could mean the end of the Clyde Port Authority in its present form after a short life of less than five years. Our most fervent hope must be that our successors will be given the maximum autonomy possible within the framework of a nationalised port industry to enable them to continue the work to which we have applied ourselves during these eventful years.

Review of 1969

Container Terminal

On 22nd March, 1969, the Clydeport Container Terminal came into operation with the inauguration of the United States Lines' New York service by the American Liberty. The terminal was formally opened by the Minister of Transport, the Rt. Hon. Richard Marsh, M.P., on Friday, 27th June.

The build-up of services since March, 1969, has been fairly rapid and at the time of writing three services are operating on a weekly basis to the East Coast of the United States. A service to Canada commenced on 18th February, 1970 and will be operating on a weekly sailing schedule by the late Spring.

The operation of the terminal during the year confirmed the Authority's view that to provide flexibility in landward transport to meet the demands of the widening cargo catchment area a direct rail access to the berth would be necessary. Work on the direct rail link to the berth is now under way and this facility should become operational during the late Summer of 1970.

With the rapid build-up of services in the short space of a year, and

having regard to the further services anticipated during the next eighteen months, the Authority decided in December, 1969, that an extension of the berth would be necessary to cope with the projected additional services and resultant increase in traffic. Application has accordingly been submitted to the Minister of Transport for approval to increase the length of the berth by 336 ft. and provide a further six acres of back-up area with an additional transporter crane and ancillary equipment to enable the berthing and working of two vessels concurrently. It is hoped that approval to the extension will be given at an early date in 1970 to enable the work to be put in hand and the additional facilities brought into operation as soon as possible.

Inland Clearance Depot

The Inland Clearance Depot at Braehead, operated by Clyde Container Services Limited, in which the Authority is the major shareholder, has continued to expand its trade with the build-up of shipping services using the container terminal. The Braehead Inland Customs Clearance Depot provides a very necessary groupage service for export container traffic and also all the facilities for the breaking-down and delivery in parcels of containerised imports.

As was envisaged in last year's Report the depot is proving to be the ideal focal point for the groupage of export cargoes and as the hub of a growing distribution network for containerised imports.

Conservancy

The increasing number of large vessels, principally tankers, now using the Clyde Estuary necessitated a review by the Authority of their conservancy functions. To provide for the safe navigation of these large ships the Authority has introduced a scheme of designated channels and anchorages which has now been approved by the Board of Trade and the Commissioners of Northern Lighthouses and incorporated in the recently published Admiralty Charts.

The Skelmorlie Channel, which runs from the north end of the Great Cumbrae Island to opposite Dunoon

was established in time to accommodate the passage of the first of the 200,000 tons tankers to the British Petroleum Company's terminal at Finnart on 23rd August, 1969. Additional buoys and shore markers were provided in Loch Long by the Authority in conjunction with British Petroleum whose Finnart Jetty can berth tankers up to 250,000 tons and with modification will be able to accept the super-tankers up to 500,000 tons presently in the design stage.

It is worth observing that on 14th September, 1969, the Evgenia Chandris was the first of several tankers of over 200,000 tons to lessen her draft by discharging a part of her cargo at Finnart to enable her to be berthed elsewhere in the United Kingdom or on the Continent.

A further part of the overall conservancy programme during the year was the successful automation of the Toward Lighthouse and work is proceeding on the establishment of a Port Control Tower for the lower reaches at Princes Pier, Greenock. The control tower will be fitted with radar and VHF radio and will provide a comprehensive navigation service for shipping.

Future Planning and Development

Deep Water Potential of the Clyde Estuary

During the year several large-scale capital development projects, dependent upon the natural deep water of the Estuary, reached the stage of firm applications for planning consent. In view of the magnitude of the proposals, the Secretary of State for Scotland, as the overall Planning Authority, called in the applications from the Local Planning Authorities. A Public Inquiry was held in April/May, 1969, into the proposed establishment by the Murco Petroleum Company Limited of a deep water jetty at Wemyss Bay to accommodate 200,000 ton tankers with a tank farm on the hillside immediately behind the berth and also an associated oil refinery at Longhaugh Point some 17 miles away. A second Public Inquiry was held in September into the South of Scotland Electricity Board's scheme to construct a coastal oil-fired electricity generating station at Inverkip and also if neces-

sary, an oil import jetty.

A third Public Inquiry commenced in November, 1969, and extended into February, 1970, into both British Steel Corporation's plans for an iron-ore import terminal at the Hunterston Peninsula with a designated area of land for a future coastal steel works and the proposal by Chevron Oil Europe Inc. for an oil import jetty at the southern end of the peninsula with a tank farm and oil refinery immediately behind.

As this Report goes to press the Secretary of State for Scotland has announced approval for the South of Scotland Electricity Board's oil-fired generating station at Inverkip but has rejected on grounds of pollution the project by the Murco Petroleum Company for an oil refinery at Longhaugh Point. A decision on the proposed developments at Hunterston Peninsula is awaited.

In March, 1969, the Authority offered to provide and operate an iron-ore terminal for the British Steel Corporation at Hunterston and during the year discussions continued with the Corporation. Negotiations between the Authority and the Corporation are well advanced on the basis of the Authority constructing the marine works for an iron-ore terminal to accommodate large bulk carriers and the Corporation providing the land-based facilities.

The Authority's promotional plans both at home and abroad continue to be aimed at the exploitation of the Clyde's natural asset of hazard-free deep water capable of taking ships of 500,000 tons dwt. and indeed even larger without the need for dredging—an asset which cannot be matched in any port area in the United Kingdom.

Rationalisation of Port Facilities

During the year the Authority approved the closure of Queen's Dock and the north side riverside berthage at Lancefield Quay and while the problem of providing alternative berthage facilities for the users delayed the closure beyond the end of the year as originally programmed, the Dock is now scheduled to close at the end of April, 1970. Agreement was reached in the course of the year for the sale of the Great Harbour, Greenock, and most of the associated land to Scott-Lithgow Limited, the Lower Clyde shipbuilders and ship-repairers. This will enable the

Scott-Lithgow Group to rationalise and expand their fitting-out and ship-repairing facilities, the water and land areas being adjacent to the 1,000 ft. long dry-dock already owned by the Company.

Ports Bill

The Ports Bill to nationalise the major ports of the United Kingdom, i.e., ports with an annual throughput of more than 5 m. tons of cargo, was presented to Parliament in November, 1969. The Clyde Port Authority and the Forth Ports Authority in Scotland will both be affected by this Bill which requires the National Ports Authority to consider the desirability of having a single port board for such of their harbours as are in Scotland. The Clyde Port Authority has all along maintained that, having regard to the short distance of approximately 40 miles between the Forth and Clyde and the opportunities to be exploited by an East/West link an amalgamation of the Estuaries into one unit would be to the advantage both of the Ports and of the Scottish economy as a whole.

Miscellaneous

Ardrossan Harbour

The Authority's subsidiary, the Ardrossan Harbour Company Ltd., has continued to provide excellent facilities for the short sea trades and the success of the new Coast Lines' service to Belfast has been gratifying. With the increasing demand for car ferry facilities to the Isle of Arran, arrangements have been made with the Scottish Transport Group for a new roll-on/roll-off terminal at Ardrossan for the Arran service and this new facility will become operational during May, 1970. To ensure that the Port has capacity for future expansion, the Ardrossan Dockyard Company's interest in the adjacent dock facilities was purchased during the year and when filled in this will provide an additional 12 acres of land for port development.

Stevedoring and Dock Labour

The two stevedoring companies operating in Glasgow, the Authority's subsidiary, James Spencer & Co. (Stevedores) Ltd., and Strathclyde Stevedoring Services Ltd., have continued to provide excellent turn-rounds of vessels and the continuing

good labour relations reflect the co-operation obtaining between the employers, trade union officials and dock workers. During the year the dock labour force was reduced from 1,751 to 1,363. The reduction was effected by natural wastage and the release from the Register of 300 men, under the voluntary severance scheme introduced as part of the Devlin Report Stage II.

(Note On 16th March, 1970, under a second severance, a further 63 men left the Register which now stands at 1,300 men.)

Canteen and Amenity Facilities

The canteen and amenity block facilities already provided have contributed much to better working conditions throughout the Port and the second stage of a programme of new and improved toilet and washing facilities throughout the Port is now under way. It is anticipated that the final stage will be undertaken during 1970.

Computer

The Authority's computer came into use towards the end of the year and development is continuing towards centralisation of accounting, budgetary control, cost analysis and production of statistics.

Training

The Authority continued their policy of encouraging training and over 80 members of the staff attended courses during the year covering port operations, computer application and programme planning and work study. In addition, apprentices attended day release classes appropriate to their trades.

Boatmen

The boatmen's service in Glasgow Harbour has been operated by self-employed harbour boatmen over the years. Towards the end of 1969 agreement was reached with representatives of the boatmen and their trade union under which the Authority have now taken the boatmen into their employment. This is a further step forward in industrial relations in the Port and will ensure the continuance of an integrated boatmen's service for shipping in the future.

Commercial Activities

The Commercial Department continued to provide statistical information on an improved basis to ship-

pers and also increased their activities by the appointment of a commercial representative to maintain personal contact with the Port Users.

The Authority took part in two exhibitions during the year as part of their expanding public relations activities. The first held in March, was organised by the Greenock Junior Chamber of Commerce and was a highly successful local exhibition. It proved to be extremely useful in explaining to the general public, as well as port users, the aims and aspirations of the Authority and their proposed developments for the future. The second exhibition, held at Manchester in April, was organised by "Ports & Terminals" and an 1/8th scale model of the container terminal formed the centrepiece of the Authority's stand.

In order to ascertain the amount of cargo arising in Scotland being shipped through other than Scottish Ports, the Authority, in conjunction with the Forth Ports Authority, initiated a joint survey by sending a questionnaire to almost 1,000 importers/exporters. The results of the survey are being examined as this Report goes to press.

A promotional tour of North America to publicise the port facilities of the Clyde was undertaken in the Spring by the General Manager and the Commercial Manager. It is the Authority's view that personal contact with users and potential users of our facilities must continue to be encouraged if the Clyde is to retain its position as a major United Kingdom Port.

Trade and Finance

During the year the tonnage of shipping arriving at Clydeport at 14,198,137 tons showed an increase of 2,121,655 tons over last year's figure. This increase is in the main accounted for by the inclusion for the first time of 1,937,169 tons of naval vessels and non-trading ships which are now subject to conservancy charges. Compared with last year's figures the tonnage of foreign shipping at Glasgow and Greenock is up by 294,368 tons but coastwise shipping showed a drop of 354,752 tons mainly on account of the cessation of Burns & Laird Lines. Glasgow services to Ireland.

The total tonnage of goods at

15,311,298 tons showed an overall increase of 774,440 tons over 1968. Iron ore imports were up by 358,033 tons to a record figure of 2,930,514 tons for the year. Oil and petroleum imports handled through Finnart Oil Terminal increased by 430,366 tons to a total figure of 4,921,243 tons.

Meadowside Granary showed an upturn of 12,116 tons and, while marginal, this is nevertheless heartening after the considerable reductions during the past two years. With the coastwise trans-shipment trade which is a new feature of the Granary operations and the slight upward trend in imports the prospects for 1970 are more encouraging than they have been for some time.

Foreign exports of steel goods and machinery were disappointing and fell by 61,709 tons mainly due to the reduction in exports of hot rolled coils.

The consolidated revenue covering all the Authority's activities at £6,622,245 was down on last year by £79,474 and reflects the reduction in stevedoring revenue of James Spencer & Company of £275,234. The operating surplus for the year was £1,425,741 before adding investment income of £35,680 and after payment of interest charges the Authority's activities showed a small net surplus for the year of £67,948.

The disappointing results on the stevedoring activities of James Spencer & Company were in large part due to the surplus labour which had to be carried during the year—a situation which was aggravated by the movement of the North American traffic from Glasgow to the Greenock container terminal. The reduction in the dock labour force as a result of the voluntary severance scheme already referred to should result in an improvement in the stevedoring position in 1970.

Capital expenditure during the year amounted to £1,396,276, the bulk of this being in respect of Clydeport Container Terminal at Greenock. Expenditure on extraordinary repairs and renewals was the lowest for many years at £31,576.

At the beginning of 1966 the Authority started with a capital debt of £18,287,837 which bore interest charges of £941,524. During the four years of the Authority's exist-

ence the capital expenditure has amounted to £7,763,039 including the purchase of the Ardrossan Harbour Company Ltd. and the acquisition of James Spencer & Company and other stevedoring interests. The compensation received from the Corporation of Glasgow over the three years 1966-1968 for the berthage above the new Kingston Bridge complex, together with a measure of payment of capital expenditure out of revenue, have made it possible to hold the capital debt to an increase of only £3,801,248 to £22,089,085 over the period. The interest charges for the year, as shown in the consolidated accounts at £1,383,022, impose an increasingly heavy burden on the finances having increased by £124,488 in net terms after excluding the investment income as against the comparable level in 1968 of £1,222,854.

During the four years since January, 1966, the Authority's net interest charges have risen by £390,647 and of this total figure some £140,000 is accounted for solely by additional interest payable on the £8,528,500 of bond debt which fell due during the period bearing rates from 5¼% to 6¾% and which had to be replaced at rates ranging up to 9½%. The average rate of interest now being paid is £7 0s. 1d. % compared with £6 4s. 6d. % in 1968.

The year 1969 was again viewed against a background of inflation and rising costs and it was with reluctance that the Authority found themselves unable to maintain the dues on ships and goods at the level fixed in July, 1966. Ship and goods dues have accordingly been increased by 10% as from 1st January, 1970. The portents for 1970 point to even further rising costs all round over those of 1969 and while considerable savings have been effected during the four years from 1966, there comes a point when it is necessary to obtain additional revenue if the Authority is to continue solvent. The charges for ancillary services were last reviewed in 1967 and it is only right to sound the warning that it seems almost inevitable that an increase will require to be made during the coming year.

LASH System Interlinks

Mississippi and Rhine

By Jack König, M. EC. SC.

Rotterdam-Europoort-Delta 1969 No. 4

In every method of transport there are three elementary stages—the loading, the actual transportation (direct or broken) and the discharging of the goods. These three events characterise the integral transport chain, the complete route of the goods from door to door. Although it might at first sight seem strange, the fact is that costs related to the actual geographical transportation of goods can be kept relatively low provided some moderate demands are made on the speed of transport¹).

As a rule, the costs are mainly the decisive factor in loading and unloading of the means of transport, not in the last place by the often long involvement of capital and crews during the period the transport means lies alongside the quay-side or stands outside the factory. This is even more serious when the means of transport has to be changed resulting in broken or interrupted transport. This frequently occurs in intercontinental transport and incurs transshipment procedures in the seaports, which are always relatively costly and sometimes absolutely costly. Cutting the time spent by ships in the ports 2) is, therefore, a good way of achieving a reduction in the total transport costs along the integral transoceanic transport chain 3).

If, moreover, one can cut down the manpower of shore personnel necessarily engaged in the transshipment procedure, the saving in costs is greater still. This is the idea lying behind containerisation, palletisation and other unit load techniques. The most drastic saving would be when big quantities of cargo are concentrated in outsize packing units so that goods do not have to be repacked until they reach their place of destination.

The latter is the conception of a transport system which in recent years has been employed more and more—the kangaroo transport. One

can retrace this in the roll-on/roll-off method (in the ferry traffic across the North Sea, among others), and the “Huckepack” or “système kangourou” of the European railways. While containers, pallets and other unit load methods can be included as packing and stevedoring techniques, in kangaroo traffic the single, large means of transport carries the other, smaller transport unit. At the same time, it also fulfills a packaging function, in that it reduces the demands which can be made on the primary packaging of the merchant's goods. In other words, kangaroo transport, which includes the LASH system, constitutes a large degree of integration of packing and transport techniques.

Once the alert shipper recognises that the costs of the transportation of the goods can be kept relatively low in relation to the costs of packing, loading and unloading, then it will also be clear that the economic possibilities in the integration of packing and transport techniques which, in principle, are offered by kangaroo transport, are certainly worth taking into consideration.

If the diligent port manager, likewise, is awake to the advantages of kangaroo transport—which are presented to him in the shape of roll-on/roll-off and LASH—then he will not fail to take efficient measures in his area to accommodate and re-forward the kangaroo ships and their “babies”. The following is a brief review of how a certain shipper (International Paper Company, U.S.A.), a shipping company (Central Gulf Steamship Corporation of New Orleans), and the port authorities of Rotterdam came to accept the principle and develop it in the shape of LASH—lighter aboard ship.

LASH and the shippers

The figure who appears in the transport world as the shipper is, in fact, nobody else than the businessman who is desirous of supplying his

clientele with goods in the best possible way for both the sellers and buyers. One important instrument in the entire arsenal of commercial means is cheap and efficient transport. Cheap, to keep the purchase price attractive for the client; efficient, in order to avoid costs of damage during the transportation and, via regular supplies to keep the volume of stocks small.

