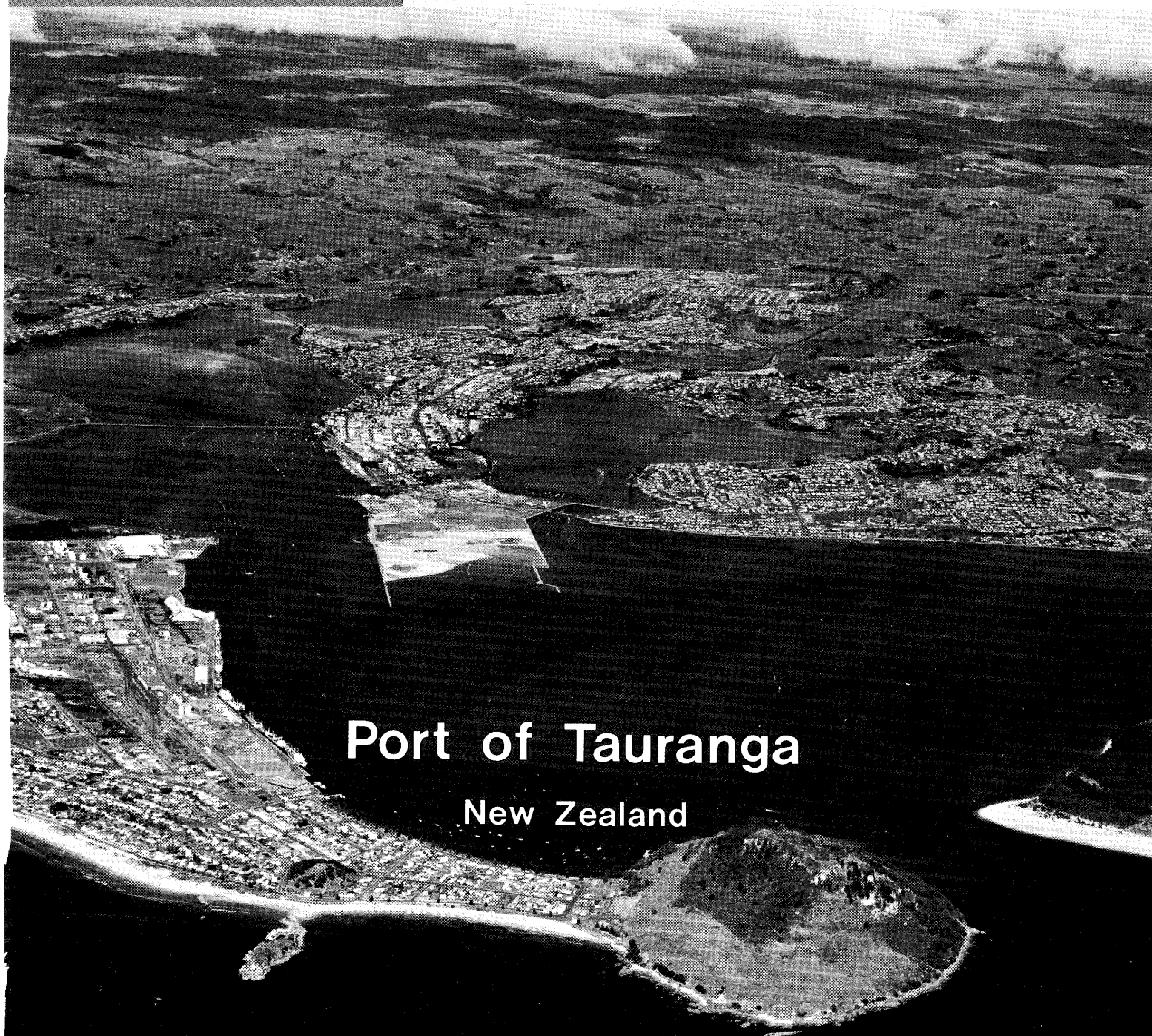


PORTS *and* HARBORS

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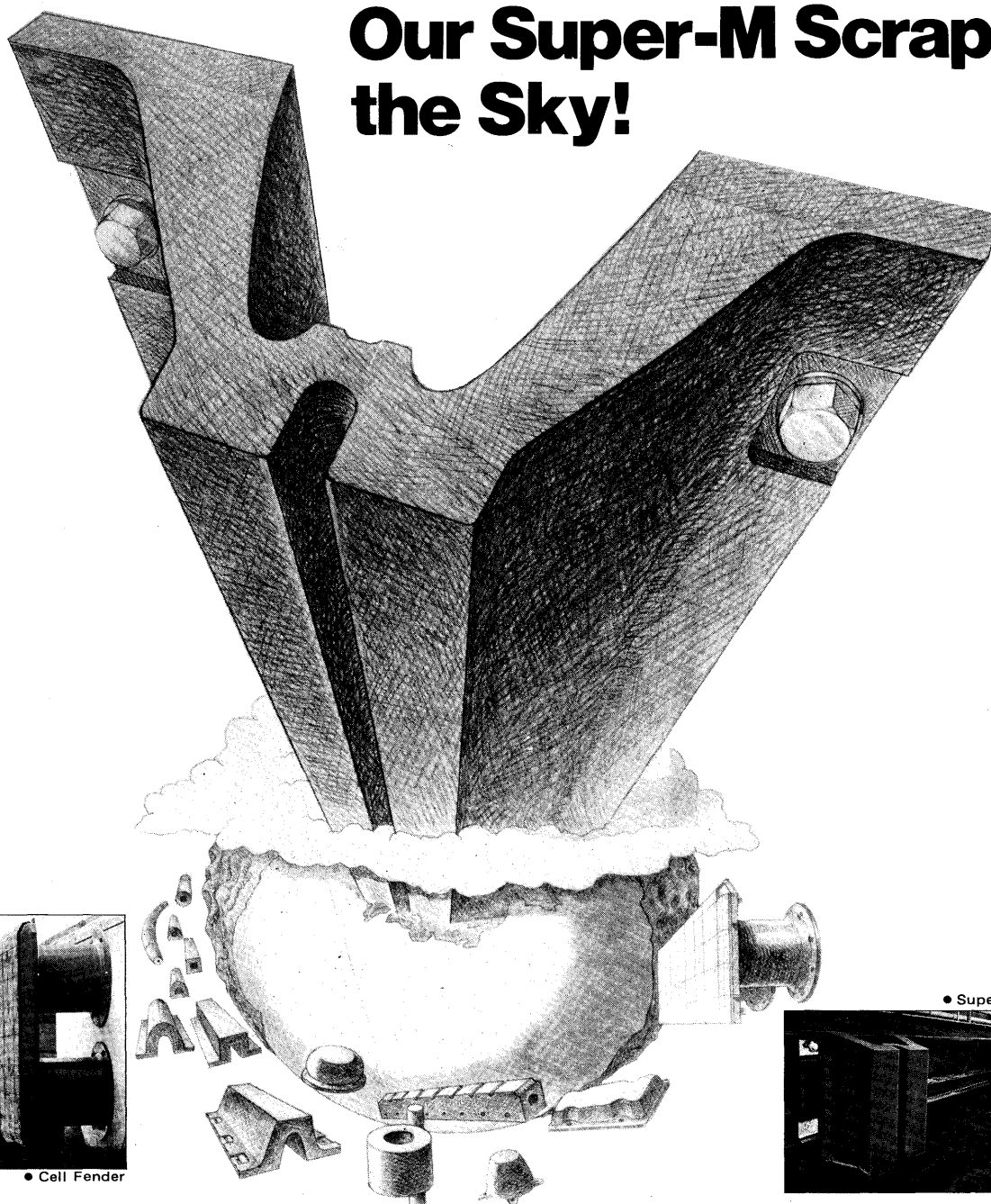
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IAPH Conference Le Havre May 1979

