

PORTS *and* HARBORS

November, 1976 Vol.21, No.11



Port of Antwerp

IAPH Conference Houston April 1977

The Publisher: The International Association of Ports and Harbors

Kotohira-Kaikan Bldg. 1, Kotohira-cho, Minato-ku,
Tokyo 105, Japan



FOR SAFER BERTHING!

Of all marine navigation, one of the most tricky is safely berthing the ship. With Bridgestone Marine Fenders, safer berthing is assured while the costs for construction and maintenance are reasonably low. Bridgestone Marine Fenders can meet any challenge!

Cell Fender	C3000H —C630H	Absorbs Maximum Energy of 730 ton-meter — for Huge Tankers and Ore Carriers
Super M Fender	SM1000H —SM250H	New Type Fender for Medium Size of Vessels
Super Arch Fender	SA1000H —SA150H	For Medium Size of Vessels
Cylindrical Fender	2000×1000 —150×75	For General Cargoes
Turtle Fender	100H×0.5M, 1.0M 130H×0.5M	For Fishing Port

BS BRIDGESTONE.

NO. 1-1 Chome, Kyobashi, Chuo-ku, Tokyo, Japan.
 TELEPHONE: 567-0111
 TELEX: J22217, J23207, J23227
 CABLE: BSTIRE TOKYO

PACECO's new Economy Portainer®



This PACECO Economy Portainer is now in operation for the Seaway Port Authority of Duluth, Minn., the first containerized port on the Great Lakes.

- half the cost
- full container capability
- moves general cargo faster.

For ports that thought they couldn't afford specialized container-handling equipment, this new low-cost container crane is specially designed to achieve maximum production with minimum capital investment and lower operating and maintenance costs.

The Portainer's controlled, straight-line operation speeds handling of general cargo, palletized cargo, and 20 ft. to 40 ft. containers. It has a 30 Ton capacity and can be self powered or shore powered. It also offers a choice of options, includ-

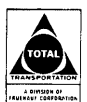
ing: a back reach of varying lengths, outreach of 72 ft. or 84 ft., standard or rotating trolley, and other features to meet your specific needs.

The Economy Portainer's versatility assures more constant production; greater utilization; and provides a higher return on your investment in manpower and facilities.

And you get the same PACECO quality and experience that has gone into the design and construction of more than 200 container cranes at major ports around the world.

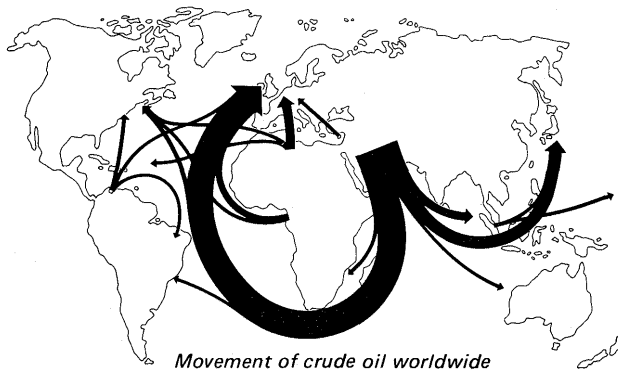


PACECO *The Only Manufacturer Offering A Complete Line Of Container Handling Systems And Equipment With World-Wide Sales And Service.*



Contact PACECO or the office nearest you. **Headquarters Office**—PACECO, Dept. 24-L, Alameda, CA 94501 • (415) 522-6100, Telex 335-399. **New York Representative**—ROBERT MOORE CORP., 350 Main St., Port Washington, N.Y. 11050 • **PACECO European Sales Office**—PACECO INTERNATIONAL LIMITED, London. **PACECO Licensees:** **Australia**—VICKERS HOSKINS PTY, LIMITED, Bassendean; **Canada**—DOMINION BRIDGE COMPANY LIMITED, Montreal; **France**—ATELIERS ET CHANTIERS DE BRETAGNE, Paris. **India**—BRAITHWAITE & CO., LIMITED, Calcutta. **Italy**—REGGIANE O.M.I. S.p.A., Reggio Emilia. **Japan**—MITSUI SHIPBUILDING & ENGINEERING CO., LTD., Tokyo. **South Africa**—DORMAN LONG VANDERBIJL CORPORATION LIMITED, Johannesburg. **Spain**—FRUEHAUF S.A., Madrid. **United Kingdom**—VICKERS ENGINEERING GROUP LIMITED, South Marston, Swindon, Wiltshire.

We like to keep things on the go.



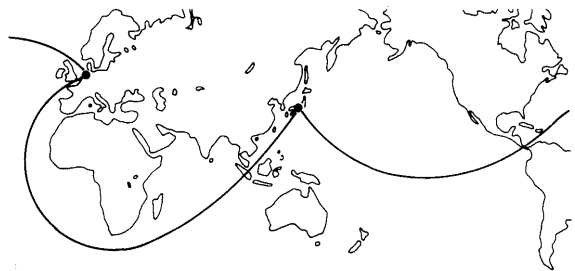
Products to fuel the world, to feed it, to shelter it — transporting such cargoes has made the shipping firm's role indispensable. So "K" Line is keeping things on the move, opening new routes with modern vessels for every need.

Our tankers, for example, carried a sizable amount of all the oil shipped by sea in 1975.

Our well-balanced fleet of 200 vessels can carry any cargo anywhere — over 21 liner routes. In containerisation, we're a pioneer and a leading specialist. And through joint ventures and other forms of international cooperation, we've made many innovations in shipping.

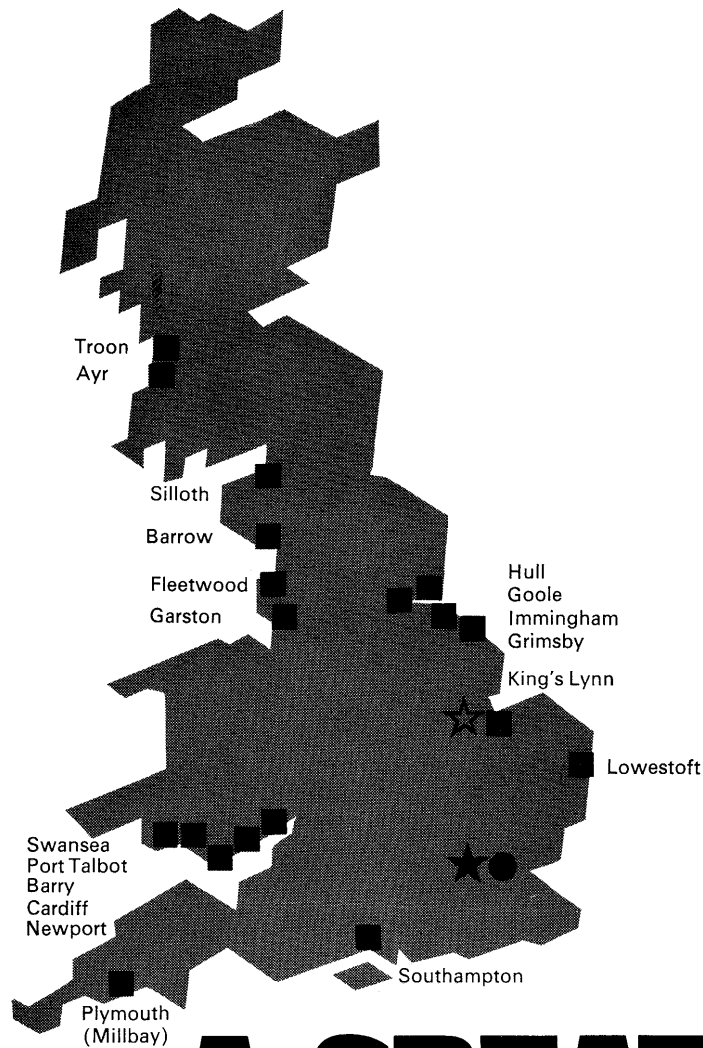
"K" Line's efforts in Europe exemplify our role throughout the world. We're conducting regular liner service on the Japan-Europe route. We're also conducting ore carrier, car carrier and tanker services. And in the spirit of cooperation, we're seeking solutions to new needs.

Everywhere, in every way, "K" Line is going all out to keep vital cargoes moving more efficiently. By keeping things on the go, we're keeping the world a little better off.



We turn needs into realities





A GREAT BRITISH ASSET

The British Transport Docks Board offers the shipper and shipowner something unique – a nationwide ports service.

Since its inception in 1963, the Docks Board's share of UK seaport trade has grown consistently and, today, its 19 ports handle 24% of the country's foreign trade by value. The key to this success is investment – in people, equipment and facilities. The Docks Board has its own staff college and research station. A continuous programme of investment in the ports has kept them competitive and able to attract business that demands the latest handling techniques.

The Docks Board is ready for further expansion in the future to ensure that it maintains its position as Britain's main port operator.

For further information on the Board's activities contact:
 Melbury House, Melbury Terrace, London NW1 6JY
 Telephone: 01-486 6621 Telex 23913

- Docks Board Ports
- London Headquarters
- ★ Research Station
- ☆ Staff College



**British Transport
Docks Board**

TOWNSVILLE

a simple solution

to

rising cost

To make your dollar go further, have your ships sail fewer miles. If you're Australia-bound, you can do it by making Townsville your terminal port. (No matter what your cargo, we can handle it and speed it south by road or rail). Your ships could make up to 5 extra voyages per year, and that's got to mean more profit. Contact us for all the details on the ins and outs of Australia.



Gateway to Australia

**Townsville
Harbour Board**

No. 1 The Strand, Townsville
North Queensland 4810 AUSTRALIA
P.O. Box 1031 Telephone 721011
Cable: 'Nausport'



PORTS *and* HARBORS

Editor: Yoshio Hayashi

Published monthly by

The International Association of Ports and Harbors

N.G.O. Consultative Status, United Nations (ECOSOC, UNCTAD, IMCO)

President:

Howe Yoon Chong
Chairman/General Manager
The Port of Singapore Authority

Executive Committee:

Chairman:

Howe Yoon Chong
President, IAPH
Chairman/General Manager
The Port of Singapore Authority

Members:

George W. Altvater
1st Vice President, IAPH
Executive Director
Port of Houston

Stanley Johnson
2nd Vice President, IAPH
Formerly Managing Director
British Transport Docks Board

A.S. Mayne
3rd Vice President, IAPH
Chairman
Melbourne Harbor Trust Commissioners

Robert L.M. Vleugels
Immediate Past President
Director General
Port of Antwerp

R.O. Ajayi
Deputy General Manager
Nigerian Ports Authority

Y.M. Raja Azam
Chairman
Kelang Port Authority

Robert Boeuf
Ingenieur General des Ponts
et Chaussées, Paris

R.W. Carr
Chairman
Auckland Harbour Board

J.H.W. Cavey
Chief, Harbours and Ports
Department of Transport, Canada

Ir. J. den Toom
Managing Director
Port Management of Amsterdam

P.K. Kinyanjui
Chairman
East African Harbours Corporation

Fumio Kohmura
Vice President
Nagoya Port Authority

Ben E. Nutter
Executive Director
Port of Oakland

Bruce Procope
Chairman
Port Authority of Trinidad and Tobago

Thomas T. Soules
Port Director
San Francisco Port Commission

Anthony J. Tozzoli
Director, Marine Terminals
The Port Authority of New York
and New Jersey

Gengo Tsuboi
Vice Chairman
The Japan Shipowners' Association

Secretary General:

Dr. Hajime Sato

Head Office:

Kotohira-Kaikan Bldg.
1, Kotohira-cho, Minato-ku,
Tokyo 105, Japan
Tel.: TOKYO (591) 4261
Cable: "IAPHCENTRAL TOKYO"
Telex: 02222516 IAPH J

November, 1976 Vol. 21, No. 11

CONTENTS

	Page
IAPH Head Office Announcements:	7~17
IMCO Report: Dangerous Goods Committee Explores Aspects of Interest to IAPH—Board Cooperation Continued—Questionnaire on Port Congestion Circulated—UNCTAD Report: Technological Change in shipping and its effects on ports: establishing tariffs for unit-load and multi-purpose terminals (UNCTAD Secretariat)—Panelists at 10th Conference—Visitors—Maritime Safety prayed in SHINTO way—Membership Notes	
Topics:	
New Frontiers in Bulk Transfer Technology (By Paul Soros, President, Soros Associates)	18
"The Port of Boston" Massport Congressional luncheon, Washington, D.C. (Massport)	29
Canadian Ports Commission Proposal Announced in Charlottetown (Port of Hamilton)	38
5th UNCTAD/SIDA Training Course (Port of Singapore Authority)	58
Ports:	
Port of New York and New Jersey Waterfront Cleanup Project Coordinating Committee	23
Newport—A Port in Transition (British Transport Docks Board)	26
Seattle—Annual Report 1975	28
Port of Gothenburg has a plan for concentration of dry cargo harbours	32
Port of Acajutla, San Salvador	39
Barbours Terminal Work Progressing (Port of Houston)	41
Port of Seattle buys back large waterfront area	46
West Dock, Bristol, Chosen by Toyota (Port of Bristol)	47
Port of Le Havre Flashes	48
Chairman's Report, Port of Portland, Victoria, Australia	54
Townsville Harbour Board Makes Great Strides	55
Orbiter Probe (International News):	37~60
The Cover: Port of Antwerp. Northern port area. To the left: Scheldt river.	

Price US\$ 2.00 per copy
US\$ 20.00 per year

Try Our Unique Dredging Technology !



"TOKUSHUN MARU NO.1"

Principal Particulars

- Gross tonnage..... 6,251.21 tons
- Hopper capacity..... 4,000 cubic meters
- Hopper loadage..... 5,600 tons
- Dredging pump..... 10,000 cubic meters/hour x 2
- Jet pump..... 800 cubic meters/hour x 2
- Dredging depth..... max 30⁶ meters
- Positioning system.... Coordinate display
- Distance meter..... AUDISTER (electronic distance meter)



Tokushu Shunsetsu Co., Ltd.

Head Office: Akiyama Bldg., No. 25, Akefuncho
 Shiba Nishikubo, Minato-ku, Tokyo

Telephone: Tokyo (03) 591-8411

PORTS *and* HARBORS

IAPH Head Office Announcements: Pages 7 ~ 17

IMCO Report:

Dangerous Goods Committee Explores Aspects of Interest to IAPH

IAPH Liaison Officer with IMCO, Mr. A.J. Smith turned in the following report on the meeting of IMCO's Sub-Committee on the Carriage of Dangerous Goods held in London from 5 to 9 July. The full text of his report follows. (Head Office)

(The Text)

The IMCO Sub-Committee on the Carriage of Dangerous Goods held its 26th Session in London from 5 to 9 July under the Chairmanship of Mr. C.H. Buschmann (Netherlands).

IAPH has a general interest in all aspects of the Sub-Committee's essentially technical discussions which were, as usual, of a wide-ranging nature. These included reference to portable tanks for dangerous goods; emergency procedures for ships carrying dangerous goods; carriage of dangerous solid substances in bulk; fire safety measures; an amendments to the International Maritime Dangerous Goods Code.

A number of other matters discussed were however of specific interest to the international port community and these are reported upon briefly hereunder.

Safe Loading of Cargo in Containers

The IMCO Secretariat has prepared preliminary draft guidelines on the proper stowage of cargoes in containers to be used by those responsible for their loading and the training of shore personnel in this activity. The dangerous goods section of these guidelines is currently under review.

Inter-American Conference on Ports and Harbours

Reference was made to the 4th Inter-American Conference on Ports and Harbours, convened by the Organisation of American States (OAS) in Mexico City on 5 to 11 December, 1975.

That Conference resolved to adhere to the provisions of the IMDG Code and to apply its provisions to their port operations. Additionally, member states intend to develop general standards and procedures for handling dangerous cargoes.

Questionnaire

A questionnaire concerning substances carried by sea and capable of causing injury or damage resulting in civil liability has been drawn up for circulation to Governments. IAPH has also been asked to assist by canvassing opinions from its members.

Safe Practice on Dangerous Goods in Ports and Harbours

This matter is of prime importance to IAPH members. The Sub-Committee noted with satisfaction that several countries had taken steps to implement IMCO Assembly Resolution A289 (VIII) dealing with Recommendations on Safe Practice of Dangerous Goods in Ports and Harbours. It was also noted that several countries as well as organisations are considering at national level the formulation of appropriate regulations or bye-laws based on the Assembly Resolution. In this regard, the whole-hearted support of IAPH was conveyed to the Sub-Committee by intervention.

It was agreed in principle that a revision of Resolution A289 (VIII) is desirable and should be undertaken as soon as possible. To this end the Sub-Committee considered that it should draw up general guidelines without too much detail which might be of help to administrations and authorities in harmonising the regulations.

The Sub-Committee will next meet for its 27th session from 21 to 25 February, 1977.

Board Cooperation Continued

As reported in the October issue, many replies were contributed to the IAPH questionnaires on (a) Revision of the 1957 Convention, (b) Acts of Sabotage and Terrorism in Ports, which were duly reported to Mr. Andre Pages, Chairman of our Special Committee on Legal Protection of Navigable Waterways after compiling replies into a report form. This office received the replies from the following members, in addition to the already reported members. (rin) as of September 30,

- (a) Revision of the 1957 Convention
 - Mr. Jorge Luis Sotto-Mayor de Araujo Rego, Administracao-Geral do Porto de Lisboa
 - Mr. Eigil Andersen, General Manager, Port of Copenhagen Authority
 - Mr. Ben E. Nutter, Executive Director, Port of Oakland
 - Mr. R.E. Dawson, Chief Executive Officer, the Harbours Association of New Zealand
 - Mr. G.B. Page, Chief Engineer, Papua New Guinea Harbours Board
- (b) Acts of Sabotage and Terrorism
 - Mr. Eigil Andersen, General Manager, Port of Copenhagen Authority
 - Mr. Fumio Kohmura, Vice-President, Nagoya Port Authority

Questionnaire on Port Congestion Circulated

In close cooperation with UNCTAD now tackling to the problems of "Port congestions", IAPH Tokyo Office circulated a questionnaire on this grave subject to all member-ports of the Association on September 30, calling for their unanimous support by filling it and airmailing it to Mr. Ullman by the end of November, this year. (General Manager, Port of Gothenburg, P.O. Box 2553, S-403, 17 Gothenburg 2, Sweden)

Mr. Sven Ullman, who is concurrently IAPH Liaison Officer with UNCTAD and also the Chairman of IAPH Special Committee on International Port Development, chose this problem as the subject of top priority to be introduced into the 10th IAPH Conference in Houston by his Committee.

In drawing up the questionnaire now in circulation, Mr. Ullman enjoyed a good cooperation of Mr. Eric Williamson, Chief, Ports Section, Shipping Division of UNCTAD, who has recently joined as an adviser member to serve on this Special Committee of IAPH.

The full text of the questionnaire follows. (TKD)



Mr. Sven Ullman

SPECIAL COMMITTEE ON INTERNATIONAL PORT DEVELOPMENT QUESTIONNAIRE ON PORT CONGESTION

It has been suggested that International Association of Ports and Harbors through its Special Committee on International Port Development should consider the problems of port congestion. In order to bring together some information on the matter, the Committee should appreciate your answers on the following questionnaire. As the term Port Congestion might have different meanings to different people we would like to define the concept as follows.

"A situation where most ships arriving at a port over a period of, say, a month, had to wait for a berth due to all berths being in use."

1. Has the port suffered from port congestion (as defined above) over the past three years? If so, kindly complete the following proforma.

1 Period	2 No. of general cargo ships which visited the port period	3 No. of general cargo ships which had to wait before securing a berth	4 Total ship-days lost in waiting by vessels in Co. 3	5 Longest waiting by any general cargo ship during the period (in days)
1973				
1st quarter
2nd quarter
3rd quarter
4th quarter
1974				
1st quarter
2nd quarter
3rd quarter
4th quarter
1975				
1st quarter
2nd quarter
3rd quarter
4th quarter

2. Please furnish data on the utilization of the general cargo berths at your port during the last three years, preferably in the following form:

(Continued on next page bottom)

Technological change in shipping and its effects on ports: establishing tariffs for unit-load and multi-purpose terminals

Report by the UNCTAD Secretariat

The following reports were specifically reproduced in this issue with the suggestion of Mr. S. Ullman, IAPH Liaison Officer with UNCTAD.

The report has been prepared by the UNCTAD Secretariat for the use of both Governments and the general public.

At its seventh session, held in November 1975, the Committee on Shipping considered a report on this subject, entitled "Technological change in shipping and its effects on ports: note on the problem" (TD/B/C.4/129). The present document discusses a number of technical matters related to the substance of that report. (Head Office)

CONTENTS

Chapter	Paragraph
I. Some guidelines for the establishment of an appropriate container tariff for a specialized roll-on/roll-off or lift-on/lift-off container terminal	1-24
A. The need for a differentiated tariff	1- 2
B. The extent of coverage provided by the tariff	3-10
C. A practical proposal	11-15
D. The structure of a tariff applicable on a container terminal	16-19
E. The rate level	20-22
F. Shift working	23-24
G. Proposal for Container Terminal Tariff Structure	

II. Some guidelines for the establishment of an appropriate tariff for a multi-purpose terminal	25-39
A. Stating the basic problems	25-27
B. Two major alternatives	28-34
C. Practical problems related to the calculation of the real cost for handling each of the different types of cargo on the multi-purpose terminal	35-39

Chapter I

SOME GUIDELINES FOR THE ESTABLISHMENT OF AN APPROPRIATE CONTAINER TARIFF FOR A SPECIALIZED ROLL-ON/ROLL-OFF OR LIFT-ON/LIFT-OFF CONTAINER TERMINAL

A. The need for a differentiated tariff

1. When establishing a container tariff for a specialized container terminal the responsible body (Port Authority or terminal operator¹⁾) must first make a decision on the basic charging unit. Different alternatives can be distinguished, each of which will have a direct effect on the commercial and/or cost elements. The following list, which is not exhaustive, shows the major factors which have to be considered by the Authority in determining a tariff which can fulfill its basic pricing objectives:

- (a) A distinction can be made between FCL and LCL²⁾ units (in respect of the handling of the container only);
- (b) A distinction between empty and full containers;
- (c) A distinction between the different container sizes (less than 20' units, 20' units, 30' units, 35' units,

Type of berth	No. of berths of this type	No. of days occupied per years			Cargo tonnage handled		
		1973	1974	1975	1973	1974	1975
.....

3. If there is, or has been, a priority system for berth allocation in your port (whether it is based on the order of ship arrival or on any other basis), please give details.
4. To your knowledge, has the port been subject to a port congestion surcharge by liner conferences during the past three years. If so, give approximate dates and an estimate of the proportion of the port's liner traffic affected by such a surcharge (import and export cargo separately).
5. How has congestion manifested itself? What, in your view, are the principal causes?
 - a) within the port's jurisdiction; and
 - b) outside the port's jurisdiction.
6. What measures have been taken to combat congestion?
7. Which of these measures have proved successful?
8. Would you be interested in receiving assistance from other members of IAPH in helping to solve port congestion?
9. Would you be prepared to offer any assistance to other ports to help them to solve the problem of port congestion?

40' units);

- (d) A distinction between a country's import/export containers (its captive traffic) and the transshipment units;
- (e) A distinction between containers discharged from or loaded on a deep sea vessel or a feeder ship;
- (f) A distinction between the units handled with the ship's gear and those handled by the terminal's cranes.

2. Combinations of the above factors will cause priorities to have to be considered. For example, if a 40' transshipment container is discharged from a feeder vessel with the ship's own gear, and thereafter loaded into a deep sea vessel with the terminal's gantry crane, which rate applies, if the tariff distinguishes between these various alternatives? Which is the predominant feature? Is it the fact that a transshipment container is handled, is it the size of the unit, the type of vessel or the equipment used? In what order should the factors be taken into account?

^{1/} The body responsible for establishing a container terminal tariff will be called hereafter 'the Authority'.

^{2/} FCL: Full Container Load. A container usually loaded by one shipper for one consignee.

LCL: Less than Container Load. A container which is filled with consignments of cargo for more than one consignee from more than one shipper.

B. The extent of coverage provided by the tariff

3. A typical tariff structure in a conventional break-bulk operation is based on a per activity basis. Charges for discharging and loading the vessel are often invoiced separately from the reception or wharf-handling charges. Often the crane costs are billed on a third invoice, the tallying and delivery charges on a fourth, and so forth. The reasons for this pricing system are not difficult to find—not only were many parties involved in the total operation, but in general each party carried out the work for a different principal.

4. When drawing up a tariff for operations on a container terminal one can, of course, choose to maintain such a diversified pricing system. However, assuming that all the operations on the terminal are carried out by one operating entity (which is the optimum operational set-up) it becomes possible, even desirable, to introduce a more homogeneous type of tariff, i.e. one based on a flat rate pricing system. Although several principals might still be involved (e.g. the ship operator and the many cargo interests) it is possible to bill the major principal (normally the ship operator) for the total charges incurred, and for it to be this principal's responsibility to settle accounts with the other principals concerned (often through the ship operators' agents).

5. The result of such an arrangement is, in the first place, a considerable simplification of the accounting system required for the terminal. The need to record each move, each activity, for each and every container is obviated. For each vessel one invoice is made out stating the total numbers handled, for which a flat rate (or a series of flat rates) is applied. Container operators will benefit equally from such a simplification. The subsequent invoicing by them of the many cargo-owners can easily be combined with the issuing of a delivery order. Such a practice indeed already exists in some ports for conventional general cargo.

6. The application of a flat rate does not mean that no

tariff has to be established for separate activities. The following listing sets out possible different sections of a tariff, based on a flat rate:

- (a) The flat rate for loading/discharging containers in the case of a FCL^{2/} container, this flat rate includes all the charges for:
 - (i) the discharge from the ship onto the quay apron;
 - (ii) the transfer from the quay apron into the stacking area;
 - (iii) the stacking of the container in the stacking area;
 - (iv) taking the container out of the stack and the transfer to the delivery bays;
 - (v) delivery of the container onto road or rail vehicle;
 - (vi) a free time for the storage of the container;
 - (vii) the receipt of the empty container;
 - (viii) the storage of the empty container in the reserved stacking area for empty units; or for an export container:
 - (ix) taking an empty container from the stack;
 - (x) the delivery of an empty container on truck for subsequent packing inland;
 - (xi) the receipt for shipment of the full container from road or rail vehicle;
 - (xii) the transfer from the delivery bays to the stacking area;
 - (xiii) the stacking of the container in the stacking area;
 - (xiv) taking the container out of the stack and the transfer to the quay apron;
 - (xv) the loading on board the vessel.
- (b) For both loading and discharging the following activities are also included in the flat rate:
 - (i) the gantry crane costs;
 - (ii) the cost of the mobile equipment;
 - (iii) the tallying of the containers on the ship side and in the stacking areas;
 - (iv) filling out the "interchange" documents;
 - (v) determining damage on the container at the moment of discharge or loading on board, and when entering or leaving the terminal gates.

7. Whether the elaboration of ship's stowage plan is included in the flat rate, and indeed, whether it is the responsibility of the terminal, remains open for discussion.

8. Some activities are ship-linked but not included in the flat rate. A special rate has to be worked out for activities such as:

- (a) Opening and closing hatch covers, and placing hatch covers on another hatch or landing them on the wharf;
- (b) Shifting of the containers within the same hatch, or shifting from one hatch to another;
- (c) Sea-worthy lashing of deck-containers (this rate would normally be quoted on a man-hour basis).

9. A number of additional activities can be required, which are not covered by the flat rate. These activities have not necessarily to involve the ship, since they might be requested by leasing companies, shippers, receivers, forwarding companies, etc. and could be billed directly to these principals. Such activities are:

- (a) Extra movement of the container on the terminal;
- (b) Storage of containers/chassis on the terminal (when not included in the flat rate);

- (c) Weighing containers;
- (d) Washing containers;
- (e) Connecting and disconnecting reefers (including electricity consumption).

10. The charges for packing and unpacking LCL—containers on the terminal are, of course, very much of a break-bulk nature, i.e. they are generally levied on a per ton basis and include two distinct moves:

- (a) The unpacking of the container; and
- (b) The subsequent delivery of the cargo onto rail or road vehicle or vice versa for export cargo.

Furthermore, a free time for the break-bulk cargo is included, after which a special storage rent has to be levied. The packing and unpacking tariff can be extremely complex if worked out on a commodity base, or kept very simple if based on weight measurement, with a possible reduction for palletized cargoes.

^{3/} Full container loads, i.e. containers which will move through the port intact.

C. A practical proposal

11. When drawing up a complete tariff for activities at a container terminal, one has to choose between a very detailed tariff, which will take into consideration the many commercial and cost related aspects (e.g. making a distinction between empty and full containers based on the commercial argument that the empty container is an unproductive and unremunerative item for the shipping line and therefore can bear less handling costs), and a fairly simple tariff, which does not consider too many of these commercial and cost-related factors, but aims at simplicity, both in the interest of the customers and the terminal.

12. A major principle should be to treat all users on the same basis. This practice, however, does not exclude the possibility of adapting the base tariff to the specific requirements of the ship operator. It can therefore be assumed that in practice the terminal may have specific agreements with each of the container operators using the terminal, and that a comparison by the various operators of their respective tariffs may not be possible because of the distinctive differences in the required terminal performance. However, whenever possible, the "Authority" should try to apply a single base tariff.

13. How commercial can a singlebase tariff be? One can argue that no incentives can be offered to the ship operators or other users to utilize the facilities of the terminal, and that the more important operators, whose services allow a more efficient operation (because of the more appropriate ship type used or the sheer number of containers handled), do not get any return for the efforts they have made.

14. The application of a "sliding scale" on a confidential basis allows an easy adaptation of the general tariff to the specific performance of each terminal user. It is a simple way of differentiating between the various services, on a cost-related basis. No sophisticated or complex calculations are required; a rebate based on the total number of containers handled in a year can be granted to the operators. For example, a "sliding scale" could offer the following rebates:

between	0— 5,000	units per year	basic rates apply
		handled:	
between	5,000—10,000	units per year	2.5 per cent rebate on

	handled:	FCL rates
between 10,000—15,000	units per year	5 per cent rebate on
	handled:	FCL rates
between 15,000—20,000	units per year	7.5 per cent rebate on
	handled:	FCL rates

and so on.

15. The steps as well as the rebates can be chosen in relation to the operators' demands and throughput, and of course, remain a major element of inducement based on the rates.