International Paper is an American concern with 33 factories spread throughout the world, which collectively manufacture 7 million tons paper and wood-pulp annually. Furthermore, I.P. owns 81 processing plants which supply a large assortment of packing articles. In addition, I.P. has the “Long Bell Division” which produces triplex and wood products. The total annual turnover in 1968 amounted to more than 1,500 million dollars. The Company's objective is aimed at a closer link between the magnificent forest resources of the United States and the economic expansion of West Europe. Beside intensive technological and biological research, International Paper strives in particular for the introduction of new methods in the field of selling and service.

This large-scale shipper, partly put on the right track by preparatory studies carried out by the Central Steamship Corporation of New Orleans on the one hand and by advice from Rotterdam on the other, decided as the first shipper to introduce the kangaroo system to world shipping. The products of the various establishments are made available along the banks (or nearby) of the Mississippi, often some hundreds of miles from New Orleans. This means transport by inland vessels to the seaport in the river estuary. On the river Mississippi, the pushing technique of transport has been known for many years and efforts towards rationalisation of river transport often resolves in the adaptation of pushboat shipping. At the other end of the transport chain, i.e. in the European Community, the customers are also mostly situated along fine waterways, the Rhine, or the other West European canal network. In this area, too, the system of “pushing” was introduced some ten years ago, and so for the last part of the long journey which the goods

had to make, the introduction of pushlighters was conveniently handy.

The total transport between the U.S. and Europe which I.P. must carry out lies in the order of one million tons per year. This quantity of products, which have to be protected against the effects of wet weather, made it wise to reflect on the transshipment procedures in the seaports of America and Europe. In 1968, the Company began in co-operation with Central Gulf Steamship Co., work on the kangaroo project, which was given the name LASH—lighter aboard ship. The train of thought was clear: pushlighters had to be constructed in such a way that they could serve as packing containers and be transported across the ocean by specially designed ships. A long-term charter agreement was signed, whereby the ACADIA FOREST (43,000 dwt.) would transport the cargoes of International Paper on her trips to Europe and, in reverse, take on board the cargoes of other shippers for the journey back.

While the 73 lighters each of 380 tons load-capacity, which were transported to Europe on the maiden trip, deliver their cargo to I.P.'s clients in Europe, the mother-ship is sailing back to the United States where 73 new lighters with wood-pulp and linerboard are waiting to be lifted on board. Meanwhile, another 73 lighters lie ready in the factory-ports far upstream on the Mississippi, waiting to be taken to New Orleans.

When the three sets of LASH-lighters are in operation early in 1970, there will always be 73 lighters either loaded or unloaded, while another set will be on board the Acadia Forest sailing across the Atlantic Ocean with a speed of about 19 knots. Including 14 reserve lighters, there are 233 LASH-lighters in total.

The Acadia Forest, under the command of Captain E. Colin Anderson, is the first of a number of ordered LASH-ships, which has been delivered⁴).

These ships are destined to transport all kinds of staple goods or liquid cargoes.

During a gathering to commemorate the arrival of the ship in the port of Rotterdam, the chairman of the managing board of I.P.-Europe,

Mr. Gordon S. Riess, said: "We are proud that we were able to cooperate in the preparations of the LASH-system". He said: "It underlines our obligations of offer the greatest possible service to our European partners and customers. We now have the shipments of the products of our forest plantations in America to the European factories entirely in our own hands".

In a statement issued on the occasion of the launching of the Acadia Forest, the President of I.P., Mr. Edward Hinman, explained the favourable aspects of the system as follows:

1. The Lash-ship is not troubled by port congestions because it leaves its lighters behind for further transportation and the mother-ship begins a new sea trip. The kangaroo ship spends more days at sea, the loading is completed sooner.
2. Lash frees shippers and receivers of the necessity of investments in port and warehouse facilities.
3. Lash serves small ports and rivers inaccessible to seagoing ships. A saving on inland transport.
4. Lash means a considerable saving on the number of times that the goods have to be handled. There are less claims for damages and lower insurance costs.
5. Lash enables a regular flow of goods to the consumer areas whereby the stocks can remain smaller. Capital freed as a result of this becomes available for other purposes.
6. Lash speeds-up the delivery of the cargo because on the way there is no longer any hold-ups. The number of ports called at by the seagoing ship is reduced. And so are the lay days. The lighters are discharged promptly and taken further. In this way, all the consignees receive their goods about the same time. With the old system, the person whose goods happened to lay at the top was served first while the consignment at the bottom was sometimes delivered as much as three weeks later.
7. Lash can supply a through Bill of Lading whereby the paperwork is simplified and the clearance formalities made easier.

The I.P. plans to ship to Europe with the Acadia Forest, about 250,000 tons of wood-pulp, cellulose and paper products such as linerboard

and carton. If all kangaroo ships ordered up to now should do this, it would amount to a transport of more than 3 million tons to Europe.

LASH and the shipping company

As rationalisation of the transport chain makes progress, the interdependence of the different links in the chain becomes greater. The shipping companies of today, therefore, face the problem that the conception of the "integral transport chain", the door-to-door transport, in so far that this threatens their position, could limit their role to one single aspect of the chain. The control over the entire chain could, in that event, come from strange quarters. The shipowners as a result feel that they are being degraded to "ferryman", a ferry-man who is hardly captain of his own ship.

The Central Gulf has steered clear of these rocks by conducting in good time transport research and, in doing so, has gained a good lead in the field of modern transportation. All the modern conceptions appeared, however, in addition to the future prospects, to have another side, namely the height of the sums of money for the essential investments. This leads to the fact that nowadays, the certainty of transport is equally desirous to the shipowner as it is to the shipper and receiver. A long-running contract—in spite of all the disadvantages inherent to this—is, therefore, notwithstanding an acceptable thing, and agreement was reached. As a result, the conditions for the cooperation with International Paper held that: the system and the continuous application of it was assured, and with this the (minimum) yield of the high investments. And so a long-running charter could be concluded; the effects of this have already been described above.

However, important it is that the yield of the investments appear to be covered by the certainty of a reasonable degree of employment, it does not remove the fact that the absolute height of the necessary capital remains enormous. Central Gulf solved this problem by only ordering for its own account the 233 lighters, costing 5.2 million dollars, and by chartering the kangaroo ship on a longrunning basis from the Norwegian Mosvold Shipping Co., of Kris-

tiansund. Furthermore, it appeared unnecessary to have to purchase their own pushboats on the Rhine. For the distribution of the Lashlighters in Europe use will be made of the pushboat capacity of the French Rhine-shipping combine C.N.F.R. This combine has many establishments along the Rhine as well as a large fleet, so that the technical and organisation capacity exists to smoothly handle the inland transport in Europe. For the sake of completeness, it can be said that Central Gulf, in this respect, had a wide choice because on the Rhine, in addition to the French combine mentioned, there are many other reliable organisations operating which can take care of the continental transport of the lighters.

Without doubt the cooperating shipowners who knew how to make a success of this first LASH-system will be on the look-out for return-cargoes from Europe, in order to boost the earning power of the Lash system.

This new tussle to obtain the outgoing cargoes from Europe will stimulate other shipowners in the Common Market, to introduce similar or other forms of rationalisation. The initiative of International Paper to contribute to the expansion of the growth of prosperity in West Europe has, as it were, a sequel: the European shipowners will also undoubtedly take the path towards far-reaching rationalisation of the continental transport and in doing so, will also make a contribution towards the general welfare of our part of the world.

LASH in ROTTERDAM-EUROPOORT

The first LASH-flow will spread between the suppliers who are grouped round the Mississippi and the customers established in the proximity of the Rhine. The nautical connection route runs, in consequence, via one of the Delta ports Rotterdam, Amsterdam or Antwerp.

The lash-barges can, in theory, be loaded on and off the mothership in the open sea but because of the prevailing conditions in the North Sea, there are several practical objections to this. Preference is given to loading and unloading in a calm harbour basin. For the port management of a potential LASH-port the

question arises whether they must introduce facilities for this shipping method. This is a problem worth studying.

The Port of Rotterdam really knew the result of such a study in advance. For if a dynamic seaport is to maintain and strengthen its position, one must not simply wait more or less passively for new, efficiency-raising activities to come along but search for itself for new possibilities and initiatives born elsewhere. Rotterdam wants to be a large and rapid bulk goods port, but above all, Rotterdam is striving with success to be a great general port where every conceivable commodity is handled efficiently and rapidly. Rotterdam's trade and industry and the port authorities of this world port employ every technical and organisational method considered suitable for the rationalisation of the many transport chains which span the world. The Rotterdam harbours are multifarious and will remain so.

So the LASH idea was greeted with enthusiasm. Part of the Waalhaven was reserved and with the help of mooring-buoys, floating pontoons and substantial maintenance work of the harbourbed, the harbour was equipped for the accommodation of kangaroo ships and the arrival and departure of lighters.

The Waalhaven supplies them with a calm mooring site, which guarantees the smooth-running handling of the Lash-transport. And so it was Rotterdam port which was allowed to receive the first kangaroo ship.

Of course, some money had to be made available for investment in order to equip the new anchorage. This will flow back because the port authorities demand an appropriate harbour-dues for the use of the anchorage.

In its judgement of this sort of project, especially if it concerns the question whether the invested money will return a reasonable yield, Rotterdam works with the idea which perhaps can best be described in short as break even analysis. But the break even point must lay right. Thus no competitive relationships towards other potential LASH-ports are disturbed. Nor are certain benefits granted to the users which are not ultimately paid by the transport

itself. In other words, the spontaneous readiness of the Rotterdam port authorities to cooperate in the success of the LASH-method is, from the financial point of view, also entirely responsible. It was found possible to welcome the new system, a system which at present interlinks the MISSISSIPPI and the RHINE!

This welcome not only applies to the ACADIA FOREST and her sister ships being built. According to details issued by International Paper, West Europe including Scandinavia will have an import market of 8 million tons of cellulose, wood-pulp and paper product in 1974. If this is correct, these arrivals will mean that great activity will prevail and extension of the number of arrivals of kangaroo ships falls within the realm of possibilities. Furthermore, LASH can be used for many other semibulk products and liquid cargoes. Against the background of the ever-increasing transshipment figures of ROTTERDAM-EUROPOORT, it would appear that LASH is heading for a very important future.

So Rotterdam wishes the ACADIA FOREST Good Luck and a safe watch.

1) For the interested layman, the following can serve as explanation:

The background of the fact that the actual, horizontal transport of goods is relatively inexpensive, lies in the physical law that moving of a quantity of weight (mass) along the equi-gravitation plane of a sphere does not require, under ideal circumstances, any labour. Under practical circumstances some labour is demanded to give speed to the mass or bulk to be moved and to maintain this speed in spite of the motion of air or water. With moderate speed, the amount remains limited. With the sailing ship, these rules of nature were exploited to the full. The fast clipper CUTTY SARK sailed fully-loaded with a speed of up to 17 knots, a service speed still currently achieved by modern bulk carriers.

2) This applies to both inland vessels and seagoing ships.

3) Door-to-door transport between destinations whereby the ocean has to be crossed.

4) 5 units for the Prudential Lines, New York, for service between America and the Mediterranean Sea.

6 units for the Pacific Far East Line, Frisco, for trade with the Far East.

2 units by the Rotterdam Holland America Line.

5) It must be mentioned that in some cases, the American transport legislation

(Continued on Next Page Bottom)

The Port of Bordeaux

Port Autonome de Bordeaux

France

Maritime activities at Bordeaux are thousand of years old, and Bordeaux and Aquitaine have always been associated in the common destiny of their port and the Gironde-Estuary.

The existence of an estuary is favourable to the establishment of industries which complement traditional activities in the harbour. This industrial development has speeded up over the last few years; on the large industrial zones prepared at Bassens, Ambes, Pauillac and Le Verdon, some important industries have settled (rubber with Michelin, fertilizer with Compagnie Française de l'Azote, chemicals with Coffra-Black, oil refineries with Elf-UIP, ESSO and SHELL; there is also an important power plant, etc...).

All the industrial zones and those under preparation have the rare advantage of possessing unlimited resources of water for industrial purposes or for cooling.

In total, the Gironde offers over 10,000 ha with a waterfront suitable for berths several dozen km long (few regions in Europe have similar possibilities to offer in the immediate vicinity of a large city).

While the great colonial era and the great époques of liberalism, particularly the brilliant XVIIIth century, brought to the port traffic which still continues to day, the industrial progress of the XIXth century was mainly favourable to the development of the northern half of France.

But the second half of the XXth century has brought encouragement to industrial expansion around the ports.

The Bordeaux Port Authority has thus undertaken some important work during the past years, operations, included: deepening of the access channel, construction of a wharf for large oil tankers, an ore

can demand a distinction between the function of shipper and forwarding-agent. In that case, forwarding-agents are not allowed to transport goods with their own material. The charter ship could then provide the solution.

and heavy bulk station, a grain station, preparation and installation of industrial harbour zones.

Existing Facilities and Equipment

The port facilities extend along the Garonne-river and the Gironde-estuary from Bordeaux to Le Verdon (about a hundred of km.). They include:

- 1—A inland waterway port, upstream the "Stone bridge" of Bordeaux;
- 2—A maritime port, downstream of this bridge, which extends on 21 km;
- 3—Outer ports at Blaye, Pauillac and Le Verdon.

I.—The Inland Waterway Port

It includes different public wharfs and a number of private wharfs which are servicing factories in the vicinity and different oil storages. The latter are feeded by self-propelling tankerbarges from the refineries of Ambes and Pauillac. The barge wharf is used especially for the important traffic of sand and gravel but also for general cargo (timber, grain, wine and materials ...) coming from or shipped to either the maritime port or the basin of the Garonne-river.

Bordeaux has indeed, liaison through the "canal latéral à la Garonne" and the "canal du Midi", with Agen, Toulouse, Sète and the Mediterranean Sea.

II.—The Maritime Port

This very well equipped harbour is divided in six zones:

a) The left bank quays:

They include 20 mooring places with a total length of 3,000 m and depths from 7.5 to 9 m at N.T.L.W. They are equipped with 45 electric cranes, of which 34 of 3/6 t, and 11 of 3 t; 15 sheds give a total covered area of 89,000 m² and the open space of paved stockyard is of 50,000 m².

Quite all the regular shipping lines sailing up to Bordeaux operate on these left bank quays.

b) The impound docks:

These docks are two in number. They have 20 mooring places equip-

ped for commercial traffic, with a total length of 1,900 m, and 32 hoisting devices (cranes of 3 and 2/ t; portal cranes of 4/5 t).

There are 8 sheds with a total covered area of 25,400 m² (7,000 m² of which are air conditionned for import of fruits and early vegetables), and 63,000 m² paved stockyard.

The docks receive medium-size vessels. There is an important traffic of timber from Northern-Europe.

c) The Queyries quays on the right bank:

These quays have 5 mooring places equipped for commercial traffic, with a total length of 490 m, depths of 7 to 8 m, and 7 cranes or portal cranes of 6 t.

These quays are principally used for import of heavy bulk.

About 12,000 m² of stockyard enable open storage of goods.

d) Bassens-Amont:

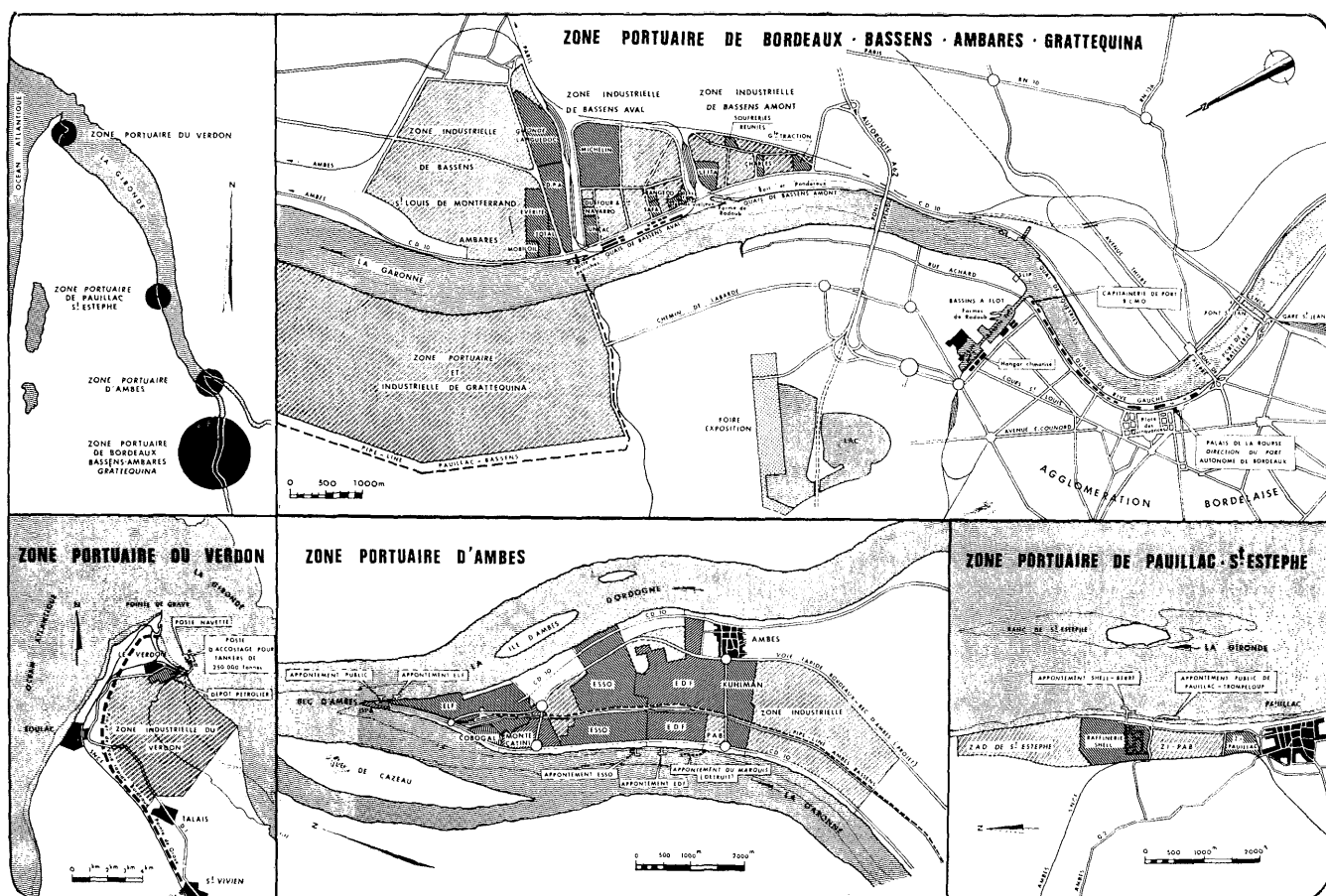
In this area, 4 mooring places of 510 m total length are equipped for commercial traffic with 9 cranes of 2/4, 3/6 or 8/12/15 t. The renewed section of the quay (310 m) enables mooring of vessels with 9,5 m draft. The upstream part is equipped as an ore station which can admit carriers of 25,000 tdw; the discharging speed is of 10,000 t/day. The equipment consists of:

- 2 "Caillard"-cranes with automatic grab, capacity 12 t, and 6 t cranes;
- 1 conveyor-belt, 130 m long, on the edge of the quay;
- 1 transversal conveyor belt, carrying the goods to a repartition tower. From there, the phosphates are carried to silos, whereas the ore, is carried to a stockyard by a last conveyor-belt feeding a mobile turning thrower.