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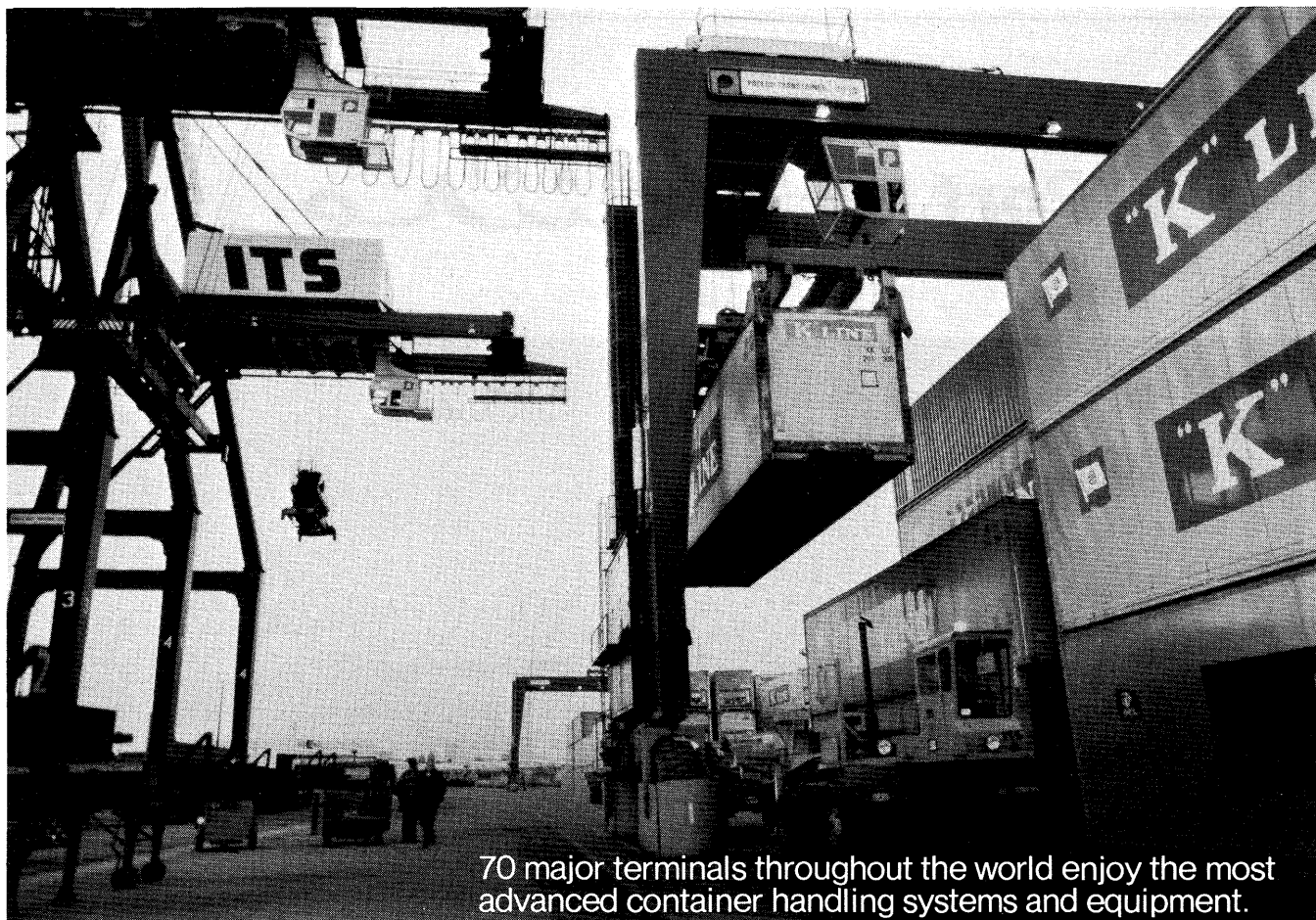
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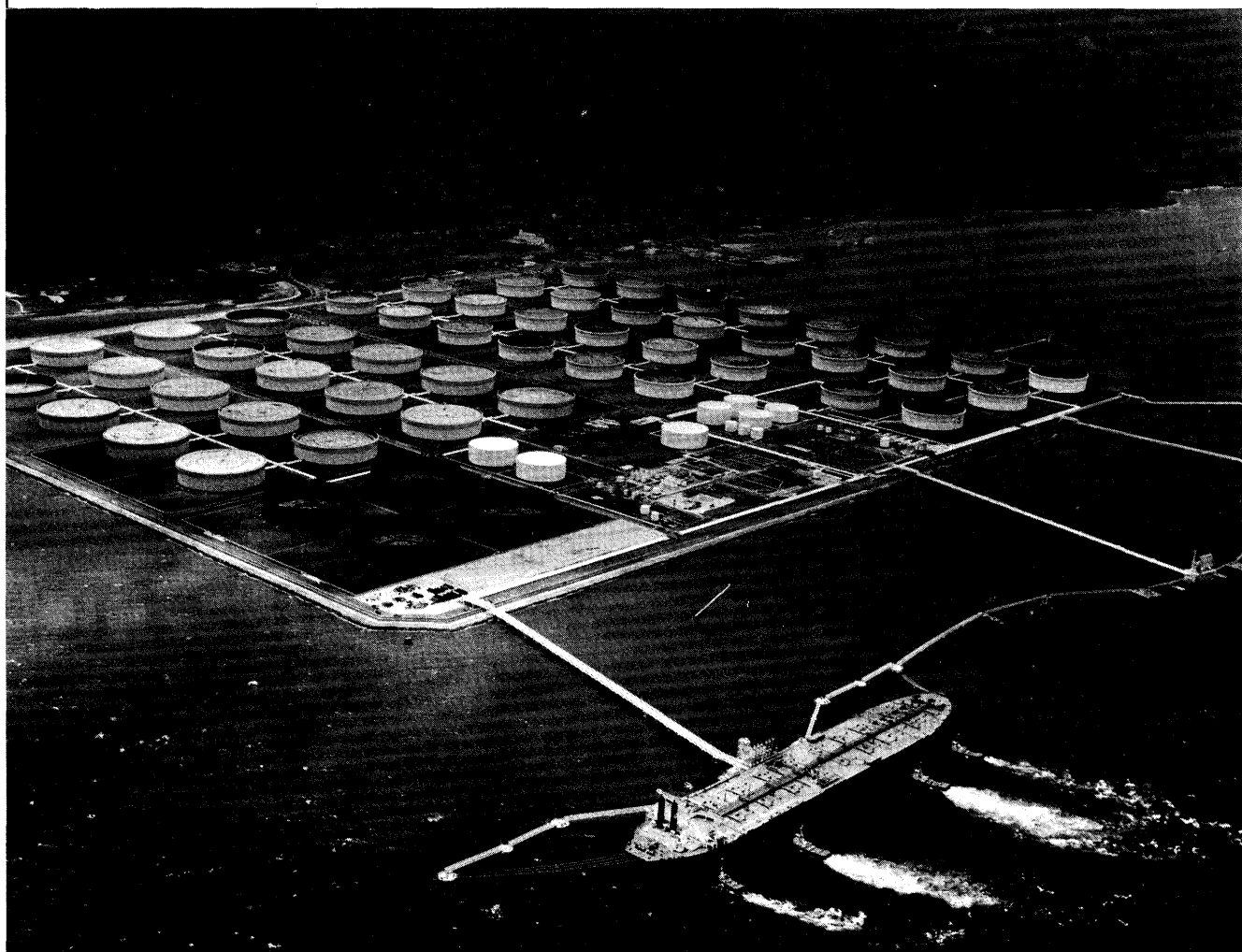
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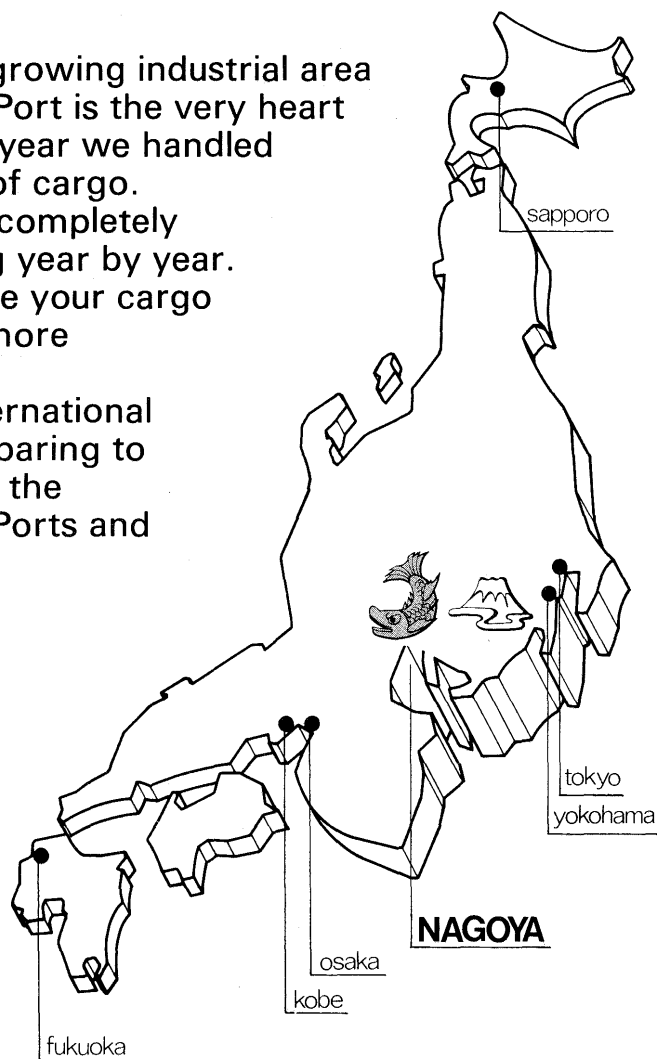
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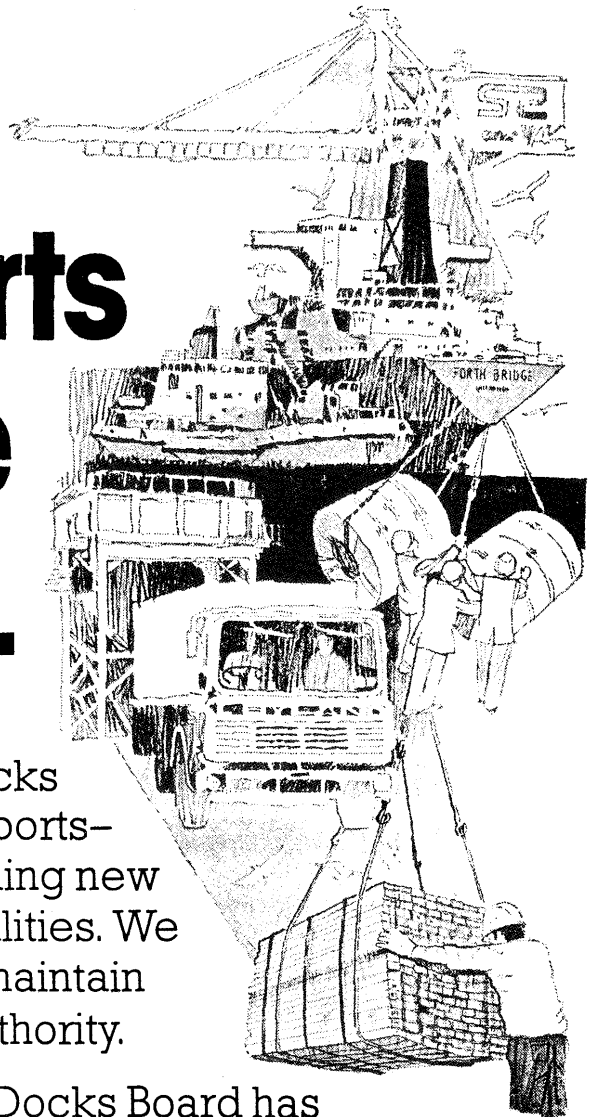
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PORTS *and* HARBORS