D. The structure of a tariff applicable on a container terminal

16. The "authority" responsible for fixing the tariff to be applied for all container terminal operations will in the first place need to develop a base structure in which corresponding rates can be fitted. This base structure will embody a number of politically motivated decisions. Indeed, the base structure can only be developed after deciding which factors will involve a rate differential and which will not. Although all the factors mentioned in paragraph 1 are related to cost, none affects the total handling cost as much as the total terminal throughput. Whether a distinction in the rates should be made between a 20', 35' and 40' container is, from a cost point of view, difficult to decide. It will depend on the availability of the appropriate equipment for 20', 35' and 40' containers. If this equipment is available, then there is not a great deal of difference in the handling cost between a 20' and 40' unit. The only marked difference is related to the storage of the units.

17. The same is true for the distinction between the handling of FCL and LCL containers (irrespective of the packing and unpacking itself), or between full and empty units. It is up to each "authority" to determine its policy, but it is very likely that interests external to the "authority" will try to influence the decisions in respect of the base structure.

18. Particularly important is the choice in respect of transshipment cargoes, and the handling of deep-sea vessels and feeder-ships. In the former case much will depend on the amount of incentive the port is willing to offer in order to attract transshipment cargo, in the latter case the transshipment aspect is also involved, but there is also the question of different ship types with correspondingly different expected handling productivities.

19. Whatever base structure is selected, it should be recognized that changes to it will be difficult to make once it has been introduced. The rate levels, on the other hand, can be modified later as circumstances change.

E. The rate level

20. On the assumption that a tariff structure has been selected, the terminal will then have to calculate the rate levels required to achieve its pricing objectives. As already indicated, given the high proportion of fixed operating costs, the most determining cost factor for a container terminal is its total throughput. In the initial stages, throughput will frequently be insufficient to allow an adequate return on capital, if competitive rates are charged. Thus, the first few years after commissioning, the "authority" will probably have to accept negative financial operating results, which it can hope to improve as throughput increases.

21. To calculate the rate levels, one can therefore not count on the actual cost incurred during the initial years of operation. The most logical solution is to choose a throughput which represents a substantial fraction of the terminal's capacity and to relate the total annual costs to this throughput. The major cost factors such as labour, terminal administration costs and capital investment costs can be calculated quite precisely. Maintenance and repair costs are less easy to estimate, although based on operational experience, some estimates can be made. General costs of the port have to be allocated on the basis of some assumption, e.g. proportionally to the volume of traffic, value of the cargoes handled, etc.

22. The basic calculation of the rate levels is straightforward provided the tariff structure is kept fairly simple. However, if a differentiation is made between many types of containers, of ship types, of operators, etc., the difficulties will grow since it is unlikely that the port authority will be able to predict with any accuracy the quantity of empty and full containers, 20'/35'/40' units, transshipment and other cargo it will handle throughout the years. This is another reason for keeping the tariff structure as simple as possible.

F. Shift working

23. Concerning shift work, the "authority" has the choice between a number of possible alternatives, of which three deserve some further attention:

- (a) It is possible to maintain the same pricing system for overtime as that for break-bulk cargoes. A distinction is made between a normal shift, for which the basis rate applies, and overtime periods and special shifts (first, second, night shift work on Saturdays and Sundays/holidays). For each of the exceptional working periods, supplements are calculated.
- (b) Container terminals often operate on a 24-hour-a-day basis, seven days a week. Thus a basic rate inclusive of all shift supplements can be proposed. This might induce container operators to call at the terminal during the night or in the week-ends, if this optimizes their sailing schedules.
- (c) Those shipowners who do not require frequent week-end work, however, may quite naturally oppose an all-shift inclusive basic rate. They might prefer a flat rate covering a 24-hour-a-day service on normal weekdays, with application of special supplements for work requested on Saturdays, Sundays and holidays.

24. The solution that is finally chosen will, of course, depend in the first place on the container operators' requirements, and also on the relative advantages the terminal offers in the tariff for any of the proposed alternatives. It is quite clear that the "shift working" factor will tend to further differentiate the tariffs between the various operators.

G. Proposal for container terminal tariff structure

1. FCL containers

In units of account per container

	up to 20' containers		over 20' containers	
	loaded	empty	loaded	empty
General rate for import/export containers (per container)				
General rate for transshipment containers (per container)				

The general rate includes:

For import containers

- (i) The discharge from the ship onto the quay apron
- (ii) The transfer from quay apron into the stacking area
- (iii) The stacking of the container in the stacking area
- (iv) Taking the container out of the stack and the transfer to the delivery bays
- (v) Delivery of the container onto road or rail vehicle
- (vi) A free time for the storage of the container
- (vii) The receipt of the empty container
- (viii) The storage of the empty container in the reserved stacking area for empty units

For export containers

- (i) Taking an empty container from the stack
- (ii) The delivery of an empty container or truck for subsequent packing inland
- (iii) The receipt for shipment of the full container from road or rail vehicle
- (iv) The transfer from the delivery bays to the stacking area
- (v) The stacking of the container in the stacking area
- (vi) Taking the container out of the stack and the transfer to the quay apron
- (vii) The loading on board of the vessel

For loading and discharging the following activities are also included in the flat rate:

- (i) The gantry crane costs
- (ii) The cost of the mobile equipment
- (iii) The tallying of the containers on the ship side and in the stacking areas
- (iv) Filling out the "interchange" documents
- (v) Determining damage on the container at the moment of discharge or loading on board, and when entering or leaving the terminal gates.

2. LCL containers

- (i) General rate for handling the container—same as FCL container.
- (ii) Rates for packing and unpacking of the cargo (including subsequent loading of import cargo onto rail or road vehicle or the preceding discharge of export cargo from rail or road vehicle into the Container Freight Station (CFS)—cargo free time—3 days.

		per ton ^{b/}
Import/export cargo:	non palletized palletized or equivalent packing ^{a/}	
Transshipment cargo:	non palletized palletized or equivalent packing ^{a/}	

^{a/}Equivalent means permitting handling by mechanical equipment (e.g. preslung units).

^{b/}Weight or measurement ton whichever is the greater.

- (iii) Storage rent for cargo after free time period:

	ton metric
1-10 days	... per day
11-15 days	... per day
16-20 days	... per day
over 20 days	... per day

3. Additional services to the ship:

	per container/ hatch cover
(i) Shifting of containers within same hatch	
(ii) Shifting of containers from one hatch to another (directly or with intermediary landing on the quay)	
(iii) Opening hatch cover and subsequently closing hatch (whether placing hatch cover on next hatch or landing it on the quay)	

4. Additional services to the container/chassis:

- (i) Extra movement in marshalling area:
per container per movement
- (ii) Container storage charges after expiration of free time:

Between 1 and 10 days after free period

loaded container up to 20':	... per day or part thereof
loaded container over 20':	... per day or part thereof
empty container up to 20':	... per day or part thereof
empty container over 20':	... per day or part thereof

The above-mentioned rates may be increased

- to ... for storage between 10 and 15 days after expiration of free time,
- to ... for storage between 16 and 20 days after expiration of free time, and
- to ... by eight for storage after 20 days.

- (iii) Chassis storage charges (without container load):
 - For chassis up to 20' length:
... per day or part thereof
 - For chassis over 20' length:
... per day or part thereof
- (iv) Chassis storage charges (with container load)
Tariff (ii) increased by ... per cent.
- (v) Charges for using weighbridge ... per weighing
- (vi) Charges for connecting and disconnecting reefers including electricity consumption:
 - Containers up to 20' length
... per day or part thereof
 - Containers over 20' length:
... per day or part thereof

5. Charges for extra labour:

Per man per hour

Chapter II

SOME GUIDELINES FOR THE ESTABLISHMENT OF AN APPROPRIATE TARIFF FOR A MULTI-PURPOSE TERMINAL

A. Stating the basic problems

25. The multi-purpose terminal described in TD/B/C.4/129

Supp. 1, chapter IV, caters for a large variety of cargoes, including conventional break-bulk general cargoes, roll-on/roll-off cargo, containers, bundled forest products, bundled iron and steel products, cars, etc. The diversity of these cargoes, as well as the likelihood of a changing cargo-mix, pose certain problems when establishing an appropriate tariff for the multi-purpose terminal.

26. Two major difficulties arise. The first one relates to the fact that on the multi-purpose terminal the cost structure is very different from the cost structure for conventional general cargo facilities. The fixed cost component (only taking into account the capital equipment costs^{4/}) amounts to 77 per cent of the total handling cost (for a door-to-door operation) on the multi-purpose terminal (averaged for all cargoes) and to 52 per cent of the total handling cost on a conventional facility. However, it is likely that for the break-bulk cargoes a tariff has been established based mainly on the cost structure for conventional berths.

27. The second difficulty concerns the break-down of the tariff over the various interests involved (i.e. mainly the carriers and the shippers/receivers). Many ports have adopted a tariff structure in which the charges for stevedoring are recovered from the ship operator (or ship's agents), whilst the cargo interests pay for the reception of the cargo, the storage (after a free time period) and the delivery costs. As explained in chapter I of this supplement, on a container terminal (and on many other unit-type terminals for that matter), a flat rate applies, covering the overall operation. This rate is normally charged to the ship operator or in case free in and out rates apply, to the cargo interests. Thus the existing contradiction between the charging system on a conventional break-bulk facility, and the more modern tariff of a unit-terminal, becomes apparent on a multi-purpose terminal.

^{4/}It is in fact quite obvious that a large fraction of the labour and staff cost on the multi-purpose terminal can also be considered as fixed costs, given the permanent nature of the labour and staff force.

B. Two major alternatives

28. Basically, the most appropriate system for the multi-purpose terminal is to adhere to a charging system based on the flat rate concept. This is especially true in view of the fact that in the long run, the terminal may well eventually become a pure unit-terminal. No serious problems should occur for such cargoes as containers, roll-on/roll-off flats, large quantities of forest products or iron and steel products (e.g. over 500 tons per ship), or for cars.

29. However, for general cargoes in break-bulk form, or small quantities of forest products or iron and steel products (which should, in fact, be considered as typical break-bulk general cargo because of the limited tonnages), various different policies can be applied, of which the two extremes deserve some further discussion.

30. On the one hand the general cargo charges could be the same as for the other parts of the port. In this alternative, the existing tariffs apply and the split of the cargo-handling charges between ship and cargo remains unchanged. The advantages of this solution lies in the fact that no resistance from the parties involved should be expected, and this can be particularly important when frequently break-bulk ships are diverted without any specific agreement between the ship operators and the port from the traditional quays to the multi-purpose terminal. Thus the inter-changeability of

the quays is also preserved, from the point of view of the charging system. But the major disadvantage is the fact that the discrepancy between the tariff charged and the costs incurred (i.e. mainly the fixed costs) remains, indeed is increased. Also the application of two different charging systems on the same terminal could lead to disputes with the other ship or cargo interests which prefer the traditional system.

31. On the other hand the general cargo charges could be based on the flat rate principle and fully paid by the ship operators, which might or might not try to recover part of the reception and delivery charges from the cargo interests. This will considerably facilitate the work of the port's invoicing department whilst only marginally increasing the workload on the shipping agents.

32. Under this alternative, the multi-purpose terminal will exhibit differences, not only in relation to the cargo-handling methods, but also with regard to the charging system. Thus the gradual switchover from break-bulk to unitized cargoes will not lead to any change in the pricing

of break-bulk operation, based on the highest cost solution but on the multi-purpose terminal in the form of an all-inclusive rate per ton. The additional income thus obtained could, for example, be channelled in a special reserve fund that would serve either to finance new port development projects, or improve existing facilities.

34. In the event the ship operators have a right to pass on part of the total handling charges on the terminal to the cargo interests, it is recommended that an official body^{5/} decides on the level of these reception and delivery rates.

^{5/}Such a body could, depending on the port's local customs, be the Chamber of Commerce or a government agency, or the Port Authority itself.

C. Practical problems related to the calculation of the real cost for handling each of the different types of cargo on the multi-purpose terminal

1. General discussion

35. The Port Authority will have to decide on some major issues, such as distinguishing between "specific costs" and "general costs", before it can determine the actual cost of handling each type of cargo on the multi-purpose terminal. The use of the gantry crane can, for example, be reasonably considered as a "specified cost" related only to the handling of containers. This interpretation would, however, in the initial stages severely tax the container handling, and might keep the container traffic at an unsatisfactory level. Moreover, it is likely that, when a gantry crane is available and during certain shifts not used for container handling, this equipment will be utilized for working other types of cargo, such as iron and steel units, forest product units, heavy lifts, etc. There exists a clear trend to make gantry cranes as versatile as possible in order to allow their more versatile use. It is feasible therefore to treat the cost involved in using a gantry crane as a general cost.

36. This principle can be broadened to include all the mechanical handling equipment which is normally provided on the terminal. Only mechanical handling equipment which is specially brought in for certain commodities or for certain operations (e.g. additional forklift trucks required for packing or unpacking of containers) can be treated as a specific variable cost.

37. A similar problem occurs when dealing with the labour and staff cost. As indicated previously (See TD/B/C.4/129/Supp. 1, Chapter IV) labour and staff on a multi-purpose berth will be permanent employees, and therefore the labour and staff costs are fixed costs. Moreover it is extremely difficult to relate this labour and staff costs to a specific operation. In fact the labour and staff on a multi-purpose berth are assumed to be all-round workers, capable of handling any cargo in the most appropriate way, and to remain responsible for this cargo as long as it stays on the terminal. The delivery clerk at the gate for example will check in and out every day a large variety of cargoes. Thus the permanent labour and staff costs should also be treated as **fixed general costs**. However, a major exception can be made for the non-permanent labour and staff which will be employed on the terminal, and therefore can specifically be related to a given type of operation and cargo class.

38. The differences in total handling costs, and thus logically differences in handling rates, will then occur almost as a result of different productivity rates.

II. REVISED CALENDAR OF UNCTAD MEETINGS FOR THE REMAINDER OF 1976

After consultations with representatives of regional groups, the Secretary-General of UNCTAD has adjusted the calendar of meetings for the remainder of 1976 to take account of the recommendations and decisions of the Conference at its fourth session. The revised schedule is as follows:

	Date	Duration	Location
Preparatory meeting on Copper	27 Sept.– 1 Oct.	1 week	Geneva
Trade and Development Board, sixteenth session, first part	5–22 Oct.	3 weeks	Geneva
Preparatory meeting on Jute and Jute Products	25–29 Oct.	1 week	Geneva
Preparatory meeting on a Common Fund	Nov.	1 week	Geneva
Ad hoc Intergovernmental Group on Container Standards	1–12 Nov.	2 weeks	Geneva
Intergovernmental Group of Experts on a Code of Conduct on Transfer of Technology, first session	8–19 Nov.	2 weeks	Geneva
Committee on Tungsten, tenth session	15–19 Nov.	1 week	Geneva
Ad hoc Intergovernmental Committee on the Integrated Programme for Commodities, first session	during the week 22–26 Nov.	3 days	Geneva
Third ad hoc Expert Group on Restrictive Business Practices	29 Nov.– 10 Dec.	2 weeks	Geneva
Preparatory Meeting on Hard Fibres	6-10 Dec.	1 week	Geneva
Preparatory Meeting on Rubber	13–17 Dec.	1 week	Geneva

methods, provided these cargoes are handled on the multi-purpose terminal.

33. The port authority can, in order to overcome the difficulties connected with cost allocation to break-bulk and containerized traffic, apply an equal rate for both types

2. A practical example

39. In order to illustrate this general discussion, the following example has been worked out, based on the requirements indicated in TD/B/C.4/129 Supp. 1, chapter IV, and on the cost figures of the multi-purpose terminal as given in TD/B/C.4/129 Supp. 2.

(a) Break-down of the labour force:

	No. of labour per day	No. of staff per day
Assumed permanent	160	80
Assumed casual	40	0

(b) Total annual general cost:

General labour cost	= 160 dockers × \$10 × 310 days	= \$ 496,000
General staff cost	= 80 staff × \$3,000	= \$ 240,000
Capital equipment costs	=	\$2,210,000
Total annual general cost	=	\$2,946,000

(c) Cargo-mix forecast for a particular year:

Forest products	145,000 tons/year productivity = 900 tons/shift
Palletized cargoes	80,000 tons/year productivity = 500 tons/shift
Ro/ro units	80,000 tons/year productivity = 1,500 tons/shift
Iron and steel products	150,000 tons/year productivity = 1,100 tons/shift
Pre-slung cargo	60,000 tons/year productivity = 500 tons/shift
Conventional general cargo	50,000 tons/year productivity = 400 tons/shift
Containers	85,000 tons/year productivity = 1,500 tons/shift

(d) Calculation of the cost per ton per main commodity and of the generated cash flow

	Forecast tonnage	Assumed Productivity per shift	Cost ratio ^{a/}	General cost per ton ^{b/} \$	Predicted annual total cost \$
Forest products	145,000	900 tons	1.67	4.04	585,800
Palletized cargoes	80,000	500 tons	3.00	7.25	580,000
Ro/ro units	80,000	1,500 tons	1.00	2.42	193,600
Iron and steel products	150,000	1,100 tons	1.36	3.29	493,500
Pre-slung cargo	60,000	500 tons	3.00	7.25	435,000
Conventional general cargo	50,000	400 tons	3.75	9.07	453,500
Containers	85,000	1,500 tons	1.00	2.42	205,700
	650,000				2,947,100

Terminal throughput at highest productivity level = 2 berths × 310 days × 2 shifts × 65.5 per cent berth occupancy × 1,500 tons/shift = 1,218,300 tons and thus the constant = \$2,946,000 (÷) 1,218,300 tons = 2.42 \$/ton.

(e) Calculation of the specific costs:

It is assumed that the casual labour (40) is employed only for handling general cargo in break-bulk form. Then the specific cost amounts to:

Specific cost of labour	= 40 dockers × \$10/day = \$400/shift
Output per shift	= 400 tons/ship × 2 ships = 800 tons
Specific cost per ton	= \$0.5

(f) The rates which could be retained, exclusive of any profit margin are thus as in the table in subparagraph (d) above, except for conventional cargo where the rate becomes \$9.07 + \$0.5, i.e. \$9.57/ton.

(g) A change in cargo-mix and berth occupancy is expected. Rates will have to be adapted, and an example of such an eventuality is given hereafter:

(i) The forecast tonnage for a future year is as follows:

Forest products	: 130,000
Palletized cargoes	: 110,000
Ro/ro units	: 90,000
Iron and steel products	: 130,000
Pre-slung cargo	: 60,000
Conventional general cargo	: 40,000
Containers	: 130,000

(ii) The productivities on a ship/shift basis will not change.

(iii) It is assumed that the general costs remain unchanged, as well as that the casual labour stays at 40 dockers on average.

(iv) The calculation for the revised rates is shown in the following table. The rates at cost prices are as in column 4, except for conventional general cargo where the addition of \$0.5 specific variable cost brings the rate up to \$9.15.

	Forecast tonnage	Assumed productivity per shift	Cost ratio	General cost per ton (constant = \$2.314) \$	Predicted cash flow \$
Forest products	130,000	900 tons	1.67	3.86	501,800
Palletized cargoes	110,000	500 tons	3.00	6.93	762,300
Ro/ro units	90,000	1,500 tons	1.00	2.31	207,900
Iron and steel products	130,000	1,100 tons	1.36	3.14	409,200
Pre-slung cargoes	60,000	500 tons	3.00	6.93	415,800
Conventional general cargo	40,000	400 tons	3.75	8.65	345,000
Containers	130,000	1,500 tons	1.00	2.31	300,300
	690,000				2,942,300

Berth occupancy = 68.46

Terminal throughput at highest level = 2 berths × 310 days × 2 shifts × 68.46 per cent berth occupancy × 1,500 tons/shift = 1,273,356 tons

General cost/ton for cargo having highest productivity = \$2,946,000 (÷) 1,273,356 t = \$2.31

^{a/} Ratio between the productivity of a commodity and the highest assumed productivity.

^{b/} The result of: General cost per ton = cost ratio × general cost/ton for cargo having highest productivity (containers).

(Further confirmation is necessary for gentlemen with *mark.)

Panelists at 10th Conference

Thanks to the good cooperation extended by members of the Executive Committee and Chairmen and Members of the Panels, the line up of the chairmen and members of the Panel Discussion at the 10th Conference have been nearly completed. Hereunder are list of the Panelists. (Rin)

Panel No. 1: The Problems of Port Congestion

Chairman: Mr. Alhaji Bamanga M. Tuku, General Manager, Nigerian Ports Authority

Members: Mr. R.T. Lorimer, General Manager, Auckland Harbour Board

Mr. Fereydoon Mavaddat, General Director of Khorramshahr Port Authority, Ports & Shipping Organization of Iran

*Mr. H. Paelinck, Head of Ports Department, Office National des Transports (ONATRA), Zaire

Mr. E. Williamson, Chief of UNCTAD's Ports Section

Panel No. 2: Port of the Future (New Technology, Facilities and Problems)

Chairman: Dr. F.A.F. Scheurleer, Managing Director Rotterdam Municipal Port Management

Members: Mr. Hugo Ekwall, Technical Director, Gränges AB, Gränges Shipping (Representing the Swedish Ship Research Foundation)

Mr. Tsuneo Nakamura, Former President, Sasebo Heavy Industries Co., Ltd. (Representing the Japan Shipbuilders' Association)

Mr. Richard Barclay, Director of Operations, The Australian National Line

Mr. Charles I. Hiltzheimer, President, Sealand Service, Inc.

Panel No. 3: Port Contribution to International Trade and Development

Chairman: Mr. Robert Boeuf, Ingenieur General des Ponts et Chaussees

Members: Mr. Weldon Gibson, Vice-President, Stanford Research Institute

Mr. J.K. Stuart, Director and General Manager, British Transport Docks Board

Mr. Kiyoshi Kato, General Manager of the Export Traffic Division, Mitsui & Company Ltd.

Ing. Hector J. Orea, Gerente General de Operaciones, Instituto Nacional de Puertos, Venezuela

Panel No. 4: The Environmental Problems of Ports

Chairman: Mr. Thomas J. Thorley, General Manager, Port of Long Beach

Members: Mr. John Wallace, President, The Maritime Services Board of N.S.W.

Mr. Taisuke Sameshima, Technical Counselor, Bureau of Ports and Harbours, Ministry of Transport

Mr. Robert Hennessy, Port Engineer, Hamilton Harbour Commissioners

Rear Admiral Anthony F. Fugaro, Chief, Office of Marine Environment and Systems, U.S. Coast Guard

Visitors

● On September 13, 1976, Mr. Arno Oscar Markus, President, and Eng. Carlos Theophilo de Souza e Mello, Chief, Planning Division, PORTOBRAS, Empresa de Portos do Brasil S.A. visited the Head Office and were met by Dr. Hajime Sato and Mr. Kinouchi, Secretary-General and Dy. Secretary-General, and exchanged the views on the promotion of further relationship between the PORTOBRAS and IAPH.

President Markus and Eng. Mello were in Japan for the purpose of discussing with the governmental agencies over the bilateral cooperation program for the development of Praya Mole Port.

According to an information, the discussion is being made between the two countries on the Brazillian development projects which include some 277 million dollars economic cooperation from Japan. The source says that the major portion of the economic cooperation would be allocated for the development of Praya Mole Port which is to serve the steel mills of Usiminas and Tubarao.

Eng. Mello who is an editing staff of "Portos e Navios" which is one of rare sources of information on Brasillian ports, assured us that he would supply the Association with more of the information about his ports and harbours. (rin)

● In the evening of September 13, 1976, a welcome reception was held for the goodwill Mission from the Korea Maritime and Port Authority which was led by Mr. Kang, Chang Sung, Director-General of this newly created organization of Korea, being accompanied by Mr. Cheung, Yeun Se, Director of Harbor Construction and Mr. Choi, Hoon, Chief, Economic Cooperation Division. The Mission was visiting S.E. Asian countries including Japan and Singapore, for the purpose of exchanging views and obtaining information on international tendency of maritime and port development.

Dr. Hajime Sato, Secretary-General, at his speech at the reception, disclosed that the K.M.P.A. joined the IAPH effective on that day and wished that a friendly relationship be developed among those people.

Among the guests who were mostly IAPH members, there were Mr. Daizo Nakamura, Vice-Minister for Transport, Mr. Kiichi Okubo, Director-General, Bureau of Ports and Harbours, Mr. Shigeya Gotoh, Director-General, Bureau of Shipping of the Ministry of Transport as well as represented were the Japan Port and Harbor Association, Keihin Port Development Authority, N.Y.K., Mitsui O.S.K., Overseas Coastal Area Development Institute of Japan, Mitsui Engineering and Shipbuilding Co., Mitsui Consultant, Inc., Daito Kogyo Co., Ltd., and Nakagawa Corrosion Protecting Co., Ltd.

The Mission, after visiting Ports of Tokyo and Yokohama as well as having meetings with various people in this country, left Japan for Singapore on September 16, 1976. (rin)

● Mr. Gerhard Beier, President and Dr. Rolf Fastenau, Vice President of the Bremer Lagerhaus-Gesellschaft, Federal Rep. of Germany, accompanied by Mr. Shigemi Tsuyama, its Far East Representative in Tokyo, visited the IAPH Head Office on the morning of September 22nd and were

met by Dr. Hajime Sato, Secretary General.

Both gentlemen from Bremen were on a business tour to Japan, meeting shipowners, trading companies and auto-manufacturers. An attempt to induce auto-makers to open a distribution center in Europe seemed to be on mind, while a propaganda for the ports of Bremen and Bremerhaven, which will celebrate the 100th anniversary next year, was another big purpose of the delegation.

On the evening of the 24th September, a reception was given by the delegation at the Hotel Ohkura, Tokyo, following a press conference. Secretary General Dr. Sato was among those invited to the reception. The gathering included many business associates from the shipping and trading circles as well as officials from the Ministry of Transport. (TKD)



Picture shows from left to right Mr. Shigeya Gotoh, Director General, Bureau of Shipping, Ministry of Transport, Mr. Yoshiya Ariyoshi, Chairman of the Board, N.Y.K. Line, Mr. Gerhard Beier, President and Mr. Shigemi Tsuyama, Far East Representative of Bremer Hagerhaus-Gesellschaft at the reception.

- On September 28, 1976, Mr. Gan Chong Kiat, Director (Finance) and Mr. Kahlid Arshad, Senior Mechanical Engineer of Kelang Port Authority (Malaysia) visited the Head Office. They were in Japan for the purpose of observing the present situation of the container handling systems in some leading container terminals in Japan.

On the same day, after having discussions with Mr. Nakamura, Chief of Research Division of the Keihin (Tokyo Bay) Port Development Authority, they visited the Tokyo International Container Terminal Co., Ltd. at its facility in the Ohi container terminals complex which is administered by the Authority, and observed the computer operated system of the container handling. (rin)

- On September 28, 1976, Professor Paul Hanappe, Professor at the University of Paris and Scientific Director of Prospective et Amenagement, visited the Head Office and was met by Dr. Hajime Sato, Secretary-General.

Prof. Hanappe is visiting Japan for the purpose of collecting the information on the industrial development in reference to the effects derived from the so-called oil shock and discussing the related matters with those who engaged in the industrial development planning, especially the industrial location planning on the water front.

Prof. Hanappe is an economist and is in a position to conduct a study on the industrial development for the

(Continued on page 22)

Maritime Safety prayed in SHINTO way

Mr. Katsuya Yokoyama, former IAPH Deputy Secretary-General, was newly appointed as the Far East Representative of Port of Los Angeles effective September 1, 1976. He was back to his mother company, Mitsui O.S.K. Lines, Ltd., after serving this Association for three years, 1973-1975.

Mr. Yokoyama, prior to his opening the Tokyo office, held a Shinto ceremony of commemoration, on August 30, 1976, inviting his personal friends.

The Shinto Priest prayed in his prayer of the safe navigation of ships and the prosperity of the Port as well as the good health of people. (rin)



Membership Notes

New Members

Regular Member

Korea Maritime and Port Authority
263, Yeunji-Dong, Jongro-Ku, Seoul
Korea
Office Phone: 27-0020
(Mr. Kang, Chang Sung, Director General)

Associate Member

Mitsui Consultants Company, Ltd. (Class A)
3-7, 3-chome, Nihonbashi-muromachi,
Chuo-ku, Tokyo 103
Office Phone: (03) 279-2321
Telex Number: TOSHOKU J22352, J22353, J22872
Cable Address: MICONTO
(Mr. Hiromasa Sato, President)

New Frontiers in Bulk Transfer Technology

By Paul Soros, President
Soros Associates
Consulting Engineers
New York, U. S. A.

Introduction

Raw materials in water-borne commerce begin and finish their voyage at bulk transfer terminals.

The last decade has been a period of rapid growth transforming the technology and character of these terminals.

Developments occurred in four main areas:

1. ship sizes increased to 250,000 DWT and larger.
2. annual capacities of terminals increased to 50 million tons and larger.
3. worldwide development of new material sources required terminals operating without harbor protection.
4. integrated transportation systems required new concepts in intermodal transfer.

The technology to meet these requirements is a relatively recent development.

Growth of Bulk Terminals

In 1960 there were few bulk carriers over 50,000 DWT and the annual capacities of large bulk terminals were measured in millions of tons.

During the 1960's offshore terminals were constructed first close to the shore or in partially protected waters and later up to a mile from shore, in exposed locations (1), in waters deep enough for 120,000 DWT ore carriers (Fig. 1).

The economy of large ships led to the construction of berths like the one completed in 1974 at Tubarao, Brazil. (2) The twin pivoting shiploaders of this berth (Fig. 2) are the largest in the world, designed by Soros Associates to load 350,000 DWT vessels at a peak rate of 20,000 tons per hour. In the future the peak shiploading capacity can be doubled to 40,000 tons per hour. The present water depth in the harbor allows the loading of 270,000 DWT vessels and can be dredged deeper for larger ships in the future.

The addition of this high-capacity berth made Tubarao the largest ore loading port in the world, with annual exports in excess of 50 million tons. The general plan (Fig. 3) illustrates the extensive installations built to handle this enormous quantity of ore. The present installations form part of a Master Plan by Soros Associates for an annual capacity of 100 million tons.