The renewed stage was arranged in a first stage for a capacity of 70,000 m³. It is serviced by two railway-junctions with weighing bridges railway-road for the reshipment.

The renewed downstream part of Bassens-Amont is more specially used for tropical timber (logs or bundles). It gives entrance to a timber yard of 3 ha.

Another timber yard, upstream, gives complementary storage capacity, of which a 8,000 m² special shed, with portal cranes.



e) Bassens-Aval:

In this area, 11 mooring places, total length 1,460 m, are equipped for commercial traffic. There are 17 cranes of 2/4, 3/6 or 6 t, as also a special plant for the handling of bulk grain.

The renewed section (900 m) enables the mooring of vessels with 9.50 m draft.

The Bassens-Aval quays are more and more used; they are the center of different important traffics as grain, oil cake, paper, fertilizer, etc.... There are 17 sheds (2 of which with 2,300 m² area and 2 of 3,600 m²) and about 23,000 m² paved stockyard.

The downstream part of the quay (225 m) specializes in grain handling. It is connected by gallery and conveyor belts to 2 silos (total capacity about 623,000 hundred-weights). The loading of grain is made by a special gantry at the speed of 300 t/hour.

By contract with the Port Authority, the "Docks des Pétroles d'Ambès" manage a public hydrocarbon storage, that is connected by pipe-lines to the oil wharfs of Ambès and to the refineries of Ambès and

Pauillac.

The storage plant has two areas which are connected by pipe-line, at Ambès capacity 77,000 m³ and at Bassens capacity 190,000 m³ now in use; the latter may be extended to 266,000 m³.

f) Ambès:

At 25 km below Bordeaux, at the junction of the river Garonne and the river Dordogne, the oil zone of Ambès has two public wharfs where tankers up to 200 m length can moor. Private wharfs for coasters and barges permit the loading of the products from the refineries on coast-going vessels and on inland waterway barges.

The Outer Ports

Blaye.—At 36 km below Bordeaux, on the right bank, Blaye has a wharf of 160 m length, equipped with 3 electric cranes, for seagoing vessels. The activity consists mostly in export of fire clay, coming from nearby layers.

Pauillac.—At 50 km below Bordeaux, on the left bank, the Port Authority owns a public wharf at Pauillac-Trompeloup, length 290 m, where vessels with 10 m draft can lay. A covered shed of 3,000 m²

completes this equipment.

A little further down, the "SHELL" oil refinery has a private wharf for tankers, coasters and barges.

Le Verdon.—The outer oil port at Le Verdon on the estuary, has two moorings. The mean mooring is for tankers from 30,000 to 200,000 tdw. The secondary mooring is for coaster-tankers of 5,000 tdw.

There are three private storages:

- 1—270,000 m³ (ELF-UIP);
- 2—120,000 m³ (ESSO);
- 3—300,000 m³ (SHELL).

At the mean mooring the unloading speed for oil is of 6,000 t/hour.

In short, the port equipment for commercial traffic is the following:

- 60 mooring places (oilwharfs not included);
- 110 quay cranes;
- 4 floating cranes or sheerleg from 15 to 250 t (of which 2 self propelling cranes of 15 and 60 t);
- 140,000 m² sheds, of which 7,000 m² air conditioned;
- 3 dry docks, of which one with 247 m length;
- several special moorings for big tankers, ore carriers and grain carriers.

Orbiter Probe

IAPH News :

Montreal Conference Committee Is Organized

In preparation for the 1971 IAPH Conference in Montreal, the National Harbours Board of Canada has constituted the following Conference Committee:

Mr. Guy Beaudet, Director, Port of Montreal, Chairman
Mr. G. S. Anderson, Public Relations Officer, Port of Montreal
Mr. A. Duckett, Public Relations Officer, NHB Ottawa

All correspondence relating to the 1971 IAPH Conference should be addressed to:

Mr. G. S. Anderson, eng.
Port of Montreal Building
Cite du Harve Montreal 104,
Quebec, Canada

Mr. G. Beaudet, Conference Committee Chairman, has written to all IAPH members confirming the Conference period of June 6-12, 1971, and also requesting that you mark these dates on your calendar and keep this period free from other commitments.

Secretary General

On August 13, 1970, Mr. Toru Akiyama, IAPH Secretary General, was appointed Chairman of the Council on Ports and Harbors for the Ministry of Transport of Japan for a second 2-year term, to serve for another two years.

Welland By-pass

Ottawa:—Mariners and motorists alike have shown keen interest in the progress being made on a major traffic-improvement project undertaken in 1966 by the St. Lawrence Seaway Authority—construction of the Welland by-pass channel.

Designed to replace the narrow and winding channel which runs through the City of Welland, and scheduled for completion by the opening of the 1973 navigation season, the by-pass will offer vessels a 350-foot-wide channel along the full 8.6 miles of its course east of the city. The width of the present channel is 192 feet.

The six movable bridges, which have long impeded water and road traffic along the old channel, will be replaced by two tunnels. The first, a road-rail tunnel, at Townline Road, is now under construction and a contract has been awarded for the second at East Main Street. Both will be in operation prior to completion of the new channel.

Work is nearing completion on a four-tube syphon culvert to carry the Welland river under the channel. A new dock will be built on the relocated channel to replace the dockage installations on the existing canal section.

These improvements require the excavation of 45 million cubic yards of earth for the channel cut, plus an additional 20 million yards for the two tunnels, the Welland river diversion and the Welland dockage. To date, 80% of channel excavation is completed. The disposal material is being graded in land-form patterns along the entire length of the channel to provide windbreaks for passing vessels and enhance the general appearance of the area. The soil of these land forms is being treated, fertilized and seeded.

In addition, there is an extensive relocation program involving roads, railways, hydro-electric lines, gas

mains, telephone cables and water and sewer facilities. These services are generally being relocated by the respective owners in collaboration with the Authority. Many of the utilities have already been removed and re-established in order to permit channel excavation to proceed. The amount of new track to be constructed for railroad relocation totals nearly one hundred miles in terms of single track distance.

Substantial changes are also being made by municipal jurisdictions and the provincial highways department with respect to the road and highway network in the Welland area. In this connection the Authority is constructing several bridges and overpasses to accommodate rail and road traffic, thereby eliminating level crossings. (Monthly Traffic Review, June, The St. Lawrence Seaway Authority)

Executive Assistant

Baltimore, Md., July 3:—Martin C. Pilsch, Jr. joined the Maryland Port Authority this week as the state agency's first Executive Assistant, it was announced today by Joseph L. Stanton, Executive Director.

Mr. Pilsch's duties consist of aiding the Authority's three top staff officials: Mr. Stanton, Deputy Director W. Gregory Halpin and Dr. Walter C. Boyer, Deputy Director for Engineering and Planning.

The new executive assistant formerly was employed at the Maritime Administration in Washington, D.C. as an integrated transportation specialist in the Office of Ports and Intermodal Systems.

Born and educated in Baltimore, he served six and a half years in the United States Army following graduation from Loyola College in 1963. As a second lieutenant and later as a captain, Mr. Pilsch saw duty with the Army at Fort Eustis, Va., and in the Republic of South Vietnam as harbor master and supervisor of port operations.

He was discharged in January of this year and now resides with his wife and two small children at 5710 Fenwick Avenue, in the Northwood area of the city. (Port of Baltimore News Release)

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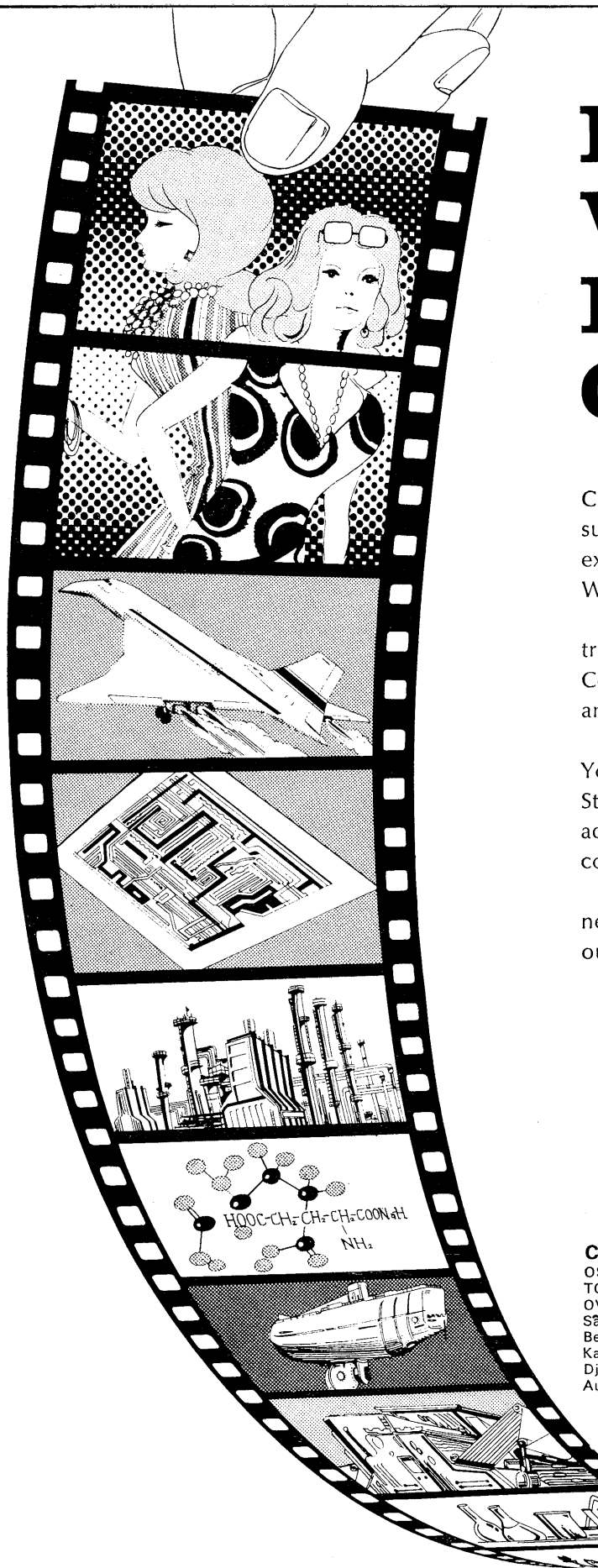
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3 More Container Cranes

Baltimore, Md.: — Somewhat stunned by the heavy and unexpected increase in shipper use of the port, it has been necessary for the Port of Baltimore to add three more container cranes. The rush of major container carriers to Baltimore, for the big boxes to be sent to interior cities, has made these additions necessary. Even the Sea-Land terminal in Baltimore, a private facility operated by Sea-Land, has been forced to plan more such cranes also.

The new cranes are of a new type which will also have an opposite reach (behind it) of 100 feet. This helps to eliminate any pier congestion by being able to handle containers in two locations rather than just the standard one location.

The cranes will be installed within the next 12 months so that they will be ready for the new container services from Japan and the Far East. In 1969, Japanese cargoes to Baltimore increased 24%, while U.S. cargo to Japan from Baltimore increased 26%.

These additional container cranes will be an interim measure until next year when Baltimore completes its remaining container berths on both sides of its harbor. When fully completed, more container cranes will be added.

Dundalk Marine Terminal, the newest and most modern container terminal on the U.S. East Coast, will then have a total of 8 container cranes. This is in addition to the 4 heavy duty, high-speed gantry cranes which operate on a full 360 degree turning circle.

The Hitachi Co., Ltd., the world famous Japanese heavy industries company, submitted bids for the new container cranes. Unfortunately Hitachi was forced to withdraw their bids due to their own heavy press of business. Bidding is open to all international companies and several European and British companies have expressed a desire to submit bids. The cost of these cranes is approximately \$1 million each.

While somewhat astonished at

shippers' quick recognition of Baltimore's location, at the center and closest to all of the U.S. major inland industrial and distribution markets, the Port is fortunate in having a number of large and highly integrated container facilities which eliminates the problems of congestion.

Major container lines using the Port of Baltimore at present include U.S. Lines, Atlantic Container Lines, Sea-Land, Sea Train, North German Lloyd—Hapag, Moore-McCormack, Scantic, A.C.T., Belgian Line and others. Japanese steamship lines have also delivered containers to Baltimore but have been hindered by a lack of containers for this route. It is expected, however, that this situation will be corrected in the near future, especially since direct delivery to and from the Eastern part of the U.S. is much cheaper than using the West Coast of the U.S. (Port of Baltimore News Release)

Steel Exported

Buffalo, N.Y.:—Buffalo has been selected by Doolan Industries of Cherry Hill, New Jersey, as the focal point for overseas steel shipments. "The steel," according to Michael Reiss, manager of the inventories department of Doolan Industries, "for the most part will move to India. We are channeling it through Buffalo for loading into an ocean ship because it is cheaper than sending it via rail to the eastern seaboard. Indications are we will be moving 60 to 70 tons to Buffalo at least once weekly and this figure could grow as we strive to build the tonnage into a regular business."

The Doolan Steel Export Company is the largest exporter of steel sheets and tin plates in the country. Said Mr. Reiss, "The Buffalo export movement is a 'new avenue' for the firm and is expected to work out well as the movement grows." (Port of Buffalo Progress Bulletin, July)

Trade Winds Meeting

Boston, Mass.:—At the meeting with the Massachusetts Congressional Delegation in Washington March 10th President Page Pratt stated "A dependable, competitive,

thriving Port of Boston will make the exports of Massachusetts and all New England more competitive abroad. Boston is the natural gateway to Europe for New England and a substantial hinterland. We must all encourage its full development as an international seaport and airport."

Two days later the Trade Winds meeting presented an unusual and very successful special program on the Port of Boston. Attendance exceeded 180. Commissioner Carroll Sheehan of the Massachusetts Department of Commerce and Development moderated a discussion panel consisting of Alexander Beaton of Patterson, Wylde & Winder, Paul LaRoque of Stone & Downer Co., John Moran of the International Longshoremen's Association, Maitland Pennington, formerly with the Federal Maritime Administration and now with Muller Fox & Pennington Associates of Washington, D.C., Paul Whipple of Wiggin Terminals and John Wylde of Patterson, Wylde & Co.

Chairman John Thompson of the Massport Authority and Thomas Soules, Port Director, then discussed the Boston-Mystic Public Container Terminal and displayed a model of this coming facility. George Trask, The First National Bank of Boston, was Program Chairman.

There have been many requests for the talks of the panelists. They are being assembled and will be available on request. Meanwhile here are some significant quotes from the three talks that have been received.

PAUL WHIPPLE, President Wiggin Terminals, Inc.: "The Port of Boston . . . is moving ahead now since the signing of the contract in April . . . Boston did not have a single vessel in port at the time the strike commenced . . . The longshoremen in Boston worked to see that all vessels in the port could sail before the strike deadline. The other day I received an inter-office memorandum from Toyota Motor Distributors, Inc., and I quote — 'Boston, as in 1968, is still our best port with the lowest damage average and frequency rate.'"