IAPH Head Office Announcements : Page 7

SDR System Suggested by S.G.

After a series of unproductive attempts to cope with the recent turmoil in the foreign exchange market, Secretary General Sato suggested to Mr. den Toom, Chairman of the Finance Committee, the adoption of SDR standard as the Association's dues assessment base in his letter of September 14th.

This switch from the current US Dollar-based standard to the IMF monetary value standard as the new basis for the Association's dues assessment was resulted from an urgent need of more steady monetary standard for the international organization whose membership spreads over 70 nations and as many different currencies.

While the exchange rate of the Special Drawing Right (SDR) to be announced by IMF (International Monetary Fund) and the currencies exchangeable into Japanese Yen may vary from time to time, the following are the rates as of June 30, 1978. (TKD)

Currency	Rates
Australian Dollar	1.07968
Austrian Schilling	18.5287
Belgian Franc	40.4972
Canada Dollar	1.39197
Danish Krone	6.98028
Deutsche Mark	2.57187
French Franc	5.60161
Italian Lira	1,059.08
Japanese Yen	254.638
Netherlands Guilder	2.76663
Norwegian Krone	6.68271
Pound Sterling	0.667301
South African Rand	1.07592
Spanish Peseta	97.5458
Swedish Krona	5.66874
U.S. Dollar	1.23953

Government of India Starts Port Congestion Committee

Mr. V.R. Mehta, former IAPH Director from India, informed Secretary General Sato on 16th September that he was appointed as an Officer on Special Duty and Chairman of the Committee to look into the causes of current congestion at Bombay Port.

The Committee, according to Mr. Mehta, is shouldering also the onerous task of identifying measures for provisions of infrastructure and allied facilities, including surface transportation facilities and container handling facilities both at Ports as well as inland centers that would be required to enable other ports to handle increased quantum of traffic efficiently.

The Committee is also requested to suggest procedural

and allied changes required and processing of documents for import/export shipments at the Ports. Mr. Mehta will in addition look over promotional and incentive scheme and other measures which should be adopted to develop export/import traffic through other Indian ports.

Mr. Mehta until his completion of the tenure in the Ministry of Shipping and Transport as Director, last June, had been serving on the Committee on Community Relations as Vice-Chairman and on Committee on Legal Protection of Navigable Waterways beside his Directorship from India, and after June 30, he moved on to his next assignment in the Indian Railways. (TKD)

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(From an article in the newspaper "Le Monde".)

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By Paul Hanappe and
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CHAPTER III

RECENT TRENDS IN PORT ECONOMICS (Parts 3)

3.3. THE ORGANISATION OF TRANSPORT

3.3.1. Transport auxiliaries

3.3. THE ORGANISATION OF TRANSPORT

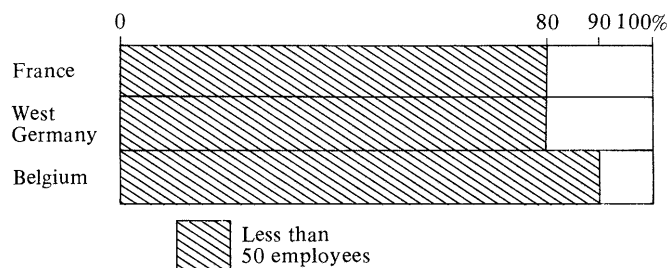
3.3.1. Transport auxiliaries¹

The object of this section is not to attempt a synthetic presentation of the transport auxiliary industry, nor to deal with all their problems. It is concerned more with attempting to identify those trends and evolutions involving these industries which are capable of shedding some light on recent changes in port history.

A. General structure of the transport auxiliary industry and its development²

The transit agent industry is characterised by a reasonable number (300 to 800) of companies (with the exception of Germany and France, where there are approximately 4,500 and 2,000 companies respectively) and by a very unbalanced distribution in respect of size: a few very large companies, generally linked with financial groups, dominate the market but coexist with a large number of small, often family, companies.

Concentration of the industry in various European countries



As the diagram above shows the proportion of small transit companies is still very large in many countries.

¹ This paragraph is largely based on studies of transport auxiliaries in different countries (Europe, United States, Japan) carried out on the initiative of M.P.P. KALTENBACH, Head of the Division of International and Commercial Affairs at the General Secretariat of the Merchant Marine.

² We are dealing here mainly with the principal transport auxiliary, the transit agent.

However these figures do not take into account a tendency towards concentration which has been shown for some years, particularly because of the development of containerised transport. This trend towards concentration, more or less marked according to the country, leads to a

reinforcement of the larger companies which offer a wide range of services with international coverage, and the relative disappearance of the smaller companies which find it very difficult to expand their activities.

Access to the industry is relatively free. However most of the transit agents would favour the establishment of some degree of control even if, in certain countries such as Germany, this might limit competition.

Nevertheless permission to operate certain activities is subject to obtaining a licence (the extreme cases being the USA and Japan, where practically all transport auxiliary activities are covered by legislation). For example in France access to the industry is controlled by the transport commission and customs declarations, and is subject to conditions of financial capacity and references.

On the other hand the development and sophistication of transport techniques, together with the increasing use of data-processing systems, necessitates and will increasingly necessitate an increased level of professional qualification on the part of the auxiliaries; this cannot fail to present a certain number of problems, because of the lack of concern in various countries at the present time regarding professional training.

In this matter of professional training Germany seems to be one of the only countries to have an effective system of training. Most of those working in transit companies have the diploma of "Speditionskaufmann" (equivalent to a British HNC). There is a School of Foreign Trade and Transport at Bremen, financed by a number of Federations (involved in foreign trading or transport), by transit agents, ship-owners and banks, and which has trained a large number of the executives of the main transport auxiliary companies.

Another aspect of the transit industry is its multi-functional character. Under the title of transit agent activities of different natures are often grouped together. In Great Britain, for example, the transit agent carries out the tasks of documentation, organisation of the route, freight reservation and coordination of the different operations, payment of the various sums due, presentation of the goods to the customs' authorities, etc. These tasks do not however differ fundamentally from the tasks carried out by their French or German colleagues. The British transit agent also normally offers other services: groupage, road transport, making containers available, storage, packaging, coordination of the delivery of major contracts (turnkey factories), insurance, financial services and commercial prospecting.