The second largest bulk terminal in the world will be Narvik, Norway for the export of Swedish iron ore where a new shiploading pier is under construction to accommodate 250,000 DWT ore carriers with provisions for larger ships in the future. The pier is equipped with a linear loader, a Soros patent representing the latest development in shiploaders. The installations being built form part of the phased expansion of the port (3) in accordance with a 50 million ton-per-year master plan developed by Soros As-

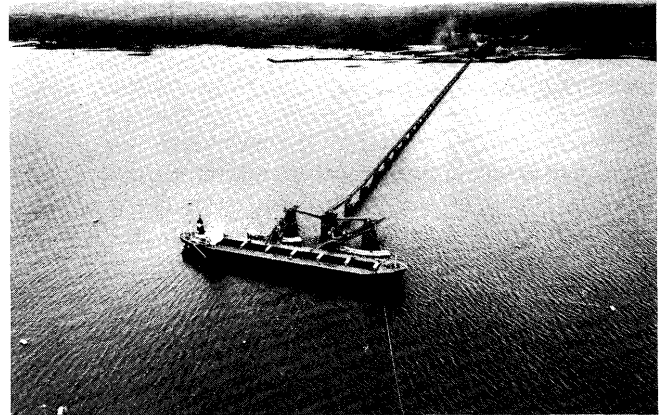


Fig. 1.—Open-sea berth at Port Latta, Australia loads 120,000 DWT ore carriers 1,600 meters from shore.

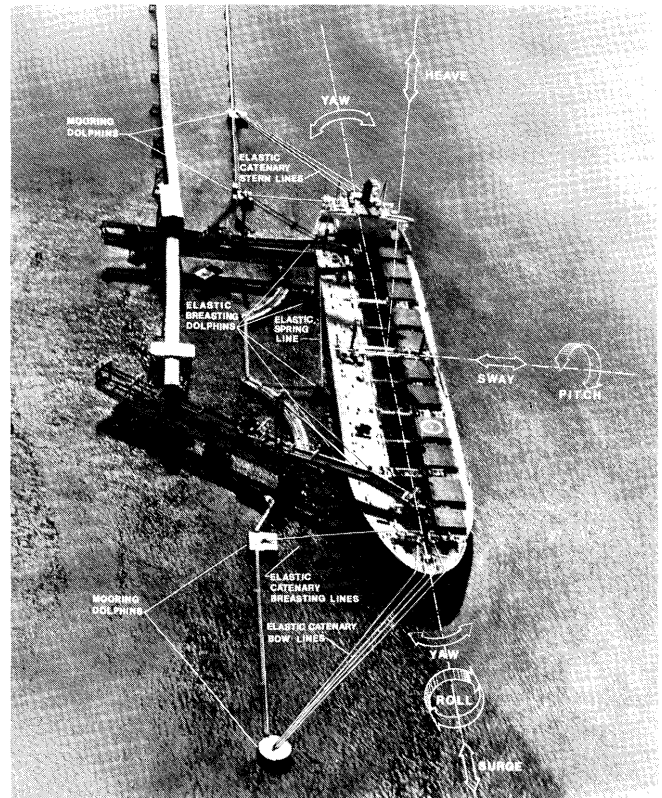


Fig. 2.—Two 20,000-ton-per-hour radial shiploaders at Tubarao, Brazil loading a 270,000 DWT ore carrier.

sociates with a total shiploading rate of 30,000 tons-per-hour.

As shown on the flow sheet (Fig. 4), the expanded facilities at Narvik will have exceptional flexibility and reliability. There will be three loading berths, each capable to load two different materials simultaneously. Products from three storage areas can reach simultaneously any of the loaders on three berths, and if required pass through one of two screening stations. Two different products

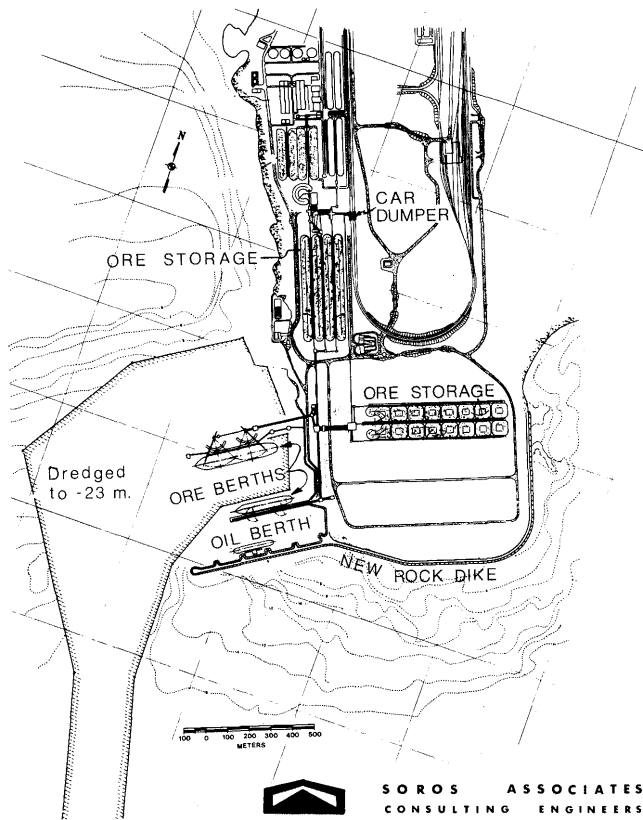


Fig. 3.—World's largest ore port at Tubarao, Brazil.

arriving by rail plus the product of the screening plant can be stockpiled at the same time. Notable advances in technology include continuous weighing accuracies of 2/10 of 1%, certifiable through advanced techniques and reclaiming, blending and screening that will be computer controlled from chemical and size analysis produced by continuous sampling and instant testing.

PORTLOG Computer Program for Basic Planning

The rational planning of terminals with such complexity requires operation research and simulation techniques. The PORTLOG computer program developed by Soros Associates for this purpose is capable to simulate the operations of a port complex and the related ship, barge, railroad or truck input and output.

PORTLOG is utilized in the selection of the number, size and capacity of berths and handling equipment, stockpile and inventory requirements, in assessing the effects of fleet distribution and berth availability, for sensitivity analysis of all systems to variations of criteria and for value engineering analysis, determining the impact of changes in one area on another or on the overall system.

Offshore Terminals Offer Alternative to Deepwater Harbors

With the dwindling of raw materials derived from traditional sources new deposits have been explored and mines opened all over the world. Many of these deposits are in regions heretofore considered inaccessible for lack of economical means of transportation. One of the adverse factors was the absence of natural protected harbors and the lack of sites where artificial ones could be built. The solution in these cases was the building of terminals in the

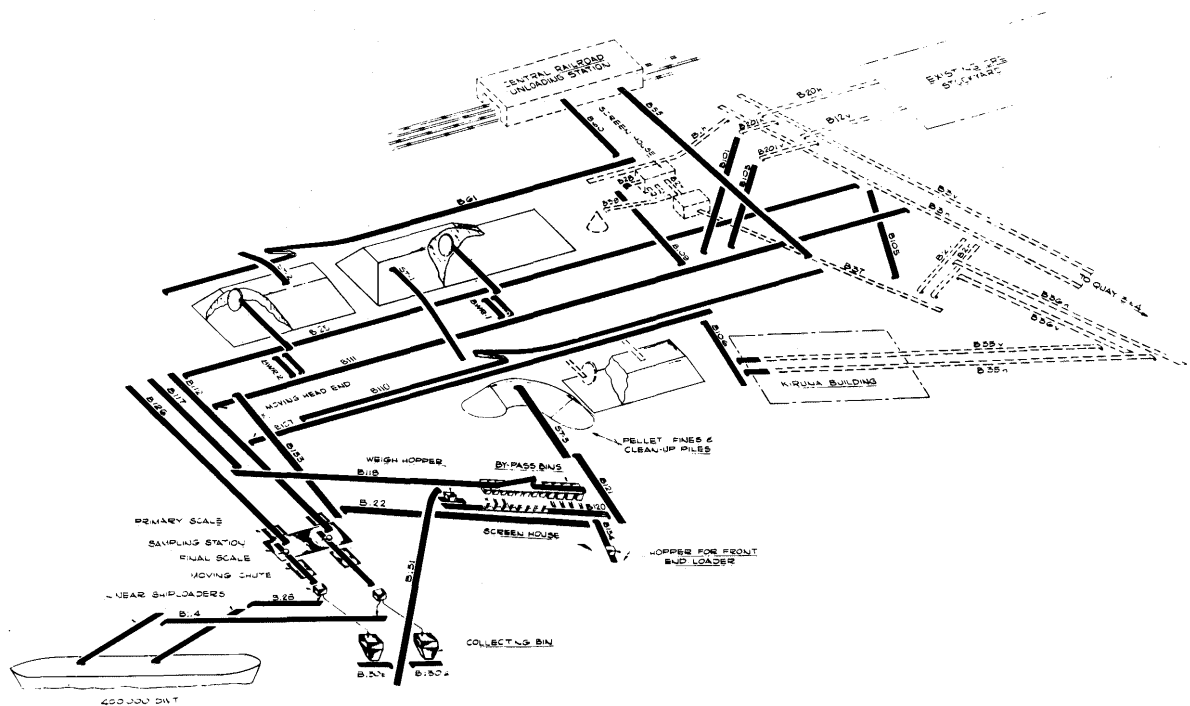


Fig. 4.—Flow diagram of 30,000 TPH ore handling system at Narvik, Norway.

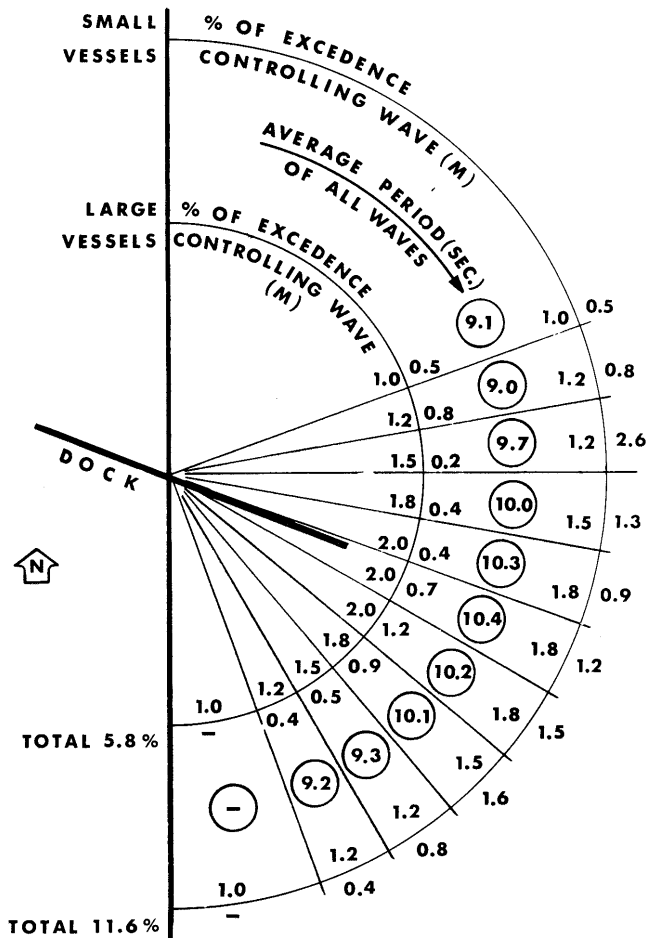


Fig. 5.—Limitations of berth availability at the offshore berth of Ponta Dobela, Mozambique.

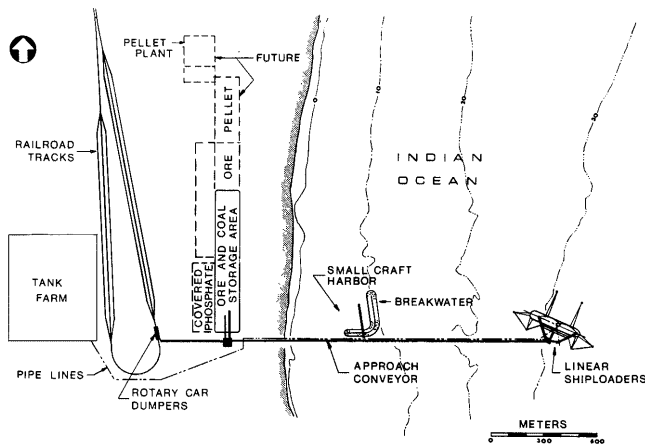


Fig. 6.—Offshore OBO terminal at Ponta Dobela, Mozambique.

open sea, in waters sufficiently deep to allow the use of large, economical bulk carriers.

In planning these newer bulk ports good use was made of the experience gained from the construction and operation of the earlier offshore terminals.

Measurements of ship movements and mooring forces during operations indicated that the limiting values could be increased by changing the spring constant of mooring lines, modifying the elastic characteristics of the breasting dolphins, and rearranging the general geometry of the berths. Such improvements were incorporated in later terminals (4).

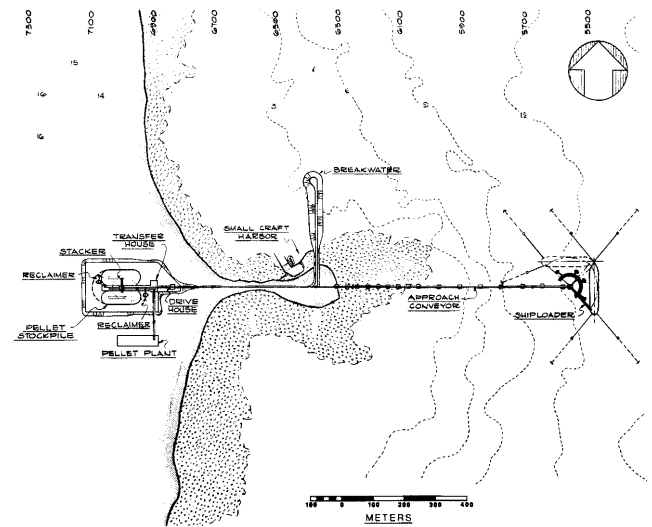


Fig. 7.—Variable orientation offshore berth at Punta Colorada, Argentina.

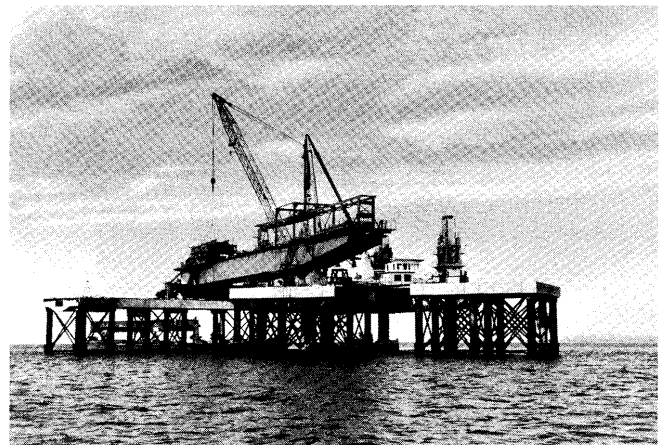


Fig. 8.—Offshore construction at Punta Colorada, Argentina.

SEABERTH Computer Program for Offshore Planning

To assist in the planning of offshore terminals, the SEABERTH computer program (5) was developed after considerable analytical and experimental research, correlated by extensive model tests for analyzing the interaction and behavior of the complete berthing system. (See Fig. 2)

SEABERTH is capable of detailed analysis of berthing systems, under all conditions of loading of any size vessel moored to a pier, or any combination of breasting and mooring dolphins and buoys, with symmetrical or asymmetrical geometry, various elastic characteristics and any number of mooring lines. Breast-on or breast-off arrangements can be analyzed with or without pretensioning and both regular and irregular seas with waves and swells of any height and period approaching from any direction, including the effects of currents, winds and coastlines.

The SEABERTH program received First Prize in the 1975 Engineering Excellence Award Competition.

Offshore OBO Terminal

Figure 5 summarizes the berth availability criteria for an offshore OBO installation designed for the severe conditions existing off the Mozambique coast (Fig. 6). The berth

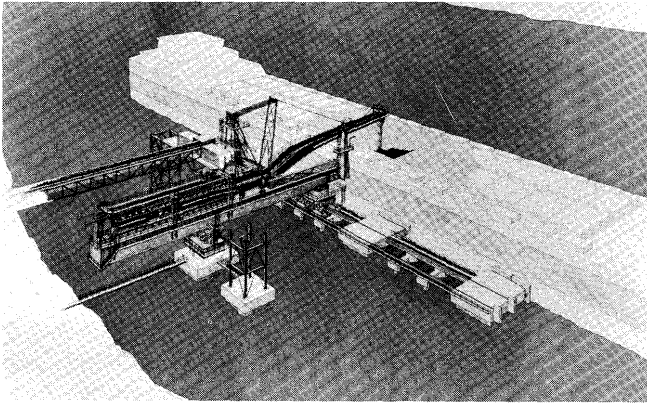


Fig. 9.—8,000 TPH linear shiploader of the Trombetas, Brazil bauxite terminal.

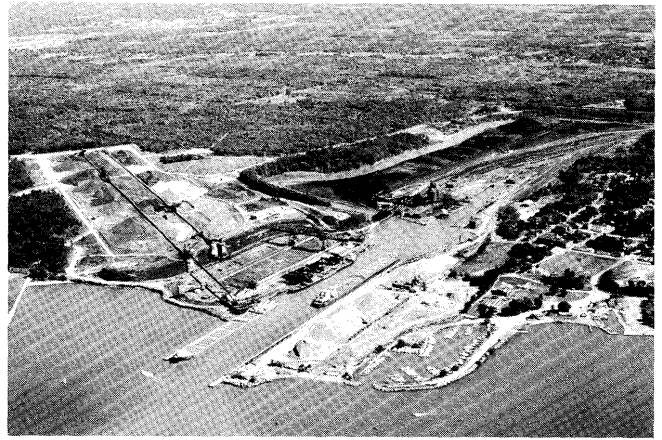


Fig. 11.—Conneaut loading and unloading terminal complex.

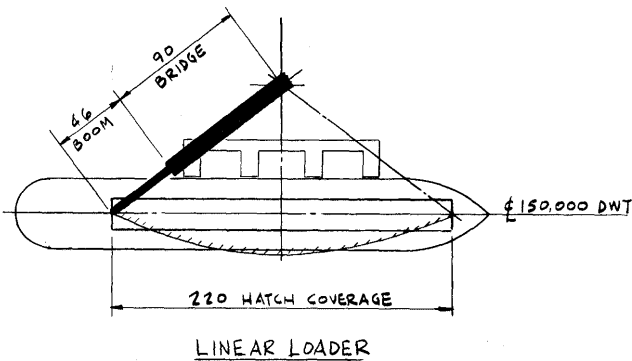
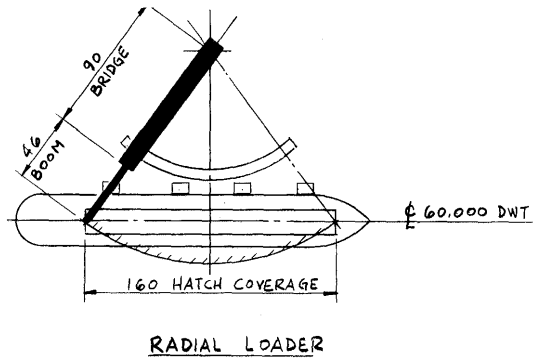


Fig. 10.—Comparison of radial and linear shiploaders with identical dimensions.

provides breast-on and breast-off mooring. The facility is designed as an OBO berth where OBO vessels can discharge crude and later be loaded with coal or ore (6). The tug harbor has free standing breakwater to minimize interference with the littoral drift.

Because of the problems presented by the constant long period waves, wave recordings were undertaken at the site over several years for use in the SEABERTH program.

It may be noted that the berth availability criterion established for this site in terms of wave height reflects also the effects of wave periods and ship sizes.

Variable Orientation Improves Berth Availability

An offshore mineral terminal in Argentina is subject to strong seasonal variations in prevailing wind and wave directions (7). There was no possible berth orientation

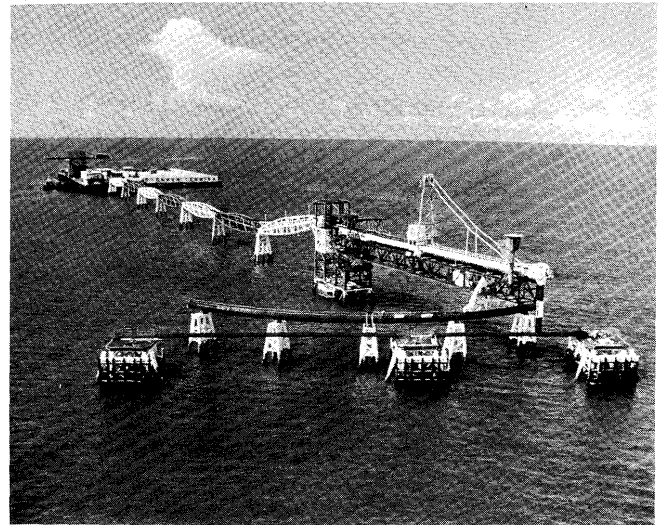


Fig. 12.—Artificial-island port 15 kilometers from shore at Areia Branca, Brazil.

which would have resulted in satisfactory berth availability, hence the facility was designed to provide multiple berth orientation (Fig. 7). Construction is nearing completion (Fig. 8).

Open Sea Berths up to 7.4 Kilometers From Shore

Offshore terminals are constructed at increasing distances from shore.

There are a number of projects in various phases of design for large capacities with distances over three kilometers from shore. The offshore mineral terminal at Santa Clara in Gabon, located 7.4 kilometers from shore, is currently in the detailed engineering stage for an ultimate capacity of over 25 million tons per year.

New Linear Shiploader Lowers Capital Costs

The pivoting radial shiploader was developed by Soros Associates in the early 1960's, as a lower cost alternative to a conventional traveling loader which requires a finger pier or marginal wharf. The largest radial installation is at Tubarao, incorporating two 20,000 TPH radial loaders (Fig. 2). The reason for using two units is the limit of ship-length coverage obtainable by one unit within practical and economical limits of the cantilever length and the bridge span.

The new Soros Linear Loader (Fig. 9) overcomes this by combining pivoting with movement on a straight track, instead of an arc. This further simplifies and minimizes the marine foundations required and greatly increases the size of vessel that can be covered by a shiploader with the same cantilever and bridge span dimensions (Fig. 10).

At present time, the largest capacity bauxite, iron ore and alumina loading installations in the world under construction utilize Linear Loaders.

Terminals for New Integrated Transportation Systems

The movement of large bulk quantities led to the development of integrated transportation systems. Often new types of terminals had to be conceived to accomplish the required intermodal transfer.

An example in the U.S. is the port complex at Conneaut, Ohio, (Fig. 11) the site of the first rail-to-storage-to-ship type coal terminal on the Great Lakes, which created a new transportation system for the movement of U.S. coal to Canada. Trains no longer have to wait for the arrival of vessels and mine production and railroad operation is not limited by the navigation season. High shiploading rates made the use of larger vessels feasible (8).

Conneaut is also the site of the first ship-to-storage-to-rail type unloading terminal on the Great Lakes, creating a new transportation system for supplying ore and pellets to the steel mills of the Pittsburgh area. Trains no longer have to wait the arrival of vessels. Blast furnaces in Pittsburgh can be charged directly from ore and pellets arriving daily from Conneaut by railroad, by passing the ore yards of the steel mills. The railroad operation is not limited by the navigation season and is not tied to the arrival of vessels.

These facilities have the highest effective coal loading rate in the world, as well as the highest unloading capacity, with two 10,000 TPH unloading berths.

Artificial Island Port

The first artificial island port, 15 kilometers off the North-East coast of Brazil was conceived for a new integrated transport system (Fig. 12). Solar salt is produced in a 150 kilometer coastal region along tidal rivers blocked by sand bars at low tide.

Small coastal vessels transport the salt daily and are unloaded in the lee of the artificial island. The island is located in the proximity of a natural trench in the Continental shelf. Salt stockpiled at the island is loaded into large bulk carriers thru an offshore berth at the edge of the trench (10). This project was recipient of an Engineering Excellence Award in 1974.

Conclusions

The experience gained from the successful operation of bulk terminals with larger tonnages and at offshore locations had led to the development of more sophisticated planning and a variety of design advances. Projects are becoming more ambitious in terms of annual capacities, vessel sizes and offshore solutions.

References

1. Soros, Paul: "Port Latta—Open Sea Loading Terminal", *Civil Engineering—ASCE* (Jan., 1969).
2. Soros, Paul and Koman, Bela: "World's Largest Ore Port at Tubarao, Brazil", *Society of Mining Engineers of AIME, Fall Meeting* (1974), Paper No. 74-B-309.

3. Soros, Paul: "Expansion Program at Iron Ore Port at Narvik", *Skilling Mining Review* (Dec. 13, 1975).
4. Soros, Paul and Koman, Bela: "Offshore Terminals for 250,000 Ton Ore Carriers", *Offshore Technology Conference*, Houston, Texas (1972), OTC 1645.
5. Sugin, Leonard and Seidl, Ludwig H.: "SEABERTH—A Program for the Calculation of Motions and Mooring Forces", *Third Ocean Engineering Specialty Conference*, Newark, Delaware (June, 1975).
6. Koman, Bela: "Planning of a Multi-Product Offshore Terminal", *Skilling Mining Review* (Dec. 21, 1974), Vol. 63, No. 51.
7. Soros, Paul and Koman, Bela: "Offshore Berths with Multiple Orientation", *Offshore Technology Conference*, Houston, Texas (1971), OTC 1366.
8. Soros, Paul: "First Rail to Ground to Water Coal Terminal in the U.S.", *XXII Ind. International Navigation Congress*, Paris (1969).
9. Skillings, Jr., David N.: "P & C Dock Co.'s Computerized Preventive Maintenance System", *Skilling Mining Review* (Oct. 4, 1975).
10. Soros, Paul and Koman, Bela: "Artificial-Island Transshipment Terminal", *Offshore Technology Conference*, Houston, Texas (1974), OTC. 2099.

(Continued from page 17)

French government's Economic and Research Agency. Since his coverage is closely related with the industrial development on the water front, Mr. Paul Bastard, Director-General of Ports and Harbours, Ministry of Equipment of France advised him to visit this Office.

With the good cooperation of our resident members and other governmental agencies, Prof. Hanappe will make a across Japan survey tour. He is scheduled to visit Ports Tomakomai, Chiba, Tokyo, Osaka and Kobe. Also, he is visiting the Bureau of Ports and Harbours, Ministry of Transport, National Land Agency, Japan Industrial Location Center and Japan Transport Economics Research Center for exchange of views and comments. (rin)

● On September 21, 1976, Mr. A.K. Majumdar, Traffic Manager, Haldia Dock Complex, Calcutta Port Trust, visited the Head Office. Mr. Majumdar was visiting Japan, after attending the Fifth UNCTAD/SIDA Training Course in Port Management which was held in Kuala Lumpur and Singapore, for the purpose of observing the container terminals facilities in Japan.

According to Mr. Brian Thomas, an internationally famous expert of ports and shipping at UNCTAD and the Course Director wrote to us the Mr. Sven Ullman, General Manager of Port of Gothenburg and Chairman of IAPH Special Committee on International Port Development was taking a part as a lecture of the Course.

Mr. Majumdar, with a good cooperation of Ports of Osaka and Kobe, visited the container terminals at each port on September 24, 1976. (rin)

Port of New York and New Jersey Waterfront Cleanup Project Coordinating Committee

Waterfront cleanup project begins with drift removal at Liberty State Park

The massive cleanup of debris that litters the Port of New York and New Jersey was begun this morning in the waters and on the shoreline of Jersey City between Liberty State Park and the Statue of Liberty. Federal, State and local officials witnessed the start of removal of the first of some 2,200 derelict vessels and deteriorating shore structures in the harbor from the deck of a Corps of Engineers vessel as guests of the Waterfront Cleanup Project Coordinating Committee.

The Waterfront Cleanup Project, authorized by Congress in 1974, will be carried out by the U.S. Army Corps of Engineers over the next eight to ten years at a total cost of about \$60,500,000.

A brief ceremony was held at the New York City Passenger Ship Terminal in Manhattan prior to the departure of the guests aboard a Corps of Engineers vessel to the work site. Speakers were Governor Brendan T. Byrne of New Jersey; Chairman William J. Ronan of The Port Authority of New York and New Jersey; Commissioner Peter A.A. Berle of the New York State Department of Environmental Conservation, representing Governor Hugh L. Carey; and Sanitation Commissioner Anthony T. Vaccarello of the City of New York, representing Mayor Abraham D. Beame; and Edward S. Olcott, Director of Planning and Development for the Port Authority, who serves as Chairman of the Coordinating Committee.

Debris removal at the work site was described by Colonel Thomas C. Hunter, Jr., New York District Engineer for the Corps, under whose supervision the cleanup work will be carried out.

The Waterfront Cleanup Project Coordinating Committee was established following the 1974 Congressional authorization of the project to deal with the unique and unprecedented requirements of state and local participation in a federal project with regional and national benefits. Under the chairmanship of the Port Authority, the Committee now comprises the Corps of Engineers, the States of New Jersey and New York, and the Cities of New York, Bayonne, Hoboken, Jersey City and Newark. As more communities are involved in the project, they will be invited to become members.

Initiation of the Waterfront Cleanup Project for the removal of debris and drift at its source promises an end to the costly, unsafe and unsightly blight in the harbor. With economic benefits exceeding project costs at a ratio of six to one, the project holds great promise for rejuvenation of the waterfront for industrial, residential and recreational uses, thus returning an invaluable resource to the people of the Port District. The start of work in the Liberty State Park area has the additional benefit of enhancing a major waterfront improvement already under way by the State of

New Jersey.

The first waterfront cleanup contract awarded by the Corps of Engineers, for \$1,067,500, calls for clearance of a 75-acre area along 2,500 feet of shoreline adjacent to Liberty State Park. The low bidder, Cross Bay Wrecking Company of Brooklyn, New York, will remove the hulks of 96 derelict vessels, 25 shore structures and miscellaneous drift sources in the water over the next seven months.

Four separate contracts will be awarded for clearance of the Liberty State Park area, which contains about 21 percent of the debris in the bi-state port. The Liberty State Park work stands as the beginning of a portwide effort to clear away and halt the recurrence of waterfront blight. Other waterfront communities, including the City of New York, with State leadership, are working toward ultimate participation in this massive large-scale renewal project. (Please see attached background sheets for additional details.)