JOHN (RED) MORAN, Inter-

national Vice President, International Longshoremen's Association: "Since the signing of the contracts, avenues of communications heretofore unavailable have opened up between Labor and Management, and both are working together to resolve many of the problems which have faced us. They are also working together to resolve any misunderstandings which may arise. Since the signing of these contracts, there have been misunderstandings and these misunderstandings have been dealt with in a manner satisfactory to both Labor and Management without interruption of work, and I repeat without interruption of work."

MAITLAND PENNINGTON, Muller Fox & Pennington Associates: "To prescribe for Boston is simple . . . 1) Concentrate on Boston 2) Develop a full service concept for the port. 3) A partnership between local government and private industry. 4) Concentrate on commercial business rather than government. 5) No alliances which are not totally to the advantage of Boston. 6) Fair, reasonable and decent labor-management relations." (The International Center of New England, Inc. April Bulletin)

Lower Seaway Toll

Washington, D. C., June 25: — Duluth Port Director C. Thomas Burke told the Great Lakes Task Force and delegation of Great Lakes area Congressmen today that "all stops should be pulled out" in promoting passage of legislation to reduce St. Lawrence Seaway tolls.

Speaking at a special Great Lakes Task Force meeting, Burke described the Seaway tolls question as the most critical issue facing the future of the lakes' ports. And, he said, should Seaway tolls be increased, "it would place millions of people in the Midwest—as well as in Canada—in unbelievably dire straits."

Burke is a member of the Task Force, which is comprised of representatives from the Council of Lake Erie Ports, the Great Lakes Commission, Great Lakes Terminals Association, International As-

sociation of Great Lakes Ports (U.S. Section), International Longshoremen's Association (Great Lakes District) and the U.S. Great Lakes Shipping Association.

The meeting was called to muster support for a bill introduced by Sen. Walter F. Mondale, D—Minn., which would cancel the Seaway's \$156 million debt to the U.S. Treasury. Passage of the bill would require that the Seaway Development Corporation continue to pay all operating and maintenance costs out of toll revenues, but debt cancellation would permit lower tolls—possibly by as much as two-thirds.

Burke said reduction in Seaway tolls would help to attract more international cargoes through the Great Lakes. In many cases, he said, these cargoes now are moving into the Midwest via other coastal routes.

"The imposition of tolls and users' charges for use of the Seaway system discriminates against mid-continent North America, its development and economic health," he said. "As a matter of equity, the Seaway should be operated and maintained open to all users without charge — as are all other coastal and inland waterways in the United States."

To supporters of recent attempts to increase the tolls, Burke charged that "any increase would be a disservice to the 70-plus million residents of eight Great Lakes states and to the shippers and importers who are dependent on foreign ship service.

"In Duluth alone," he said, "one out of every four persons in our work force would be adversely affected by a toll increase. The economy of our state would suffer a serious decline, and Duluth-Superior alone would stand to lose more than \$20 million now generated by world trade." (Seaway Port Authority of Duluth)

Roll-on, Roll-off

Hollywood-Fort Lauderdale, Fla.: —Wallenius Caribbean Line is expanding its operation out of Port Everglades and will inaugurate a direct roll-on, roll-off trailership serv-

ice to the Virgin Island, commencing July 10.

Port Authority Chairman Jack Clark hailed the development as "another milestone for the harbor." He said the new service was the result of continuing efforts on the part of the Authority and Port industries to promote trade with island countries in the Caribbean and West Indies.

The MV Elektra, one of three WCL front-loading trailerships based here, will sail every 10th day to Charlotte Amalie, St. Thomas and Fredericksted, St. Croix.

Wallenius Caribbean came here last fall and immediately established service to Panama and the Dutch West Indies. As of July 1, the two ships engaged in this route, MV Oberon and Aniara, will step up their schedule and offer weekly sailings, Clark declared. (Port Everglades News)

New Port Director

Hollywood-Fort Lauderdale, Fla., July 27:—John H. (Jack) Ferris, Jr., was appointed port director at Port Everglades at the July 21st Commission meeting following the resignation of Michael K. Tewksbury. Tewksbury tendered his resignation, which was accepted with regret by the Commission, to enter politics. He served as port director since January, 1969.

Ferris, a resident of Fort Lauderdale since 1945, has been associated with the Port Authority in administrative capacity for 12 years. He was appointed assistant port director in 1969. He is a past president of the Port Everglades Propeller Club and currently serves on the board of governors.

J. G. Jackson, Jr., administrative assistant, was named assistant port director. (Port Everglades News)

Port vs. City Economy

Galveston, Texas, August 12:—Port-related wage and salary income totaled 61 per cent of the City of Galveston's overall wage and salary figures during 1968, according to an economic impact report released here recently. The study, conducted by a University of Houston administra-

(Continued on Next Page Bottom)

Port of Beaumont Growing By Leaps and Bounds

By R. A. Coale, President

Port Board of Commissioners
Port of Beaumont
Texas, U.S.A.

(July 15): In 1949, when the Port of Beaumont Navigation District of Jefferson County, Texas,

tor for the Galveston Wharves, shows combined primary and secondary wage and salary income from waterborne commerce equaled \$103.6 million.

The city's total income for the year 1968 (the most recent year for which full-year reports are available) was \$172 million. On actual employment, the report by Dr. Warren Rose, chairman of the department of production and logistics management at the University of Houston, shows 59 per cent of the city's work force of 30,000 persons engaged in meeting demands of waterborne commerce, based on full-time employment as a primary or secondary result of the port.

Basically, the report concludes:

- (1) Almost one out of every three dollars in wages and salaries earned in the city is directly attributable to the port, and without the port income would have been reduced by \$50 million.
- (2) Almost three out every five workers in the city are employed in port-related activities, either primary or secondary; about 9,000—or 3 out of 10—are in business activities primarily related to the port.
- (3) Transportation, government and manufacturing sectors of the economy are the major sources of port-related income, with more than \$60 million earned in these categories. These sectors also represent dominant force in employment, accounting for 58 per cent. (News from the Port of Galveston)

was created by act of the Texas Legislation, the terminal facilities, which had been owned and operated by the City of Beaumont, were in such dilapidated condition that immediate rebuilding was necessary to continue Port operations. The total tonnage that year was 126, 143 tons. The Port Board was able to restore those facilities using General Obligation Tax monies, and increased Port business resulted year by year, reaching 676,631 tons handled in 1960. The first expansion of Port facilities occurred as a result of Port Board action in selling slightly more than ten million dollars Revenue Bonds in 1961, and at that time the Port Board retired \$2.3 million of the General Obligation Tax Bonds from the proceeds of the sale of the Revenue Bonds.

1962 and 1963 were years of new construction at the Port, resulting in the Port owned three million bushel grain elevator and the new Carroll Street wharf facilities. The first one million tons year was reached in 1964, when a total of 1,228,124 tons were handled. Each successive year 1965 through 1968, more than two million tons were handled each year. Due to Union labor work stoppages last year, a total of 1,321,256 tons were handled in the 8½ months of operation. During the first five months of this year, a total of 1,192,380 tons have been handled. The Port of Beaumont has been very successful since the Revenue Bond Improvement Program, both as to earnings and volume of business, and the present general cargo facilities have been utilized to their full capacity since 1964. Now, new additional facilities are needed for the Port of Beaumont to continue to be com-

petitive, particularly in the new mode of ocean transportation of containerization, which uses large metal boxes measuring 8 feet wide by 8 feet high by 20 feet long or 40 feet long, loaded with various commodities. After more than a year of careful and thorough consideration and investigation of various methods of financing and needed additional Port facilities, the Port Board at a meeting held Tuesday, July 14, 1970, announced an election for September 1, 1970, for a \$12 million General Obligation Bond Issue to expand the Port of Beaumont by construction of new additional docks and transit sheds on Harbor Island and other enlargement of the Port.

The new Harbor Island facility will include 1200 feet long wharf unit with wharf building 200 by 600 feet, totaling 120,000 square feet of covered storage, and open concrete area consisting of 150,000 square feet, which will provide berths for two ships working simultaneously. It will be accommodated by rail tracks and truck roadway from the Main Street facilities all the way across Harbor Island to the Carroll Street general cargo docks. The island itself will be made a part of the mainland by dredging in material from the eastern point of the island and from Port owned property across the channel, thereby also enlarging the turning basin. The new land made available by filling in the ox-bow water area between the island and the mainland will create approximately 14 additional acres as back-up area for the two new ship berths. This new area is capable of handling two to three thousand of the new 8×8×20 cargo containers, so that this cargo can be handled at Beaumont instead of being trucked or railed to Houston or New Orleans for ocean shipment. This area can also be utilized for scrap iron, cargo on own wheels, or other open area cargo awaiting arrival of ships.

An additional heavy lift crane will be purchased, which will be portable and can be used to ship-load or unload containers and other heavy lift cargoes at the two new ship berths and at the Carroll

Street general cargo facilities, as well as being used in tandem with the Port's heavy lift gantry crane at the Main Street facilities. It is estimated that the two new ship berths, wharf buildings, and back-up area will generate approximately 20 to 25 per cent additional general cargo business for the Port of Beaumont. This would mean, conservatively, some 150,000 to 200,000 tons additional each year. This additional new cargo would create an increase in ship calls, rail cars, trucks, and barges. As example, presently 450 to 500 ships calling per year would be increased by 90 to 100 additional ships calling per year.

It is reliably estimated that one ton of general cargo produces a direct dollar expenditure of \$18.46 per ton*; or stated otherwise, brings \$18.46 per ton* in outside money to a port area; thus 150,000 tons increase in Port general cargo means an additional \$2.8 million per year increase in the Port's financial benefit impact on the Port's area economy. Estimated costs for the proposed expansion have been furnished by DeLeuw, Cather & Co., Chicago, Illinois, the Port's consulting engineers, which lists \$900,000.00 for the 236 feet wharf extension on the Carroll Street wharf unit, \$7 million for the Harbor Island development, which includes 1200 feet wharf, trackage, dredging, filling, and grading, and including rail-highway connection from Main Port to Carroll Street, \$900,000.00 for the 200 by 600 feet wharf building on Harbor Island, and 25 percent for engineering and contingencies totaling \$2.2 million. An additional \$1 million is to be earmarked for necessary land acquisitions and/or increase in cost estimates, but bond sales will be limited to cover construction and other costs and only if it is necessary will the total bonds authorized be sold. The proposed purchase of portable heavy lift crane and other heavy lift fork trucks for special use in moving containers to shipside, as well as the rebuilding of Dock No. 1, is to be made using Port's present surplus funds of more than \$1.8 million now invested in U.S. Treasury Bills.



CONTAINERS THROUGH DULUTH... A modern conventional cargo port for many years, the Port of Duluth, Minn., has made steady progress in recent Great Lakes shipping seasons in moving containers through its facilities at the Clure Public Marine Terminal. Twenty-foot containers, such as pictured above, were discharged in August by the terminal's gantry cranes from the British ship *Federal Tyne*.

* U.S. Dept. of Commerce, Maritime Administration, Washington, D.C., dated April 26, 1968.

Relief Cargo for Peru

Los Angeles, Calif., July 8:—The Los Angeles Board of Harbor Commissioners laid Harbor Department ledgers aside temporarily today (Wednesday, July 8) to grant free wharfage and free wharf storage to Peruvian relief cargo scheduled for freight-free shipment from Los Angeles to Peru for relief of earthquake-torn communities in that country.

The storage was technically arranged by the Harbor Commission's vote to approve a temporary Harbor Tariff amendment granting the cost-free storage and wharfage.

Harbor Commission President Robert A. Day said the action was agreed upon by all members of the Commission in the belief that the people of Los Angeles and surrounding area would want to participate in aiding the unfortunate

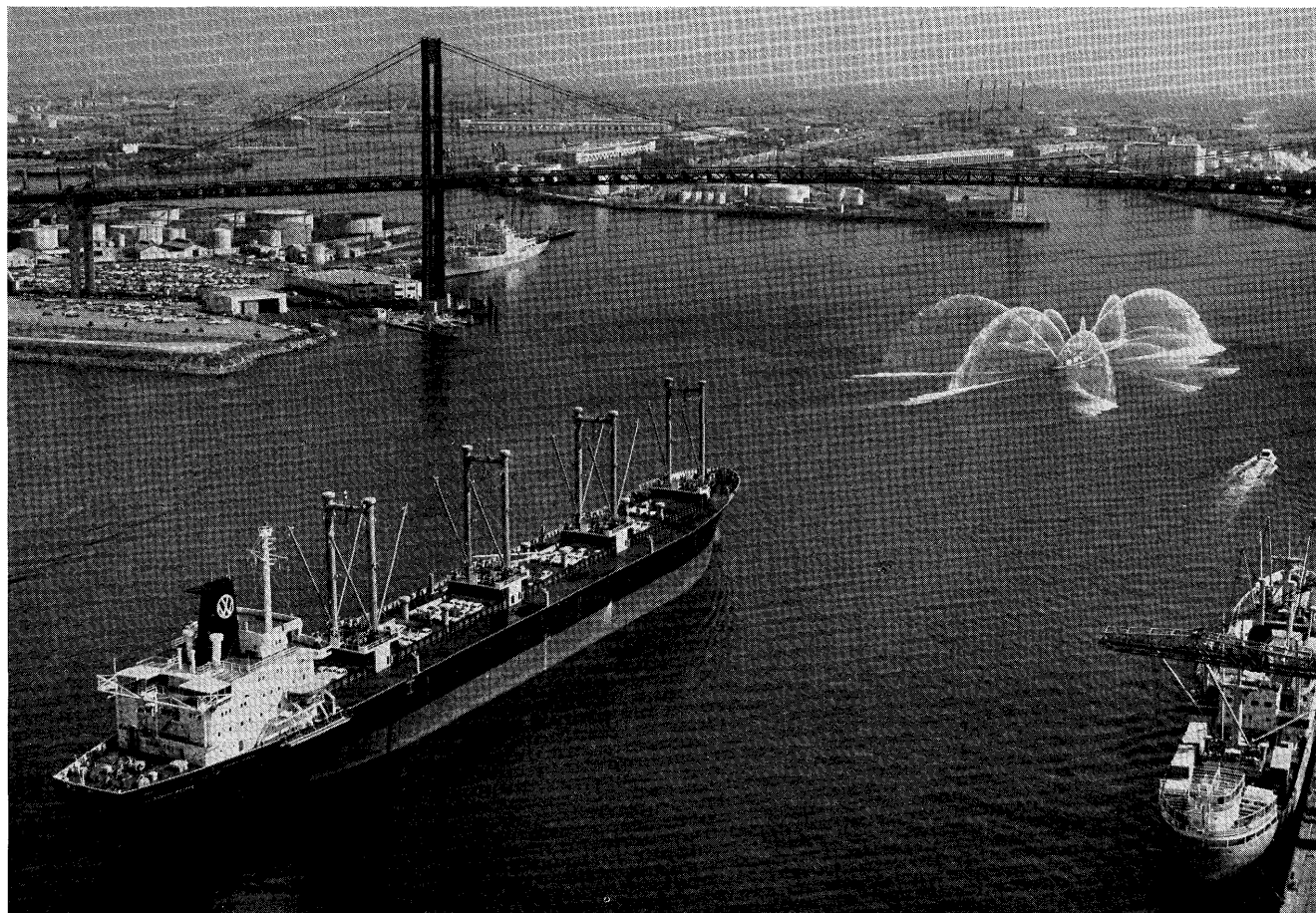
Peruvian earthquake victims by making Port of Los Angeles' facilities available.

The assistance is given in concert with several shipping lines which utilize the port and which are providing the free transportation of several hundred tons of clothing and other relief materials by ocean carrier. (Port of Los Angeles)

New Bulk Facility

Los Angeles, Calif., July 6:—A million dollars worth of new equipment at Los Angeles Harbor's bulk loading facility has added bulk unloading capabilities to the terminal, as well. It has also resulted in a better grade of steel being produced at Kaiser's steel mill in Fontana (California) for shipments to Japan.

The new offloading equipment was installed in time for the first ship loads of iron ore from Brazil and Australia, due to arrive at the Port of Los Angeles this month, and



MAIDEN VOYAGE WELCOME (July 31, 1970)—M.S. Elisabeth Boltén, largest Volkswagen auto carrier is greeted on maiden voyage at Port of Los Angeles by harbor fire boat skyrocketing tons of water from its high pressure nozzles. The 33,000 ton 644 foot-long VW emblem ship is designed to carry 2,650 vehicles. Vessel has unique "retractable" decks that create open holds of eight decks to accommodate bulk cargo. The big ship will carry about 30,000 long tons of California produced chemicals on return voyage to Europe. (Volkswagen Pacific, Inc., Culver City, Calif.)

for rail transport to Kaiser's Fontana plant.

Certain types of Australian and Brazilian iron ore are blended with the Eagle Mountain ore used at the Kaiser steel mills for a better and stronger type of pig iron, according to metallurgists.

Installation of the unloading unit at the port's bulk loading facility in the Outer Harbor came as a direct result of extensive research in blending iron ore from various parts of the world.