The activities of transit agents can be seen, therefore, to be multiple and varied. Furthermore it is rare for their activities to cover only a single mode of transport. To confirm this it is only necessary to examine the various fields of activity of some major transit companies. It should, however, be noted that air transport involves a certain level of specialisation; this therefore constitutes a field which is slightly different, and for which the largest transit companies generally create a specialised subsidiary.

b. Autonomy and integration of the transport auxiliary industries

The autonomy of the transport auxiliaries is declining in most of the countries studied and depends, amongst other things, on the force relationships between loaders and transporters.

In Great Britain, for example, and excluding the two leaders in the industry (Lep and Thomas Meadows), most of the transit agents above a certain size are integrated into financial groups active mainly as ship-owners or in transport (for example Anglo-Overseas is a subsidiary of P & O, the leading European ship-owner).

Similarly in Holland the integration of transit agents into ship-owning is very considerable. A large number of the major transit agents form part of vast holdings based on maritime companies. In this way the Ruys Transport Group forms a division of the Nederlandsche Scheepvaart Unie, which groups together mainly maritime companies. This high degree of integration in Holland is accompanied, somewhat paradoxically, by a high degree of autonomy on the part of those transit agents forming part of the groups controlled by ship-owners.

In Belgium, on the other hand, it is the loaders which play a very important role. Most of the transit agents are controlled by major industrial companies, and work almost exclusively for them.

In Japan transit agents have a considerably reduced margin of manoeuvre, and play a rather minimal role in the relationships between powerful commercial companies and maritime companies which often belong to the same group.

Generally the largest companies do not carry out only the functions of transit agents. They are also either transporters (most frequently land-based, such as Nippon Express) or are maritime agents, or they may be both at the same time.

The regrouping of the various functions in the same company results from different motivations. For the transit agent or the transporter it may be a normal extension of his activities. In Japan Nippon Express, directed mainly towards domestic transport activities, carries out transit operations as a logical extension of this transport. In the same way in Switzerland the major transit agents are also transporters (Danzas, Natural, Crowe, Mat), and conversely the major transport companies also become transit agents.

However in the case of certain companies it is a question of maintaining their position within the transport system. Some transit agents have recognised the danger which the development of containerisation represents for their industry (the avoidance or simplification of certain tasks, making them accessible to loaders and, more particularly, to transporters, etc.). In such cases it is a matter of diversifying their activities in order to remain the essential intermediaries in the transport chain, a favoured solution involving developing road transport activities. In Germany one out of two of all transport licences are today in the hands of transit agents¹.

We should note the special case of Singapore where the Port Authority itself carries out part of the functions of a transit agent, warehouse, handler for containers and road transporter (through a company in which it holds 20% of the capital, Container Warehousing and Transportation (CWT)); the majority of the capital is controlled, as in the case of the Port of Singapore Authority, by the Government.

¹ Long distance road transport (over 50 km) is subject to licencing.

c. The incidence of containerisation

Containerisation has had a major effect on the role of transport auxiliaries and hence, in the long term, on the structure of the industry.

Firstly the use of containers in door-to-door transport reduces the number of technical, commercial and legislative operations both at the port and also within the territory. As far as certain auxiliaries are concerned these tasks form the greater part of their activity. In the limiting case, such as containers fully loaded with the same goods and destined for the same final port, intervention by a transit agent does not seem to be any longer necessary. Certain ship-owners are conscious of this fact, and many of them are now dealing directly with the loaders to obtain the maximum freight, so making the containerships they control more profitable, despite their high cost.

Containerisation does not, however, necessarily exclude the transit agent. In practice, and if in the case of the "fully loaded" containers the transit agents have little opportunity of intervention, they do have an important role to play where the groupage containers are concerned. Many large transit agents have understood this fact and are cooperating within this field. Such cooperation takes place within the framework of generally stable associations, but some may be only temporary (Holland).

In Switzerland, for example, the "Kangourou" group amalgamates the groupage of 5 transit agents dealing with Australia (Danzas, J. Maeder, Natural, Gondrand, Weltführer Wifag). Similarly in Antwerp the E.C.C.A. (Euro Consolidated Container Association) handle groupage for the United States, Canada and Japan.

Containerisation does not therefore represent a serious threat for transit agents of a certain size who are able to adapt their activity to the evolution of transport techniques. The danger seems to be much more real for the small transit agents who often have difficulty in filling their groupage containers because of the lack of sufficient traffic and who, in addition, cannot invest in depots and handling equipment.

The development of container transport has, as we have seen, had obvious effects on the transport auxiliary industry. In addition to the fact that it promotes cooperation between transit agents, and is also accentuating the trend towards concentration in the sector (by the disappearance of the smaller companies or their absorption into larger companies), it also leads to an enlargement of the activities of any transit agent who wishes to maintain his place in the transport system and who is therefore obliged to integrate other occupations, the favoured solution involving developing road transport activities.

d. Internationalisation

The present trend (arising largely from the appearance of new transport systems) towards considering transport as a chain of operations from the producer to the consumer increasingly leads those auxiliaries who wish to maintain their activity to establish international networks. This is why there has for some years been a movement towards the strengthening of the overseas networks of the largest transit agents (cf. table 3.2.).

Such internationalisation can be effected in three different ways, corresponding to various levels of establishment:

— the establishment of a network of correspondents or

TABLE No. 3.2. Internationalisation of the principal transit agents

COMPANY	Country of origin	Total employees	Employees outside the country of origin	Number of countries where the company is established (excluding commercial delegation)	Effective overseas coefficient (total employees as %)
1	2	3	4	5	6
INTERNATIO-MULLER	HOLLAND	14,000	1,700	6	11
SCHENKER	W. GERMANY	10,000	4,000	17	40
DANZAS	SWITZERLAND	10,000	8,300	11	83
GONDRAND	(Multinational)	8,000	5,000	7	62
RUYS	HOLLAND	7,100	2,100	12	29
SCAC	FRANCE	7,000	5,700	39	81 (6*)
VAN GEND ET LOOS	HOLLAND	6,800	1,200	6	17
MORY-HELMINGER	FRANCE	6,600	1,100	10	16 (1*)
KUHNE UND NAGEL	W. GERMANY	6,000	2,000	28	33
CALBERSON	FRANCE	5,000	720	3	15
LEP	U.K.	5,000	1,700	12	34
PANALPINA	SWITZERLAND	4,100	3,700	13	90
PAKHOED	HOLLAND	3,000	800	6	26
EMERY	USA	2,500	500	17	20
AMI (Agence Marit. Inter.)	BELGIUM	2,400	1,200	12	50
THOMAS MEADOWS	U.K.	2,000	700	7	35
DUBOIS	FRANCE	1,600	105	1	7
JACKY MAEDER	SWITZERLAND	1,500	600	11	40
WALON-ITA	FRANCE	1,400	130	6	11
AEI (Air Express Internat.)	USA	1,400	785	15	56
SCTT	FRANCE	700	450	9	64 (17*)
HEPPNER	FRANCE	1,200	300	1	25
HARPER ROBINSON	USA	750	150		20
JONEMANN	FRANCE	450	45	1	10
MALISSARD SAVARZEIX	FRANCE	1,200	40	1	3
BOURGEY-MONTREUIL	FRANCE	1,150	50	2	4
(* outside the France zone)					

Source: Usine Nouvelle No. 14 - 3 March 1975

- executive agents controlled by commercial delegations,
- shareholdings or absorptions of overseas transit and transport companies,
- the creation of the company's own network abroad.

These three types of establishment are not, however, mutually exclusive, the same company being able to use one or more of these forms of establishment in various countries. The choice depends on a wide range of factors such as the dynamism of the company, the amount of traffic being handled, the legislation in force in the foreign countries or the pressure of competition.

Generally speaking the smaller transit agents use the first type of establishment, medium sized agents the first two, whereas larger companies may use all three systems simultaneously. However it seems that a certain number of transit agents are conscious of the lower efficiency of the first system. In practice the transport auxiliary is better able to handle the traffic if he controls both ends of the transport chain. Now the system of commercial delegation lacks efficiency, the more so since it does not make it possible to capture third party traffic. It seems therefore that the largest transit agents tend, whenever it is possible, to abandon this type of establishment in favour of the other two. Another system found in several cases in Europe, and which may be considered as being promising since it avoids the often considerable capital investments, consists of concluding agreements with foreign partners (cf.

Thomas Meadows, below).

The principal European companies are generally well established in Europe itself. By contrast very few of them as yet have a real international network. The most dynamic in this respect are without doubt the German companies, particularly Kühne and Nagel, whose network abroad was established mainly between 1965 and 1970. This company is represented in about 40 countries, and uses all three methods of establishment. However since the activities of Kühne and Nagel are mainly directed towards international traffic it mainly uses direct establishments: it has subsidiaries in about twenty countries (the principal European countries, North America, South America, Taiwan and certain African countries) and shareholdings in transit agents in seven other countries (Greece, Turkey, Iraq, Iran, Kenya, Singapore and Lebanon).