LIBERTY STATE PARK CLEANUP AREA

General Description of Area

The work area of the first contract is characterized by a marsh area and a waterfront composed of large bulkheaded and filled wharfs on the south and pier type structures projecting into the Bay on the east. All of these piers are in a dilapidated condition. The central portion of the area contains marshland extending from the shoreline in a westward direction. The far northern section of this area is a bulkheaded land mass no longer used for traffic. The entire off-shore portion and parts of the marsh area include a large number of abandoned barges and other derelicts most of which are totally or partially submerged. Loose timber piling is evident throughout the on-shore area.

Method of Work

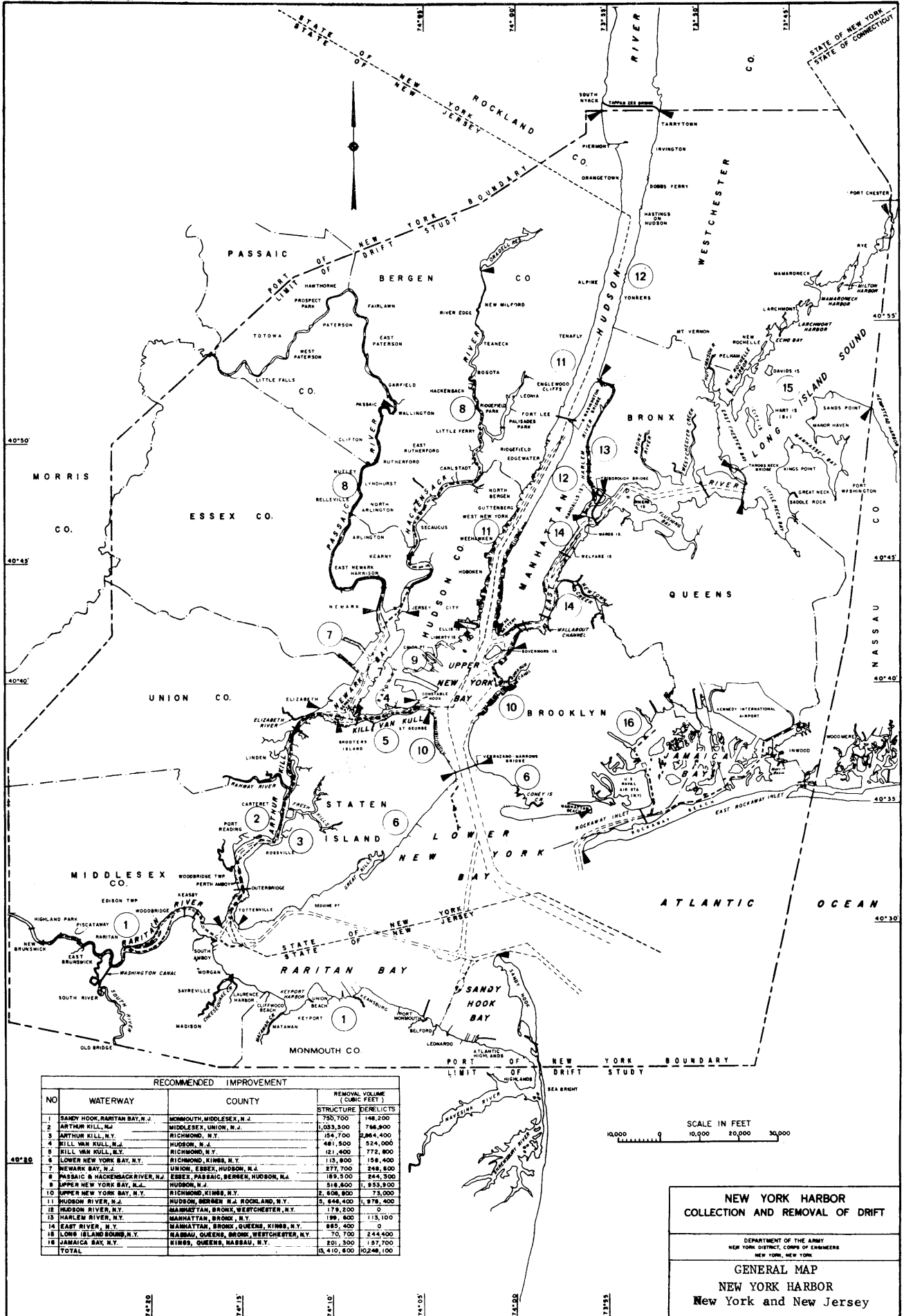
Access and removal will be by floating equipment utilizing clam buckets to demolish derelicts and structures. Dredging operations will be limited to prevent encroachment into the marsh. These operations are to remain sufficiently distant that the natural slope of the dredged cut will not affect the stability of this area.

Drift-source materials to be removed from the marsh area will be snaked out by cables. Items too large for this method will first be cut on-site into manageable sizes. Land based operations for the removal of drift sources will be used wherever possible.

Timber piling, lumber, steel and concrete that are not recyclable will be transported to a land fill area in New Jersey by truck. Dredged organic silt will be dumped in a previously designated disposal area at sea.

Quantities of Material to be Removed

Materials to be removed from the work area which is
(Continued on page 25)



ATTACHMENT 1

(Continued from page 23)

littered with 96 derelict vessels, 25 shore structures, miscellaneous objects and loose drift timber includes:

timber	— 9.7 million board feet
pilings	— 1.1 million board feet
concrete	— 941 cubic yards
steel	— 1,038 tons

Project Benefits

The Waterfront Cleanup Project, which for the first time will eliminate harbor drift by removal of the source, affords tangible benefits in a ratio of 6.1 to 1 over costs. These benefits include:

- Reduction of damages to commercial and public vessels;
- Reduction of damages to recreational boats;
- Enhancement of real estate values;
- Reduction in future operating costs for the removal of floating drift under the on-going Federal project;
- Reduction in future costs for the removal of drift from recreational beaches.

Other benefits which have not been given monetary values are:

- Reduction in fire hazards;
- Reduction in air pollutants from drift sources due to accidental burning;
- Improved water quality;
- Reduction of hazards to life and health;
- Improved aesthetic qualities of the waterfront;
- Reduction in spread of marine borers due to decrease of habitat.

August 1976

ABOUT THE WATERFRONT CLEANUP PROJECT

The Waterfront Cleanup Project is a U.S. Army Corps of Engineers water resources development project officially known as the New York Harbor Collection and Removal of Drift Project, authorized by Section 91 of the Water Resources Development Act of 1974 (P.L. 93-251). It is based on the premise that harbor drift and debris is best controlled by removing its source, rather than relying only in the past and of present, on collecting and disposing of floating drift by the use of special Corps of Engineers vessels.

The project envisions the removal of some 2,200 rotting vessel hulks and 100 rundown piers and shore structures, plus the repair of another 160 usable and productive structures over a period of some eight to ten years. At 1974 price levels, the total task of removing, disposing or repairing approximately 23.5 million cubic feet of material, is estimated at \$60,527,000, of which the Federal share, subject to annual appropriations, is \$28,713,000. Non-Federal costs in New Jersey would be \$16,217,000, and in New York, \$15,597,000, for a total of \$31,814,000. Disposal of the wooden rubble would be by carefully controlled burning 20 miles at sea, or by other environmentally acceptable means.

The project encompasses the entire 1,500 square mile area of the Port District within the States of New York and New Jersey. It has been structured by the Corps to be accomplished in "reaches", a sector of waterfront in which cleanup work is viable from an economic and engineering point of view. Any waterfront community is eligible to

participate with the Corps in clearing such a "reach", provided it agrees to: (1) provide property access rights to the Corps to do the removal work, (2) contributes one-third the cost of vessel and structural removals, (3) assumes responsibility for structural repairs sufficient to prevent drift as required by the Corps, (4) enacts, as needed, and enforces laws or regulations to prevent the return of debris-generating conditions, and (5) assumes project work liability, other than that of the Corps and its agents.

The Waterfront Cleanup Project was conceived by civic, port and maritime interests in the early 1960's. In 1963, the Congress directed the Corps of Engineers to study the debris generating problem. Throughout the intervening years, local interests sought adequate Federal funds for the study, and generally lent enthusiastic support. After its authorization as a Federal work project in 1974, a Port of New York and New Jersey Waterfront Cleanup Project Coordinating Committee was formed under the Chairmanship of the Port Authority of New York and New Jersey to coordinate the unique and heretofore untried regional requirements of project participation. The Committee includes State, Corps and interested municipal representatives as its members. Membership is open to those waterfront communities that seriously plan to participate in implementing the project in their "reaches".

The project offers, in addition to a lessening of drift damage to recreational, harbor and other smaller craft, the prospect of land reuse, with the further benefits of aesthetic and environmental enhancements, and fire and health hazard reductions. It is well suited to an era of renewal, recycling and reuse. It stands as perhaps the major, if not the only, hope for ending blight on the bi-state Port waterfront, and for restoring an unmarred spectacle of the harbor to the people of the Port District.

August 1976



Newport— A Port in Transition

British Transport Docks Board London

London, 30 June, 1976:—The recent opening of “Docks Way”, the 1800 metres (1.1 miles) access road direct from Newport Docks to the M4 and thence the M5, means that the port can now be truly termed a ‘motorway’ port, with London only 2 hours drive away and Birmingham even less. This is one further important stage in the port’s efforts to redevelop and adapt itself to changing trade patterns.

In 1963, the first year in which the port came under the ownership of the British Transport Docks Board, the main traffics dealt with at the port were imports of iron ore, amounting to 2,000,000 tonnes, and 450,000 tonnes of coal exports. Newport now handles no iron ore and no coal exports. In the early nineteen-sixties the decision was taken to rationalise the facilities available at the South Wales ports and to concentrate coal exports at Swansea and Barry. Exports of coal ceased through Newport in 1964 and this released large areas of land, which had been reserved for coal, for redevelopment to meet the requirements of other new trades using modern cargo handling methods.

For example, this made possible the development of a large purpose-built timber terminal, initially of 20 acres, which in turn has attracted major new business to the port, often requiring the nation-wide distribution which is feasible with the excellent motorway connections from Newport. The expansion of Newport’s timber trade has included sawn timber and other forest products from Canada, the Far East and Australia.

Similarly in mid 1975, the iron ore imports that had formerly been handled at Newport were re-routed by the BSC through Port Talbot Harbour. This decision to switch iron-ore imports to Port Talbot had been planned for several years in order to take advantage of the ship size—up to 150,000 dwt—that could be handled there, although Newport’s ability to accept vessels of 33,000 dwt is more than adequate for most bulk trades—with the further notable exception of oil.

Newport has therefore once again valuable capacity to attract new bulk and general cargo traffics and indeed in the last few years new traffics have been handled, such as imported cars, fertilizers, and tea, to name a few.

New Trades

Tea is a prime example of the diversification of trade which Newport is trying to attract. Imports from India began experimentally three years ago, but with the 1975/76 season (running from August to February) Newport has become a well established tea port. Five vessels discharged 271,000 chests (15,000 tonnes) of tea from India during this period. In line with the wishes of the tea trade, the chests are sorted to marks on the quayside and loaded direct to road vehicle rather than going through shed.

This pattern of operation is preferred because it keeps down the cost of handling and speeds up final delivery, and



Export cars marshalled for shipment to the USA at South Dock, Newport.

the port prides itself that this is achieved without causing delay to ships, while at the same time giving a high quality sorting of cargo. A rate of discharge of 2,400 chests per gang shift is being achieved giving vessels a 4/5 days turnround.

Indeed it was an indication that shipowners and tea receivers approved of the way Newport had handled these tea cargoes when last November the port was entrusted with the only shipment of palletised tea to be imported from India during the season. Sixty-nine thousand chests of tea were unloaded from the Scindia Steamship Company’s vessel “Jalamorari” in only 2½ days. A total of 4,150 pallets were unloaded direct to road vehicles, and because the cargo was palletised, discharge was twice as fast as normal for a tea cargo of this size.

The chairman of the Shipping Sub-Committee of the Tea Trade Committee, Mr. Charles Monteath, endorsed the tea trade’s approval. “When we first considered the possibility of sending tea to Newport we were impressed by the willingness of the Docks Board and stevedores to study our requirements and provide us with the procedures, documentation and facilities we asked for. This co-operation continues and has resulted in a high standard of deliveries both as regard to productivity and accuracy,” he said.

Newport has become a well established car reception centre. Once again the availability of large areas of land for marshalling purposes, and the ease of distribution from the port, make it an obvious choice. Export vehicles are mainly British Leyland cars to North America, and nearly 9,000 were handled in 1975. Car imports have been building up since they began three years ago and Laser Transport operate a 15 acre bonded terminal for dealing with the throughput of this traffic. Nearly 18,000 cars were imported through Newport in 1975.

Another new import traffic recently attracted to the port as a result of available shed accommodation is fertilizer which after dry blending and bagging is distributed throughout Wales and the South West.



The MacMillan Bloedel Meyer timber terminal at Newport Docks.

Bulk traffics continue to be of importance at Newport where the handling facilities are excellent.

Timber Terminal

Without doubt one of the most interesting developments at Newport in recent years has been the establishment of a timber terminal provided with the most sophisticated handling equipment able to carry out a highly mechanised operation. The original 20-acre timber terminal was opened by MacMillan Bloedel Meyer Ltd. in 1967 specifically to handle Canadian softwood from British Columbia. This was extended to include forest products from eastern Canada and other parts of the world.

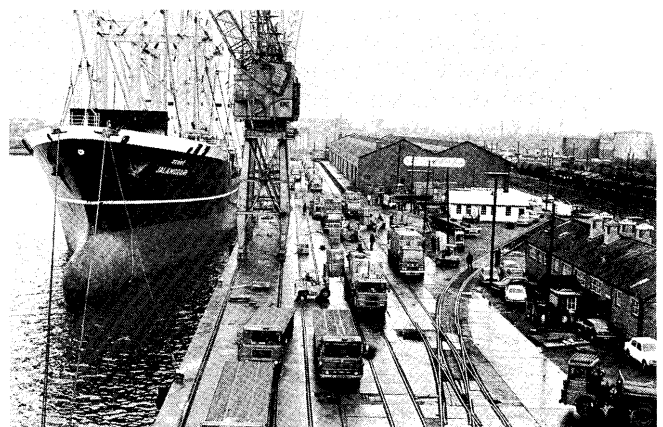
Much of the softwood is discharged by high capacity ship's gear capable of dealing with lifts up to 18 tonnes. The timber is then picked up from the quay by radio equipped mobile trucks and taken to the storage area.

The terminal operators can meet any order for softwood from anywhere on the British mainland if made by 3.00 p.m. one day to arrive at destination the next day.

MacMillan Bloedel Meyer's terminal manager, Mr. Ken Charman, said that Newport's geographical location was a contributing factor to the service they were able to offer importers. "With lorries going all over the U.K. from the terminal it is certainly a plus that Newport is now a motorway port," he said.

The timber terminal has now doubled in size to over 40 acres in order to meet the requirements of the Far East timber trade. Imports of hardwood from Malaysia began in 1972, and the port and the terminal operators have pioneered the development of a scheme under which an inclusive charge is levied, and all documentation handled, for parcels of timber from the ship's side to the final destination, giving an importer a more efficient and quicker service.

Indonesian timber has now also moved through Newport, and it is incidentally an indication of their regard for the port that the Indonesia/Europe Conference has



A cargo of palletised tea chests being discharged from the m.v. 'Jalamorari' at Newport Docks.

given Newport the privilege of freight rates being quoted on the same basic freight rate as to northern Europe, providing ships discharge 1,000 tonnes of timber, or more. Normally, freight rates on cargo shipped from Indonesia are higher in UK ports than European ports.

Future

But what of the future? In common with all other ports, Newport is feeling the effects of the decline in world trade and the recession in the United Kingdom economy. Mr. Vernon Snow Newport's docks manager, is confident that when a up-turn in the economy does occur, Newport's fortunes will also recover. "It is encouraging that in this time of recession we are being successful in securing new traffics", he said.

Clearly the port hopes that the availability of land and shed accommodation and good communication links will attract new trade. And the commissioning of the new blast furnace at Llanwern must also be a good augury for the revival of a traditional trade, the export of steel—which is made on the port's doorstep.

Seattle—Annual Report 1975

from 1975 Annual Report Issue
of "Port of Seattle Reporter"
April 1976

President's Message

The Port of Seattle juggernaut, needing only occasional servicing, continued to roll on resolutely during 1975.

Our operating revenues for the year were the highest in the Port's history. Sea-Tac Airport set new records in passenger and freight traffic.

We enhanced our stature as a "people port" by providing environmental amenities. We made good progress in implementing the long-awaited Sea-Tac/Communities Plan and in the acquisition of noise-impacted homes near the airport.

The only area where our big machine experienced a slow-down was in foreign waterborne commerce, in which we like all other ports, were buffeted by the worldwide recession.

Despite depressed economic conditions, however, we still maintained our historic position as the West Coast leader in high-value OCP import cargo. And our domestic trade, mainly with Alaska, continued to register sharp gains.

Although we were confronted with an adverse situation in foreign trade, we did not retrench in our overall program to build new terminals and acquire property for future development.

This reflects quite eloquently the confidence we have in ourselves and in the future of our Port—a factor which has accounted most significantly for our emergence in the past decade as one of America's great ports.

At this point, the outlook for the Port for 1976 is very promising. The upswing in economic recovery, which started in the latter part of 1975, is gaining momentum, and we can expect to capitalize on our expertise and preparedness to corner a large share of the burgeoning cargo movement.

I wish to take this opportunity to express the appreciation of my fellow Commissioners and myself to all Port employees for their dedication and industry and for cooperating so effectively with the Commission. This excellent working relationship, so vital to any port's growth, is one of our most valuable assets.

Henry T. Simonson
President—1976
Seattle Port Commission

Highlights

Operating revenues for 1975 of \$54,422,257, the highest in Port history, surpassed 1974 revenues by \$5.8 million.

The \$4.9-million project to develop Terminal 19 into a container facility was completed, creating a 1,060-foot pier that connects with Terminals 18 and 20.

Redevelopment of Pier 66 was begun in 1975, including reconstruction of the west apron and other facilities.

A landscaped viewpoint park was built at Pier 48, featuring an authentic 32-foot Alaskan totem pole.

Several large properties on the Duwamish Waterway were acquired by the Port as part of its long-range program to develop additional shipping facilities on the waterway.

Plans were announced to conduct studies of environmental factors and alternative-development concepts of Seattle's southeast harbor area, the remaining portion of Seattle's waterfront subject to major development.

The first trailership service for Seattle was inaugurated in September when TOTE's new roll on/roll off vessel "Great Land" opened a weekly service to Anchorage.

Seattle's trade, which dropped off the first half of 1975 due to the worldwide recession, picked up sharply during the latter part of the year when economic conditions improved.

On the other hand, domestic container traffic, mainly to Alaska, registered a healthy 19.5% increase for the year.

A new record in passenger traffic at Sea-Tac was set in 1975 when 6,080,782 travelers transited the airport. The 5.8% increase over the previous year was well above the national average.

Air freight tonnage also reached new heights, with a 168,258-ton volume, a gain of 18.5%.

Business was good at the airport parking terminal, with 1,533,615 vehicles using the facility, for a 12% increase over the previous year.

Sea-Tac's control tower underwent an \$860,000 remodeling and expansion job, making the new tower cab 25 feet higher than the former tower.

The Sea-Tac/Communities Plan passed from the study category into the implementation stage, with noise-monitoring slated to be the first project to be undertaken under this comprehensive program to make Sea-Tac more compatible to the surrounding areas.

Implementation of the Port's interim land-acquisition program to purchase 177 properties got under way in mid-year.

A new closed-circuit television system was put into operation in the fall—the first such system to be installed at any major airport.

Sea-Tac Airport won the 1975 national award for airport beautification and environmental enhancement, presented by the Federal Aviation Administration and the Department of Transportation.

"The Port of Boston" Massport Congressional Luncheon, Washington, D.C. June 23, 1976

News from Massport

Massport Executive Director David W. Davis and Port Director Thomas F. Moakley will address the Massachusetts Congressional Delegation today concerning four areas in which the Port of Boston's cargo handling capabilities can be significantly improved through action by federal agencies. These are:

1) Addition of the Port of Boston to the 40 U.S. ports now granted "favored port" status for trade with the U.S.S.R.;

2) Equalization of rail rates with those charged for container shipment between other major East Coast ports and Chicago;

3) Implementation of a Foreign Trade Zone; and

4) Dredging of Boston Harbor.

Massport, operator of the Port of Boston's container and general cargo terminals, has made these matters key elements of its full-scale efforts to maximize the Port of Boston's cargo handling capabilities.

Over the years other ports have moved ahead of the Port of Boston on these matters, but Massport is working hard to regain a competitive edge for the Port.

In other areas the Port of Boston has made noteworthy progress since the appointment of David W. Davis by the Massport Board last July.

Developments at the Port of Boston have included . . .

. . . the appointments of Mr. Moakley (December 1975) and Director of Marketing and Development William F. Tobin (May 1976)

. . . record monthly volumes in containers handled during March and April at the Boston-Mystic Container Terminal and the introduction of three new steamship lines at that terminal to bring the number of lines operating there on a regularly scheduled basis to 19 which resulted in a record of 32 scheduled vessel arrivals there in June

. . . a stable management-labor relationship for the past several months on the waterfront with the current contract between the Boston Shipping Association (B.S.A) and the International Longshoremen's Association (I.L.A.) to run until September 1977

. . . the arrival of the M/V Ponderosa, the largest lumber ship ever to visit the East Coast, at Castle Island Terminal as its first port of call in May to begin a shuttle service between the East Coast and Vancouver. Castle Island in the M/V Ponderosa's first East Coast port of call due to the depth of its berths, recently dredged by Massport

. . . an aggressive and sophisticated marketing and trade development program now in the planning stage, to be implemented by Mr. Tobin

. . . excellent working relationships between Massport and the State and City. The latter now controls the South Boston Naval Annex, the most likely site of any major Port of Boston cargo facility development in the future.

. . . progress in other port-related matters, with a study



Boston, Mass., 062176:—Massport Executive Director David W. Davis, left and Port Director Thomas F. Moakley, shown here viewing a photograph of Massport's Boston-Mystic Container Terminal, addressed the Massachusetts Congressional Delegation June 23 regarding matters of significance to the Port of Boston's future.

underway to determine the future of the Boston Fish Pier and negotiations to bring the S.S. United States to Boston as a permanently moored floating hotel.

Also attending the Congressional luncheon from Massachusetts will be Mr. Tobin, Assistant to the Executive Director Arthur I. Segel, and Director of Administration James S. Hoyte of Massport; Capt. Arthur Knight, commissioner of pilots; Arthur Lane, president of the B.S.A.; Earl A. Posey, president of the Propeller Club of the U.S., Port of Boston, Inc.; Kenneth R. Rossano, senior vice president of the First National Bank of Boston; and Antone L. Silva, chairman of the New Bedford Industrial Development Commission.

Attached are accounts of the four agenda items calling for federal action.

Favored Ports List (For Trade with the U.S.S.R.)

As the result of the 1972 U.S.-U.S.S.R. Trade Agreement, 40 ports from each country were granted "favored port" status, enabling them to receive visits from vessels of the other country on only four days' notice, compared to the 14 days' notice required for such activity at other ports.

Although Boston is the 14th busiest U.S. port in terms of general cargo, and eighth largest in terms of import valuation, it was not included among the 40 favored U.S. ports. The primary reason cited for this omission was the existence of U.S. Navy facilities in Charlestown and South Boston. But these bases have been inactive since July 1973, and, although the Trade Agreement was reviewed and

re-signed by the Commerce Department in 1975, the Port of Boston was not added to the list.

A prominent Soviet carrier, the Far East Shipping Co., has indicated interest in serving the Port of Boston. The potential of such trade is indicated by the recent shipment of \$4.6 million of textile machinery to the U.S.S.R. via Boston by a North Andover manufacturer. But the current requirement of 14 days' notice is a great impediment to such trade. Modern vessels can travel from the U.S.S.R. to Boston in approximately 10 days.

The Massachusetts Congressional delegation's support is needed now if Boston is to achieve "favored port" status, which is enjoyed by such ports as Bay City, Michigan; Astoria, Oregon; and Kenosha, Wisconsin.

Rail Rate Equalization

The cost of shipping a container or trailer by rail from the Port of Boston to Chicago is approximately \$100 greater (\$508 to \$403 per container) than the rate for the same service from all of this port's major competitors—New York, Philadelphia, Baltimore and Norfolk—to Chicago.

Despite the fact that these ports vary greatly in their distance from Chicago, their rail rates to that city have been equalized, a traditional practice, for many years.

In fact, the rates for service from Boston to Chicago for boxcar rail service were equalized with those from its competing ports in 1963 after a prolonged court battle ending in a U.S. Supreme Court decision in Boston's favor. But container on flat-car (COFC) and trailer on flat-car (TOFC) rates were not included in that case and the rate disparity which has existed for these categories between Boston and Chicago continues to exist, having first been established in 1916. In recent years this particular rate disparity has hurt the Port of Boston in its competition for Midwest-bound cargo, as containerized cargo has risen to approximately 70 percent of general cargo tonnage at the Port of Boston.

Massport's recently appointed Midwest representative reports that many major shippers throughout that area consider the rail rate disparity a prohibitive factor to shipping via Boston. If it were not for this factor, Boston would be in an excellent position to break into the vast Midwest shipping market, as there are excellent rail lines to its port terminals and Boston is often the first U.S. port of call for vessels bound from Europe, creating the opportunity for faster service.

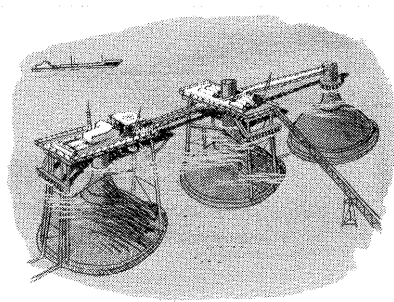
Port Director Moakley has contacted Conrail, which submits proposed rail rate changes to the Interstate Commerce Commission (ICC), in the attempt to have these rail rates equalized.

Foreign Trade Zone

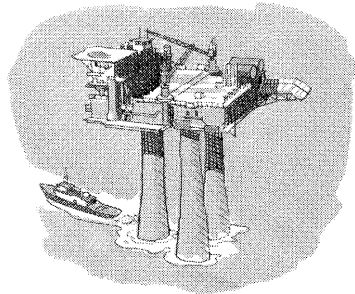
There are currently 17 Foreign Trade Zones under the jurisdiction of the U.S. Department of Commerce, in the United States. Not one is located in New England.

A Foreign Trade Zone is in an area outside of U.S. Customs jurisdiction. It permits the importation and storage, processing, exhibiting, assembly, etc. and re-export of goods without the barriers of tariffs. If the imports are brought into the country from the Foreign Trade Zone, Customs duties are not paid on them until they leave the zone.

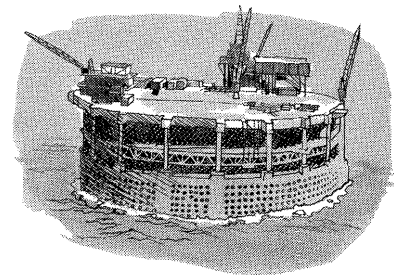
(Continued on page 32 bottom.)



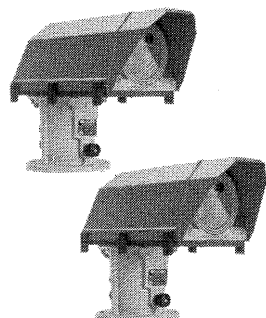
Tideland MaxLumina marine lanterns flash in unison to protect a group of three gigantic underwater petroleum storage structures shaped like "inverted funnels" in the Fateh field off the coast of Dubai. "Bridges" connect the above-surface portions of the storage units, and the synchronized flashing presents the installation as a "single structure" to avoid invasion by ships navigating in the vicinity at night.



Tideland MaxLumina lanterns and AudioBeam® fog signals have been selected by a major oil producer to protect a series of tall, reinforced concrete production platforms like this in the Norwegian North Sea. The high standards of design and the required levels of performance for navigation aids—as required by various national regulatory authorities—narrowed the choice to Tideland.



The well-known Ekofisk storage tank and surrounding production structures are another multi-million-dollar investment in the Norwegian North Sea protected by synchronized Tideland MaxLumina lanterns. Although they flash in unison, each MaxLumina lantern is independent. They are equipped with Syncrostat® flasher/lampchangers. Should any one or more fail, all remaining lanterns continue the precise flash code in synchronization.



RL-125
Tideland RL-125 MaxLumina range lights can be synchronized to flash in unison for maximum visibility by marine pilots in navigating to mid-channel alignment. These lights also can be programmed to flash any preselected simple or complex code. Tideland has designed the RL-125 so that one person can focus it on location.



Sonic System Synchronizes Suez.

Tideland's new SonicSync controls navigation lights.

More readable, more visible, more dependable aids to navigation for the re-opened Suez Canal keep the ships to the center of the channel. Pilots see Tideland Signal's MaxLumina® buoy lights flash in unison instead of at random. SonicSync synchronizes the lights' paired flashing with certainty. Background lights on shore or on other ships are diminished by comparison.

Tideland's MaxLumina tower lanterns direct marine traffic from a series of 14 towers on the banks of the canal. Tideland graphic-design electronic panels control the tower signals. Ships progress safely. Tideland's synchronization system gives visual accent to the tower lanterns.

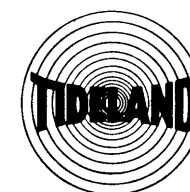
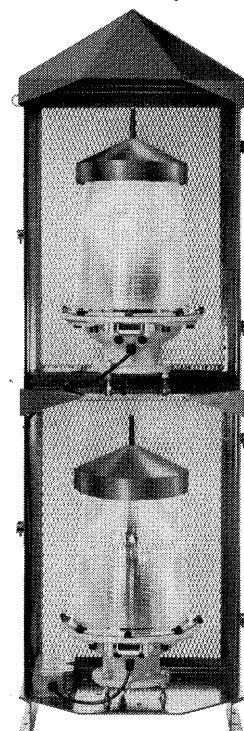
Biform ML-300
Tideland's Biform ML-300 HI marine lanterns flash a 30,000 candela signal for a 27.8 nautical mile luminous range when the meteorological visibility is 20 miles. This AC electrically powered light is recommended as a landfall beacon or other main navigation light.