Joseph Shapiro, head of National Metal and Steel Corporation, operators of the bulk loading facility, said offloading equipment is expected to handle 7,000 to 8,000 tons per day on a double, or 16-hour shift.

Importation of the special iron ore for blending purposes, coupled

with another new program calling for the movement of seven million tons of coal valued at \$125 million to be shipped through the Los Angeles Harbor facility during the coming ten years, will make the facility one of the busiest of its type on the West Coast.

The coking-type coal, from Kaiser Steel's mines in Sunnyside, Utah, will be shipped to Japan where it will be used in huge steel plants. Yawata and Fuji interests have merged to form Japan Steel Corporation, one of the world's largest steel companies. Nippon Steel Corporation executed the contract with Kaiser interests as coordinator for the Japanese steel producers.

Mitsubishi Shoji Kaisha, one of Japan's largest trading firms worldwide, is handling details of the coal

sale.

Kaiser will deliver the coking coal shipments at the rate of about 750,000 tons annually to Japanese ports aboard vessels of the United International Shipping Corporation, jointly owned by Kaiser Steel and Kaiser Aluminum.

The gigantic program will result in new unit-train operations between Sunnyside, Utah, and Los Angeles Harbor via Denver and Rio Grande Western Railroad and the Union Pacific Railway.

Sunnyside Mine will be expanded and new machinery installed, according to Jack J. Carlson, president of Kaiser Steel Corporation, who announced details of the "letter of intent" for the huge coking coal transaction.

Mining operations at Sunnyside,

which began at the turn of the century, were negligible until 1942, when Kaiser Steel took over production. Currently, the mine is turning out approximately 1.2 million tons of coking coal annually. Modifications and improvements will include the addition of a third longwall miner to meet the sale demands, Carlson said.

Additional storage areas may be added to the bulk loading area at the Port of Los Angeles to accommodate the coking coal stock piles, according to reports. Harbor officials, moving to meet possible air contamination problems, are constructing a dust control sprinkler system, which will cover coking coal areas with a blanket of mist during stockpiling and loading operations. (Port of Los Angeles)

Underwater TV

Los Angeles, Calif., June 26:—Television has gone underwater at Los Angeles Harbor to aid the port in its all-out effort to combat water pollution and rid its waters of discarded junk.

The Los Angeles Harbor Department is pioneering the use of closed-circuit TV equipment to locate and remove trash on the harbor's bottom, which has been a peril to marine life as it deteriorates and consumes oxygen.

Under contract to the Port of Angeles, 60-year-old Al Hanson, a 30-year veteran of deep sea diving, and his wife, Norma, the only registered woman hard-hat diver in the United States, have located pockets of pollution-causing debris by use of TV cameras and specially adapted monitors.

Some of the jetsam found were dead trash fish, including several seven-foot-long blue shark, supermarket shopping carts, abalone shells, metal containers and tanks, and several motorcycles—probably thrown overboard by thieves on the run.

Other things discovered in Davey Jones' locker were large amounts of refrigeration pipe, steel cable, hose, netting, miscellaneous metal and plastic objects, a stove and even a kitchen sink.



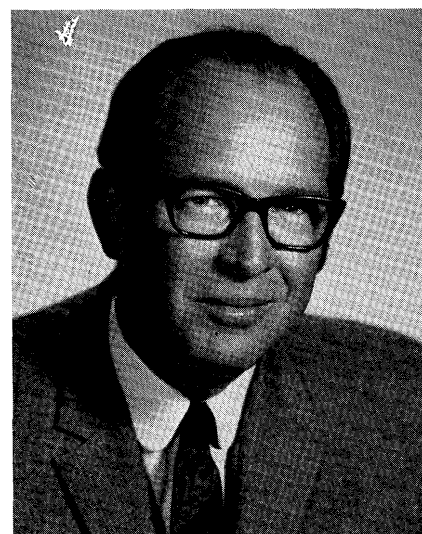
July 27, 1970:—27½ Ton PACECO Portainer, Houston, Texas. The new Port of Houston Portainer will be similar but larger than the one shown here, which was installed at the Sea-Land Terminal in 1966. (Paceco News)

The TV equipment first was adopted for use by the Harbor Department to inspect piling and underwater wharf structures, which may be in need of repair. But the discovery last January of large quantities of trash fish at Fish Harbor sparked the idea of using TV cameras to scour the harbor bottom for pollutants.

The fish had been dumped overboard by boats unloading their catches at Terminal Island canneries. It took the canneries two weeks to remove the decaying fish, but since they did, the Harbor Department reports, marine life has returned to the area another battle in the port's fight against water pollution appears to have been won.

The Hansons' cameras since have been used to find and remove debris at several locations within the harbor. Al Hanson's underwater discoveries are viewed on a 16-inch monitor on a nearby boat. The monitor and other equipment are tended by his wife.

Dumping fish and other discards and pollutants into Los Angeles Harbor has been outlawed and signs have been posted warning against the practice. (Port of Los Angeles)



PACECO, a Division of Fruehauf Corporation has announced the appointment of Clement F. Burnap (above) as Assistant to the Vice President, Marketing. He will be assigned to Paceco's International Operations. (Paceco News)

Korean Group

Oakland, Calif., August 3: — A study team comprised of seven of South Korea's most prominent business figures will visit the Port of Oakland Tuesday (Aug. 4) to discuss maritime management concepts

with port officials.

Organized by the Korean Productivity Center in Seoul, the group is one of several teams from that country that will meet with American business leaders to study management techniques for future application in Korea's growing business community.

While in Oakland they will discuss Port organization and procedures with Executive Director Ben E. Nutter and exchange ideas regarding trade opportunities with Marine Terminals and Traffic Manager Robert W. Crandall.

The contingent will later visit Sea-Land Service for a tour of container facilities and meetings with company executives.

Included in the management group are Hyung Tae Kim, president of Dong Jin Casting Co.; Chai Hong Lim, National Plastics Co. president; Moon Hwan Yim, Dong Hwa Paper Mills Co. president; Soo-Keun Kim, president of Dae Sung Industry Co.; Du Yeung Hong, president of Nam Yang Dairy Products Co.; and team Secretary Chang Ha Lee.

Their visit to the U.S. is under the sponsorship of the Agency for International Development. (Port of Oakland)

Kobe City Officials

Oakland, Calif., August 3: — Mayor Tatsuo Miyazaki of Kobe, Japan, and a group of other Kobe government officials toured the mammoth Port of Oakland container shipping facilities Saturday (Aug. 1) as the highlight of their one-day maritime-oriented Bay Area visit.

The tour of the Oakland facilities was conducted by Port Executive Director Ben E. Nutter.

The Japanese delegation visited the Sea-Land container terminal for an inspection of the installation and demonstration of containerized cargo equipment and procedures. In addition, they toured the port's huge Seventh Street Terminal, hub of Northern California container operation for Matson Navigation Co., Johnson Line and six Japanese carriers.

Because Kobe is Japan's largest container port, the group had ex-

Virginia State Ports Unified July 1, 1970

**Reprinted from Virginia Port Authority
World Trade News, July**

On July 1 the Virginia State Ports Authority becomes the Virginia Port Authority, partially fulfilling the hopes of the many legislators, businessmen, and concerned citizens who have worked so diligently to make the dreams of port unification come true.

For the Commonwealth of Virginia the date of July 1 will serve as a benchmark designating the time when the State officially embarked on an ambitious plan for developing, promoting and operating all its ports as a single unit.

The melding process, however, will not be an easy task. As Governor Linwood Holton pointed out on June 9 at the annual Hampton Roads Maritime Association Dinner, "Obviously, we can't expect the new VPA to achieve full unification next month, next year, or even the year after that. Still, as an old Chinese proverb puts it, 'in order to make a journey of a thousand miles, it is necessary to take the first step.'"

The Governor continues, "It will take patience and understanding and tactful negotiation on the part of the people in the Port Authority and in the localities that now own port facilities to provide effective unification."

A primary consideration of the local port authorities is where the

pressed a particular desire to tour the Port of Oakland, the principal containerized cargo handler on the Pacific Coast and second largest such port in the world.

Accompanying the mayor were Shoichi Matsumoto, Kobe city council chairman; Keishi Nakagawa, city liaison department manager; and Osamu Shibahara, Kobe general affairs department head. (Port of Oakland)

money is going to come from to continue development of marine terminals. But the Governor assures that, in addition to the capital outlay funds available in the biennium beginning July 1, 1970, the General Assembly will provide additional necessary funds, if it can observe real progress toward true unification.

"The guiding star must be the realization that development of the full potential of the port will benefit not just the three Tidewater Communities, (it will benefit them more than any one could do individually for itself) but will indeed benefit every city and country in Virginia, and, be a great national asset."

Besides economic benefits to the State, treasures at the end of the unity voyage include a single, coordinated promotion effort, involving commerce development, public relations, and advertising . . . a coordinated system of ship berthing . . . a single, coordinated planning and research program to bring about short-and long-range port development plans which can be implemented . . . establishment of a solid financing program whereby terminal facilities can be constructed with funds generated by the sale of revenue bonds, perhaps backed by a continuing source of income, and/or leases with steamship lines or terminal operators for private terminal operations.

Paraphrasing one of the Governor's recent statements, it could be said there is a "pot of gold" at the end of the port unification rainbow.

The VPA was not created overnight. In June, 1969, Governor Mills E. Godwin, Jr., appointed an eleven-member Commission to deliberate upon the Commonwealth's

system of port development and management, and to examine in particular the feasibility of a unified approach to this economically important activity.

After five months of intensive study and the employment of a management consulting firm, the Governor's Port Study Commission made its report. Headed by Senator Edward L. Breeden of Norfolk, the Commission recommended to the Governor and General Assembly the unification and amalgamation of the port development and operational functions of the ports of the Commonwealth of Virginia under one single, centralized authority to be established at the State level.

The 1970 General Assembly passed enabling legislation creating and governing the new Virginia Port Authority, which was signed into law by Governor Linwood Holton. The specific legislation calls for a single port authority to develop and operate the ports of the Commonwealth.

Among the changes from VSPA to VPA provided for by the legislation, in addition to those referring to acquiring, developing and operating marine terminals are: the size of the Board of Commissioners is enlarged from seven to eleven; and, an executive advisory council is to be created composed of the chief executive and chairman of the boards of the local port authorities.

The VPA may not achieve port unity immediately, but its formation is the first step towards consolidating the publicly owned port terminals.

Victory for Portland

Portland, Oregon, August 12:—The Portland Commission of Public Docks has scored a major victory in its long battle to obtain for Portland its share of Japanese trans-Pacific container service. A Federal Court has ruled that the consortium operation of six Japanese steamship lines cannot continue unless the vessels include Portland. The ruling



Philadelphia Port's new \$26-million Tioga Marine Terminal was officially leased to the Delaware River Terminal & Stevedoring Co., Inc., at a lease-signing ceremony held Aug. 12. Participating in the signing were (l. to r.), Brig. Gen. (USA, ret.) Allen F. Clark, Jr., president Philadelphia Port Corp., which constructed the terminal; S. Harry Galfand, Philadelphia's Director of Commerce; and Robert J. Tarr, president, DRTS. The Tioga Terminal is part of the City's \$120-million port improvement program designed to provide 20 or more modern berths to handle break-bulk or containerized cargo. (City of Philadelphia News Release)

stands until the Federal Maritime Commission decides the CPD case now before it.

Thomas P. Guerin, Dock Commission General Manager, returned this week from a three-day hearing before a Federal Maritime Commission examiner in Washington, D.C. He had expected a lengthy wait before the examiner's findings were reviewed by the full FMC and a decision rendered.

However, events took a dramatic turn on Tuesday. Guerin received informal telephone advice, later confirmed, that the U.S. District Court of Appeals in Washington, D.C. had responded to an earlier CPD request for a stay of approval for the trans-Pacific container service.

Result of the court's action, Guerin said, is that after August 23 the Japanese container ships can make no more calls under the consortium unless they also serve Portland. The "Golden Arrow", first ship in the service, has made three voyages to Seattle and Vancouver, B.C., and

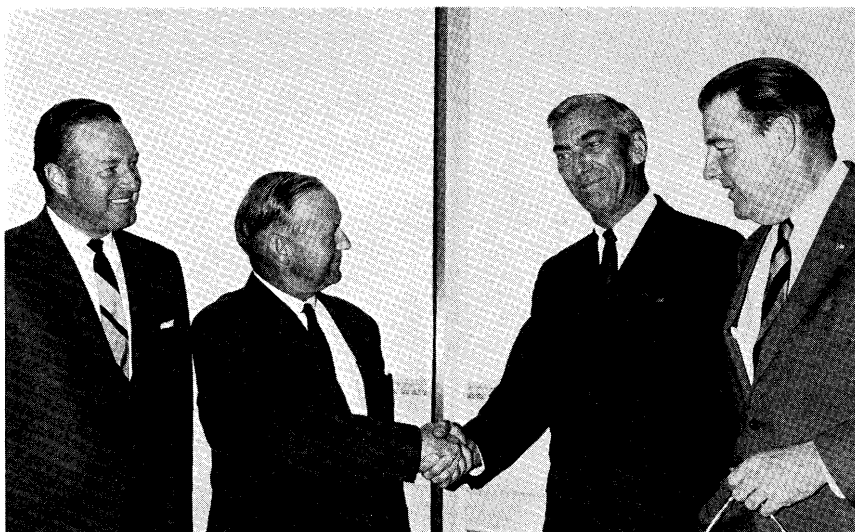
is on its fourth trip.

Permission to commence this service was granted in April by the FMC. Six Japanese shipping lines, merged by their government into a consortium, had filed an agreement with the FMC which stated container ships would serve the ports of both Oregon and Washington.

When it became apparent that Portland was to be excluded from this service despite the agreement's terms, the Dock Commission asked that the FMC hold a public hearing. The request was denied and the agreement was approved. At that point, CPD asked for a court order instructing the FMC to call for a hearing. This was granted with the court's stipulation that the Japanese operation could continue until August 12 while the hearings were underway.

Pursuant to the court order, the FMC scheduled a public hearing. It was this that took the Dock Commission people to Washington.

Last week the Japanese consorti-



SAN FRANCISCO—Newly-appointed Cargo Protection Council chief Charles F. Brusch received congratulations from Chris Blom (second from left), president of the Marine Exchange of the San Francisco Bay Region. The just-organized Golden Gate security effort for ocean cargos sponsored by the Exchange will be directed by co-chairmen George J. Gmelch (left), Pacific Far East Line vice president, and Robert E. Mayer (right), Todd Shipyards Corp. Pacific Coast sales manager. Ports, terminals, stevedoring companies and Bay Region shipping firms have pledged support for the program. Brusch, a 25-year veteran of F. B. I. assignments, has extensive Northern California experience. (Marine Exchange of S. F. Bay Region)

um members and the FMC asked for a 75 day extension of the court's deadline. The Dock Commission opposed the request.

Today's order from the Washington, D.C. District Court of Appeals came with dramatic suddenness. It denied the request for the 75-day delay and it effectively halted future Japanese container ship service under the consortium, after the present voyage of the Golden Arrow is completed unless Portland is equally served.

Guerin was joined in Washington by Curtis A. Smith, Dock Commission Operations Manager, and Milton J. Mowat, its traffic analyst. Also on the Portland team were Fred Huntsinger, President of the Portland longshore local, Leland Waltuck, Manager, Standard Steel Tube Supply, and Jack H. Burns, Vice President, Burns Bros. Importers and President, Automotive Jobbers Warehouse. Legal aspects of the case were handled by Norman Sutherland, of the Portland firm of White, Sutherland and Gilbertson, and Edward Smeltzer, Washington attorney.

Andrew J. Cook, Dock Commission Chairman, hailed the decision as a victory for Portland. He praised the Commission's staff and team of attorneys.

"Although the hearing examiner's decision is yet to be handed in", Cook said, "our attorneys think it is improbable that the FMC will decide against us. We feel confident our position will be sustained and that Portland will get its fair share of container ship service."

Sutherland explained that the court's ban on future sailings of the Golden Arrow and other ships expected to enter this fall and winter, will be lifted only if Portland calls are included in the schedule.

The Dock Commission has two more cases pending before the FMC, both related to the container-ship question. One, termed the Intermodal Case, contends the practice of trans-Pacific freight conferences' members of discharging Portland-bound cargo at Seattle and trucking it to Portland at the steamship lines' own expense is illegal. This method of doing business, the CPD claims, eliminates a shipping service from

Portland. A hearing on this matter has been set for Nov. 3.

The second case involves the "preferential agreement" between Port of Seattle and the Japanese container consortium for berthing space and port services. CPD claims Seattle absorption of wharfage and other charges amounts to subsidization of the shipping services. The FMC has ordered a hearing on this case for September 15. (Portland Public Docks News Release)

Public Relations Man

San Diego, Calif., August 11:—Donald D. Sarten, 43, San Diego, has been named a Community Relations Assistant for the Unified Port District by Don L. Nay, Port Director. Mr. Sarten assumed his new duties Monday (8-10-70). His appointment fills a position left vacant since last May when Don Williams passed away. Mr. Williams had been with the District since its formation in 1963.