In Great Britain Thomas Meadows and Lep are the only two transit companies to have an international network, but they are still far from having the coverage of the German leaders. The international network of Thomas Meadows is mainly directed towards the Commonwealth. In order to overcome the weakness of its European establishment the company has chosen to conclude an agreement with a partner on the Continent, Danzas, which is well established at a European level, the agreement being on the basis that Danzas entrusts its traffic to Thomas Meadows where the latter is well established (Great Britain, Australia,

Canada, South Africa and New Zealand), conversely Thomas Meadows entrusts its European freight to Danzas.

As far as Lep (which is primarily a financial group) is concerned has progressively established its control over some very large European transit agents and is, for this reason, very well established in Europe except in France. Its present efforts are directed towards the Far East and Australia and will subsequently be directed towards the USA and Canada.

In Switzerland the Panalpina company (40% of the capital of which is held by Ruys) has established a very complete overseas network. Seeking to develop its traffic over large distances Panalpina has systematically bought up foreign transit agents since the time of its creation. For this reason it is well established in North America, South America and in Nigeria. It is also very active in Europe.

By contrast, and although the Danzas company undoubtedly has the largest network in Europe, it has no effective establishment outside Europe except in Iran and Latin America, because of the agreements which it has signed with other companies for its foreign traffic, particularly Thomas Meadows as described above.

As far as French transit agents are concerned they are hardly international. Some recent moves do, however, seem to be taking place: certain of the largest transit agents have become conscious of the need to have an efficient network abroad, and are now modifying their policy of internationalisation. In this way SCAC has, since 1975, converted its representation abroad into subsidiaries wherever this was possible (United States, Brazil, Iran), and has reinforced its position in the Middle East (Lebanon, Iraq, Saudi Arabia and Kuwait) and in Europe.

e. The penetration of data-processing

Data-processing of freight seems to be an irresistible trend. The organisation of traffic is facing new problems arising from the increasing volumes to be handled, the increasing automation of the techniques of loading and unloading, and the necessity to limit as far as possible the time of transport, and hence the immobilisation of goods. Any solution to these problems naturally involves the use of data-processing which, as a source of rationalisation and acceleration of the traffic, simplifies and clarifies the operations.

However while most of the major transport auxiliaries use computers to improve the internal management of the company (accounting, clients' files, etc.), there are still only a few examples in Europe of the use of data-processing in freight handling, in particular because of the major costs which this modernisation involves and also the structural modifications which it may involve. Only the largest companies can install a data-processing system. Any transport auxiliary which is not large enough to become integrated into the system will be bound to disappear if it is unable to supply an adequate service. Because of the large number of small companies in this sector it can easily be understood why they are not favourable to too rapid an extension of the system.

If the use of data-processing systems is far from being general this statement needs to be modified according to the individual fields concerned. In practice the use of data-processing for freight handling is much more advanced in the field of air transport than maritime transport, particularly because of the importance for airlines to reduce as far as possible immobilisation delays with the goods on

the ground. For this reason two systems, one British (LACES) and the other French (SOFIA) have been developed. The first has been operating since 1971, whereas the second only came into use recently. The SOFIA project is due to the initiative of the General Directorate of Customs and Indirect Taxes. Its object (as in the case of the British system) is to cope with the increase in traffic which, up to the present, has doubled every five years, and to improve the efficiency of the import and export customs operations at the three Paris airports. This project brings together the air transport companies, the commission agents, the transit agents and the customs administration. Its implementation will undoubtedly contribute towards further concentration of the auxiliary industries.

In the maritime field the only major use of data-processing systems for freight handling is at the port of Hamburg. The system used, (Datenbank) is a cooperative system between various transit agents and other agents in the transport chain (ship-owners, charter agents, etc.) and has operated since 1970. At the present time it is only a joint system for electronic data-processing on exports. However a subsequent phase envisages extending its use to other industries and to the processing of imports.

f. Conclusion

The transport auxiliary industries are therefore undergoing considerable transformations at the present time. This evolution is at a more or less advanced state according to the country concerned, German transport auxiliaries being ahead of their colleagues in other European countries in this respect.

To a large extent these transformations relate to the changes which have taken place in recent years in transport techniques, and as a result are not likely to slow down.

The trend towards containerisation and the development of data-processing appears to be irreversible, and can only lead to concentration in the sector by the disappearance or regrouping of small companies and by a diversification of functions, transit agents increasingly integrating other operations in the transport chain. Internationalisation of the industry arises from the same causes, and in the same way contributes towards concentration in the sector.

The activities of loaders and transporters are in no way foreign to the reorganisations taking place. As far as the transporters are concerned it is above all a question of making their increasing capital investments more and more profitable, within a climate of reduced expansion.

Similarly for the loaders the intensification of competition at international level requires ever more effective commercialisation of production, and therefore leads to particular attention being given to transport problems. Both find an interest in increased efficiency of the services given by transport auxiliaries, an efficiency which reduces dead time and speeds up the turn-round of goods by minimising their immobilisation.

Economic Impact of the U. S. Port Industry:

An Input-Output Analysis of Waterborne Transportation

Prepared for the Maritime Administration, U.S.
Department of Commerce by the Port Authority of NY &
NJ, Planning and Development Department.
(Executive Summary)

The objective of this study is to provide policy makers in Government and business with a new tool by which the economic impact of alternative policies relating to the U.S. port industry can be analyzed and assessed.

This was achieved by creating an input-output model showing in quantifiable terms how the port industry is economically linked with every other sector of the economy.

Another important contribution of this study was the determination for the first time of a comprehensive definition of the port industry. The industry was defined as any economic activity that is directly needed in the movement of waterborne cargo.

By applying this definition and using a reliable mathematical framework in the form of the official U.S. Department of Commerce input-output tables, the model can be used as a forecasting and planning tool.

This study is national in scope. It aims to discern the broad impact of the port industry on jobs, income and tax revenues as well as its impact on specific industries on a nationwide basis.

The port industry is analyzed not only as a producer of services upon which many users depend, but also as a consumer of goods and services that account for many jobs in its supplying industries.

Major Findings

Analysis, using the input-output model, showed that port industry operations in the base year of this study were responsible **directly** and **indirectly** for:

- Gross sales (revenues) within the economy of \$28 billion.
- A \$15.0 billion contribution to gross national product (GNP).
- 1,046,800 jobs.
- Personal income of \$9.6 billion.
- Business income totaling \$3.7 billion.
- Federal taxes totaling \$5.2 billion.
- State and local taxes amounting to \$2 billion.

The analysis also revealed the following:

- The chain reactions initiated by the multiple purchases for port operations gives the Nation's port industry a multiplier effect of 1.6. This means that each dollar of sales by the port industry produces \$1.60 in sales throughout the economy.
- The handling of the Nation's waterborne exports and imports was directly and indirectly responsible for \$16.2 billion of port revenues. This means that the movement of each ton of waterborne cargo in U.S. foreign trade generated port industry revenues of \$34. Applying the above multiplier, the direct and indirect revenues amounted to \$55.

- The movement of every 600 long tons in waterborne foreign trade created one job in the national economy.
- Every million dollar increase in the Nation's imports brings about an average increase of \$229,400 in demand for port services.
- Direct purchases of goods and services by the port industry from other industries totaled \$8.9 billion.
- Direct and indirect impact of port investments totaled \$2.1 billion.

The statistics used in construction of the input-output model in this study were for the year 1970, the latest for which complete and official Government input-output data were available.

Since GNP of \$1.9 trillion in 1977 was almost double that of the base year of this study, the above port industry dollar impact figures have approximately doubled from 1970.

The I-O model's property of being able to simulate the impact of a large number of specific policy alternatives permits its use as a forecasting and planning tool. The model can provide answers to key policy questions such as:

- What are the economic implications of a dock strike?
- What new demands are placed on the Nation's port industry and its suppliers when the level of exports rises or declines?
- How are the Nation's ports affected by an increase or a decrease in personal consumption expenditures?

Recommendations

This study demonstrates that the activities stemming from U.S. port operations are indispensable and valuable assets to the Nation's productive output.

It is therefore recommended that:

- MarAd continue to promote and encourage the development of U.S. ports based on its statutory mandates;
- MarAd adopt the definition of the port industry in this report and promote its general use;
- MarAd periodically update the input-output model to provide an ongoing tool to assess the impact of alternative policies relating to the U.S. port industry; and
- MarAd proceed to develop further the capability of this national model to be applied on regional levels.

National Ports Council Annual Report

Year ended 31st December 1977

(Extracts)

General Review

Total port traffic in 1977 showed little change as compared with 1976. Non-fuels traffic increased by 3 per cent, whilst fuels traffic declined by 0.5 per cent. The major change was in the pattern of fuel movements, as North Sea Oil flowed in increasing quantities. Imports of fuels fell by a fifth, but this was largely offset by increased coastal movements and exports. This has benefited the traffic of those (East Coast) ports which are directly involved in the landing and distribution of North Sea Oil, or are particularly well placed to refine it, at the expense of other oil ports. Unitised handling continued to increase its share of port traffic; unitised tonnages increased by 7 per cent.