Contracts awarded Tideland Signal by the Suez Canal Authority for synchronized channel buoy and traffic lights are recognition of Tideland as the deliberate leader in modern electric aids to navigation.

Tideland systems are matchless in dependability and operation and in their durability in severe marine environment. Tideland manufactures every product. Aids to navigation are Tideland's only business.

Tideland offers navigation aids which meet the stringent requirements of BASEEFA, UL and other regulatory and safety standard certifications.

SYNCHRONIZATION. SonicSync® is Tideland's underwater communication system to synchronize the operation of aids to navigation without the vulnerabilities of hard wire connections or the uncertainties of radio frequency signals. SonicSync includes a transmitter at one navigation aid to send a coded acoustic signal to a receiver at the synchronized navigation aid. The coding system prevents interference. Tideland's synchronization systems, whether SonicSync or other communication methods, maintain operation of all other navigation aids in the event of failure of any one or more of the others.



Aids to Navigation

Write today for more information.

Tideland Signal Corporation

P.O. Box 52430, Houston, Texas 77052, U.S.A.
Phone (713) 681-6101 • Telex 76-2327 • Cable TICOR

Port of Gothenburg has a plan for concentration of dry cargo harbours

Port of Gothenburg Sweden

Gothenburg, Sweden, 1976-07-09:—A project group of harbour and cargo handling specialists set up by the Port of Gothenburg and the Göteborgs Stuveri AB (The Gothenburg Stevedoring Co) has recommended a concentration of almost all the dry cargo handling in the port to the Skandia and Älvsborg harbours at the mouth of the River Göta. The idea is to try to handle even conventional cargo with methods similar to those used in unitload traffic.

The project group has estimated the costs of the new harbour and cargo handling facilities to about 370 m. Swedish Kronor (\$81 m.).

The group will now proceed with a more detailed plan while the financial matters connected to the large investments proposed—which by far are the largest ever planned by the port—will be scrutinized before a decision to put the plan into reality can be taken.

A concentration of the harbour activities

At Gothenburg—as is the case at many other ports situated at a river—the harbours of the port during gone years have grown successively along the two riverbanks and are spread over long distances. In the long run this has

proved to be less favourable than a more concentrated harbour localisation, and the Port of Gothenburg has already taken some steps in the direction of a concentration. Most of the harbour facilities on the south bank of the river have thus already been transferred to the north side of the river, and within soon only the terminals for the passenger—and cargo ferry lines to Denmark and Germany will be left on the south side.

The project group, which has been working for about a year, has made a close study footed on the 1974 through-flow of dry cargo at the different harbours of the port. Three alternatives have been worked out for comparison—two of them are of a more modest character using, after modernization, the now existing harbours on the north bank of the river. Even the north-side harbours are, however, spread over a distance of some 10 km., and in the third and more radical alternative—which is the one which is now recommended—almost all the dry cargo traffic is planned to be concentrated to the 10-year-old Skandia harbour and the new Älvsborg harbour which is under construction and lies in direct connection to the Skandia harbour at the mouth of the river.

In addition to the container traffic already flowing through the Skandia harbour also semi-containerships, according to the plan, will in the future be served at the

(Continued from page 30)

Massport has conducted an economic survey indicating a widespread demand for such an area at the Port of Boston. Sixty-one importers and exporters indicated that they might benefit from such a facility. Massport is now working on the financial and engineering studies required for application to federal authorities to have such a zone created in Boston.

Massport and the City of Boston are negotiating concerning an area at the South Boston Naval Annex where a Foreign Trade Zone might be located. The City, which controls the Annex, will apply for federal funds for renovation of a multi-story building and upkeep of several surrounding areas which might be leased to Massport for this purpose.

The implementation of a Foreign Trade Zone at the Port of Boston would capitalize on the port's facilities and provide employment for the area's residents.

Dredging the Harbor

The depth of the ship channels leading into the Port of Boston is a minimum of 40 feet at mean low water. This is fully sufficient to handle the largest vessels which might enter Boston Harbor in the next few years, but Massport would like to have it deepened in order to prepare for any future developments in the shipbuilding industry and to cut costs in maneuvering vessels.

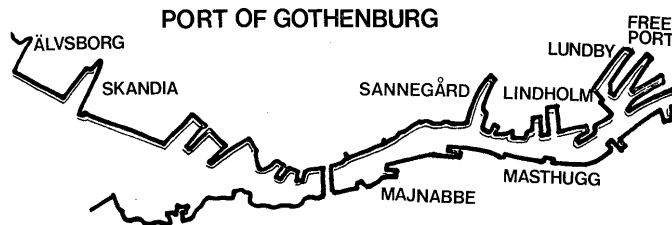
Massport has completed a feasibility study in applying to the U.S. Army Corps of Engineers to have the harbor channels dredged to a depth of 45 feet at mean low water. This study, completed with the assistance of the harbor

pilots, the oil companies and other port entities, consisted of information relative to tonnage projections and sizes of ships using the port.

There is generally a waiting time of at least three to five years from the time the Corps of Engineers accepts such a project until the dredging actually begins, so Massport is anxious to have the dredging completed as soon as possible. Dredging of channels is the most direct way in which the federal government supports commercial port activity.

There is one particular matter in which dredging of the harbor channels would result in immediate benefits for the Port of Boston. Vessels entering the harbor often must follow a zig-zag course, as the starboard side of the channel, which they normally follow, is only 35 feet deep at one point. Deep-draft vessels must sometimes switch to the other side of the channel at that point, resulting in extra time and effort.

Just this May, it was shown that dredging can directly result in increased business at this port when the fully loaded M/V Ponderosa, a giant lumber vessel, was able to call at the Castle Island Terminal due to the recent dredging of berths there.



This map of the port of Gothenburg shows the location of the Skandia and Älvsborg Harbours at the mouth of the River Göta. The concentration of dry cargo traffic to these harbours, as suggested, would leave the inner harbour

empty except for ferry traffic at the Majnabbe and Masthugg Harbours, and certain special traffic in the Free Port as well as in the Lundby and Sannegård Harbours.

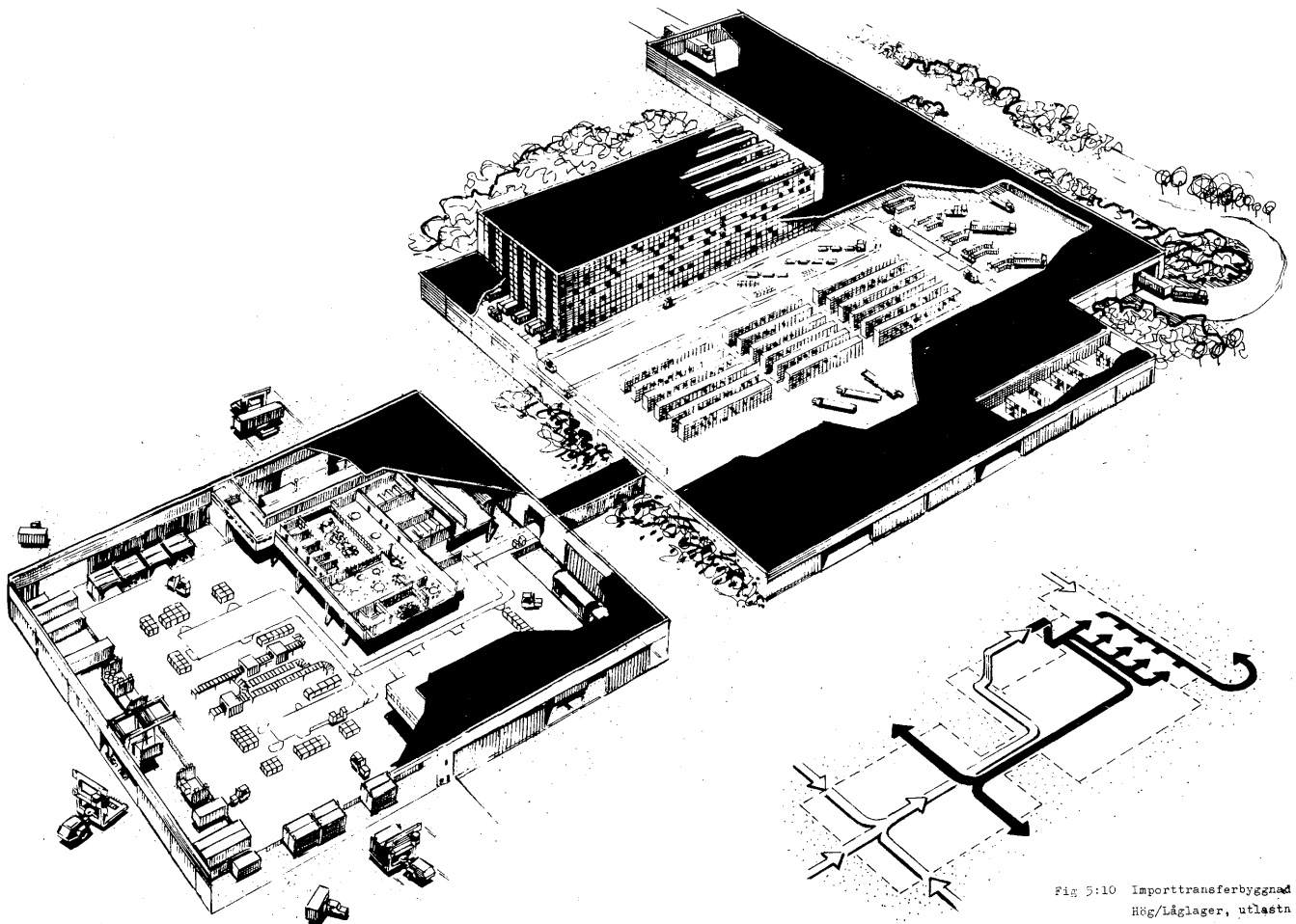


Fig 5:10 Importtransferbyggnad
Hög/Låglager, utlastn

The import building for conventional cargo and containers-to-be-stripped in the Älvsborg Harbour, as suggested in the Port Development report, prepared by specialists from the Port of Gothenburg and the Gothenburg Stevedoring Co. Conventional cargo is taken on flats to the import building

(left) and forwarded to the warehousing and exit building to the right. No lorries will be allowed into the port area; all internal transport is performed with big so-called LUF units.

Skandia harbour, while the major part of the conventional dry cargoes will be handled at the new Älvsborg harbour.

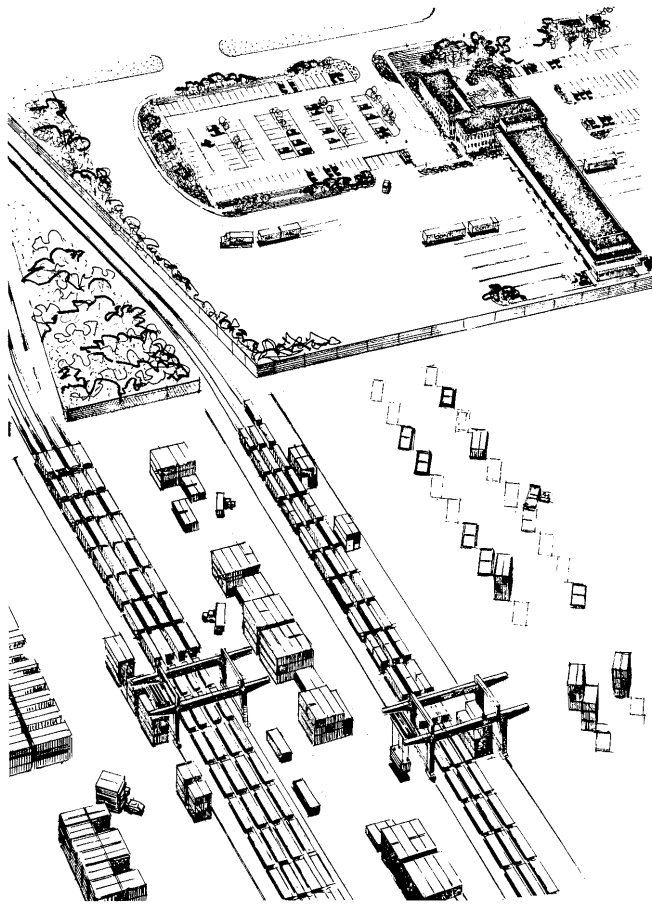
In order to make the increased flow of cargo through the Skandia harbour possible extensive changes have to be made in the crane equipment, the railway system, a new large pontoon ramp will be added to the equipment, etc.

Unique cargo handling system

One of the main features in the new harbour plan is a

new cargo handling system proposed for the Skandia and Älvsborg harbours.

With the exception of the direct container traffic of the Skandia harbour, which will go on as hitherto, all other goods will, according to the plan, have to pass one of the two large transit buildings—one for export and one for import goods—which will be built at the inner part of the Älvsborg harbour. All lorries and railway waggons will thus have to deliver or fetch the cargo at the import and export



In the Skandia Harbour, container handling will be more effective after a new railroad system has been constructed. This will replace two existing smaller systems. The Gothenburg Stevedoring Co. has bought cranes previously fitted to Johnson Line container vessels, which will be used to load and unload railroad cars in the terminal.

buildings—with the exception of the beforementioned Skandia container traffic. In this way the space of the Älvsborg harbour will be totally freed from lorry and railway traffic and also at the Skandia harbour this traffic will be limited.

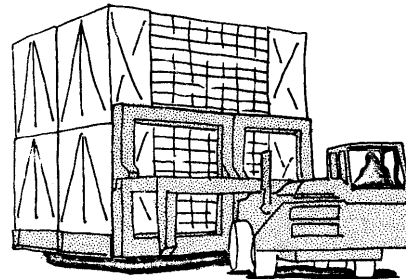
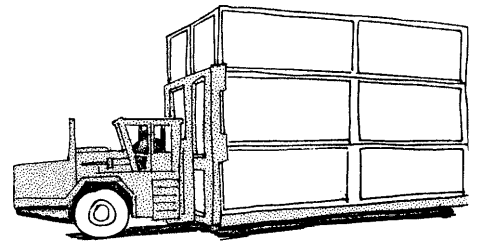
The building for the import goods will be connected to a special warehouse where the goods could be stored either in a low building or in a high building where a computer system will be used for handling the vertically stored goods.

The two buildings for import and export will be especially designed and equipped to serve as end stations in an internal transport system for the two harbours.

The aim is to put together goods of conventional type to larger transport units—for example on large flats—for the transport between the buildings and the ships and vice versa. A considerable saving of time is expected at the berths as a result of the new internal transport system.

For the internal transport in the two harbours it is proposed that the new Swedish LUF (Lift-Unit-Frame) system should be used. The LUF frame can be equipped with flats convenient for all sorts of general cargo and preloaded in the warehouses or at the quays. The trailer used is then placed under the frame, which is hydraulically lifted and transported to its destination by a special truck.

The preloading and placing of the loaded frames will be



A prototype LUF (Lift Unit Frame) vehicle is presently undergoing tests in the Skandia Harbour in Gothenburg. The cargo handling system suggested for the combined unit-load/conventional cargo harbour in Gothenburg needs a large-capacity internal transport medium, and LUF might be the answer; e.g., six containers can be moved at the same time with the help of one truck.

effected according to programs carefully worked out in beforehand. The LUF system permits a large volume of units to be handled at a time—up to six containers or a similar quantity of general cargo could be transported on each frame.

New large cranes for containers and general cargo

Large cranes with the double purpose to handle containers as well as general cargoes are included in the lay-out for the new harbour project. Such combination cranes will be placed at the quays of the Älvsborg harbour and at the west quay of the Skandia harbour, while the longer south quay of Skandia still will be equipped with special container cranes. Some of these will also serve the west quay since they are designed to be able to take the 100 degree curve that connects the crane rails of the two quays.

Among the advantages which the group of specialists underlines when they recommend the concentrated form of harbour activities are a better utilization of machinery and technical equipment, a better organization of the personnel resources, also possibilities to modernize the environmental arrangements for the people involved in the harbour work.

The project group estimates that there are possibilities that the proposed Skandia/Älvsborg harbour project could be put into reality around 1980 and that these dry cargo harbours will prove to be sufficient for the port even a bit into the 1990's. Thus an earlier projected dry cargo harbour at the Krossholmen west of the Älvsborg harbour planned to be ready around 1985 could be postponed.

According to the plan put forward by the project group some special cargoes like cars and fruit will still be handled at the Lundby and Free harbours at the inner part of the old harbours, and some bulk cargoes will continually go via the Sannegård harbour, but the main dry cargo stream will be guided to the new combined Skandia/Älvsborg harbours.

The First Banker



Early in man's history, he learned to specialise. A man that did his best work with a hammer became a carpenter.

The one that grew the biggest vegetables became a farmer. And goods and services were traded.

When life became more complex, money was invented. It enabled trade to take place on a higher level. And it created the need for another type of specialist. The banker.

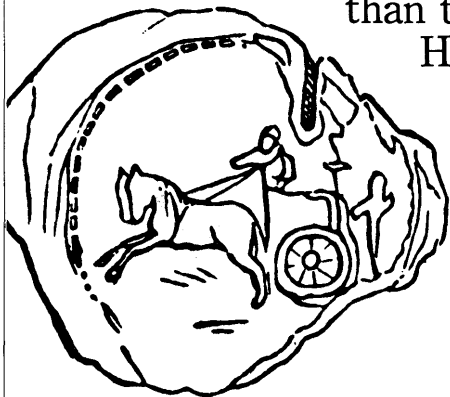
We at Fuji Bank are proud to be following the traditions of that first banker. For the past ninety-six years we have been assisting both individuals and corporations in all types of business transactions.



We maintain offices all over the world. And stand ready to provide both capital and financial advice to those who request our services.

Today's world is more complex than that of the first banker.

He did his best to help then. We do our best to help now.



 **FUJI BANK**

Tokyo, Japan

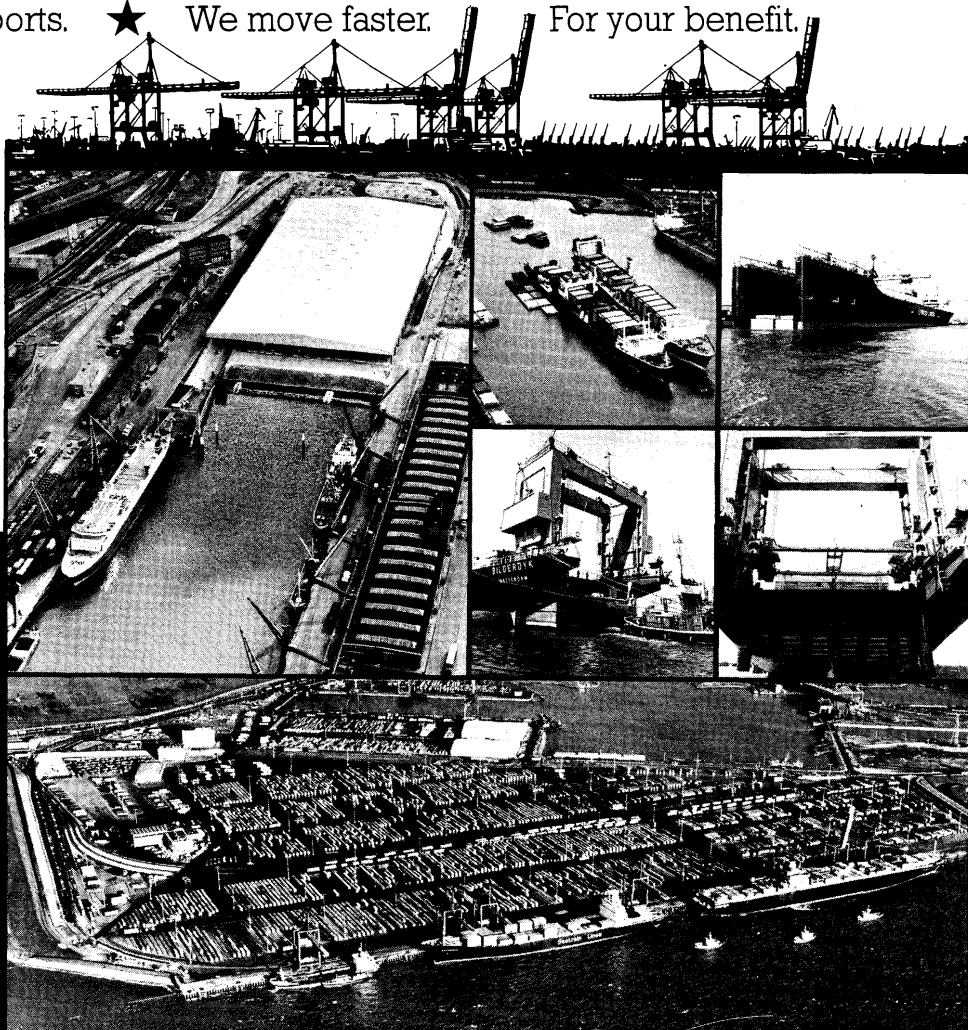
Overseas Offices: - New York - Chicago - Los Angeles - Toronto - Sao Paulo - London - Paris - Düsseldorf - Beirut - Tehran - Seoul - Singapore - Jakarta - Hong Kong -

Subsidiaries: - Zurich - New York -

Associates & Affiliates: - London - Zurich - Luxemburg - Sao Paulo - Hong Kong - Singapore - Kuala Lumpur - Bangkok - Jakarta - Melbourne - Port-Vila -

Container Ro/ro-Lash

Intermodal traffic needs speed, efficiency, and flexibility. ★ We've got the facilities and the know-how. ★ That's why more and more lines are calling at our ports. ★ We move faster. For your benefit.



**The Ports of
Bremen-Bremerhaven**

For details write to: Bremer Lagerhaus-Gesellschaft, 28 Bremen, Überseehafen, Phone 3 89 61, Telex 2 44 840
Bremer Lagerhaus-Gesellschaft, 285 Bremerhaven, Steubenstr., Phone 48 41, Telex 02-38722

Orbiter Probe

“Portos e Navios” May '76

Rio de Janeiro, Brazil (Selected titles from the May issue of “Portos e Navios”):—

Ports and Waterways

- Covec shall explore entrepot at the Port of Salvador.
- Agreement for the continuation of waterway works to be renewed.
- Cold-storage terminal for meat of Rio Grande is being released.
- Companhia Docas do Rio de Janeiro has been formed.
- Government representatives and undertakers discuss bulk storage at Aratu Port.
- American Port buys British cargo control system.
- Container handling increases at the Port of Goteburg.
- Aratu: work at the terminal to start by the end of May.
- São José do Norte, Rio Grande do Sul State, shall gain international port area.
- Gigantic press disembarked at Rio de Janeiro Port.
- Construction contract of Sepetiba Port has been signed.
- Incentives for coastal trade export.
- Rio's Port Center shall be touristic gate.
- Importation and exportation fluctuate in Santos by 4% in three months.
- Liquid bulk cargo represent 60% of Fortaleza's cargo handling.
- Land & Marine in the south-east of Asia.
- Port of Baltimore buys mammoth cranes.

Other Articles

- A New Generation of Tugs for Port Traffic.
- Regulation of the Law for Container Use.

Canadians place well in dinghy championships

Hamilton, Ontario, August 24 (Port of Hamilton Information Release):—The Pilling family found themselves pining for their mirror while they were away in Holland a few weeks ago.

Not the kind that gives a reflection—the kind that floats—their Mirror Dinghy, “Wee Pal.”

Hamilton Harbour Commissioners' Marine Dockyard Superintendent, Graham Pilling, and his family have just returned from Holland where father and daughter, 13 year old Susan, competed in the Mirror Dinghy World Championships.

Out of 51 contenders from 11 countries, the Pillings placed 13th. “We would've done better,” says Graham, “if we had our own dinghy, Wee Pal.”

A Mirror Dinghy is a racing dinghy you put together yourself—“the Volkswagen of sailing” as Graham puts it.

Three years ago Graham and his daughters, 15 year old

Jane, and Sue, decided to join the Ontario Mirror Dinghy Association. Since then, the Pillings have been Ontario Champions. And Sue and Jane set a precedent as the first girls to ever win the Canadian Junior Championships.

July 1st Graham and Sue won the Canadian Mirror Class Association competition in Hamilton Harbour, and the chance to compete in the World Championships in Holland.

The family arrived in Holland July 28th. Graham and Sue had to borrow a boat because it was too costly to transport their own “Wee Pal.” A number of other contenders had to do so also and unfortunately “the standards of these boats weren't equal to the others.”

So the Pillings set to work on their boat—smoothing the rough edges, painting, installing fittings and tuning her.

The practise race was August 1st and the series began Monday, August 2nd. There were 5 races—the Pillings placed 14th, 18th, 18th, 9th and 7th. The winner was determined by taking the average of each contenders' best three races. Graham and Sue placed 13th overall. “The English placed five boats in the top six,” notes Graham. First place went to Roy Patridge, Chris Owens placed second and Mark Rushall was third. All are from England where Mirror Dinghy Racing began.

“If I had another chance with my own boat,” says Graham, “I think we would have done better than we did.”

The next world championship race takes place in Perth, Australia in 3-1/2 years. Graham smiles, “You're never happy until you're first . . .”

Commissioner Alway Elected V.P. of CPHA

Hamilton, September 15 (Information Release from Port of Hamilton):—Hamilton Harbour Commissioner Mowbray Alway has been elected to the Board of Directors of the Canadian Port and Harbour Association for 1977. Mr. Alway becomes Vice President of the Association.

The Commissioner is the City of Hamilton's appointee on a three man Board of Harbour Commissioners in Hamilton. He was recently re-appointed to a second three year term by the City.

The Canadian Port and Harbour Association is comprised of those Canadian Ports and Harbours under the administration of local Harbour Commissions, National Harbours Board Ports and those Harbours and Government wharves which are the direct responsibility of Transport Canada's Regional Directorate.

Mr. Alway's election comes during the course of the 18th Canadian Port and Harbour Association's Annual meeting in Charlottetown.

Canadian Ports Commission Proposal Announced in Charlottetown

Information Release from Port of Hamilton

Hamilton, Ontario, September 13, 1976:—Transport Minister, Otto Lang announced today the probable structure of a Canadian Ports Commission, should the Federal Government give its approval in the up-coming months.

The proposed Canada Ports Act would create the C.P.C. headed by a Commissioner within the Transport Canada's Marine Transportation administration.

The new management structure will be composed of the local port commissions, a Canadian ports commission, a Canadian ports policy council and regional advisory councils.

The Ministry of Transport will be responsible for the development of long-range national port objectives and for the establishment of priorities and strategic plans for growth and development.

The Canadian Ports Commissioner will be responsible for national port policy and planning as well as the monitoring of port performance. The Commission will provide the expertise required for over all policy direction to the national ports system. This direction will include the development of national port objectives and strategic plans, the maintenance of uniform standards of financial management, the approval of local port developments of major importance, the promotion of Canadian Ports generally and the provision of professional services to the ports when so requested. The Canadian Ports Commission will also operate the extensive and important system of public harbours and government wharves.

Each of the designated major ports are to be administered, operated and managed by a Port Commission patterned after the present Harbour Commission which the Port of Hamilton already has. This is a public corporation and power to act on its own as other corporations do with the authority to employ a manager of its own choice and the staff required to operate the port.

The basis for concluding whether a port should have local autonomy includes among other considerations, the importance of the port to the national system, the interest of the local government in playing a part in the day to day management of the port, and the ability of the port to be financially viable. The Port of Hamilton is one of twenty named by the Minister as having Port Commission status.

The local Port Commission is viewed as a collaborative Federal-Municipal management structure and will function much as does a board of directors. This board will give the port direction and will bear ultimate responsibility for the quality of management and performance.

The Port Commission will have from three to seven members (the present Hamilton Harbour Commission has two federally appointed and one municipally appointed representative) all appointed by the government with the

majority being federal representatives and the others being nominated by the municipalities concerned. The Minister foresees the Port of Hamilton as having three to five appointed commissioners.

Local port commissions should be self-sustaining business enterprises with operating and maintenance costs, and to the extent possible, capital costs financed from port revenues. Uniform financial management and control systems will be adopted for all the new port commissions to bring them into efficient operation.

Each port commission will propose long-range development goals and plans for its port for submission to the Canadian Ports Commission with a view to having them incorporated into the national programme.

Day to day port commission management responsibilities will include land use, management of human resources, the application of port pricing policies, the promotion of port operational capabilities, the development of port property and the making of by-laws for the operation of the port.

A Canadian Ports Policy Council will be established to advise on national port management policy. The Minister will appoint up to eight members to the council from the chairmen of the local port commissions and its chairman will be the Canadian Port Commissioner. The council will give advice on new policy directions and will be expected to give particular attention to confirming that maximum decentralization of operating responsibility actually takes place.

The government has decided the responsibility for establishing port security standards for major ports will be assumed by The Royal Canadian Mounted Police. Ports that wish to provide its own police services will be able to do so after demonstrating that it can meet established standards of security and after obtaining government approval.

Hamilton Harbour Commission Chairman, Ed Tharen sees, in his opinion this outline "is good, as we now have the standards of one of the finest police forces in the world being used as a guideline. This will improve port security, will assist in unifying police procedures in all ports in Canada and will in the long run by reducing pilferage, etc., reduce the cost of the movement of goods so that all Canadians will benefit from the saving."

Tharen not only agrees with the security measures but also with the total Canadian Ports Commission concept.

"I feel that the government has adopted as its general policy for administration of ports, a doctrine of local autonomy as far as can be practically implemented with regard to the background of the needs of Canada in the transportation of goods."

"The central input into the major ports which will be under the local Commission will be geared mainly to advisory and co-ordinating with as much local autonomy left as can be practical."

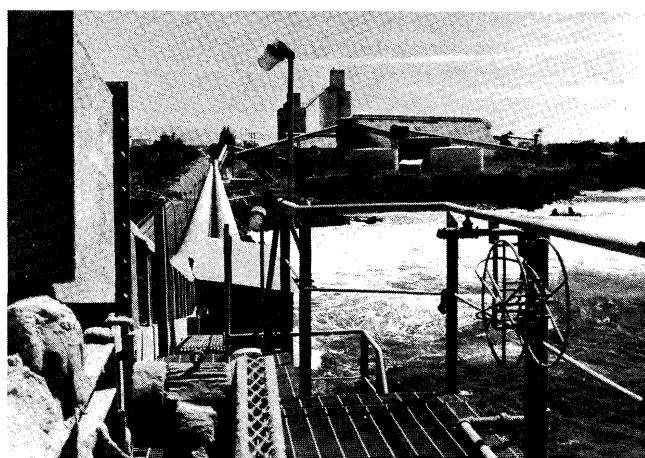
Port of Acajutla, San Salvador



Port of Acajutla.