"There was considerable interest in the position as evidence by the 110 applications received by the San Diego County Civil Service Commission," according to William L. Dick, Director of Trade and Community Relations. "In Mr. Sarten we feel the District has a man who can make an important contribution to the public's understanding of District programs and goals."

Since moving to San Diego in August of 1969 Mr. Sarten has produced "ASPIRATIONS, San Diego, 1970-2070" for the San Diego Chamber of Commerce while associated with the San Diego printing firm of Frye & Smith, Ltd. The handsome, four-color magazine talks about San Diego's future and emphasizes the quality of life enjoyed now and suggests means for protecting it. He also spent a few weeks as copy editor for the San Diego Evening Tribune before being notified that he had been selected for the community relations post. (Port of San Diego News Release)

Kobe-Rotterdam-Seattle

Seattle, Wash., July 23:—The mayors and top port management of two of the world's busiest seaports

will be the guests of the Port of Seattle August 1-5. Mayors Tatsuo Miyazaki of Kobe and W. Thomassen of Rotterdam, accompanied by port officials and leading businessmen of their respective cities, will come to Seattle to attend the second annual Kobe-Rotterdam-Seattle Port Seminar.

Business sessions of the seminar, slated for August 3 and 4, will feature tri-port discussions and papers on port operations, development and equipment. The Kobe and Rotterdam mayors, in whose cities the port facilities are city-owned, will take active parts in the presentations, which will be held in the Olympic Hotel. Seattle's Mayor Wes Uhlman will participate in several of the civic affairs honoring the visitors.

One of the major events of the visitor's schedule will be a civic luncheon, sponsored by the Seattle Chamber of Commerce and the Port of Seattle, which will be held in the Olympic Hotel on Monday, August 3. Tickets for this event are being handled by the Chamber. The principal speaker will be Governor Daniel J. Evans, with Gordon Clinton acting as master of ceremonies.

Kobe is Japan's largest container port and has a "Sister Port" affiliation with both Seattle and Rotterdam. The first seminar was held in Kobe in 1969 and was thought to be of such value to the three participants that it should be repeated. A decision as to whether the seminars should be continued annually will be made at the Seattle meeting.

Rotterdam is Europe's largest port and has an extensive expansion program under way. It has chosen the name "Europort" to signify its status as the principal port of Europe.

At the opening session Monday afternoon each of the three ports will discuss its expansion program, augmenting the discussion with films and slides.

The Tuesday morning session will feature papers and discussion on computerization, as it pertains to ports, and on the types and usage of dock handling equipment. The afternoon session will be given over to papers and discussions concerning terminal charges, lease arrange-

ments, labor relations and training programs for waterfront labor.

The five-day program will conclude Wednesday with on-dock demonstrations of equipment, a tour of the harbor and, in the evening, a dinner with Governor Evans in Olympia. The majority of the delegates will leave on Thursday, some to return to their home ports, others to visit other ports in the United States and Europe.

Frank R. Kitchell, president of the Port of Seattle Commission, is general chairman of the seminar. (Port of Seattle)

Tonnage Up

Tampa, Fla.:—Tonnage through the Port of Tampa reached 15,304,842 during the first half of 1970, Guy N. Verger, Port Director, announced.

This represented an increase of 14 per cent over the first six months of 1969, Verger noted. He also pointed out that the increase came at a time when many sections of the nation were suffering an economic decline.

Increases were made in a number of commodities during the six-month period. Bulk phosphate rose to 7,093,137 tons from 6,010,463 tons for the first half of 1969, an increase of 1,082,674 tons.

Imports of frozen and fresh meats rose to 34,158 tons during the six-month period, a rise of some 14,000 tons. Other import items showing a marked increase were newsprint and citrus pellets. Bananas and other general cargo items remained approximately the same.

Petroleum products showed an increase of 265,605 tons for the period, up to 4,379,994 tons over-all. Imports of liquid sulphur were also on the increase as well as potash and salt.

One import, coffee, joined the general cargo category with 644,000 pounds of the item.

Verger predicted the year 1970 will be a record year for the port if the tonnage increase continues, and he said every indication is that it will continue. (Tampa Port Authority)

Pollution Cases

Melbourne:—In the incessant fight against pollution in the waters of the Port, the Melbourne Harbor Trust Commissioners launched five prosecutions in three Courts of Petty Sessions in recent weeks, which resulted in fines totalling \$770 being imposed in four cases and one case being dismissed.

The question of pollution, not only of the waters of the Port but in the environment generally has aroused considerable interest in recent months, and there has been increasing awareness in all sections of the community of the problems of pollution.

The results of prosecutions, which were laid under the Navigable Waters (Oil Pollution) Act of 1960, were as follows:—

The South Melbourne Court on the 4th of March fined the Master of the British freighter "Arafura" \$75 for the discharge of oil into the waters of the Port while berthed at 15 South Wharf, and \$25 for failing to report a discharge of oil forth-with. The Court also awarded costs amounting to \$29.50.

The Melbourne Court on the 20th of March fined the Master of the Nauruan freighter "Eigamoia" \$100 for the discharge of oil into the waters of the port while berthed at No. 14 North Wharf. The Court also awarded costs of \$27.50, which included the court attendance of an analyst of Minex Analytical Laboratories Pty. Ltd.

The Port Melbourne Court on the 9th of April dismissed a charge against General Motors-Holden's Pty. Ltd. for discharging oil into the waters of the Port. The Court held that the offence was caused by an independent contractor employed by General Motors-Holden's Pty. Ltd., and that the company could not foresee this particular incident happening. Oil escaped into the port from a storm water drain with an outlet at No. 31 South Wharf.

The Melbourne Court on 24th of April fined the Master of the fishing vessel "Boomerang" \$400 for the discharge of oil into the waters of the port. The Court also award-

ed costs amounting to \$35.50, which included the court attendance of an analyst of Minex Analytical Laboratories Pty. Ltd.

The Port Melbourne Court on the 18th of May fined B.P. (Aust.) Pty. Ltd. \$150 for the discharge of oil into the waters of the Port, and \$20 for failing to report a discharge of oil immediately. The Court also awarded costs amounting to \$13. Oil escaped from the company's premises by a drain with an outlet under Princes Pier in the Hobson Bay area of the Port. (Melbourne Harbor Trust Port Gazette, June)

Up to Year 2000

Melbourne: — A Comprehensive plan showing how the Port of Melbourne will look in the year 2000—with particular emphasis on the relationship between the port and the city and State it serves—is expected to be submitted to the Melbourne Harbor Trust Commissioners soon by a team of consultants engaged by the Port Authority.

The consortium of consultants are Earle Shaw and Partners, architects and town planners, and Alan J. Brown and Steven Pty. Ltd., consulting engineers, surveyors, and town planners, both of Melbourne, who are working in conjunction with Port engineers on the planning project which covers the period 1985~2000.

The Melbourne Harbor Trust Commissioners have always taken long range views in planning the development of port facilities, and highly qualified and experienced port engineers in the past have been able to plan successfully the long range projects which have resulted in the modern and efficient port facilities of today.

However, with the growing complexity of urban development in the city of Melbourne, calling for new concepts in transportation, the increasing population and a changing population distribution, and the continuing substantial increases in industrial development, all of which particularly require a greatly changed land utilisation, made it desirable for the Port Authority to call in planners with greater experience in urban development

planning.

The Commissioners intend to integrate their port development plans more closely with those of the city and the State of Victoria. On this basis the planning consultants are undertaking the project with the following in mind:—

1. To prepare a base map to show the proposed development.
2. To undertake surveys to establish—
 - (a) An estimate of the probable future cargo volume in relation to the needs of an expanding economy and a growing population.
 - (b) General trends in transportation.
 - (c) The development in cargo handling techniques.
 - (d) The trends in shipping design.
 - (e) The relationship of the Port Authority's facilities to other transport in the prediction years 1985~2000.

3. To assess the probable land requirements of the Commissioners and the necessary cargo handling facilities required in the future.

4. To prepare a development (land use) plan integrated with and designed for ultimate inclusion in the Metropolitan Planning Scheme.

One of the major problems which have faced port authorities over the years, and this includes port authorities in Australia, as well as in many countries overseas, is the lack of community awareness and very often the complete disregard of the requirements of ports in their long range planning.

Sea transport is still the principal transportation medium for the tremendous volume of goods which are essential to the maintenance and development of any community, and for which, at present, there is no satisfactory alternative means of transportation.

Over the past 20 years, the volume of cargo handled by the Port of Melbourne has risen from 7.5 million tons in 1950 to 9.4 million tons in 1960 to 13.1 million tons in 1969, and the last ten years alone have seen radically changed port facilities and cargo handling methods which require considerable land areas for the

economic operations. (Melbourne Harbor Trust Port Gazette, June)

APAA Conference

According to the Marine Board of Hobart, Tasmania, the 22nd Conference of The Australian Port Authorities' Association will be held in Hobart 8th-12th February, 1971.

Portland Harbor Annual

Portland, Victoria, Australia, August 20:—There was a steep upward trend of 28.61 per cent in the volume of cargo handled through the Port of Portland during the 1969/70 financial year, when total trade amounted to 608,953 tons.

This figure provides a milestone in the history of the Port Authority, for it is the first time that trade has exceeded the half million ton mark for a single year's operations.

In a review of trade statistics presented today to the Minister of Public Works, (Mr. Murray Byrne) the Portland Harbor Trust Commissioners state that, during the year ended June 30, exports more than doubled the previous year's figure to total 250,728 tons, whilst imports, at 358,225 tons, showed a slight decline.

Shipping Revenue, at \$421,533, showed a corresponding increase of almost 18 per cent.

Compared with the previous year's figures the most outstanding feature of port trade was a 147.9% increase in the volume of exports handled.

This resulted mainly from a record grain season, during which 195,784 tons were shipped out in bulk through the Trust's seaboard terminal.

Apart from regular shipments of bulk oats, a shipment of 23,596 tons of barley, and one of 10,410 tons of grain sorghum provided an opportunity for the terminal to handle a wider variety of coarse grains.

At the same time, the inauguration of a shipping service to provide supplies of bagged wheat and flour to the Red Sea port of Jedda accounted for the handling of four shipments totalling 16,451 tons.

When compared with the previous year's figures, increased shipments of meat and allied products

from Messers. Thos. Borthwick & Sons Portland freezing works rose by 6,000 tons to 13,153 tons. Among the by-products supplied from this source was the first shipment of bulk tallow and one consignment of un-tised tallow in drums.

Record offerings at the local wool centre were again reflected in increased exports of wool which at 85,759 bales, was more than 12,000 bales higher than the previous year.

Shipping services to Papua-New Guinea and Noumea during the year involved the handling of a more diversified range of cargo through the port. This included potatoes (464 tons), onions (108 tons), fruit (45 tons) and panelboard (44 tons).

Three parcels of frozen crayfish tails from the South-east of South Australia consigned to the American market totalled 43 tons.

Exports of butter and cheese shipped through the port remained almost static during the year at 8,227 tons; but the overall tonnage of manufactured milk products and Nescafe from the Nestle plant at Warrnambool was up by 1,032 tons to 4,029 tons.

A decline of some 14,000 tons in import trade resulted mainly from a decrease in the quantity of raw materials landed for fertilizer manufacture and the suspension of paper pulp imports.

However, the quantity of raw coffee beans landed at Portland continued to rise during the year to 6,859 tons, and imports of wool packs were up by 201 tons to 1,076 tons.

Trade statistics disclose that the volume of petroleum products landed was the second highest on record with 252,423 tons handled during the year.

This shows an increase of 4 per cent on the previous year's figure and involved the pumping of more than 63,000,000 gallons from tankers to the terminal installations at North and South Portland. (Portland Harbor Trust Commissioners, Australia)



"N.S. Mutsu", Japan's first nuclear-powered ship.

1 Million-T Dock

Tokyo, August 15:—The Transport Ministry will announce today that it will approve Mitsubishi Heavy Industries' (MHI) construction of a 1,000,000-dw/t building dock at Koyakijima Island, Nagasaki Prefecture.

Upon completion, the dock will lay claim to being the world's largest.

The specifications in the application reveal that it will be 970 meters long, 100 meters wide, with supplementary equipment of two 600-ton cranes.

The dock will build three vessels of 250,000-dw/t class at one time. Total expenses earmarked for the construction are ¥28,000,000,000 exclusive of land expenses.

Japan's current largest dock is located at Nippon Kokan Kaisha's Tsu Shipyard, which is 500 meters long. Besides this, Sumitomo Shipbuilding & Machinery Co. is building one at Oppama Beach, Kanagawa Prefecture, which is 560 meters in length. Both are to be capable of building craft up to 500,000 dw/t.

The dock at Koyakijima Island will be partially operative from around March 1972 and by 1974 will become totally operative. Work will commence immediately upon official approval by the ministry.

The reason behind the approval granted by the ministry is that Japan is suffering from lack of giant docks and has to stay abreast of Western competition in the field of giant vessel construction.

The Transport Ministry, however, is showing a cautious stance on the issue of granting building permits for tankers exceeding 477,000-dw/t, which is the current size limit approved by the ministry, because of safety factors involved. (Shipping and Trade News)

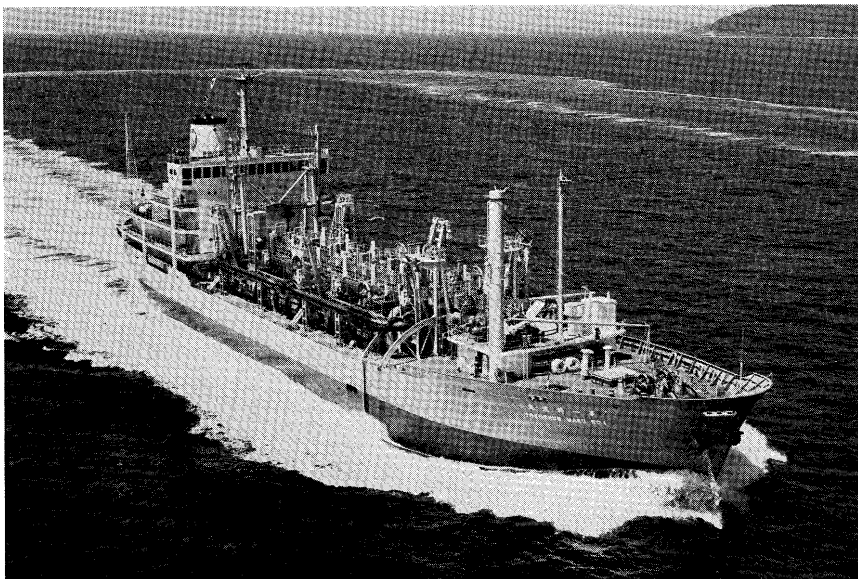
Engineering Seminar

Tokyo:—The 7th Group Training Course in Port and Harbor Engineering 1970, organized by the Overseas Technical Cooperation Agency of Japan, is in session August 1 through November 30, 1970.

There are 15 participants this year, 2 each from Indonesia and Thailand, and one each from Argentine, Brazil, Ceylon, India, Iraq, Lebanon, Pakistan, Philippines, Tunisia, U.S.R. and Venezuela.

Nuclear Ship

Tokyo:—IHI has turned over the 8,350-gross-ton "N.S. Mutsu," Japan's first nuclear-powered ship, to the Japan Nuclear Ship Development Agency (JNSDA) at its Tokyo Shipyard. She is the world's



"Tokushun Maru No. 1", Japan's largest drag suction dredger.

fourth nuclear-powered merchant ship.

The "Mutsu" is an experimental ship equipped with an indirect cycle light water type nuclear reactor (output 36,000 KW) using uranium oxide of low enrichment as fuel built for the purpose of raising the technical level in the field of building and operating of nuclear-powered vessels in Japan with the advent of the age of nuclear-powered merchantmen.

The order placed with IHI by the JNSDA in November, 1967, called for the construction of the vessel as well as the nuclear reactor containment vessel and secondary biological shieldings etc. excluding the reactor and itself.

Prior to her delivery, the "Mutsu" underwent a five-day trial run by means of her auxiliary power in Tokyo Bay from June 26 through 30. After being turned over to the JNSDA on July 13, the ship was unveiled before the public in Tokyo and Mutsu City, her base port in Aomori Prefecture.

The nuclear reactor will be installed on the "Mutsu" by the Mitsubishi Atomic Power Industries Co., at Mutsu Port. Installation work is scheduled to be completed in January, 1972. (IHI Bulletin, August)

Biggest Dredger

Tokyo: — The 6,300-gross-ton "Tokushun Maru No. 1," Japan's largest drag suction dredger built at IHI Tokyo Shipyard, has been turned over to the Special Dredging Co., Ltd.

More than double the size of the "Kaiho Maru" (built by IHI in 1964 for the Transport Ministry), which is the biggest dredger in operation in this country, the "Tokushun Maru No. 1" may be described as one of the largest of its kind in the world.

She is equipped with two drag arms on both sides, has a maximum dredging depth of 27 meters, develops a dredging speed of about 3.5 knots and has a mud holding capacity of 4,000 cubic meters.

Other features of the dredger include a mud hold door at the bottom that is remote-controlled and the capacity to convey mud to reclaimed land by connecting the ship and reclaimed land with a pipe.