Capital Expenditure

Port Authorities estimated their aggregate capital expenditure in 1977 at £77 million. The equivalent estimate for 1976 (see Annual Report for 1976, para. 24) was also £77 million, but actual expenditure for that year was £60 million. To allow for the effects of inflation, the Council have calculated the 1976 expenditure in terms of 1977 prices, at £70 million.

Port Finance

During 1977 the ports maintained the level of financial performance in money terms which they achieved in 1976, and so both 1977 and 1976 show a substantial improvement following the setback in 1975.

The 1976 aggregate net surplus (before exceptional items) of £39 million is the highest yet; with this improvement the cash flow generated from the year's harbour operations (i.e. net surplus before exceptional items plus depreciation for the year) exceeded capital expenditure in the year by some £7 million (ignoring redemptions of loan debt); further, even after exceptional items involving cash movements, and after taxation and dividends, the remaining cash flow for the year almost matched capital expenditure for the year.

When the final figures for 1977 are available, the Council expect these 28 port undertakings to show an aggregate net surplus (before exceptional items) of some £41 million, representing a return on capital of 10.3% (in money terms) compared with 10.4% in 1976 and only 4.9% in 1975. These returns on capital may be compared with the "fall-back target" of 10% recommended by the Council in late 1975 for the years 1977/1978.

The improved surpluses for 1977 and 1976 have been achieved while increasing provisions are being made for depreciation partly for new developments, but partly because more port authorities are adopting shorter asset lives as recommended by the Council.

Port Research

The Council have continued to collaborate with the British Ports Association, through the medium of the Joint Research Committee, in defining and monitoring the Council's technical research programme.

The projects which the Council had in progress during

1977 were as follows:

- (a) Shared use of dredgers
- (b) Automation of Hydrographic Surveying
- (c) In-situ Consolidation of Estuarine Sediments
- (d) The use of tugs for manoeuvring large vessels in ports
- (e) Human factors study of Marine Pilots
- (f) Ship lock blockage
- (g) Measurement of Draught Instrumentation
- (h) Port Navigation Service Procedures and Routines
- (j) Evaluation of Harbour Channel Approach Aids
- (k) Ship behaviour studies
- (l) Investigation into Instrumentation on Dredgers
- (m) New Approach to Conventional Cargo Handling
- (n) Container Location Project
- (p) Equipment Reference Manuals
- (q) Technical Manuals: Requirements, Principles and Practice—A User Case Study
- (r) Evaluation of Karricon 3083 Straddle Carrier
- (s) Studies on Container Handling Arising from the Container Berth Systems Study

Aggregate Financial Results of 28 Major Port Authorities

The following Table shows in a comparable format the aggregate results for financial periods ended in 1975 and 1976 of 28 larger port undertakings*

	1975 £m.	1976 £m.
Capital employed at year end	646.6	682.7
Operating revenue	294.1	371.3
Expenses	248.8	286.2
Depreciation (based on book amount of fixed assets)	18.2	19.3
Operating Surplus after depreciation	27.1	65.8
Interest and Dividends receivable	4.8	5.5
Surplus before interest charged	31.9	71.3
Interest charged to revenue	29.0	32.3
Net Surplus before exceptional items	2.9	39.0
Exceptional items: (analysed below)		
Net Surplus/(Deficit) after exceptional items	(38.1)	26.0
Capital expenditure during year	46.2	51.1
Return on capital employed in money terms (before exceptional items)	4.9%	10.4%
Interest charged as a percentage of capital employed	4.5%	4.7%
Total capital debt as a percentage of capital employed	69.6%	66.6%

*British Transport Docks Board, London, Mersey, Manchester, Aberdeen, Blyth, Boston, Bristol, British Railways Board—Harbours, British Waterways Board—Docks, Clyde, Dover, Dundee, Felixstowe, Forth, Harwich Harbour Conservancy, Ipswich, Lerwick, Medway, Milford Haven, Montrose, Poole, Portsmouth, Preston, Shoreham, Sunderland, Tees & Hartlepool, and Tyne.

(Continued on next page bottom)

The Port Authority of NY & NJ

1977 Annual Report (Extracts)

A year of Challenges and Changes

As one of the region's major resources for over 55 years, the Port Authority prepared to relate to the major challenges facing the port area and the Northeast, and develop new programs under rigorous conditions of public accountability and in a spirit of partnership with the states and local governments it serves.

Significant changes with respect to Port Authority policies and procedures were made by the Board and the Executive Director during the year.

The Board adopted a Freedom of Information policy and specific procedures, patterned after the New York State Freedom of Information Act, for public access to Port Authority records and proceedings.

Certain items of expense in the Port Authority's operating budget were eliminated or reduced by the tightening of procedures. Administration of revenue investments was improved by discontinuing non-interest bearing bank deposits when possible.

The Board amended the by-laws to create a new Audit Committee which will have general supervision over the Port Authority's books and accounts, and review the work of the independent accountants chosen for the annual audit.

Travel and expense policies and procedures were tightened after an independent auditing firm was authorized to review the expense accounts of selected Port Authority staff as a follow-up to a sample audit initiated by the New York State Comptroller's office.

Industrial Parks and Regional Recovery

With the region's economic redevelopment as a paramount issue, the Port Authority readied its proposal to build industrial parks at three core-city sites. The proposal is premised on the fact that the Port District economy has been eroded through the loss, hidden under the region's magnitudes of wealth and commerce, of 15,000 manufac-

turing firms and half a million manufacturing jobs over the past two decades. The proposal offers the states the Port Authority's historic ability to plan, manage and raise capital for business-like public enterprises as an initiative for a new partnership of the cities, states and federal government to attract investment capital to the region for manufacturing enterprises and the jobs they would create.

The proposal also offers a potential solution to the major Port District problem of disposing of municipal solid waste. The Port District is within a very few years of exhausting areas for landfill. An essential feature of the Port Authority proposal is to burn and recycle municipal solid waste as competitively priced electrical power directly available to industrial park tenants.

Legislation to authorize the industrial park program has been drafted and is under review by the governors' offices.

Energy Saved and Energy Earned

The Port Authority is engaged in studies in cooperation with other state agencies on the control of sources and costs of energy in the coming decades, as it becomes increasingly critical here to the development and maintenance of more favorable rates of industrial and economic growth.

The Port Authority has been reducing its own energy consumption and costs as well as experimenting on its own initiative with measures of wider application, among them the use of solar energy and the creation of low-cost energy from the containment of gases from decomposing landfill.

Despite the expansion of some of its facilities, the Port Authority reduced its use of energy to 70 percent of its 1973 consumption. Its conservation program has produced an absolute saving of 2,000 billion BTU's, or the equivalent of 350,000 barrels of oil per year.

Construction

- The Port Authority's \$160 million expansion and modernization of its midtown bus terminal was on schedule at year-end. The terminal itself, moreover, in addition to serving over 200,000 passengers a day, will be one of the major elements in the rehabilitation of 42nd Street west of Eighth Avenue.
- High above the Hudson River, in an engineering feat that maintained unbroken service even to peak-hour traffic, the Port Authority began the replacement of the 46-year-old upper level roadways of the George Washington Bridge.
- Four World Trade Center, the next to last of six buildings planned for the World Trade Center complex, opened its doors in April, 1977.
- A new \$25 million terminal designed and to be constructed by the Port Authority at LaGuardia Airport will help accommodate Northeast Corridor passenger traffic, and will be scheduled to complete in 1980.
- The Port Authority is planning to spend \$400 million for new mass transit capital improvements, \$120 million for facilities in each state and \$160 million for the Port Authority Bus Terminal expansion now under way.

(Continued from page 13)

PORT TRAFFIC STATISTICS

	Million tonnes	
	Actual 1976	Estimated 1977
Traffic other than fuels		
Total	121.5	121.8
Fuels		
Total	213.2	214.5
Total traffic		
Foreign		
Imports	180.0	158.2
Exports	62.8	77.6
Coastwise		
Inwards	41.1	44.0
Outwards	50.9	56.3
Total	334.7	336.2

Promoting the Port Through World Trade . . .

The Port Authority intensified its drive to improve the port's competitive position, deteriorated in part since the advent of the Conrail monopoly with its policy to maintain freight rates on container traffic that favor Baltimore over other North Atlantic ports. In the absence of competitive rail services, explicitly called for in the Railroad Reorganization Act, the Port Authority has been pressing Conrail to fulfill the congressional intent by equalizing rail rates on import-export container traffic between North Atlantic ports and the midwest.