Aerial view of vehicle warehouse and yard.



Grain belt and silo.



Loading unit—Port of Acajutla

Transits, Cargo, Tolls Decline During FY 1976

Balboa Heights, C.Z., Panama, July 30, 1976 (Panama Canal Spillway):—Panama Canal transits, tolls and cargo all registered declines during Fiscal Year 1976, which ended last month.

Final official figures show that oceangoing commercial transits dropped from 13,609 to 12,157 and total transits went from 14,735 to 13,201. Oceangoing commercial cargo transiting the waterway went from 140.1 million long tons to 117.2 million and total cargo dropped from 140.6 million to 117.4 million long tons.

Oceangoing commercial tolls dropped from 141.9 million to \$134.2 million and total tolls revenue from \$143.3 million to \$135 million.

The decreases in transits, cargo tonnage and revenue have been attributed primarily to the prolonged effects of the world recession and the recent opening of the Suez Canal.

The latter event resulted in an estimated loss of \$4.1 million in revenue and some 350 transits due to ships diverting away from the Panama Canal to Suez during FY 1976.



Charleston, South Carolina (Trade News, South Carolina State Ports Authority):—The Port of Charleston gets another “big lift” with the addition of this 125-ton gantry crane at Union Pier, the South Carolina State Ports Authority’s break-bulk terminal. Part of a continuing expansion and physical improvement program at Charleston, the crane is expected to be operational by the end of 1976. Construction of a 100,000-square-foot warehouse and paving of several acres of open storage will complete the project and bring the port’s oldest terminal to its maximum operating potential.

Port Everglades News

Hollywood-Fort Lauderdale, Florida, August 25 (Port Everglades Authority):—

- Sea-Land Service, Inc., world’s largest operator of container ships, hosted a reception and tour of the container ship SS SEA-LAND CONSUMER at Port Everglades recently. The event in the main passenger terminal commemorated the 10th anniversary of Sea-Land’s North Atlantic service and inauguration of its Mediterranean and Middle East service from Port Everglades. Port Chairman Fred J. Stevens presented a plaque which was accepted by Capt. R.A. Thornal, master of the SS SEA-LAND CONSUMER.

- A decision on the application of the Port Everglades Authority for establishment of a Foreign-Trade Zone is expected before the end of the year, following a public hearing held here Aug. 4.

The Port Authority outlined plans for the development of a 30-acre general purpose trade zone and construction of a 110,000 sq. ft. concrete building. Twenty-one industries have expressed an interest in using the foreign-trade zone.

Barbours Terminal Work Progressing

by Middy Randerson
 Port of Houston Magazine
 April, 1976

\$53 Million Development Scheduled To Open Early Next Year Will Add Two Container Berths To Existing LASH Berths

Construction is well underway on the Port of Houston's unique Barbours LASH/Container Terminal which, when completed in the first quarter of 1977, will offer the newest and finest intermodal facilities of any port in the Gulf of Mexico.

The \$53 million development is located just off the 40-foot deep Houston Ship Channel, a short two-and-a-half hours from the Gulf. Now under construction close to the two existing LASH terminals are two 1,000-foot container wharves.

Two 40-long ton electrically powered Paceco container cranes will be erected on the apron of the wharves and will be able to move the length of both wharves. One crane has

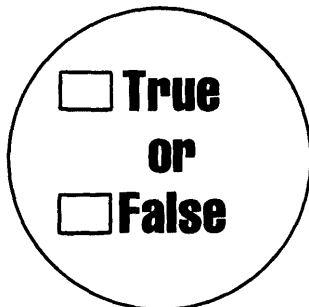
a rotating trolley mechanism to accommodate containers carried on Lash ships which are stowed athwart ship and thus require this special handling.

Three diesel-electric powered LeTourneau yard cranes also have been ordered, each with a 40-long ton capacity for quick stacking of containers. Each wharf will be backed by 36 acres of graded land, with initial development providing seven acres of paved marshalling area. Present construction at the two wharves will offer space for 2,700 of the 20-foot containers or their equivalents. There will be 50 electrical outlets for refrigerated containers. Eventual expansion of the facility calls for a capacity of as many as 8,100 of the 20-foot containers or their equivalents and as many as 132 refrigeration outlets.

Approximately a mile from the terminals, a container freight station is being built. It is on the access road leading to Barbours Terminal which recently was completed by the Port and runs two miles from the state highway to the new terminal. The container freight station will provide 55,000 square feet of stuffing and stripping space. Rail access will be extended to the container freight station and may be extended to the docks when necessary.

(Continued on next page bottom)

All Ports Are Alike



Test your transportation IQ. Put a check in one of the squares and look at the bottom of this column to see if you agree. By way of information, some ports provide only the bare essentials. Then there are others, like the Port of Houston, where facilities have always been kept ahead of customers' needs. For instance we have now expanded into three distinct port areas, each complete and designed for your particular cargo, providing the best facilities in the Gulf of Mexico.

TRI-PORTS OF HOUSTON

Serving You better three ways

Port of Houston Authority/P.O. Box 2562/Houston, Texas 77001/Field Service Office/
 Lincoln Bldg./60 East 42nd St./New York, N.Y. 10017

Answer: False; but if you marked True, please write to the Director of Trade Development for information.

Port of Hueneme—The Mini-Port Doing a Maxi-Job

Port Hueneme, Calif. (Port of Hueneme Press Release):—It's been asked—"What is Port Hueneme doing? In fact—"where" is Port Hueneme? (pronounced "Y-Nee-Me"). Well, it is one of the smaller deep water ports on the west coast of California, situated about 61 miles north of Los Angeles in the thriving County of Ventura.

Actually, it is well known in shipping circles, virtually because of its next door neighbor, the all important 1,600 acre Naval Base where the famous Construction Battalion Center (SeaBees) is headquartered, but to the average citizen, it could be anything or anywhere.

What is the commercial Port of Hueneme doing, and why can it be said "it is a mini-port doing a maxi-job"? As a relatively small port, it is playing an increasing role for its size through an expertise not often seen in a public entity and without the usual vast bureaucratic complexities. The Oxnard Harbor District, operating with a staff of only 14 under the policy guidance of a 5-man Board of Harbor Commissioners, are doing what many ports find impossible—making a significant operating profit reducing the taxpayers liability at an ever-growing rate.

In the past four years, since the Port completed a 4.9 million dollar expansion program, financed by a general obligation bond, the Harbor District has reduced its tax rate from 6¢ per \$100 of assessed valuation to 3-1/4¢ during which period of time gross revenues have quadrupled. In addition, the port is completely run from income derived from their operating revenue without cost to the taxpayer. It is certainly not difficult in these times of rising taxes not to recognize this achievement.

How has the Port accomplished this? With persistent and

good management, the Harbor Commissioners under the leadership of Mr. Bob H. Jennings, President and a highly qualified staff, recognized that to rush into the highly sophisticated containerized cargo business would be, if not futile, imprudent, considering the close proximity of the huge and competitive harbor complex of Long Beach/Los Angeles. They realize that a large capital expenditure just simply could not be justified for the relatively small volume of cargo, compatible to containers, that would be generated within the port's tributary area. There were alternatives and these had to be explored—to specialize, and to carefully research possible agricultural exports grown in the surrounding area. Firstly, in specializing, a tanker terminal was established for the import of low sulphur fuel; the offshore oil industry was solicited use the port as a staging area; waterside land was leased for the processing of lumber barged in from the northwest; and, in addition, property was made available on a lease basis for other harbor related industries.

The matter of investigating possible agricultural exports narrowed down to the vast citrus producing area of Ventura, Kern and Tulare Counties. The only answer was to point out the harbor's potential to nearby growers and packinghouses. Through one initial grower query, emerged three separate independent citrus exporters, and after a thorough cost analysis, it was revealed that the Port of Hueneme could be more than competitive for shipping citrus products.

To date, the port has welcomed eight vessels loading oranges, lemons, and grapefruit to the Far East and Europe. The fact that the vessels are calling has also attracted other fresh produce such as honeydew melons, garlic and some processed canned fruit. This was accomplished without disturbing any of the other profitable activities taking place within the harbor. The forecast for future shipments of

To expedite traffic to and from the wharves, an entry permit station is being built close to the container freight station. There will be five entry gates to the terminal with room for expansion.

Buildings behind the wharves will include a two-story terminal office building with 8,000 square feet of space which will have four covered entry lanes and one additional entry lane for oversized loads. There will be one 2,300-square foot amenities building for each wharf which will house lunchrooms, locker rooms and office space for longshoremen and stevedores. There also will be an equipment repair shop for maintenance of dock equipment, cranes and tractors.

Another plus of the Barbours Terminal site is that even when present construction is completed there will be room for unlimited expansion as shipping demands increase.

With the two new container cranes added to the three already in operation the Port's Turning Basin area, the Port of Houston offers the quickest turn around time in the Gulf for container ships.

Two LASH berths are now in operation at Barbours Cut: a U-shaped pier for LASH and LASH/container vessels which was completed in 1972, and a second dolphin-system LASH berth across from it on the Barbours Channel. The almost four acres of paved marshalling area behind the pier offer outlets for 12 refrigerated containers and there is fleeting area for 100 LASH barges nearby.

Situated near the center of the United States on the Gulf Coast, the Port of Houston is the traditional entrance of commerce destined for the entire Midwestern area of the United States. With the new facilities at Barbours Terminal added to the 45 general cargo berths in the Port's Turning Basin area and the liquid cargo facilities at the Port's Bay-port Division, the Port of Houston is able to serve all types of cargo movement. From a 500-ton component of oil field machinery to the many LASH and Container movements, the Port of Houston can handle them all.

More than 13 million people live within a 300 mile radius of the Port of Houston. Houston itself leads the South in population, buying income, building permits, bank demand deposits, retail sales, capital expenditures and many other fields of economic impact.

This industrial market in the fastest growing area of the United States is a prime generator of LASH and container cargoes. Backing up the Port of Houston is a system of superb highways, the service of six Class A railroads, and more than 2,000 miles of U.S. intracoastal waterways.

The multi-billion dollar Houston area market and easy access to the heartland of America make the Port of Houston the prime entry point for cargoes from throughout the world. With the new Barbours Terminal facilities, the Port of Houston features the biggest and best in intermodal services and the foremost expertise in the field.



Long Beach, Calif., 82476 (Port of Long Beach News):—**BEAMIEST SUPERTANKER IN MAIDEN CALL AT PORT OF LONG BEACH:** A preview of things to come at the Port of Long Beach was the recent arrival at the Arco Terminal of the 145,680 DWT motor tanker Zawrat, owned by the Polish Steamship Company. The 158-foot wide supertanker is the beamiest ever to berth in any U.S. port, though other Long Beach callers like the Japan Mimosa was 20,000 tons larger, the Universe Patriot 30 feet longer and the Fairfield drew 6 feet more water. The Polish crude carrier just missed the discharge record of the Japan Mimosa here by 7000 barrels as it offloaded 1,060,000 barrels of Nigerian petroleum. Already routinely handling vessels of this size, Long Beach is now planning a three-berth deep water terminal to receive North Slope oil from Alaska aboard vessels in the 165,000 ton class by 1978. Photo on bridge of the Zawrat finds, from left, Dennis W. Bushard, Asst. General Manager of North American Maritime Agencies, Port Director of Commerce Lee Sellers, Captain Antoni Goszcynski and NAMA Vice President Donald S. Ballard.

fresh citrus is excellent, calling for two to three vessels monthly during the shipping season. The overall cooperative effort between the Oxnard Harbor District, shipper, stevedore contractor and labor has paid off handsomely, particularly in terms of employment, both directly and indirectly.

Another cargo potential for the Port is imported automobiles, and negotiations with a major Japanese manufacturer are nearly finalized. This is a natural for the harbor. It is believed that the automobile operation will commence with the introduction of the 1977 models bringing to the Port one or two car carriers monthly. They will lease approximately 10 acres of land for storage purposes establishing sophisticated shops for necessary repairs, painting and partial assembly, not to mention a carwash.

All of the above activities will create new direct jobs, increase work for the longshore labor force with a proportional increase of indirect jobs of about three to one.

Regardless of the large nearby ports, the means has justified the end, and can only reinforce the optimism of the harbor commission and staff. The Port of Hueneme, according to President Bob Jennings, is fulfilling its function, and that is to develop waterborne commerce and at the same time contribute to the growth of the community. This is just a beginning, and it is a good bet



Long Beach, Calif., 82676 (Port of Long Beach News):—**IRISH STAR IN MAIDEN CALL AT LONG BEACH OFFLOADS CANADIAN RAILS FOR MEXICAN USE:** One of the more unusual cargoes unloaded in the Port of Long Beach recently was a shipment of 9523 short tons of 78 foot long steel rails which arrived aboard the Irish Star, operated by Star Shipping, Inc. The 19,162,000 pound shipload, consisting of 7665 pieces, originated in Sydney, Nova Scotia, and was loaded by Crescent crane operators onto Southern Pacific gondola cars for rail movement to Calexico and delivery at the border to the Mexican National Railways for replacement of old trackage in Baja California. The Irish Star was selected because of its special 80-foot long hatches. Shown at shipboard welcome ceremonies are Captain Michael Carey, left, who was presented with Apollo portrait of Southern California by George H. Stein, Director of Property Management. Wayne W. Withrow freight forwarders handled the unique shipment of Canadian products destined for Mexico via Port of Long Beach.

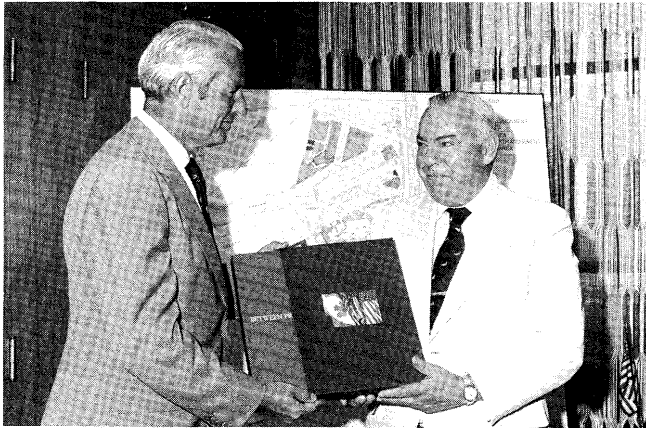
that the exclamations, "What is it and where is it" will be a question of past.

Wharf improvement contract

Los Angeles, Calif., September 1 (Port of Los Angeles News):—The Los Angeles Board of Harbor Commissioners today (Wed. 9/1) awarded a \$475,000 contract to Elco Corporation of Long Beach for alterations to Berths 178-179 in the Port's Wilmington District.

Elco Corporation won the contract on the basis of an open bidding procedure. The alterations include reconstruction and strengthening of a portion of a timber wharf and alterations to an existing cargo shed.

The new construction will result in increased wharf loading capacity for Crescent Wharf and Warehouse, tenants at Berths 178-179, allowing them to accommodate more cargo on the wharf. Currently the company is handling steel and container shipments and anticipates additional cargo tonnage in the near future. The wharf improvement will also mean additional revenue for the Port.



Long Beach, Calif., 82676 (Port of Long Beach News):—CANADA IN BICENTENNIAL GIFT TO PORT OF LONG BEACH: Canada's Bicentennial birthday gift to the people of United States took the form of a beautifully produced pictorial volume depicting the fenceless border joining the two countries. The Hon. H. Donald Gilchrist, Canadian Consul General in Los Angeles, is pictured at left as he paid a courtesy call at the Port of Long Beach recently to present a copy of "Between Friends", painstakingly photographed by 32 Canadian photographers, to General Manager Thomas J. Thorley.



Long Beach, Calif., 82476 (Port of Long Beach News):—EIGHTH MAERSK LINE CONTAINER SHIP ARRIVES AT LONG BEACH: Maiden Voyage arrival of the Axel Maersk at the Maersk Line facility at Pacific Container Terminal in the Port of Long Beach found George H. Stein, Director of Property Management, left, coming aboard to present Apollo photo of Southern California to Captain Bent Nygaard Lund, with Maersk Line Agency General Manager Harold E. Scully looking on. The Danish-flag carrier will shortly have nine fully-cellular container ships in the Pacific service.

National Port Week

New York, September 23 (News from The Port Authority of NY & NJ):—The Port of New York and New Jersey will observe National Port Week on Thursday, September 30, with a four-hour inspection of port facilities in the bi-state harbor. The tour aboard a Circle Line vessel will depart from the New York City Passenger Ship Terminal, Berth 5, at 12th Avenue and West 55th Street, New York City at 10 A.M. and return at 2:30 P.M.

Port Authority Chairman William J. Ronan will preside at a ceremony at the Terminal prior to the harbor inspection, at which time a message from President Ford hailing the importance of ports to the American economy will be read. Also at the ceremony, the National Port Week proclamations of Governor Carey and Governor Byrne will be presented by representatives of the States of New York and New Jersey to James P. McAllister, President of the New York-New Jersey Port Promotion Association. A City representative will present Mayor Beame's proclamation of National Port Week to Francis J. Barry, Chairman of the New York City Council on Port Development.

About 300 civic leaders, Port officials, and members of the maritime community will attend the ceremony and inspection. Luncheon will be served aboard the vessel.

National Port Week is September 26—October 2.

The harbor inspection is being jointly sponsored by three port groups: the New York-New Jersey Port Promotion Association, the New York City Council on Port Development, and The Port Authority of New York and New Jersey.

Improved cargo receiving procedure announced

San Francisco, Calif., August 30 (Marine Exchange of the San Francisco Bay Region):—Steamship operators and agents headquartered in the San Francisco Bay Area are implementing a greatly improved cargo receiving procedure, effective November 1, 1976, it was announced today by the Facilitation Committee of the S.F. Marine Exchange, following a meeting of major ocean carriers and agents. This procedure will significantly expedite the receiving of cargo at Bay Area terminals. It is hoped that the adoption of this system in the Bay Area will expand quickly to other Pacific Coast ports.

The new procedure is called a **prelodged** or **shipper-prepared dock receipt**. Until now, it has been the practice for the Receiving Clerk to prepare a dock receipt, at the time the cargo is delivered, on the basis of information furnished by the truck driver. Oftentimes this information is incomplete or differs significantly from ocean bill of lading information. The Facilitation Committee proposes preparation of the dock receipt by the shipper or his freight forwarder **prior** to cargo delivery, so that the dock receipt can be lodged at the pier before the truck arrives. This system has worked quite satisfactorily on the New York waterfront for years.

It is an everyday occurrence for terminal and steamship personnel, freight forwarders, and shippers to consume valuable time reconciling discrepancies and errors arising out of the present system. Often the preparation of bills of lading is delayed and this is an unwelcome expense in these days of high interest rates. The adoption of the prelodged dock receipt would significantly reduce error and result in a



Long Beach, Calif., 82676 (Port of Long Beach News):—**A BUNCH OF BANANAS ARRIVE AT PORT OF LONG BEACH:** Maiden arrival of the MV Loch Maree at the Standard Fruit banana terminal in the Port of Long Beach recently found the British-flag vessel unloading 8043 tons of bananas from Nicaragua and Ecuador, which translates to 178,770 boxes or approximately 17.5 million banana splits. Any way you slice it, that's a bunch of bananas, but only a fraction of the 1.1 billion bananas moved through Long Beach annually for distribution throughout the Western United States and Canada. Pictured at dockside welcoming ceremonies are, from left, Terminal Manager Joe Casasanto, Captain William Stockley and Adolf B. Zetterberg, Asst. Director of Port Operations.

smoother documentation flow. It is a proposal with advantages for everyone involved: less time spent reconciling conflicting information will result in faster truck turnaround; less time on the phone for forwarder and steamship personnel; more rapid release of bills of lading. Fewer errors mean substantially reduced need for later correction, often a hidden but nonetheless heavy expense.

It is recognized that the prelodged dock receipt is not a panacea for all problems. This new procedure is expected to reduce a large amount of the many errors presently occurring and this is highly desirable even if not all problems are solved.

The freight forwarder will play an important part in the new system. Dock receipts have the same format as the bill of lading, so they can be prepared at the same time as the B/L and export declaration. In the event a shipper or his supplier are some distance from the port, the forwarder is ideally positioned to receive information from several sources and bring it together into a single set of documents.

The Facilitation Committee expects to meet shortly with Bay Area terminal groups and the San Francisco Freight Forwarders Association in order to work out the details. While there has been informal consultation prior to this, and consensus that the time was ripe to adopt this system, these conferences will put the finishing touches on procedures and insure a smooth adoption of a change which promises many benefits to all parties engaged in international trade.



Oakland, Calif., August 3 (Port of Oakland):—**SMALL-WORLD ENCOUNTER IN OAKLAND**—The maiden voyage call of the new Maersk Line containership T.S. Alva Maersk at the Port of Oakland was the occasion for an unusual reunion among Faeroe Islanders. Some 850 miles distant from the Danish mainland in the North Atlantic, the tiny Faeroes add up to only 540 square miles and are inhabited by a total of 40,000 people who have preserved their own Old Norse language. Thus it was a significant day that saw these Faeroes families gathered on the bridge deck of the Alva Maersk in Oakland, so far from home. From left, they are J. Olsen and Captain K. Olsen, Maersk Line Terminal Manager in Oakland, a native of the Faeroes; K. Balling, of Maersk Line Agency; Mrs. M. Olsen, also of the Faeroes; Mrs. S. i Koltri (sic) and Mr. N. i Koltri, a shipbuilder/craftsman visiting the U.S. from the Faeroes under Smithsonian Institution sponsorship; Mrs. A. Mohr and Mr. H. Mohr, harbormaster of the Faeroe Islands; Captain H. Holm, master of T.S. Alva Maersk, and Mrs. E. Holm, both Faeroes natives; and John Verheul, Marine Terminals Superintendent of the Port of Oakland (originally from Holland, as it happens, not the Faeroes—his son, John Jay, is in the foreground).

Seaway Corporation 1975 Annual Report

Washington, D.C., July 26, 1976 (Department of Transportation, Saint Lawrence Seaway Development Corporation):—The 1975 Annual Report of the Saint Lawrence Seaway Development Corporation has been submitted to the Congress by President Ford, D.W. Oberlin, administrator of the Seaway Corporation, announced today.

According to the report, 1975 witnessed a welcome return to more normal cargo volume on the Seaway. Accounting for this favorable trend were: an improving national economy, greater availability of fuel, a more stable labor climate throughout the Great Lakes, major foreign grain sales, and advances in the ongoing season extension program.

Cargo shipments through the Montreal-Lake Ontario section of the Seaway rose 8.8%, to 48 million tons. Bulk cargo, which was up 12%, gave overall tonnage its largest

(Continued on next page bottom)

Port of Seattle buys back large waterfront area

Seattle, Washington, July 2 (News Release from Port of Seattle):—Terminal 91—all 198 acres and its two half-mile long piers—literally “came home” June 30 to its original owner, the Port of Seattle.

In a jointly sponsored ceremony and reception, the Seattle Chamber of Commerce and the Port marked the official purchase and transfer of title of the huge complex to the Port from the U.S. Navy... the largest single waterfront property acquisition since the Port came into being in 1911. The Port built the big piers between 1913 and 1920, and operated them until January 1942 when the Navy commandeered them for wartime use, paying the Port slightly over \$4 million.

The June 30 transaction returns the piers, and much additional space and improvements, for a purchase price of \$15,355,000, slightly more than the Port's General Manager, J. Eldon Opheim, wanted to pay six years ago when he offered one dollar. General Services Administration had originally appraised the complex at about \$25 million.

The final agreed price of \$15,355,000 was contingent on the Port's transferring title to its Pier 36 property to the Coast Guard for use as its northwest headquarters and berths for its new polar icebreakers and high endurance cutters.

R.D. Mohn, assistant general manager of the Port and chief negotiator of the venture for six years, acted as M.C. and introduced some of the principals in the long project. Co-sponsor of the ceremony, Ralph Davis, president of the Seattle Chamber of Commerce, spoke on the general impact on Seattle and King County of the Port's keeping the

boost. In the bulk category, wheat tonnage reached a record of 12,414,483.

Corporation revenues, principally from tolls, climbed 4.8% from the previous year to 6.3 million. Of that total, \$4.3 million went for operating expenses and \$2 million was returned to the U.S. Treasury as payment of the outstanding bond debt—which now has been reduced to \$118.5 million.

Oberlin noted these 1975 Seaway highlights: the longest navigation season on record; the first full year of 12-month navigation on the Upper Great Lakes; the return to the Great Lakes of American flag ocean liner service; and advances made under the Winter Navigation Demonstration Program.

In his letter to the President, Secretary of Transportation William T. Coleman, Jr., commends the season extension demonstration results and says: “The unique characteristics of the St. Lawrence River section are such that the focus for future demonstration of winter navigation should be directed to that section of the system.”

Single copies of the report may be obtained free from: The Office of Communications, Saint Lawrence Seaway Development Corporation, P.O. Box 520, Massena, New York 13662.

complex in operation for its six years as Licensed Operator during the negotiations.

Rear Admiral Chester Richmond, commandant, 13th Coast Guard District, accepted title to Pier 36 from the Port. He expressed his service's appreciation of the Port's taking action and making it possible to retain the Coast Guard's fleet in Seattle after the Navy declared Pier 90/91 as surplus to its needs and causing the Coast Guard to find new quarters.

Rear Admiral James Murray, commandant, 13th Naval District, welcomed the Port as his neighbor, gently reminding the Port Commission that the transfer of title did not include his “house on the hill” nor the Officers' Club, both of which remain Navy property.

Port Commission president Henry Simonson summed up the impact and importance of the Port's acquisition of the complex as it affects all of King County. Presently, the terminal handles some 250,000 tons of offshore general cargo. In 10 years, that figure will rise to 500,000 tons plus an additional 500,000 tons of other cargoes.

That traffic translates into 2,100 direct and indirect civilian jobs in King County and will rise to 3,400 jobs in the 1980's.

Projecting those jobs to include dependents and annual payroll, the on-site and off-site impact of the Port's operation of Terminal 91 on King County—excluding military employment—totals 4,900 residents and a \$25 million payroll at the present time; by the mid-80's those figures will grow to 7,500 residents and a payroll of \$65 million.

Sales and revenues currently run to about \$90 million and may reach \$230 million in the 1980's. In the light of these figures, the \$15 million purchase price is a real bargain for the Port and for King County's residents.

Joel Haggard, representing the Magnolia Community Club, applauded the Port's acquisition and noted the economic impact as projected by Commissioner Simonson. However, he reminded the Port that although the Port and Pier 90/91 had existed “from the beginning,” Magnolia was there even before that. He spoke of the Port's patience in listening to Magnolia/Queen Anne residents and of the Port's taking into consideration the “people factor” and not just the economic factors in its future operations of the terminal.

The Port has agreed not to drastically change operations at Terminal 91 for at least five years, except for necessary maintenance, and will continue to operate as it has for the past six years. When changes are contemplated, the Port has assured Magnolia/Queen Anne communities that it will consult with these area residents as fellow involved neighbors.

With the transfer of the deed from General Services Administration to the Port and with the handing over of the Port's huge check to Vern Barnes, GSA's director of real property division, the ceremonies came to a close.

West Dock, Bristol, Chosen by Toyota

From "Portfolio" A Newspaper for the Port of Bristol, September 8, 1976

Latest developments in the attempt by Toyota (G.B.) Ltd. to establish an export distribution complex at West Dock appear to indicate that the new proposals submitted by the company may obviate the need for an Industrial Development Certificate.

New Proposals

The new proposals, carefully worked out in close consultation with the local planning authorities and the Port of Bristol, more clearly define the area required for predelivery inspection of vehicles. Under this new definition the only section which could possibly be described as industrial is separated in an area less than 15,000 sq.ft., and, since Industrial Development Certificates are only required for Developments covering more than 15,000 sq.ft., would not appear to require Ministerial approval.

Toyota's new proposals were officially delivered to Woodspring District Council planners on September 1st by the company's legal advisers and consultants.

A spokesman for the council commented at that time that there seemed to be nothing in the new plans which would require an application for a certificate.

The plans will now go before the Council's northern area planning committee on September 13th, before being considered by the full Woodspring Council on September 28th.

First Ship

Providing that the plans are passed, and there seems little reason to suggest that they should not be, then Toyota's first vessel could be in the West Dock from Nagoya, Japan, by next spring. That vessel would probably be the "Jimya Maru", a 738 foot long, 16,000 ton ro-ro ship capable of carrying more than 6,000 cars.

What Happens in the Future?

Sadly, although the Toyota scheme may get the go-ahead because an Industrial Development Certificate may not now be needed, this does nothing to clarify the likely position for other developments when I.D.C.'s are needed.

To reiterate the present position, large areas of Great Britain have been designated as development or intermediate areas. They include South Wales. Here industry is encouraged to become established with cash grants as inducements in an effort to take up slack resources and unemployment.

The Bristol region, however, is not in a development area and, as such, any industrial development over 15,000 sq.ft. requires an I.D.C. Any company wishing to embark on a major investment must obtain an I.D.C. from the Department of Trade and Industry setting out a case for any such proposals.

Why Toyota Chose West Dock

In a detailed letter to Industry Secretary, Mr. Eric Varley, in July, Toyota's Assistant to the General Manager, Mr. Ian Ross set out an impressive list of reasons for wanting to come to West Dock.

- West Dock is the only dock which can offer a site of some 20 to 25 acres actually adjoining the receiving docks.

The importance of proximity is that vehicles can be driven from the ship to the site by private road without the need to use transporters. In Toyota's experience the use of transporters can be both expensive and damaging.

- Toyota have been informed by British Railways Western Region of their intention to establish a modern freight terminal adjoining the land at West Dock. Whilst Toyota have yet to fully examine the practicality of rail distribution it is a factor which they must take into account, possibly as a back-up facility.

- West Dock offers immediate motorway access some 400 yards from the site. It is then practicable to deliver cars virtually the length and breadth of the British Isles without leaving the motorway.

- With the running down of Concorde production at Filton there is a ready supply of skilled labour available in the area who would not require expensive Government re-training.

- The rates offered to Toyota by the Port of Bristol Authority are excellent.