The dredger has been built as an answer to vessels that have increased in size these past few years and will be used by the Special Dredging Co. (IHI Bulletin, August)

Oil for Coal

Taranaki:—The Government decision on the fuel to be burned at

the New Plymouth Power Station came in May — and enabled the Taranaki Harbours Board to clarify its plans for the area being developed as a coal-handling berth.

A combination of gas and oil fuelling is now planned for the 600-megawatt station being built on partly reclaimed land adjacent to Port Taranaki.

The decision to substitute coal releases the Taranaki Harbours Board from the responsibility of providing a collier berth, although work for the berth had started.

Proven expenditure, likely to amount to \$500,000 will be refunded by the Government.

A sea wall, and behind it a reclamation of nine acres, was nearing completion when the decision came, but the area will still be valuable to the board.

"No port can have too much land," says secretary-manager, Mr. J. G. Boddy.

Although no specific purpose has yet been allocated for the site, constant inquiry is being made of the board by overseas and New Zealand concerns for land. A number of delegations, including several from Japan, have recently been conducted around the port to view its facilities.

The power station, and particularly its 650ft. chimney, will be a dominating feature of Port Taranaki in the years to come.

The chimney itself will be built by the New Zealand company, Downer and Co., in association with a German firm, Karrene Feuerungsbau, and will cost \$2.3 million.

The decision to burn gas or oil will mean some changes in the station, and project engineer, Mr. M. J. Williams, said recently the outward appearance of the buildings could change slightly. An addition would be two oil storage tanks, with a total capacity of eight million gallons.

Mr. Williams said a capital saving of about \$5 million was likely with the changes resulting from the "no coal" decision. This did not include savings in coal-winning equipment and transportation of coal from the West Coast of the

South Island, which would not now be needed.

Although the port, therefore, has lost a trade of between 500,000 and one million tons of coal annually, which was to have been used in the station, it is considered highly probable the port will be used for imports of oil.

Gas from the offshore Maui field will be the major fuel source for the station, but development of the field cannot be undertaken in time for the first turbine at the station, which is to be commissioned in January, 1973.

Estimates prepared by the Taranaki Harbours Board indicate that tonnages of oil to be handled could be:

1973:	120,000 tons.
1974:	350,000 tons.
1975:	640,000 tons.
1976:	700,000 tons.

If from 1975 onwards the station burned gas and oil in a percentage of 60-40, oil could be required at the rate of 250,000 tons annually.

"Oil could therefore offset some of the loss of trade and income brought about by the Government decision," Mr. Boddy says. (Taranaki Harbours Board Port News)

Record Annual Cargo

Chittagong, August 15:—The Port of Chittagong created a new record in the handling of cargo during the year 1969~70 (July-June). A total of 5,035,631 tons passed through the Port. This is the highest figure ever achieved which is 11.02% higher than that recorded for the corresponding period of the previous year.

Principal commoditywise Imports & Exports handled are tabulated below:—

A. Import.	Total: 4,462,304 tons.
Foodgrain	1,460,007 "
Cement	452,978 "
Fertilizer	203,605 "
Coal	148,361 "
General Cargo	988,353 "
Bulk Oil	1,209,000 "

B. Export.	Total: 573,327 tons.
Jute	145,490 "
Jute Product	157,215 "
Tea	35,731 "
Hide & Skin	6,815 "
General cargo	228,076 "

The achievement is particularly noteworthy in view of the fact that the rehabilitation of Jetties 1-6 is still in progress & during the period under review no new berthing facilities have been added. In spite of the fact that the tonnage handled increased by 11.02% there has been no undue detention or congestion of shipping. These excellent figures & turn-round of shipping was achieved by constant supervision & special attention given to the various field of Port operation and clearance of cargo. With the present trend of traffic offering the Port hopes to handle 5.5 million tons of cargo during 1970~1971 by adopting such methods as are considered expedient in further improving the turn round of vessels calling at this Port. (Chittagong Port Trust)

Annual Donations

Karachi:—The Karachi Port Trust has been granting every year donations and contributions to various Medical, Educational and Charitable Institutions of the city of Karachi since a long time. As usual, K.P.T. has denoted more than Rs. 40,000/- to different Medical, Educational and Charitable Institutions of the city for the year 1969-70, which are as follows:—

Continuance of donations to:—

Dr. Shauket Haroon Hospital	3000/-
Red Cross Maternity & Child Welfare Centre	3000/-
R.B. Goverdhandas Eye Hospital	1200/-
Karachi Health Association	2000/-
Machnich Memorial Marine Club	3000/-
KPT Labour Union Reading Room	600/-
K.P.T. Sports Association	3000/-
Port Dept. Institute Manora.	500/-

Poor Patients Relief Society	500/-
St. John Ambulance Association.	1000/-
Karachi T.B. Association	3000/-
K.P.T. Manora Club	1000/-
Association for the Welfare of Deaf & Dumb	3000/-
Ojha Sanatorium	3000/-
Naunihal Baby Care Centre	500/-
Adult Blind Centre	3000/-
Karachi Council for Child Welfare	500/-
Diabetic Association of Pakistan	1000/-
Society for Rehabilitation of Crippled.	500/-
KPT Apprentice Marine Engineer's Association	2000/-

Increase in the donations to:—

Pakistan Association for Blinds from Rs. 3000/-to Rs. 3500/-
Ida Rieu Poor Welfare Association from Rs. 1000/-to Rs. 2000/-

Non-recurring grant towards the cost of Building of Nurses Hostel, Dr. Shaukat Haroon Hospital 5000/-

Fresh Donations to:—

Society of Children in need of Special Attention	Rs. 1000/- per annum
Society for Prevention & Cure of Blindness	Rs. 1000/- per annum

(K.P.T. News Bulletin)

Goods Traffic in 1969

Antwerp:—As was stated in a previous issue the maritime goods traffic in 1969 (according to the provisional figures of the National Institute for Statistics) amounted to a total of 73,020,300 t. This means an increase of 587,000 t (0.8%) over the previous year. In comparison with 1967 the increase amounts to 10.6 million tons (17%).

Thus goods traffic by sea has more than doubled over the last 10 years (35.6 millions tons in 1959).

The increase in comparison with 1968 is entirely due to bulk cargo (+2 million tons), whereas general cargo decreased by about 1.5 million tons.

Europe-Africa

Traffic of goods by sea (in 1,000 t.) (1)

	1968	1969	+/-
Bulk cargo:			
imports	37.204	38.495	+1.291
transit	4.551	3.937	- 614
unloaded	41.755	42.432	+ 677
exports	7.355	8.735	+1.379
transit	1.229	1.207	- 21
loaded	8.585	9.943	+1.358
Total	50.340	52.375	+2.035
General cargo:			
imports	3.154	2.761	- 392
transit	3.614	3.698	+ 83
unloaded	6.768	6.459	- 309
exports	6.649	6.473	- 175
transit	8.675	7.712	- 964
loaded	15.324	14.185	-1.139
Total	22.093	20.644	-1.448
Overall total	72.433	73.020	+ 587

The increase over 1968 is thus the result of an increase in cargo loaded of 219,000 t. and in cargo unloaded of 368,000 t.

If the movements of the principal types of cargo are examined the increase in the imports of mineral oil is especially noticeable as are the decrease in the imports of grain and cattle fodder and the increase in iron and steel products imported.

In the case of exports an increase is to be noted in most types of goods except the very striking decrease in the iron and steel traffic. This is in fact the reason for the small increase of the overall figures. Because of the great demand for iron and steel products on the European market in 1969 overseas exports declined considerably, the result of which was felt in the port. The scarcity of iron and steel on the European market is moreover clearly revealed by the large increase in imports from overseas production areas.

Goods traffic by sea according to principal types of goods (in 1,000 t.) (1)

	1968	1969	+/-
Imports			
grain	1,882	1,248	- 633
fertilizers	1,160	1,392	+ 231
raw mineral products	753	821	+ 68

ore	13,164	13,095	- 68
mineral oil	23,476	24,510	+1,034
chemical products	1,005	806	- 199
fruit	481	394	- 87
cattle fodder	873	571	- 302
wood	539	328	- 211
paper pulp	425	470	+ 45
textile fibres	442	436	- 5
iron and steel	443	888	+ 444
other metals	527	478	- 48
coal	1,184	1,224	+ 39
Exports			
fertilizers	2,298	2,334	+ 37
raw mineral products	1,254	1,412	+ 158
mineral oil	2,819	3,513	+ 694
bunker oil	2,064	2,606	+ 541
chemical products	2,024	2,245	+ 220
iron and steel	8,218	6,845	-1,373

(1) Differences are the result giving round figures to the nearest 1,000 t. (Antwerp Port News, June)

Grain Terminal Manager

Liverpool, 3rd August:—Mr. Herbert W.T. Chapman has been appointed to manage the £4 million Grain Terminal now under construction at Seaforth and due for completion by the end of 1971.

Aged 59, Mr. Chapman is at present with Louis Dreyfus and Co. Ltd., and has been with that Company for more than 30 years gaining experience of grain handling in most United Kingdom Ports. He served in the Royal Navy as a Lieutenant during the 1939~45 war and saw service in India and the Far East where he was directly concerned with port operations.

The Seaforth Terminal when completed will be able to handle larger vessels than any other U.K. installation and it is hoped that Liverpool—already Britain's second largest grain port—will eventually become one of the busiest in Europe.

By taking up his duties in September, Mr. Chapman will be able to supervise the eventual com-

pletion and commissioning of the Terminal.

Mr. Chapman is married with one son and lives in Childwall, Liverpool. (Mersey Docks and Harbour Board)

Record Grain Discharge

London, 10th August:—The Port of London Authority's river-side grain terminal at Tilbury has just created a new record for grain discharge in London, and possibly in the U.K. A total of 24,419 tons of Australian wheat was unloaded from one ship last Friday and Sunday in 24 hours 20 minutes working time—an average of 1,000 tons per hour.

The ship—the 15,671 g.r. ton "Olympic Pearl"—berthed at the grain terminal early on Friday morning and started work with the first shift at 7 a.m. By the end of the second shift at 9 p.m. a total of 16,630 tons had been discharged. The remainder—7,789 tons—was discharged on Sunday.

The "Olympic Pearl" sailed on Sunday night to allow the next vessel to begin work at the terminal at 7.0 a.m. this morning (Monday). The terminal, which has been in operation for 14 months, incorporates high-speed discharge elevators and conveyors, connecting the ship jetty to the 100,000 ton capacity silo installation and to coaster and barge loading points. It also feeds three private mills built on sites adjacent to the terminal. (News from PLA)

Southampton News

London, 17 August:—Mr. Donald Stringer, who as already announced, is to assume control of the Board's Port of Southampton, will take up his new appointment on Thursday, 20th August with the title of Port Director, Southampton.

At the same time, Mr. W. D. Noddings, the present Assistant Chief Docks Manager at Southampton will take up the new appointment of Docks Manager with responsibility for the day-to-day running of the port.

£14 Million Development Plan at Southampton Container Terminal

British Transport Docks Board

London, 19th June:—The first of several contracts to a total value of about £14 million has been placed by the British Transport Docks Board for further development of the Southampton Container Terminal.

The contract, for capital dredging and land reclamation, has been awarded to Westminster Dredging Company Limited, who will begin work immediately. The placing of other contracts is expected to follow shortly.

Announcing details of the development Mr. Donald Stringer, deputy managing director and a member of the Docks Board, said that the current project would increase

the Southampton Ocean Container Terminal to nearly five times its present size, and would cater for business the port had already won.

"This development will provide the facilities required when the port becomes the principal U.K. terminal for the Far East container service of Overseas Containers Ltd. and Associated Container Transportation at the end of 1971", he said. "It will also enable us to provide further common-user capacity to meet the expansion plans of existing users and will also go some way to help in providing for the demands from other shipowners wishing to use Southampton for container services."

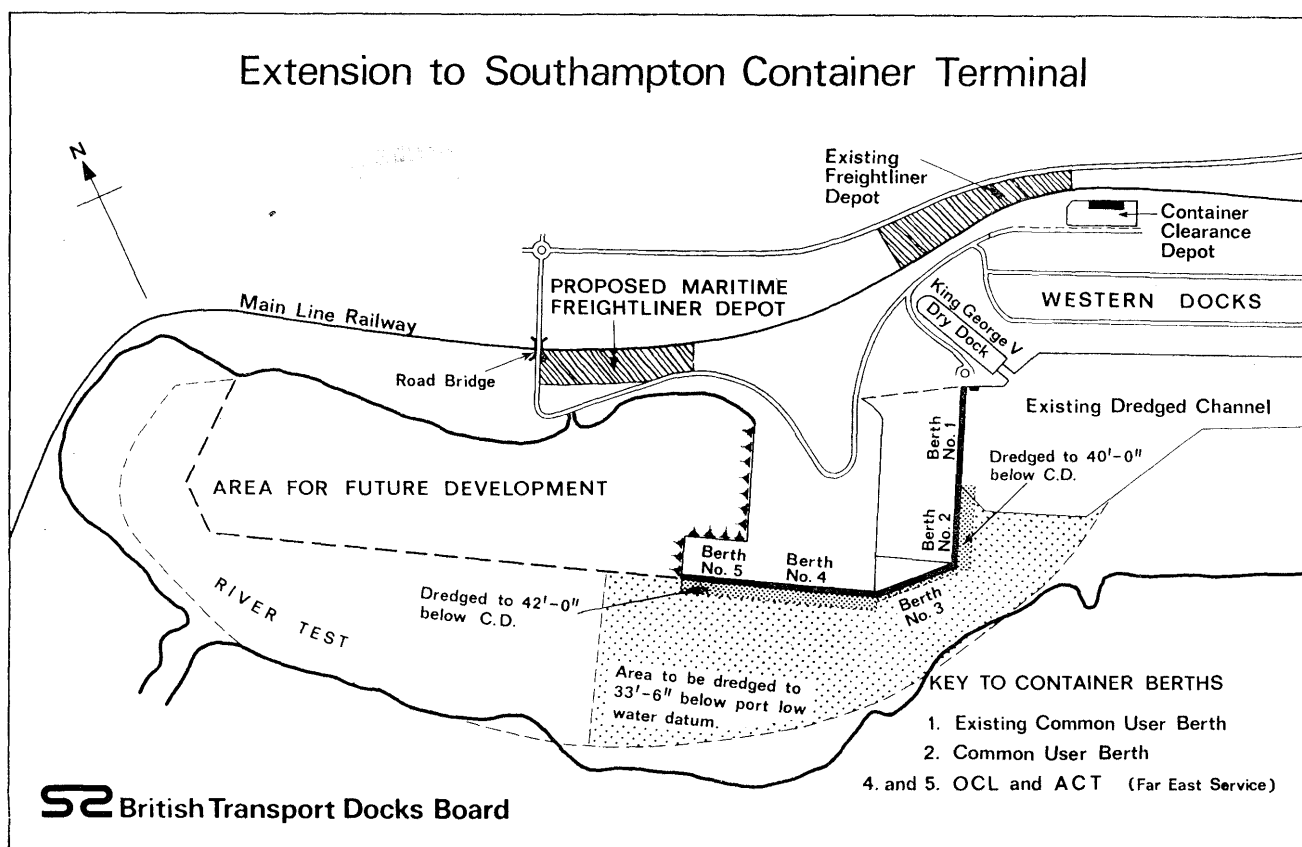
Mr. Stringer went on to say that it had been estimated that some two million tons of traffic would pass through Southampton annually on the Far East service. "Together with other container business already secured this means that the port is likely to be dealing with over a thousand containers a day by the end of 1973", he said.

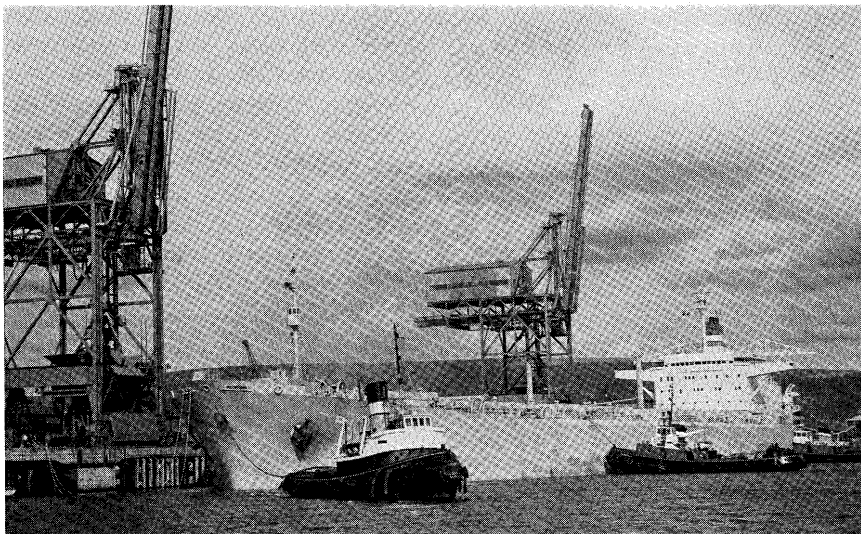
New Berths

Three new container berths totalling 3,000 ft. in length are to be constructed under the scheme, two for OCL/ACT (Berths 4 & 5) and one (Berth 2) as a 900 ft. extension of the existing 1,000 ft. common-user quay (Berth 1). In addition another 900 ft. berth (Berth 3) will be constructed for other than container operations.