In the same vein, the Port Authority spearheaded a move to reduce to competitive levels the charges levied on the transfer of containers from rail ramps to the port's marine terminals. When a major terminal operating company reduced its drayage charges to equal those in Baltimore, the promise of increased rail container traffic was sufficient to convince Conrail to institute daily trailer-on-flat-car service to and from Chicago. By year-end, six major terminal operating companies, all served through the Conrail rail ramp adjacent to the Elizabeth Marine Terminal, had instituted competitive drayage charges and the trailer-on-flat-car traffic was increasing rapidly.

From the centralization of world trade functions in the World Trade Center to its trade development offices in the Orient, Europe and the American midwest, the Port Authority is engaged in the generation of new world trade and in increasing the port's world share.

Throughout the year the World Trade Institute, the educational arm of the World Trade Center, offered more than 300 programs on every aspect of international business, and its Language School continued to provide American and overseas business personnel with skills in over a dozen languages.

The World Trade Center maintains a unique electronic retrieval system known as Interfile, from which can be obtained accurate data to facilitate international business transactions. Interfile is one of the functions of the World Trade Information Center, which draws on a data bank developed by the World Trade Centers Association, a worldwide organization with members in 45 countries.

. . . And Marine Improvements

The Port Authority assumed the leadership, as it has in the past, for organizing civic, trade and corporate agencies to obtain congressional appropriations for harbor and channel improvements needed for shipping and other port-related industries. This year the Congress responded with appropriations of almost \$7 million, substantially the amount of the Port District request, to deepen channels and anchorages and to continue the waterfront cleanup program to restore the port's shoreline as an environmental and economic asset.

The first major clearance of the waterfront, in an area behind the Statue of Liberty, dovetailed with the construction of Liberty State Park, for which the State of New Jersey commissioned the Port Authority to provide highly varied and complex engineering services.

Port Authority Finance

• Basic Policies and Financial Structure

The Port Authority of New York and New Jersey was created in 1921 by compact between the two states to plan, develop and operate terminals and other facilities of transportation and commerce, and to advance projects in

the general fields of transportation and world trade that contribute to promoting and protecting the commerce of the Port District.

The Port Authority undertakes only those projects authorized by the two states.

The compact envisions the Port Authority as financially self-sustaining. The agency has neither the power to pledge the credit of either state or any municipality nor to levy taxes or assessments.

Over the years more than \$4.6 billion of Port Authority obligations have been purchased by investors, of which over \$2 billion was outstanding at December 31, 1977.

To effect its programs, the Port Authority created a General Reserve Fund under statutes which provide for the pooling of revenues from older facilities with established earning power to aid in the development of new projects.

• Combined Operations in Brief

Gross operating revenues of the Port Authority for the year 1977 totaled \$524,325,000, an increase of 5.6 percent over 1976. This growth reflects the continuing increase in the development and utilization of the Port Authority's facilities. Gross operating revenues include increased tolls on tunnels and bridges instituted on May 5, 1975.

Operating expenses increased 5.3 percent to reach \$327,047,000.

Financial income on securities held in the reserve and operating funds was \$28,238,000, which resulted from investment income of \$28,365,000, including a \$3,670,000 gain on the purchase of Port Authority bonds, and a downward adjustment of \$127,000 in the value of the securities held in these funds at year-end.

Thus, net revenues available for debt service and reserves were \$225,516,000.

Interest on the Port Authority's debt charged to operations and reserves totaled \$92,190,000 and long-term bonded debt amortization amounted to \$34,754,000. In addition, \$60,000,000 in principal payments was made to reduce outstanding bank loans in accordance with agreements with the banks. Total debt service charged to revenues and reserves, including reserve funds in trust, therefore, was \$186,944,000.

• Financial Position at Year-End

On December 31, 1977, the total assets of the Port Authority, represented by the cumulative amount invested in facilities and balances in construction, operating and reserve funds were \$4,396,559,000, an increase of 3.6 percent, or \$154,151,000, over last year.

The amount invested in facilities rose by \$95,353,000, including net interest during construction of \$9,603,000 on bonded debt and bank loans, to a cumulative total of \$3,792,776,000 at year-end 1977. This increase is represented by additional investment at:

Land Transportation Facilities.....	\$42,000,000
The World Trade Center	27,000,000
Air Terminals.....	20,000,000
Marine Terminals.....	6,000,000

Bonded debt decreased during the year by \$59,754,000 to a total of \$1,821,923,000. At year-end, net assets increased by 6.8 percent to a total of \$2,208,164,000, about 58 percent of the amount invested in facilities.

• Highlights	1977	1976
Gross Operating Revenues	\$ 524,300,000	\$ 496,400,000
Net Operating Revenues	197,300,000	185,700,000
Net Revenues Available for Debt Service and Reserves	225,500,000	215,800,000
Debt Service Charged to Revenues and Reserves	186,900,000	180,900,000
Cumulative Invested in Facilities	3,792,800,000	3,697,400,000
Bonded Debt Outstanding	1,821,900,000	1,881,700,000
Bank Loans Outstanding	205,000,000	140,000,000
General Reserve Fund	194,700,000	188,200,000
Consolidated Bond Reserve Fund	110,900,000	83,500,000
Reserve Funds in Trust	18,800,000	23,800,000

• Port Authority Terminals and Transportation Facilities At a Glance

Terminals	1977	1976
All Bus Facilities		
Passengers	76,500,000	78,000,000
Bus Movements	3,365,000	3,339,000
Total Employment	5,650	5,930

Cumulative PA Investment in Bus Terminal and Truck Terminals (In Thousands)	\$118,700	\$102,000
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Marine Terminals	1977	1976
All Terminals		
Ship Arrivals	3,087	3,416
General Cargo (Long Tons)	10,990,792	12,172,435
Total Employment	9,879	10,030

New Jersey Marine Terminals		
Ship Arrivals	1,977	2,313
General Cargo (Long Tons)	9,782,048	11,064,352
Total Employment	7,524	7,755

New York Marine Terminals		
Ship Arrivals	1,110	1,103
General Cargo (Long Tons)	1,208,744	1,108,083
Total Employment	2,355	2,275

Cumulative PA Investment in Marine Terminals (In Thousands)	\$534,000	\$528,000
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Air Terminals	1977	1976
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Totals at the Three Major Airports		
Plane Movements	822,000	791,000
Passenger Traffic	44,937,000	41,875,000
Cargo—Tons	1,349,000	1,200,000
Revenue Mail—Tons	220,000	214,000
Total Employment	52,606	55,559

Cumulative PA Investment in Air Terminals (in Thousands)	\$1,331,000	\$1,311,000
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Tunnels and Bridges (Eastbound Traffic in Thousands)	1977	1976
All Crossings		
Automobiles	72,835	71,719
Buses	1,587	1,528
Trucks	8,357	8,184
Total Vehicles	82,779	81,431

Cumulative PA Investment in Tunnels and Bridges (In Thousands)	\$593,100	\$571,000
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• Income	Combined	Marine Terminals
	1977	1976
	(in Thousands)	1977
Gross Operating Revenues	\$524,325	\$44,671
Gross Operating Income (Loss)	145,315	8,984
Gross Operating Revenues	496,413	42,509
Gross Operating Income (Loss)	136,587	8,741
Central Expenses	(42,790)	(41,446)
Income from Operations	102,525	95,141
Financial Income	28,238	30,038
Interest on Debt	(92,190)	(87,968)
Net Income	\$ 38,573	\$ 37,211

• Financial Position	Combined	Marine Terminals
	(in Thousands)	
1977		
Assets		
Facilities, net - beginning of year	\$2,802,243	\$386,777
Net capital expenditures	95,353	6,035
Depreciation	(94,753)	(14,148)
Facilities, net - end of year	2,802,843	\$378,664
Cash, investments and other assets	603,783	
Total Assets	3,406,626	
Liabilities	2,188,395	
Net Assets	\$1,218,231	
1976		
Assets		
Facilities, net - beginning of year	\$2,776,428	\$388,212
Net capital expenditures	116,386	11,820
Depreciation	(90,571)	(13,255)
Facilities, net - end of year	2,802,243	\$386,777
Cash, investments and other assets	544,985	
Total Assets	3,347,228	
Liabilities	2,174,386	
Net Assets	\$1,172,842	

B.T.D.B. Report & Accounts 1977

Extracts

Chairman's Statement

by Sir Humphrey Browne, CBE

In the year 1977 the British Transport Docks Board showed a further improvement in results. An increase in the more highly valued traffics, tight control of costs, benefits from investment and the extension of the Board's stevedoring activity: all these combined to increase profitability. This was achieved despite the fact that seaborne traffics generally were adversely affected by the level of industrial activity and other external forces to which the fortunes of the ports industry are particularly sensitive.