Two Senior Appointments with Forth Ports Authority

Edinburgh (Forth Ports Authority):—Resulting from the retirement of Mr. I.H. McDonald, C.A., Director (Finance and Administration) at the end of September, two key appointments have been announced by the Forth Ports Authority to take effect from 1st October.

Mr. Colin T. Macnab, Finance Controller, becomes Finance Director after eighteen months with the Authority. He is thirty-eight. Educated at Hutcheson's Grammar School, Glasgow, he qualified as a chartered accountant in 1960 and has held senior financial appointments in management consultancy and industry.

Mr. Philip C. Shanks, Legal Assistant with the Authority, has been appointed Secretary and Solicitor to the Authority at the age of thirty four. Mr. Shanks began his career in banking in 1960, specialising in taxation and investment. Eight years later he decided to switch to law, attending Edinburgh University, graduating in 1971 and qualifying as a solicitor two years later, after work in private practice and with Edinburgh Corporation.

Port of Le Havre Flashes

May 1976

• Le Havre and Indonesia

Le Havre has been chosen for the shipment to Indonesia of a very large export order of machinery and other equipment for use in irrigation work there. A first contract covered the supply of 210 Poclair excavators, which are 60 hp caterpillar-tracked earth movers. Shipments began on December 5th and continued until May 5th, with Pillet & Cie as the forwarding agents. A second and more spectacular contract, to the value of 60 million francs, covered the supply of 35 pontoons, which are brought to Le Havre by road on articulated lorries. Each pontoon—15 m/49 ft. long, 9 m/30 ft. wide and weighing 92 tonnes—comes in three sections, which are off-loaded and placed in the water by the Port Authority's 30-tonne floating crane.

The pontoons are made by the Compagnie Mécanique de Rochefort and by the Compagnie Mécanique de Carvin and are also shipped to Indonesia through the port of Le Havre. The first was loaded on the Dutch vessel Daniella on March 3rd, and shipments are continuing at the rate of six pontoons per ship per month.

• Major Passenger Port

Not many people cross the Atlantic by sea these days. Even so Le Havre, which used to be one of the great liner terminals, has not only kept but considerably improved its position as a passenger port, very largely due to the round-the-clock services operated by three different companies to Southampton in England and Rosslare in southern Ireland.

All previous records were far surpassed in 1975, when 784,000 passengers passed through the port, an improvement of 28% on the 1974 figure of 611,000. The cross-Channel ferries alone carried 747,000 people, which was 200,000 more than the previous year's total of 544,000. The increase in the number of cars carried was even more dramatic: 167,000 vehicles in 1975 against 116,000 in 1974 (up 44%).

Le Havre is of course ideally situated, being linked via the Paris motorway to the entire French motorway network. Moreover, a frequent, fast and remarkably comfortable train service puts us just one and three quarter hours from Paris by rail.

Le Havre is an extremely busy port for people travelling between France, Britain and Ireland and in 1975 rose to third place among French passenger ports, immediately behind Calais and Boulogne, where passenger carrying is the main activity.

There are between 8 and 12 car-ferry sailings a day from Le Havre to England and Ireland. We are in fact the only Continental port with a scheduled passenger service direct to Ireland.

The car-ferry companies using the port (Townsend Thoresen, Normandy Ferries and Iris Continental Line) look to the future with confidence. Early bookings this year indicate a considerable increase over 1975, which was

itself a record year. One attraction, of course, is that crossing from Le Havre to Southampton or Rosslare on one of these spacious and comfortable vessels is a mini-cruise in itself.

Of all the things that have gone into making Le Havre a major port these days for passengers, the two most important are the go-ahead attitude of the companies concerned and the up-to-date specialist facilities that we have installed for this type of traffic.

• Bunkering at Havre Antifer

Giant tankers docking at the new Havre-Antifer terminal naturally expect to find bunkering facilities there, though it is not widely known that a 550,000 dwt mammoth can take on as much as 15,000 tonnes of fuel for its own use. The bunkering fuel delivered to Antifer is pumped along a 10" pipeline from the storage depot owned by the SHMPP (Société Havraise de Manutention de Produits Pétroliers) in the port/industry zone at Le Havre, 14 miles away (22 km). This SHMPP pipeline is the first in France to be provided with the elaborate insulation used. Two storage tanks have been built at Antifer for bunkering fuel, one of 14,800 cubic metres capacity and the other of 10,850 cu. metres. The fuel is pumped aboard at whatever rate the ship requests, up to a maximum of 3,000 cu. metres an hour.

• New Containerised Service to the West Indies

The Compagnie de Navigation Mixte is operating a new container service to the West Indies, which it inaugurated on March 2nd with its new container vessel, the Pagnol, an ultra-modern 172 m/565 ft. containership capable of transporting 25,000 tonnes of containerised goods at 15 knots. Amanor act as the company's agents in Le Havre.

• First Tanker Docks at Antifer

Le Havre's brand-new oil terminal at Antifer, which can take 550,000 dwt giants fully laden, welcomed its first customer on March 17th, when the Liberian Andros Chrissi arrived for docking trials, which are the indispensable prelude to normal everyday working. The Andros Chrissi is a 282,000 dwt vessel and the 140,000 tonnes of crude unloaded were used to test the discharging, pumping and storage facilities at the new terminal. Everything went off perfectly.

• Le Havre, Gateway to the Far East

In the space of under two months Le Havre has been made a port of call for three different containerised services to the Far East, all of them with world-wide reputations.

With a view to improving the service provided, especially by increasing the number of sailings, the Services Franco-Belges (Chargeurs Réunis, Cie Maritime Belge and Ahlers Line) have joined with other companies to set up a consortium known as ACE Group, which was the first of the three to choose Le Havre for the North Europe/Far East run. The first ship to dock here was the Singapore-registered Neptune Emerald, which called on March 7th and had the Agences Maritimes Associées for agents. In 1977,

ACE Group will have eight fast containerships operating a weekly outward service from Europe to the Far East.

The third generation of Scan-Dutch containerships, capable of carrying the equivalent of 2,700 × 20 ft. units, began calling here regularly on March 18th, with the arrival of the Norwegian Toyama, to be followed a few days later by the French Korrigan, the largest containership to have docked here so far. The agents are Plate-Ruys.

Soon afterwards a third international consortium of shipping companies, the TRIO group, took a similar decision and began sending its third generation vessels from April 23rd onwards, starting with the British Benalder.

So Le Havre, the last port touched between North Europe and the Far East, can now offer shippers several sailings a week to countries in Asia.

● **Havre World Trade Centre**

On February 26th Mr. Le Chevalier, President of the Association for the Establishment of a World Trade Centre in Le Havre, unveiled the main details of the revised project. The Centre will be a link in the worldwide chain of World Trade Centres and will have a total surface area of 26,000 m² (280,000 sq.ft.), made up of 18,000 m² (194,000 sq.ft.) of office space in two seven-storey buildings, 8,000 m² (86,000 sq.ft.) of common facilities (banks, a post office, public services, conference chambers, etc.) and a 100-room hotel of 3-star rating.

June 1976

● **Franco-Arab Chamber of Commerce Delegation in Le Havre**

The Chairman of the Franco-Arab Chamber of Commerce, Mr. Habib-Deloncle, and the Secretary, Mr. Baccar Touzani, visited the Port of Le Havre on April 13th together with a dozen members of the Chamber, including a number of commercial advisers from Arab countries. They also saw the new port development areas and the Havre-Antifer Oil Terminal. These very important visitors were particularly interested in the vast oil traffic with Arab countries and in the recently opened Antifer terminal, as well as in the proposed acquisition of a 650-tonne heavy-lift crane for the growing traffic in ultra-heavy equipment.

● **Two New Service**

New container service to Spain, Portugal and Morocco.

The Compagnie Générale d'Armements Maritimes, which is a subsidiary of the Cie Générale Maritime, has joined with Van Nievelt Goudrian France to set up a fortnightly round trip container service between Le Havre and Casablanca, calling at Bilbao and Lisbon in both directions. It is known as GEMCO Service and was inaugurated on April 12th, when the Margret Catharina arrived here to load up for the first time. The Compagnie Générale Transatlantique are the agents in Le Havre.

New Franco-Portuguese Service.

Following an agreement between the Companhia Portuguesa de Transportes Maritimos and the Union Industrielle et Maritime, this new Franco-Portuguese service has been offering at least two sailings a month to Lisbon and Leixoes since April last, with the possibility of an additional call at Setubal. The service was inaugurated by the Peter Theilgard

on April 15th. Both companies are represented here by the Agences Maritimes Associées.

● **20 Containership Movements in One Day**

Of the 47 shipping movements recorded on April 6th, twenty were made by containerships, with ten arrivals and ten departures. Between them they discharged some 6,317 tonnes of assorted merchandise and took on 3,839 tonnes, making more than 10,000 tonnes in all.

● **Coal in 1975**

One of the main subjects of satisfaction last year was the upsurge in coal imports, which finally amounted to 2,780,789 tonnes and pulverised the previous record of 1,532,602 tonnes set up in 1970. Yet this increase in the coal traffic at Le Havre, which in 1975 rose to second place among French ports involved in the trade, coincided with an overall drop in French imports from 21.3 m tonnes in 1974 to 20.3 m tonnes in 1975. Le Havre's share therefore rose from 6% to 14% between one year and the next, which shows just how competitive our facilities are.

● **New Commercial Port Takes Shape**

Work is going ahead fast on the construction of 2,300 ft./700 m of quayage round the new A Dock that has been dug in the port/industry zone. Work on the back-up areas, which will eventually cover about 45 acres/18 ha, began on March 29th with the preparation of the site. Levelling and surfacing will continue until the first two berths are brought into service, in January and June 1977. The new dock will be able to accommodate three normal-sized vessels simultaneously or two third-generation containerships of the type that now call regularly at Le Havre on their way to and from the Far East.

● **First Call by Trio Group Containership**

The TRIO Group's new direct service between France and the Far East was opened on April 22nd by the Ben Line Containers vessel Benalder. At the same time Ben Line announced changes in its agency arrangements for France. The Etablissements Herpin now look after the technical side, including inland transport, and are responsible for obtaining freight for carriage to the Far East, while Messrs G. Feron & E. de Clebsattel and Cie Paris continue to seek the custom of those importing from that part of the world. François Lecoq is Ben Line's representative in Le Havre for the vessels themselves, while the Etablissements Herpin see to the commercial side.

● **620,000 Tonnes of Crude in a Day**

On March 26th last, four tankers discharged 619,829 tonnes of crude in one day, the highest tonnage ever put ashore at Le Havre in such a short period. Quite an exploit, in fact, for a time of economic crisis.

● **New Johnson Scanstar Service to North Pacific**

Since April 20th, when the Falstria opened Johnson Scanstar's new outward container service from France direct to the U.S. West Coast, the company's high-speed containerships have been calling weekly at Le Havre. In the words of Johnson Scanstar's managing director, Mr. Göran Winberg, "the decision to call regularly at Le Havre springs

(Continued on next page bottom)



Mr. J. Morris Gifford, CBE, MA, FCIT
 Director General, National Ports Council

Mr. Gifford is New President of the C.I.T.

London, 12th September 1976 (News Release from National Ports Council):—Mr. James Morris Gifford, CBE, MA, FCIT, Director General of the National Ports Council, has been elected President of the Chartered Institute of Transport for the coming year, taking office on October 1st.

Mr. Gifford has been chief executive of the NPC ever since it was formed, being appointed Director-General in November 1963 and becoming a Member of the Council six months later.

Elected a Fellow of the Institute in March 1970, he was an Ordinary Member of the Council of the Institute from 1972 to 1975, serving on the Education and Training Committees, and became Vice-President in 1975.

Mr. Gifford was born in 1922 and was educated at Dunfermline High School and Edinburgh University, graduating MA with Honours in Classics in 1946, following his

directly from our excellent relations with French businessmen". Worms Services Maritimes are the agents in Le Havre.

• Havre-Antifer Terminal Opened to Shipping

The Havre-Antifer Oil Terminal became operational on April 13th, when the French tanker Aquitaine, owned by the Société Française de Transports Maritimes, tied up at one of the two berths at the jetty head. The Aquitaine, which had arrived from the Persian Gulf with 133,754 tonnes of crude for Elf-Antar, is a 240,000 dwt vessel, 1,095 ft. long and 160 ft. in beam (334 m x 49 m), represented in Le Havre by Thiboumery. The approach and berthing operations went off without a hitch and made April 13th a red-letter day in the history of the port. A number of other tankers have used Antifer since, and though their arrivals and departures were less spectacular, they have certainly proved the enormous value of the new terminal, which in June received its first 550,000 tonner.



MALAYSIAN HARDWOOD ARRIVES AT NEWPORT
START OF NEW MONTHLY BULK HARDWOOD SERVICE

The 27,000 tonne 'Rimba Meranti' discharging 2,518 tonnes of Malaysian hardwood at Newport. The vessel arrived at Newport on Tuesday, 21 September, and the shipment is the beginning of a monthly bulk hardwood service which has been won by Newport and is operated by the Malaysian International Shipping Corporation. It is expected to result in around 50,000 tonnes of hardwood and plywood arriving at the MacMillan Bloedel Meyer timber terminal in South Dock each year. Cargoes of Malaysian hardwood will now be arriving at Newport about every 30 days. (22 September 1976, British Transport Docks Board.)

return from war service—he served with the Royal Artillery during World War II, latterly as Regimental Survey Officer of the Lanarkshire Yeomanry. He is a barrister-at-law, having been called to the bar by the Middle Temple in 1951.

After graduating, Mr. Gifford was on the staff of the Shipping Federation until 1955, being appointed Assistant Secretary of the Mersey District in 1948, Assistant Secretary of the Thames District in 1950, and Secretary of the Clyde District in 1953.

For ten years before his present appointment he was General Manager of the National Association of Port Employers. During that time he was closely concerned in launching the pension scheme for registered dock workers at the end of 1960 and in the introduction of training schemes for new entrants to the dock industry.

He was a member of the National Dock Labour Board from 1955 to 1963, and chairman of the Board's General Purposes Committee from 1960 to 1963.

Mr. Gifford was appointed a Commander of the Order of the British Empire (CBE) in January 1973.

In 1943 he married Margaret Lowe Shaw, who is also an MA (Hons) of Edinburgh University. They have two sons and one daughter.



Hamburg Container Center is being readied for South-African container service.

Container Centre Hamburg slated for South African Service

Hamburg, September 1st (Presse-Dienst, Hafen Hamburg Informationsbüro):—Economic difficulties with gold, trade deficits and political unrest in South Africa are in no way affecting plans to develop full containerisation services to South African Ports, according to a statement issued by Hafen Hamburg Informationsbüro.

Hamburg, traditionally linked closely with South Africa in maritime trade, will be a key port in the South African container service operated by the South African conference when the ten container vessels begin operating between Europe and the cape in 1980.

The containerisation of the South African service involves an investment of more than DM 3,000 million (670 million pounds), according to Hafen Hamburg Informationsbüro, including installations being introduced by South African Railways and Harbours (SAR & H) for container handling in South African ports.

All in all the South Africans are optimistic, not only because they believe they will be able to keep unrest in the country under control, but also because they have faith in their ability to master economic problems.

The importance of the development of the container service is underlined by West-German-South African trade figures last year: West Germany exported DM 3,400 million to South Africa and imported goods worth DM 2,200 million.

South Africa remained 16th in the league of top customers for West German exports compiled by "Frankfurter Allgemeine Zeitung" in the first half of 1976.

There was a slight increase in value of German exports to South Africa—DM 1,727 million, compared with DM 1,697 million in the corresponding half of 1975, but South Africa took only 1.4 per cent in January-June last year.

However, Deutsche Afrika Linie, which have expressed confidence that the container service will be fully operational on schedule have not yet felt the effect of South African import restrictions introduced at the beginning of August.

Hamburg overseas forwarding agents a. Hartrodt have stated the cash deposit ruling could have a far greater influence on the development of trade with South Africa than racial tension.

Amsterdam News Letter

• Luxurious Theme Cruises

At the end of May, the luxurious Carras cruise ship, M.S. Daphne, initiated the first of seven theme voyages—a music cruise—originating in Amsterdam. Municipal waterboats spouted a festive welcome for the Greek vessel, and those at dockside to greet the ship included the Greek Ambassador to the Netherlands, Amsterdam port officials, City Councilman C.H. Goekoop, and Miss Holland, plus an assortment of bands and a street organ. Mr. John C. Carras had also flown in to enjoy the Dutch capital's warm welcome.

World-renowned performers on board for the first cruise included Elizabeth Schwarzkopf, violinist Daniel Heifetz, Christina Walevska, the famous cellist, and Blandine Verlet, a virtuosa on the harpsichord. They were among those presenting programs for the equally illustrious guests—many of whom, such as ex-King Simeon II of Bulgaria and his wife, were royalty.

The Daphne's second voyage—a cinema cruise which departed from Amsterdam during June—was also studded with stars. Debbie Reynolds, Glenn Ford, Lynn Redgrave, Cornel Wilde, June Allyson, and a 'mystery star' were present to introduce their own films.

For sailings during July and August, themes are the 'Lands of the Norsemen,' and 'The Green and Pleasant Lands.' The first plans stops at major Scandinavian ports, plus Leningrad and Gdynia; the second will concentrate on the romantic harbors of England and Ireland.

• Houthaven Improved

The Port of Amsterdam, an important center for wood and wood products since the 16th century, is even today upgrading its extensive facilities for handling timber and its by-products.

Amsterdam's Houthaven, in particular, is currently being modernized, with many smaller piers demolished to provide more space for storage and trucking. Roadways are also being improved and enlarged. Covering over 200 acres, exclusive of water, the Houthaven is home to 33 firms with 1200 employees.

Additionally, VCK's new Combi Terminal is being built expressly to handle wood, paper and cellulose.

In 1974 (the latest figures available), the Amsterdam port handled approximately 280,000 tons of forest products—mostly soft wood and related products.

Port Seminar a Success

Amsterdam (Haven Amsterdam, June 1976):—The Amsterdam segment of the 12th International Seminar on Port Management, held the first week of May was an unqualified success. Hosted by the Amsterdam Port Association's Joop Meerhoff, the 38 members of the seminar got a good look at the diverse activities in the Port of Amsterdam.

During the week-long event, the participants stayed at the International Centre of the Royal Tropical Institute. During the week, they were received by the Amsterdam Municipal Port Management and given talks a colour slide shows about the port by various senior members of the staff. They visited the facilities of KNSM and were given a

talk about the facilitation of export documents. That first evening there was a reception given by the Amsterdam Port Management at Passenger Terminal Amsterdam.

The second day, they were given a visit to the Royal Tropical Institute where its functions were explained. Later there was a visit to several port establishments, including a stevedoring facility and IGMA (International Grain Transshipment Co.). The following day was spent at the expanding facilities of Verenigd Cargadoorskantoor (VCK) and an inspection of the locks, breakwaters and harbour entrance of the State Fishing Port at IJmuiden.

The following day, there was an expensive visit to Schiphol Airport, Amsterdam, followed by a tour of the West Terminal of KNSM's Combined Terminals Amsterdam, and an excursion through the port aboard one of the fire-fighting control boats of the Havendienst, where an explanation of the duties and services of the Amsterdam Harbourmaster's services was given.

The last day of the seminar in Amsterdam started out with a tour of the Amsterdamse Droogdok Maatschappij (ADM), then followed with a visit to the general cargo terminal of Wm H. Müller & Co., and then on to Overslagbedrijf 'Amsterdam' (OBA), the port's major ore and coal terminal. Finally there was a get together at the Rijksmuseum Nederlands Scheepvaart Museum (shipping museum) to wind up the busy week.

MAPUTO, Capital of Mozambique

Maputo, Mozambique (Portos e Caminhos de Ferro de Moçambique, January/February/March 1976):—The People's Republic of Mozambique commemorated on the 3rd February 1976, the Heroes Day of Mozambique. All mozambicans who fell during the fight against foreign oppression, before and during the liberation wars, were remembered by the people of the People's Republic of Mozambique, who in this manner meditated on the significance of the supreme sacrifice of those who died to give us Freedom.

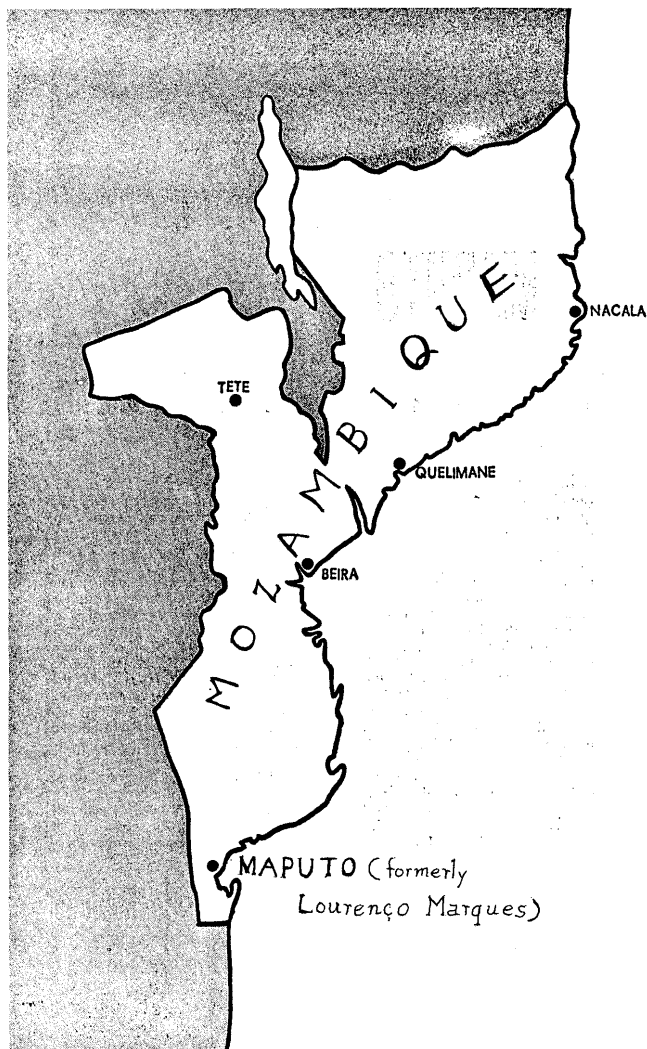
In the capital of the country, whose name changed to Maputo, the President of FRELIMO and of the People's Republic of Mozambique, Samora Moisés Machel, made an important speech, where he announced several important measures of wide social impact, which were widely reported by the information media and were approved by the people.

Therefore, as from 9.35 a.m. of the 3rd February 1976, the capital of Mozambique, Lourenço Marques, changed its name to MAPUTO.

National Direction of Harbours and Railways of Mozambique

Maputo, Mozambique (Portos e Caminhos de Ferro de Moçambique, January/February/March 1976):—Comrade José Luís Cabaço, the Minister of Transport and Communications of the People's Republic of Mozambique, announced on the 15th January 1976, at the city of Beira, the creation of the National Direction of Harbours and Railways of Mozambique (DNPCF). This new department replaces the Mozambique Harbours Railways Administration, and will include the Departments of Maritime Transport, Naval Services and Road Transport.

To direct this state enterprise, the Council of Ministers



appointed engineer José Maria Alcântara Santos, who until recently was designated director-general of the Mozambique Harbours, Railways Administration.

These measures were announced by comrade minister José Luís Cabaço, during a meeting with the workers of the Beira Port and Railways.

“Port of Brisbane Authority” is Proposed

Brisbane, Australia, 14.7.76:—The Marine Services Minister, Mr. Tom Newbery, warned today that Brisbane risked being by-passed as a major overseas trading port if there were further serious delays in establishing a new port at the mouth of the Brisbane River.

He said he would be pressing for legislation to constitute a Port of Brisbane Authority to be adopted as early as possible in the next session of Parliament so that work on the proposed \$60 million port development could begin.

A Bill to establish the Authority was introduced to Parliament in April but was allowed to lie on the Table during the Parliamentary recess to enable Members to make a more detailed study of its contents and ramifications.

Today Mr. Newbery took a group of Government and Opposition Members (including the Opposition Leader, Mr.

Burns) on a boat tour of the proposed site of the new port at the Fisherman Islands.

It was the third such tour arranged by Mr. Newbery designed to give Members a first hand look at the port proposals.

“Projected trends in world trade and the advent of large bulk carriers and container ships make it imperative that Brisbane’s port facilities be moved to deeper water at the mouth of the river,” Mr. Newbery said.

“Total tonnage handled by the Port of Brisbane is expected to treble within the next 10 years and we must expand our facilities to meet this increasing trade.”

Mr. Newbery said every river port in the world which aimed to keep abreast of the changing demands of trade patterns had moved, or was moving, to deeper water down-river.

He said that for this expansion to take place, it was essential that a Port Authority be established without delay to control development of the new complex.

The Bill proposed that the Authority be established as a public corporation outside the regular framework of Government.

The new Authority would be based on the structure of successful Port Authorities in Melbourne and Fremantle.

“Subject to the normal Government restraints the Authority will be fully geared to operate as effectively as any major and efficient private enterprise body, with a commercial style of management directed to improving the commerce of the State and the city of Brisbane,” Mr. Newbery said.

He said the Port of Brisbane had an advantage over Australia’s other eastern seaboard ports because of its proximity to the nation’s main Pacific region trading partners—Japan, the United States, Canada and developing markets in South East Asia.

“But the larger container ships of 33,000 dead weight tons cannot use the Port of Brisbane in its present condition because of the inadequate depth of channels and turnaround delays caused by the need to wait for a suitable tide.”

“Turnaround delays and the annual cost of dredging river channels add significantly to port charges which are higher than those of Sydney and Melbourne,” Mr. Newbery said.

“New deepwater facilities at the river mouth and the economies of scale envisaged in the associated handling, storage and transport services will make the port more competitive and attract a greater volume of trade.”

Mr. Newbery said the Bill provided for access to the Fisherman Islands site via a causeway carrying rail and road links over the Boat Passage.

The proposed causeway would incorporate a bridged opening with a 3 metre clearance above high water so that small craft could continue to use the Boat Passage access to Moreton Bay.

New Emblem for the Department

Brisbane, Australia, 2.8.76:—The Marine Services Minister, Mr. Newbery, today introduced a new emblem for the Department of Harbours and Marine and a new uniform to be worn by Officers of Queensland’s Boating and
(Continued on next page bottom)

Chairman's Report, Port of Portland Victoria, Australia

Twenty-fourth Annual Report for the year ended June 30, 1975

The presentation of the Trust's 24th Annual Report affords the Commissioners an opportunity to review, in the main, another year of progressive development within the port area.

In contrast to the developmental projects undertaken during the year, port trade showed an overall decline of 55,030 tonnes (8.62%) when compared with the previous year's trading figures. This situation was due mainly to a decline of some 128,000 tonnes in the volume of petroleum products landed at Portland, largely as a result of industrial unrest amongst the maritime unions which, it should be noted, was not confined to Portland.

As a consequence, the Trust's shipping revenue was almost \$74,000 (13.7%) lower than the previous year's total of \$538,893.

Fisheries Patrol.

The new emblem will be displayed on all Departmental vessels throughout the State. It combines the Departmental crest with the traditional Maltese Cross, which is the emblem of the State of Queensland.

During a ceremony at Manly today, Mr. Newbery placed the first of the new emblems on the latest addition to the Departmental fleet—a new patrol boat for the Queensland Boating and Fisheries Patrol. The new vessel is one of three built especially for the Patrol.

Mr. Newbery said a distinctive new uniform for Officers of the Boating and Fisheries Patrol had been introduced to avoid confusion with those worn by volunteer organisations. It featured a distinctive arm flash and a new cap badge which could be easily recognised by the boating public.

Mr. Newbery said huge increases in the number of small craft registered in Queensland had brought new pressures and responsibilities on the Government to maintain high safety standards among boat users.

Registrations had pushed past 61,000 and were expected to increase to a total of 90,000 within the next four years.

Mr. Newbery said Officers of the Queensland Boating and Fisheries Patrol policed the State's boating regulations but their prime objective was to encourage boating people to voluntarily take proper safety precautions and show due consideration for other users of the waterways.

"We are looking for the co-operation of the boating public in these aims," Mr. Newbery said. "With this co-operation the Government hopes to avoid having to impose more restrictive regulations on the boat owner."

Mr. Newbery said the Department placed a high priority on education for boating safety and had a range of films and brochures available to help the boating public keep the State's waterways accident free.

It is, however, pleasing to record that, despite the loss of import tonnage, the port's export trade showed an encouraging rise of 58.5% over last year's total of 103,464 tonnes.

Amongst the most notable features of the year under review was the completion of a new bulk tallow terminal at No. 2 quay, preliminary planning for the construction of a new general cargo berth, and a visit to the port of the first Ro-ro vessel to lift a record cargo of wool.

All three items are featured elsewhere in this publication.

The completion of the bulk tallow terminal mid-way through the year carried with it a sense of real achievement. The Commissioners are appreciative of the satisfactory culmination of negotiations which led to the construction of this project, and for the ready acceptance afforded this proposal by the Minister of Public Works, the Hon. Roberts Dunstan.

Although the original project envisaged a throughput of some 6,000 tonnes of tallow per annum, it is pleasing to report that the success of this new trade is such that, by the end of the financial year, negotiations were in hand to duplicate the holding capacity at the terminal.

The policy of centralising general export cargo in capital city ports was slightly arrested during the year with the loading of three cargoes of wool for West European and Russian ports. These shipments highlighted the fact that the success of future wool exports would rest, to a large extent, on reasonable quantities being available for despatch to individual markets.

One pointer in Portland's favour as a major wool exporting centre is the decision by the State Government to pay an export subsidy of \$1.50 per bale on the first 100,000 bales of wool delivered for export through Portland each year. The subsidy is equivalent to the cost of railing wool from Portland to Melbourne and is designed to boost general cargo trade through the port.

It is interesting to note that, since the establishment of the selling centre in Portland, exports of wool had grown from 12,579 bales during 1963/64 to a peak of 85,759 bales in 1969/70.

Although the decline in this traffic during the intervening years was reputed to have largely been the result of containerisation, evidence presented to a Committee of Inquiry into the port's general cargo trade indicated that there were considerable quantities of wool from the Portland selling centre still being shipped through the Port of Melbourne in conventional vessels.

Hopefully, the introduction of the State Government subsidy will provide a valuable incentive towards reversing this situation in favour of Portland. So far as other trades are concerned, any benefits to be derived through the reintroduction of the wool trade must present opportunities for the handling of an additional range of cargo.