Land Reclamation

Behind the 2,100 ft. quay to be used by OCL/ACT, a 50-acre container park and marshalling area will be provided by reclaiming land from the River Test, and a similar back-up area of 16½ acres will be added to the existing 20 acres at the common-user terminal. Five acres for Berth 3, plus boundary





100,000-ton Norwegian bulk carrier "Hoegh Rainbow" at Port Talbot Harbour.

and connecting areas, bring to a total of 98 acres the land reclamation to be carried out.

Dredging

The Southampton Container Terminal can accommodate the largest container vessels afloat. Dredging work to be carried out for the new berths will create an extension of the deep-water approach channel with a depth of some 33.5 ft. below chart datum. A depth of 42 ft. below chart datum will be provided alongside the berths. As was done in the construction of the existing terminal, suitable dredged material will be pumped ashore to reclaim land for the operating areas.

Equipment

Provision has been included in the scheme for the purchase of four container handling cranes of up to 45-tons capacity, and allied shore handling equipment. Three of the cranes will serve the OCL/ACT terminal and the fourth will be installed at the second common-user berth, adjacent to the existing 1,000 ft. berth which is equipped with two cranes.

Other items included in the project are the provision of mains services and road weighbridges.

Communications

An important aspect of the new development will be the provision of entirely new road access to the container terminal by the Board constructing a bridge carrying a

two-lane dual carriageway across the main London/Bournemouth railway line, giving a direct link between the terminal and main trunk road routes. This will have the effect of permitting the growing docks traffic to by-pass the Southampton city centre.

In addition, Freightliners Limited plan to provide a maritime rail terminal adjacent to the container complex.

The new berths will become partly operational late in 1971 for the start of the Far East Container service. Total completion is scheduled for the end of 1972.

Background note:

Present ocean container facilities at Southampton consist of a 1,000 ft. deep-water quay, with a roll-on/roll-off linkspan and 20 acres of paved working area, served by two Paceco-Vickers transporter cranes and seven Clarke Van Carriers.

The terminal cost some £3½ million and was brought into use in October, 1968 for Belgian Line trans-Atlantic services (now part of Dart Containerline).

Companies at present using the terminal are Dart Containerline (two sailings a week to USA and Canada), Atlantic Container Line (weekly sailing to USA) and Seatrain Lines (weekly sailings to USA with associated feeder services).

The Docks Board have also provided within the dock estate a bonded container depot which is

used for Customs examination, break-bulk and consolidation of container traffic. This has recently been extended in size to 4 acres and the Customs shed increased to 32,000 sq. ft.

The OCL/ACT Far East service will be operated by vessels of some 35,000 tons deadweight each with a capacity of about 2,000 containers. The first of these ships are due to enter service towards the end of 1971, with the remainder becoming operational during 1972/3.

The Western Docks Extension project provides for the future construction of up to 6,000 ft. of deep water quays with 225 acres of marshalling area when required.

New Port Director

London, 17 August:—A strengthened management structure for the South Wales ports is announced today by the British Transport Docks Board. It is being introduced to take account of the expansion and development of the ports and the wider responsibilities of the Board in this area.

As a result, Mr. T. S. Roberts, J.P. has been appointed as Port Director for South Wales with his headquarters in Cardiff.

Since the Board was set up in 1963, £27 m has been invested in new and improved port facilities in South Wales, notably the construction of the new harbour at Port Talbot, costing £16 m, for the import of iron ore, which was opened by H. M. the Queen this year. (British Transport Docks Board)

Largest Bulker

London, 13 August:—The largest dry cargo vessel ever to discharge at a U.K. port, and one of the largest to come to Europe, is due to arrive at Port Talbot from Canada tomorrow (Friday, August 14).

She is the 100,000-ton Norwegian bulk carrier 'Hoegh Rainbow', on charter to the British Steel Corporation to bring a cargo of about 90,000 tons of iron ore from Port Cartier for discharge at the British Transport Docks

Board's new £20 million Port Talbot Harbour.

The vessel, which has a draft of 47 ft. 6 ins., is expected to begin moving into the harbour from her anchorage in Swansea Bay with the assistance of tugs at about 1600 hrs. and to complete berthing at the ore unloading jetty before 1800 hrs.

Port Talbot Harbour is one of the very few ports in Europe at present capable of handling ore carriers of this size. Since it became operational in March this year, it has handled 805,540 tons of iron ore from 17 vessels. The largest of these was the 75,000-ton "Westminster Bridge" which arrived at the harbour for its inauguration by the Queen in May.

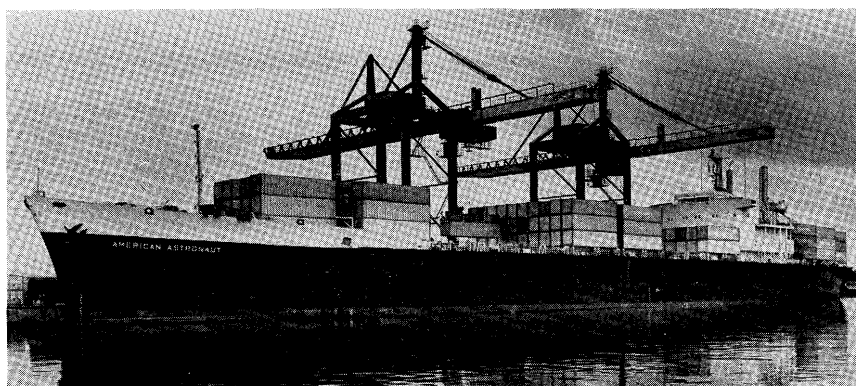
The 'Hoegh Rainbow', owned by Leif Hoegh and Company A/S of Oslo, was built in Japan in 1969 by Kawasaki Heavy Industries Ltd. of Kobe. She is 820 feet in length and has a beam of 127 ft. 8 ins. Agents for the ship are Cory Brothers Shipping Ltd., of Port Talbot. (British Transport Docks Board)

Symposium on LASH

Rouen:—The Institute of International Transportation Law at Palais des Consuls, 76, Rouen, France, announced on June 8, 1970 in the name of its president, Mr. J. Vaudour that said Institute is organizing a symposium on "The Legal Problems Posed by the Utilization of Barge-Carrying Vessels" on Friday, October 16 in Rouen, with the cooperation of the professors of the Law Department of the University of Rouen.

The technical and commercial questions relating to the utilization of barge-carrying vessels have found, until today, an initial answer thanks to the studies performed and to the experience with the first vessel of this type—the "Acadia-Forest". However, the legal problems that this new method of transportation brings about is a different matter.

The Institute of International Transportation Law has the mission to assure the development of



transportation law in line with the development of transport techniques. It thus decided to devote a one-day study to this question.

Mr. Rodiere, professor at the Law Department of the University of Paris, has kindly agreed to direct the program. He will be assisted by Professor Mercadal of the Law Department of the University of Rouen.

The symposium will benefit from the cooperation of the following:

- The British Institute
- The European Jurists Association
- The Department of Law and Economic Sciences of the University of Rouen
- The Regional Chamber of Commerce and Industry of Haute-Normandie
- The Autonomous Ports of Rouen and Le Havre
- The Advanced School of Commerce and Enterprise Administration of Rouen

The announcement extends invitation to IAPH for participation in the symposium. Still further details are yet to be revealed.

Full-Container Lines

Bremen:—M.S. "American Astronaut" (18,816 BRT, 20,574 dwt) of the United States Lines, a vessel of the "Lancer" class with a loading capacity of 1,200 containers (20-foot types) and a speed of 23 knots, recently started the regular weekly USL full-container service between Bremerhaven and the U.S. East Coast. With this service the number of full-container lines operating between the Ports of Bremen and the United States has risen to a total of seven. Sea Land

Service, Inc., the American Export Isbrandtsen Lines (Container Marine Lines Division), the Hapag-Lloyd Container-Linien, the Atlantic Container Line, the Moore-McCormack Lines, Incorporated, and the Seatrain Lines, Inc., are the other lines that already call at the Ports of Bremen and Bremerhaven. The Australia Europe Container Service will offer a further full-container service between Bremerhaven and Australia, which will start in autumn this year.

With these eight full-container lines, which are complemented by seven semi-container lines, the Ports of Bremen can offer shippers the widest choice of departures of container vessels in comparison with all the other European ports.

It will be possible to strengthen this leading position at the end of 1971, when a full-container service to Japan will be put into operation. Indeed the very conception of the new "Terminal on the Sea", the first berth of which will have been completed at the end of this year and a further berth by autumn 1971, as well as the very best location, easily accessible to the sea and to the hinterland, will also offer full-container transport to the Far East most favourable possibilities.

Moreover, the concentration of eight full-container lines in the near future will lead this year to a further record in the number of containers handled by the Ports of Bremen. 100,000 containers of the 20', 35' and 40' types (about 160,000 on a 20-foot basis), i.e. 27,000

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or 35% more than last year, will have been handled via Bremen/Bremerhaven by the end of this year. This means that already more than 75% of the goods transported between the Ports of Bremen and the U.S. East Coast (viz. 1.5 million tons) will have been transported in containers.

The United States Lines will operate their new full-container service with the vessels "American Astronaut", "American Liberty" and "American Legion" and they will be taking on cargo in Bremerhaven every Monday, bound for New York, Baltimore and Norfolk. After M.S. "American Astronaut", which handled 539 containers in Bremerhaven, there will follow the vessels "American Liberty" on 27th July and "American Legion" on the 3rd August, 1970. (via Bremen Bremerhaven)

Container Conference

Bremen:—The World Association of World Federalists is convening a conference in Berlin from October 19th to 21st 1970 to study the effects of the container trade upon world economy. The Bremen Senator for ports, shipping and traffic, Dr. Georg Borttscheller, has now been appointed to the international honorary committee of this conference. (Bremen Air Mail, August)

Port Industrialization

Bremen:—The chairman of the Board of the BLG (Bremer Lagerhaus Gesellschaft—or port authority), Gerhard Beier, described the not-inconsiderable structural alterations in port handling and transportation means as being the

industrialisation process of sea transportation economy. Unquestionably pleased with the development of his company, also in respect of the first half of the 1970 business year, Beier now examined, in the General Meeting of the BLG, the problems arising with this industrialisation process. Also in the non-foreseeable future the most modern technical appliances and methods will exist side by side with the old tried methods of the past. The wide range of services within the ports will, therefore, have to reach from the traditional forms of cargo handling and shipping clearance, right over to the most highly developed transportation system. This calls for the highest degree of flexibility in the investments in the port economy. In view of this great range it would be unwise in the extreme, according to Beier, to concentrate attention

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solely to the adaptability of the modern forms of cargo handling. (Bremen Air Mail, August)

Container Exhibition

Genoa:—The 4th International Container Exhibition is scheduled October 7—12, 1970 in Genoa, Italy, according to “fiera internazionale di genova”, 16129 Genova, Piazzale J. F. Kennedy, Italy.

Welfare Benefits

Barcelona:—It is traditional for the Authority to offer welfare benefits to its employees and labourers. This was started many years ago and took the form of medical-pharmaceutical assistance and has extended in recent years to include other parallel activities.

Currently the Authority's efforts are concentrated on 4 points: housing, sanitary assistance, collective dining rooms and sports events.

Commencing with work done by the Authority itself and recently with the assistance of the Patronage

of Housing of the Ministry of Public Works, 159 dwellings have been completed. Next month 64 more will be completed and 170 more are about to be started. In one year and a half, a total of 393 dwelling places have been constructed for the employees and labourers of the Port Authority. This represents dwelling places for more than 50% of the employees and labourers.

All this housing is contained within the Harbour zone and the apartments range in size from 60 to 170 m². The rental fees are very low.

As regards sanitation and health in its medical-pharmaceutical aspect, the Port Authority has taken out the Obligatory Health Insurance and Industrial Accident Insurance for its employees. In addition, there is a branch Social Office which takes care of medical-pharmaceutical insurance for the personnel not subject to the Obligatory Health Insurance, as well as pension benefits, these latter aided by the Port Worker's Mutual Fund.

For the development of its medical hygienic activities, the Port Authority has at its disposal a modern outpatients clinic and a staff of doctors and physicians, thereby enabling the Authority to give medical and pharmaceutical aid completely without cost to its labourers and employees.

There are two collective dining rooms; one in the area of the workshops, in which the personnel may purchase meals at the price of 6 ptas. and a cafeteria which serves only a hot lunch at 10 ptas. This latter is located in the office of the Port Authority itself.

Sporting events are directed by a Company Group for Education and Relaxation which has organized football teams, sailing, rowing and shooting clubs and which has its own gymnasium as well as a temporary football field.

In total the Port Authority spends 5 million pesetas per year on social benefits. (Puerto De Barcelona, Boletín Informativo, November 1969)

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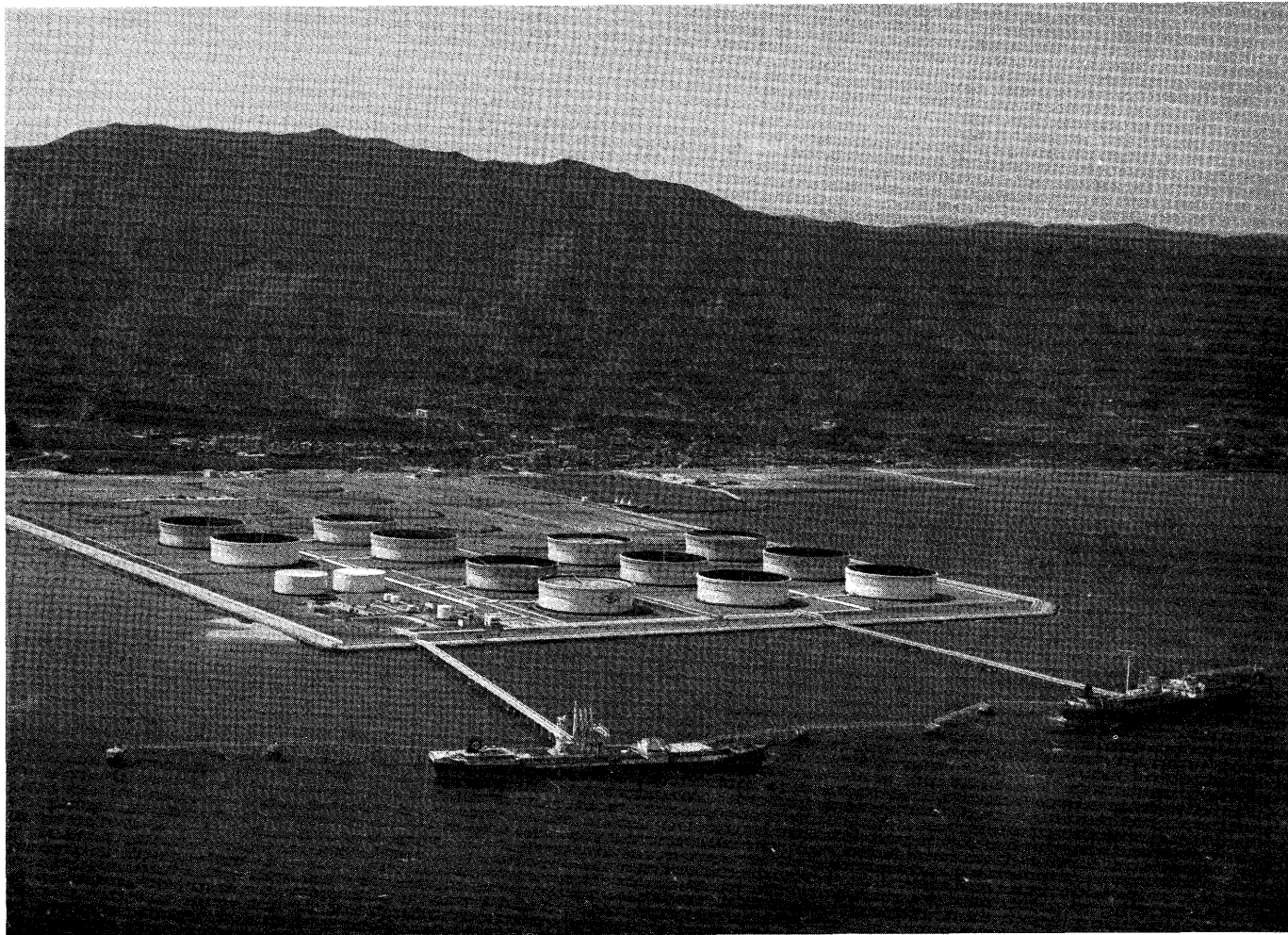
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we all know, generates no returns on capital investment but we are believers of the adage that teaches us an ounce of prevention is worth a pound of cure. Happily, we are not alone. Others in the Japanese petroleum and tanker industries are equally anxious to stop the willful and damaging pollution of the seas and coastlines which sustain the wellbeing of mankind and, for sure, as a result of our concerted efforts much has been accomplished.

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