The year under review saw considerable opposition being
(Continued on next page bottom)

Townsville Harbour Board Makes Great Strides

Townsville, North Queensland, Australia, 19th August, 1976 (Townsville Harbour Board):—The Townsville Harbour Board in June completed its three year term of office and in the words of the Chairman, Mr. A.G. Field, 'the three years 1973-76 have been the most progressive in the eighty year history of the Board'.

Deep water dredging of the main channel and swing basin has given a depth of 10.7 metres capable of catering for ships of 65,000 tonnes D.W. Water at the five major export berths and the oil berth have depths up to 12.5 metres.

Extensions to the container berth have also been completed and with the 60 tonne container crane, this berth is one of the finest and most efficient on the Australian coast.

In addition, further extensions and improvements are planned or under way. Already contracts have been let for a further 103 metres of berth line and a large tract of land has been acquired on the South bank of Ross River for redevelopment and Port extension, which will ensure the provision of a buffer zone between Port operations and residential areas.

A phosphate rock unloading tippler with direct rail link was opened in June 1976 and phosphate trains from Duchess are arriving on a regular schedule which will build



Mr. A.G. Field, Chairman of the Townsville Harbour Board, re-elected for his third three year term. Mr. Field is also Chairman of the Queensland Harbour Boards' Association and a member of the Council of the Australian Ports and Marine Authorities.

expressed by representatives of bodies such as the Australian Wheat Board, Victorian Grain Elevators Board and the Grains Division of the Victorian Farmers' Union to recommendations contained in the Report of the State Development Committee into the bulk handling of all grains in Victoria.

From the Trust's point of view a farcial situation exists at the present time whereby the port is being denied the right to handle several hundred thousand tonnes of trade which should flow through Portland. This is mainly because of expressed animosity to the Trust retaining control of a facility that was developed for, and which operates most efficiently in, the handling of coarse grains. Over the years its worth in attracting trade to the port has been amply demonstrated and given normal coarse grain seasons, it will be financially successful.

The Commissioners' expressed policy is that the existing trade must be retained, and that the recommendations contained in the Inquiry Report should be implemented. This would allow wheat from a large area to be handled through Portland and would enable growers to enjoy the advantage of reduced land freight due to the shorter lead to the seaboard terminal. This already significant factor will increase in dimension should rail freight rates increase in line with other costs.

One project of a rather unusual nature conducted by the Commissioners during the year was an acquisitive Art Award. The aim of the Award was to provide the Trust with an up-to-date painting depicting development of the port or some part of it.

The Award was finalised to coincide with the 140th

Anniversary of Portland's settlement in 1834 and the 14th Anniversary of the official opening of the present harbour project on November 19th, 1960. Thanks for the success of this project are due to the Director of the National Gallery and members of the local Art Group for their valuable advice and assistance; Mr. Harley Griffiths, of Melbourne, for judging the winning entry, and to the many artists throughout Victoria and South Australia who submitted entries.

To coincide with the announcement of the Art Award it was extremely gratifying to also acknowledge State Government approval for the construction of a new multi-purpose cargo berth.

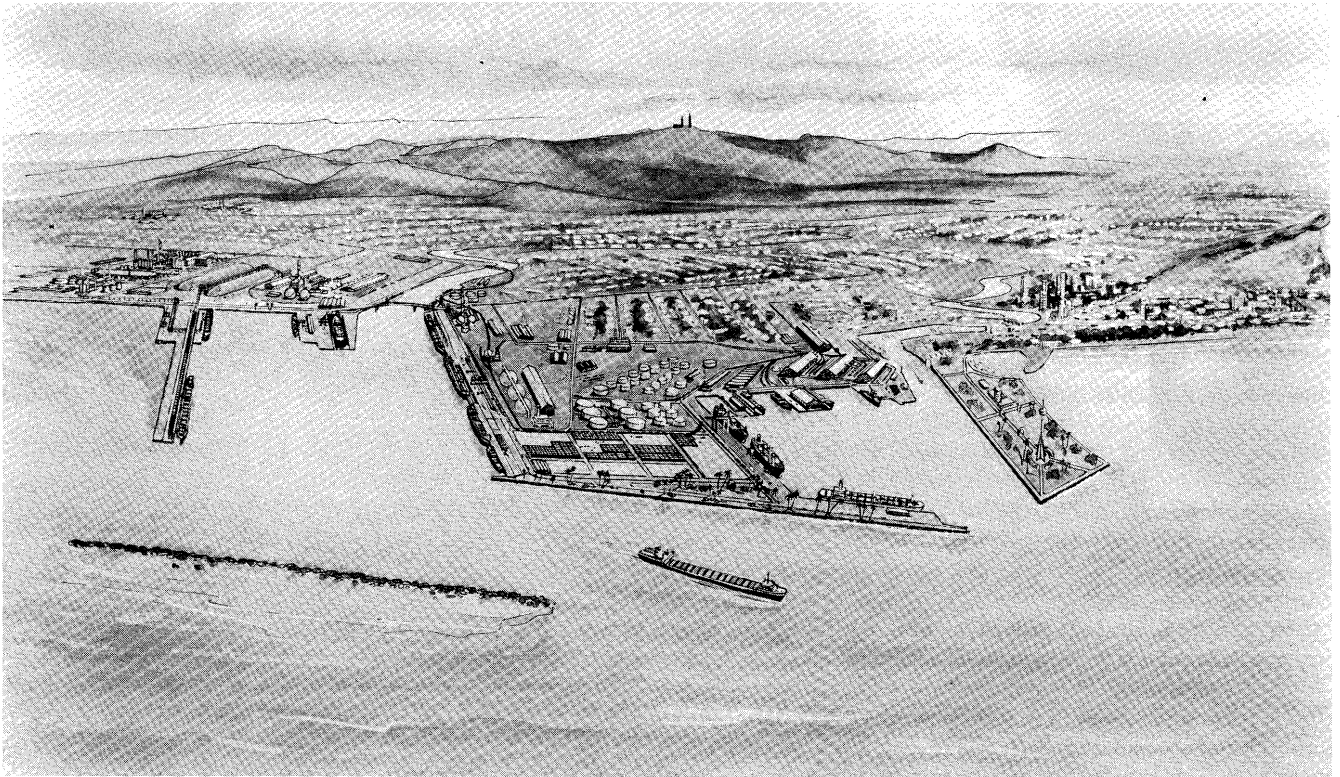
Initially, the berth will be utilised to handle conventional type cargo, but the wharf apron will be designed for heavy wheel loadings and ultimately, a container crane.

The Government has empowered the Trust to proceed with the design of the wharf and it is expected that construction will commence mid-way during the next financial year. This new project will comprise the first stage of development along the eastern side of No. 2 quay.

Of grave concern to the Commissioners is the Federal Government's withdrawal of the fertiliser bounty at a time when the cost of fertiliser to the farmer is escalating rapidly.

As this year's imports of raw materials were only slightly less than last year the immediate effect on the Trust of this disastrous and far-reaching policy decision cannot be readily gauged by that reference. A much better indication of sales trends and future trade can be obtained by

(Continued on page 60)



Annual trade figures through the Port of Townsville for the 1975-76 year showed an increase of 40%. Townsville Harbour Board anticipate that total shipping through the Port will double again by 1979. This artist's impression has been drawn from the development plan which will cater for future growth. The additional land has already been acquired and reclamation extensions are proceeding to plan.

up to 1,000,000 tonnes annually by the 1977-78 year.

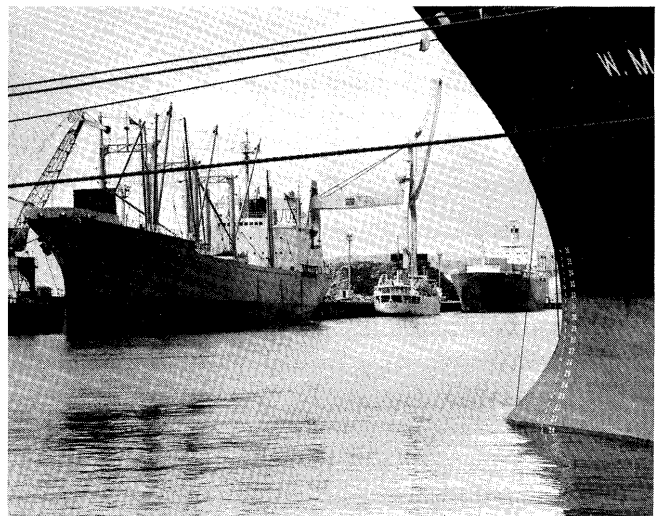
During the three year period, trade through the Port has increased by forty per cent and it is anticipated that it will double again in the next three years.

The Port has made a major contribution to trade and employment in Townsville and North Queensland. There are now some 580 people directly dependent upon Port operations for their livelihood, and it is estimated a further 5000 people are in some manner involved with Port operations.

Other factors which must have a major bearing on the Port's future are the spiralling cost of other modes of transport, the opening of the Suez Canal again making the "north-about" route an attractive route for ships to Europe, and the establishment of an Omega Station in Australia coupled with the lighting of the Palms Passage through the Barrier Reef some sixty kilometres north of Townsville.

The Port's efficiency has not gone unnoticed by overseas shipowners. The Port of Townsville has achieved a record unmatched by any port in Australia for the quick turnaround of cargo vessels. The average stay in Port for all cargo vessels has decreased from 2.6 days in 1973 to 1.8 days in 1976, without any off-port waiting time which is so common with every other major Australian port.

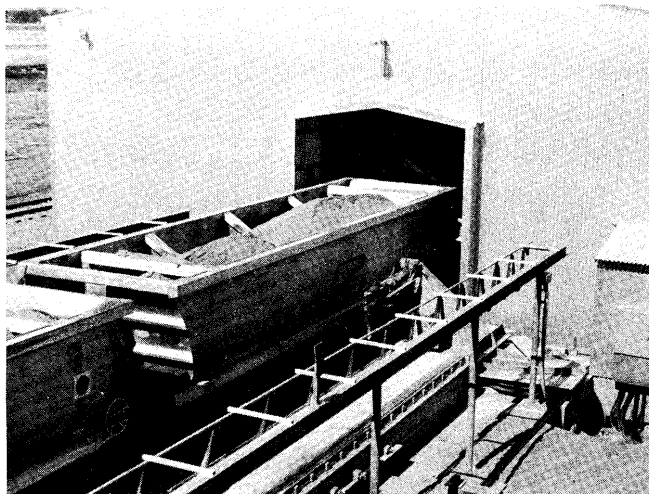
On July 13th of this year, the inauguration of a new



The Port of Townsville with 10 berths, five with depths from 10.7 meters to 12.5 metres provides quick turnaround for shipping. In the 1975-76 year, whilst catering for an increase of trade through the Port of 40%, vessels averaged a stay of only 1.8 days which is the best average of any Australian Port.

regular shipping service from Japan to Australia was marked when the Russian ship 'Mikhail Vladimirski' made the first regular loading at the Port.

Large container-type vessels will be added to the run as from September this year. These ships will be fully refrigerated and meat producers of North Queensland are already clamouring for North Queensland meat to be shipped in future directly from Townsville rather than for the product to incur the heavy additional freight and



The new Queensland Railway 50 tonne capacity aluminium type G.O. waggons specially designed for the freighting of rock phosphate from Duchess to Townsville can be automatically 'dumped' without uncoupling. Here a waggon is about to enter the Townsville tippler which can handle 35 waggons or approx. 1,700 tonnes per hour.

handling costs of being railed to Brisbane for storage and shipment from that port.

The Port of Townsville has now completed cold storage capacity for 2,500 tonnes of meat which more than provides the minimum shipping requirement by overseas shipowners of 500 tonnes to warrant a direct shipping service.

The Russians have been the first to realise the extent of the development at Townsville and already they have won a major contract to ship produce to Japan.

It will come as no surprise to those associated in any way with industry in North Queensland to learn that the advent of the Russians on the northern scene has caused a stir in international shipping circles. It is not secret that members of the various shipping transport combines recently visited Moscow to discuss Russian shipping plans in the Pacific.

North Queenslanders see savings of over \$4,000,000 annually in freight costs alone if beef was shipped directly from Townsville.

With criticisms already being voiced in the Australian Parliament of the poor cargo handling record of the major Australian capital city ports, it is cause of great pride for the Townsville Harbour Board to have demonstrated that the more than ten million dollars which have been spent on Port improvements over the last three years has already achieved such dynamic results.

Moreover, it is significant that more than 50% of the cost of capital development in the Port has been financed out of revenue, which in consideration of the services rendered to shipowners, shippers and Port users, speaks well for the good management and efficiency consciousness of the administration.

Shipowners from United Kingdom and Europe are already 'feeling out' the Townsville scene with the advent of the re-opening of the Suez Canal. The possibility of Townsville becoming their first or last Port of call on the Australian circuit for the regular shipping schedules could

well become a reality.

The members of the Townsville Harbour Board recently elected to serve for a three year term to 1979 convened for their first meeting in July. Mr. A.G. Field was re-elected Chairman for his third successive three-year term. Deputy Chairman is Mr. T.H.A. Titley of Charters Towers who also has a long record of service with the Board.

Mr. Field is also Chairman of the Queensland Harbour Boards' Association and is a member of the Council of Australian Ports and Marine Authorities.

Under Mr. Field's leadership the Townsville Harbour Board has followed a positive development and promotion programme. In February, 1976 Mr. Field led a delegation from Townsville to Tokyo and other Japanese ports to promote the shipping potential of the Port of Townsville to shipowners and exporters to Australia.

No Container Crane for the Port of Tauranga

Mount Maunganui, New Zealand June 1976 ("GATEWAY", Journal of the Port of Tauranga, Published by the Bay of Plenty Harbour Board):—For many months, in fact ever since its 25th March 1975 application for approval to establish a New Zealand-Japan container terminal was declined by the New Zealand Ports Authority in July 1975, the Harbour Board has strenuously battled to achieve a reversal of this decision on the basis that proven facts justify such a course in the economic interests of the nation.

The Authority's decision was immediately challenged by appeal to the Minister of Transport and was supported with tremendous enthusiasm by a wide cross section of business and community interests throughout the whole of the port's hinterland ("Gateway", September 1975). Following strong submissions to the Minister in August 1975 by a representative delegation from the area, he requested Ministry of Transport officials to undertake a socio economic analysis of the impact resulting from the Authority's decision. With the change in Government, further action was delayed until 30th January 1976, when the new Minister of Transport, as Appeal Authority, met with Board members who explained in detail the major elements of their submission.

On 24th March the Appeal Authority upheld the original decision of the New Zealand Ports Authority which yet again provoked outbursts of bitter indignation and opposition throughout the whole central North Island region, and from many Auckland business and local authority representatives.

At a well attended public meeting in Tauranga on 21st April, the former Minister of Transport, Sir Basil Arthur, Bart., and the Board, made clear their stand on the container issue. Released that day the Board's publication, "Port of Tauranga, The True Facts on its Container Case", reproduced both the major elements of its submitted case, the Ministry's socio economic report, and a critical analysis of that report.

The meeting expressed its total lack of confidence in the decision and the manner in which it was reached and overwhelmingly supported the Board in its aims and objectives.

Early this month Board representatives again called on

the Minister to discuss Port development and there the position rests at present.

Board members, business and community interests throughout the port region are extremely disappointed in the appeal decision, and accept it with considerable reluctance.

Bay of Plenty interests have always been renowned for presenting true facts as has been testified by proven results from many past public commissions and enquiries into development of the Bay and its port.

Typifying this attitude are the comments made by Board Chairman, Mr. Calder "The public should be aware that the decision by the Minister of Transport not to allow container facilities at the Port of Tauranga is not the end of the issue.

This is just another hurdle to overcome.

This Board will continue to fight for what we feel is a vitally important development—and we will succeed."

"Foreword. . ."

Sydney, Australia, June, 1976 (Vol. 1, No. 1 "Ports of New South Wales", a new official journal published by The Maritime Services Board of N.S.W.):—For the Maritime Services Board of New South Wales, 1976 marks three significant milestones: it is the 75th anniversary of the creation of the Sydney Harbour Trust, the forerunner of the present Board which was itself established 40 years ago this year, and it is the 30th year of publication of the Board's official journal.

The 30 years since the "Port of Sydney" began publication in 1946 have seen considerable developments in the Ports of this State and the extension of the Board's jurisdiction.

In view of the Board's expanded role, it is appropriate in this anniversary year to introduce a new publication to communicate its aims and achievements. For this reason the Board is producing a new official journal, "The Ports of New South Wales".

In the first issue of the "Port of Sydney" in 1946 the then President of the Board, Mr. G.H. Faulks, wrote that purpose of the journal was to bring the functions of the Board under the notice of shipping and commercial interests in Australia and overseas, and to furnish information concerning the history, development, facilities and scenic beauty of the Port under its jurisdiction, as well as matters generally connected with their administration.

This still remains the Board's intention today—with, of course, the scope extending to all the State's Ports and to its administrative role over the waterways of the State.

Over the years the "Port of Sydney" has served the Board and the people of New South Wales well in highlighting and explaining the changes and developments in the Ports which play such an important role in the State's seaborne trade and the Board's role in administering the navigation laws of the State.

In presenting Vol. 1, No. 1, of "Ports of New South Wales" I confidently predict that the new journal will uphold the fine tradition of its predecessor and, at the same time, express the hope that it will still prove interesting and instructive to those engaged in industry and commerce, as well as being of particular interest to those with a love for

the sea and ships.

J.M. WALLACE,
President.

5th UNCTAD/SIDA Training Course

Speech by Mr. Billie Cheng, Director (Operations), PSA at the welcoming dinner for participants of the 5th UNCTAD/SIDA Training Course in Port Management on Monday, 16 August 1976 at 1900 Hours at the PSA Auditorium. (Refer to "Ports and Harbors" September, page 41.)

Distinguished Guests, Ladies and Gentlemen:

On behalf of the Singapore Government and the Port of Singapore Authority, I like to extend to the staff and participants of the Fifth UNCTAD/SIDA Port Management Training Course a warm welcome to Singapore.

As participants, you have come here to learn and gain knowledge. It was reported that about 60,000 pages of new knowledge are discovered daily although they are mainly in the technical and scientific field. As new knowledge are added so rapidly, what we have already learnt soon becomes obsolete. The thought of it makes me feel like a drop-out already. Although it is necessary for us to acquire new knowledge, however, it is important that we know how to apply these knowledge effectively. More important, I think, is the responsible attitude for us in managing our national resources with what we have learnt to the mutual benefit of our fellowmen. For this, there should be mutual trust and genuine concern in our efforts to co-operate with one another. The saying that "no man is an island" still holds true today. Although barriers are erected geographically, politically, in trade and even in religion, nations of the world are still inter-dependent with one another. I'm glad that this Course is being conducted under international co-operation for the benefit of countries in the Asian and Pacific region.

We live in the 20th century with so much knowledge at our disposal. There is still so much for us to learn about each other as human beings. We should come together as friends—to know each other on a personal basis, to understand each other, to learn also about each other's customs and ways of life, and to trust in one another. Living is not only acquiring new knowledge and gaining more material wealth in order to have a comfortable life. True living means the sharing and the enjoyment of each other's company. I understand that you had a similar 4-week Training Course in Malaysia which is both interesting and beneficial. You have also settled down to the training very quickly and developed a warm camaraderie among yourselves. I hope you will continue to use the opportunity during the Training Course to further cultivate a friendship which is true, meaningful and long-lasting.

Ladies and Gentlemen, you have my assurance that my speech will not be a long one—like your coach trip to Singapore! Neither do I have the stamina like one of you course participants has in buttonholing a lecturer till 4.00 am in the morning!

Such keenness to learn augurs well for this Course, but the UNCTAD Faculty members may be nervous and



During its maiden voyage stopover at Singapore, the M.S. "Kwong Ta" was accorded a special welcome. A simple presentation ceremony was held on board the vessel on 12th July 1976, during which PSA Deputy Director (Mechanical & Electrical) Mr. Ho Shao Meng, (right), presented a commemorative pewter salver to the master of the ship, Captain Ling Hwei (left). The 10,029 dwt cargo vessel left the dockyard Kochizosen, Japan in June 76. (Port of Singapore Authority)



Mr. Choo Wee Liang, Manager (PSA Offshore Supply Terminal) presented a salver and a book to the master of t.s. "Axel Maersk" Capt. Nygaard to commemorate her maiden voyage to the Port of Singapore on 19 Jul. 76. "Axel Maersk" is the seventh of the nine Maersk Line's new container ship for the Far East, Europe and America Service. (Port of Singapore Authority)

exhausted wrecks by the end of this 9-week Training Course in Port Management.

I hope that UNCTAD will not be deterred by this but will continue to conduct such training courses in this region. It is through such training courses that port officials from different countries, many of which are far apart, can get together. I am informed that 25 participants from 17 countries in the Asian and Pacific region are attending this particular Training Course. I am sure that they will use this opportunity to take active part in the exchange of views and experiences in areas of common interest.

I have gone through your interesting and heavy training programme and noticed that the area covered in this Course is very wide. There are lectures on port planning, port finance, port productivity, cargo unitization, port labour and so on. I have also noticed that you will be making a number of visits to the PSA gateways over the next 5 weeks. For instance, you will be visiting the Keppel Wharves on the coming Thursday and the Container Terminal next week. Your observation tour to the Pasir Panjang Wharves is on your 3rd week's programme. You are most welcome to have frank discussions with my officers who will be there to accompany you on your observation tours. There may be other areas which the PSA could be of assistance to you. Please let us know. It is through such discussions that we will benefit from each other's experience, and hopefully, we could arrive at some solutions to our common problems.

Do take this opportunity to learn as much as you can in class and during your visits. At the same time, do not forget to take time off (after lectures, that is) to see something of Singapore.

I wish all of you a successful Training Course in Singapore.



Picture shows Mr. Kenneth Seah, Assistant Director (Port Promotion), PSA, presenting a salver to the master of 'HANS KRUGER', Capt Dieter Steffans during the maiden voyage ceremony.

It now remains for me to say, enjoy yourselves this evening.

Thank you, Ladies and Gentlemen.

THE MOST CONVENIENT HOTEL FOR AIR PASSENGERS



Tokyo Air-Terminal Hotel

ROOM RATE

Single Room with Shower	\$13:00
Single Room with Bath	\$18:70
Studio Twin Room with Bath	\$23:80
Standard Twin Room with Bath	\$27:20
Deluxe Twin Room with Bath	\$34:00

☆ Completely sound-proofed and air-conditioned rooms.
☆ TV and information radio sets in each room.

RESTAURANTS

AVION	French cuisine	3rd floor
YAMATO	Japanese cuisine	3rd floor
SAIHO	Chinese cuisine	4th floor
COCKTAIL LOUNGE		3rd floor

3rd floor, Tokyo International Airport Terminal Bldg. For reservations Tel: 747-0111 Cable: AIRPORTEL



Picture shows the Master of 'RIMBA RAMIN', Capt Benjamin Tikki receiving a commemorative salver from Mr. Chen Meng Sheng, Traffic Manager (Sembawang Port) of PSA, at a ceremony on board the vessel.

(Continued from page 55)

reference to the quantity of fertilisers handled over the Commissioners' rail system. For 1974/75 the system handled 111,549 tonnes, compared with 211,350 tonnes in 1973/74. Indications at time of writing show an even more alarming decline. Other Australian ports must be similarly effected.

Under pressure, the Government has referred the matter of the Subsidy to the Industries Assistance Commission for a report.

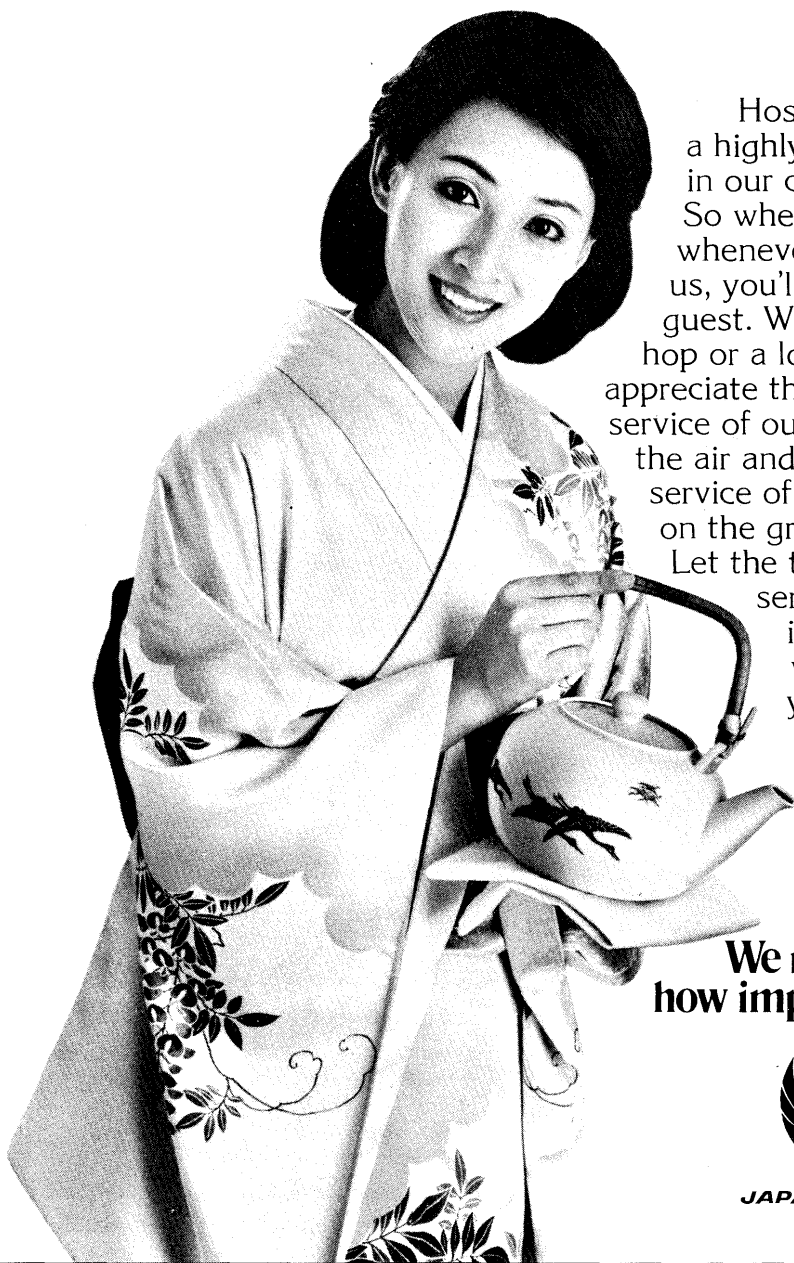
In the National interest, as well as that of the health of our primary industries, it is sincerely hoped that the report will not only favour the reintroduction of the bounty but also recommend a substantial increase on the former figure.

Once again I extend thanks to my fellow Commissioners, the Executive Officers, and to the Staff as a whole in appreciation of their wholehearted support and for the capable and loyal services so freely given by them during the year.

Finally, I record my further appointment by the Governor-in-Council as Chairman of Commissioners for three years as from last March.

T. C. JARRETT,
Chairman.

Enjoy the hospitality of Japan worldwide.



Hospitality is a highly refined art in our country. So wherever and whenever you fly with us, you'll be an honoured guest. Whether it's a short hop or a long haul, you'll appreciate the graceful service of our hostesses in the air and the helpful service of our staff on the ground.

Let the tradition of service which JAL is respected for worldwide, go with you worldwide.

**We never forget
how important you are.**



JAPAN AIR LINES



MITSUI Computer Control System for Container Terminals

Huge piles of data!

How do you process them for efficient handling of containers?

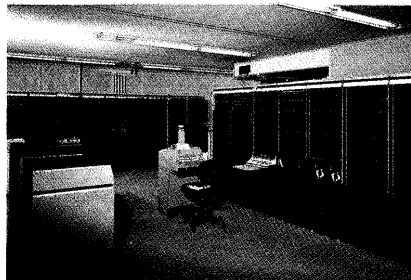
Our System can help solve your problems and enable you to reap the true benefits of container transportation.

Developed in 1972, this System has proved its efficiency at the busy Ohi Pier, Port of Tokyo, and we are now prepared to aid you in solving your terminal problems, particularly those in the fields of cargo information and operations systems.

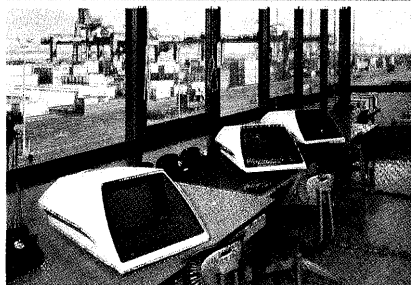
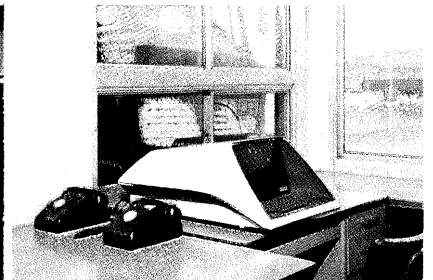
Major Application Software

1. Planning Support & Management System
2. Receiving/Delivery Operations System
3. Loading/Unloading Operations System
4. Marshalling/Shift Operations System
5. Report Generating System
6. Inquiry System
7. Back up & File Control System

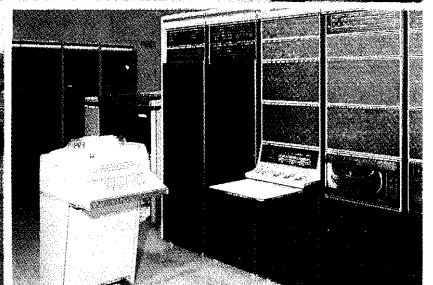
COMPUTER ROOM



GATE OFFICE



OPERATION ROOM



CENTRAL CONTROL UNIT



MITSUI ENGINEERING & SHIPBUILDING CO., LTD.

Head Office: 6-4, Tsukiji 5-chome, Chuo-ku, Tokyo, 104 Japan

Cable: "MITUIZOKEN TOKYO", Telex: J22924, J22821

Material Handling Machinery Sales Department Tel. (03) 544-3677

Systems Engineering Department Tel. (03) 544-3272

Overseas Offices: New York, Los Angeles, London, Duesseldorf, Hong Kong, Singapore, Rio de Janeiro

一九八二年十月十日 第五〇〇四号