The surplus, after historic cost depreciation before interest, was £29.0 m, an increase of £3.2 m, and the return on capital improved from 15.5% to 16.8%. This represented a positive step towards the target of 20% return by 1980 which was agreed with Government early in the year. After additional depreciation for inflation, interest and tax of £7.9 m net profit increased from £6.2 m to £7.3 m.

Investment

Because of the Board's improving financial performance internal funds are available for an expanded investment programme. Despite the current lack of growth in world trade generally, the Board believe that worthwhile investment schemes should be pressed ahead to improve efficiency and customer service and to cater for expanding traffics. Accordingly, the Board are carrying through a wide range of investment projects at the ports. The largest single project, the construction of the fifth container berth at Southampton, was nearing completion at the end of the year. At Barry, in South Wales, a new conveyor system for the export of solid fuels is under construction; work has also started on a similar project at Ayr for the export of coal. At Garston the container facilities used principally by Irish sea services are being developed with new cranes to handle increasing traffic. The Mineral Quay at Immingham is in course of rehabilitation after years of intensive use for the import of bulk cargoes; and the container terminal at Hull is being further developed to handle increasing traffics. Two new general cargo berths at Goole were almost complete at the end of the year.

Traffics

In terms of total tonnage handled, the main factors were a substantial reduction in the movement of petroleum, partly as a result of North Sea oil flows; a reduction of iron ore imports by the British Steel Corporation; and the diversion of coal imports from South Wales ports. There was also the loss, towards the end of the year, of the traditional mail, cargo and passenger service between Southampton and South Africa, which is being replaced by the container service, won by Southampton against strong competition.

There was a further increase in container traffic and a 19% expansion in imports/exports of motor vehicles. Important new general cargo trades were gained at Hull, with 18 new services starting during 1977; at the South Wales ports, which are acquiring more general cargo

business to replace the declining coal traffic; and at the Board's small ports which had an excellent year, trades with Ireland being particularly good.

Charges

The Board's objective, of holding prices steady during the year after the increases on 1st January, 1977, was fulfilled. An increase in charges was necessary on 1st January, 1978, but the Board have again expressed the hope that there will be no further rise in charges for twelve months.

Cargo Handling

The Board believe that the best way of satisfying their customers is to be able to offer the full range of cargo services at their ports. To this end, further progress was made in the acquisition of stevedoring companies on agreed negotiated terms. In July, Stevedores (Goole) Ltd., was acquired and by the end of the year agreement had been reached for the acquisition of the Newport Stevedoring Co. Ltd. and the Hull Superintending & Tallying Co. Ltd. The Board's previous acquisitions of cargo handling businesses continue to be profitable and to make an important contribution to the overall results. The exception in 1977 was at Southampton where an overtime ban by dock workers in an attempt to break through Phase 2 of the Government's pay policy caused difficulties for eight months. The effect of this was compounded by a shortage of dockers during the peak summer period and as a result a considerable number of ships were diverted from Southampton.

The Board

At the end of the year Mr. George Lowthian, CBE, who was the only serving founder Member of the Board, having been appointed at the end of 1962, was approaching the age of 70 and retired from part-time membership. Mr. J.H. Collier-Wright, CBE, Deputy Managing Director since 1971 and an Executive Member of the Board since 1974, retired at the same time. I would like to pay tribute to the great contribution which both made to the Board.

Mr. Ron Smith, CBE, was appointed a Non-Executive Member with effect from 1st January, 1978. Mr. Smith was an Executive Member of British Steel Corporation for ten years. Previously he had been General Secretary of the Union of Post Office Workers, and for some years a Non-Executive Member of the Board of BOAC.

Prospects

I have mentioned earlier the target of 20% return on capital by 1980 which has been agreed with Government. The prospects of achieving the target will depend partly on the level of international trade, because with high fixed costs the ports industry is vulnerable to fluctuations in throughput. The Board are confident, however, that unless there is a major decline in world trade the target can be achieved, through the continued success of their investment policies, a tight control on those costs which can be influenced by the Board, and further efforts in the UK and overseas to win new business through a reliable and competitive service at the ports.

Staff

Each year the problems and the pressures for the Board's staff seem to increase. I would like to take this opportunity of expressing the Board's appreciation of the efforts of everyone concerned.

Salient Figures

	1977 \$000	1976 £000	Change on 1976 £000
Revenue (including investment income)	110,481	99,146	+ 11,335
*Surplus after historic cost depreciation before interest	29,024	25,797	+ 3,227
Exceptional items	Cr. 245	Dr. 717†	+ 92
Interest charges	6,830	6,748	+ 82
Reserve for additional depreciation	7,254	6,039	+ 1,215
Net surplus after replacement cost depreciation before tax	15,185	12,293	+ 2,892
Net surplus after tax	7,285	6,193	+ 1,092
Capital employed	£173.0m	£166.7m	+ £6.3m
Surplus as % of capital employed	16.8%	15.5%	+ 1.3%

Traffic

	1977 000 tonnes	1976 000 tonnes	Change on 1976 000 tonnes	%
Ores	8,569	10,893	— 2,324	21.3
Timber	1,120	1,139	— 19	1.7
Coal	4,525	5,201	— 676	13.0
Petroleum	40,566	43,848	— 3,282	7.5
Foodstuffs	3,955	4,169	— 214	5.1
Manufactured goods and other commodities	18,435	18,239	+ 196	1.1
	77,170	83,489	— 6,319	7.6

	1977	1976	Change on 1976	%
Container and roll-on/roll-off services (freight units)	693,000	683,000	+ 10,000	1.5
Import/export vehicles	278,000	233,000	+ 45,000	19.3
Accompanied passenger vehicles	466,000	499,000	— 33,000	6.6
Passengers	2,962,000	3,157,000	— 195,000	6.2
Shipping entering and leaving (NRT)	129,807,000	138,279,000	— 8,472,000	6.1

The Port of Tauranga — 25 years progress

(extracts) See front cover also.

Port Growth:

The proposal in the early 1950's to establish a pulp and paper mill at Kawerau to utilise the tremendous forestry resources in the Rotorua region brought sharply into national focus the existence of a natural deep water port within Tauranga Harbour. Construction at Mount Maunganui of the first 1225 feet of wharf at a cost of some \$1.9 million was commenced in November 1953 with the aid of Government finance and under Ministry of Works supervision.

Growth of the Port has paralleled the rapid growth of New Zealand's two major pulp and paper mills at Kawerau and Kinleith, the log, timber and dairy products export trades, and the fertiliser, petroleum products import trades.

The export of logs in 1955 was then only an embryonic dream but as the 1950's slipped away the dream became a reality, when on November 24, 1957 the first trial shipment of 158 tons was sent to Japan.

Log shipments shot up from 13,667 tons to 85,155 tons in 1958/59 and timber shipments increased by 24%, marking the beginning of a spectacular trade which reached a peak of 1,623,880 tonnes in 1972/73.

In 1950, total trade potential was optimistically assessed at "perhaps 1 million tons in 25 years"—in fact, the first million tons was chalked up in 1964/65 only 10 years after the official opening, the second million in 1968/69, and the third million in 1972/73.

Port construction and capital works:

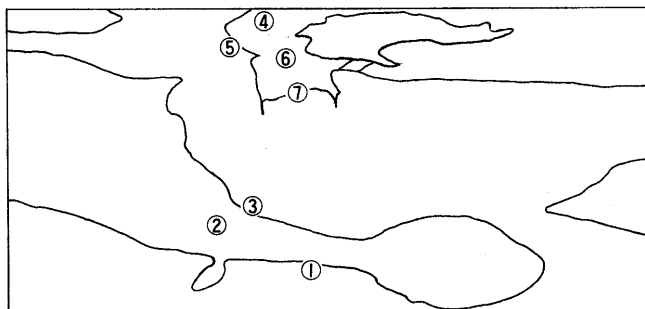
To keep pace with this dramatic progress an almost continuous berth building programme has been undertaken accompanied by channel and harbour deepening, reclamation works, construction of port facilities, acquisition of floating and shore plant, tugs and so on.

- Port draughts were increased from 7.31 m (24 ft), by 2.79 m (9 ft) between 1961-1978 to handle the 68% increase in shipping in and out (269% increase in net register tonnage).
- The main wharf was lengthened from 373 m to 1,830 m (6,004 ft).
- Large transit storage sheds were constructed.
- In 1968 the first stage of the present 5½ ac, 22,500 tonne capacity butter and cheese cool store became operational.
- In 1971 a 600 tonne slipway and jetty were constructed.
- During March 1975 a new roll on/roll off service linking the Port directly with Australian Ports was inaugurated, and a \$2 million Forest Industry Terminal has subsequently been completed.
- In 1977 Government approval was given to purchase a heavy lift multi-purpose gantry crane at a total establishment cost of \$3.9 million.

The Port's first tug "Mt Maunganui" entered service on April 14, 1960, the second, "Rotorua", on April 12, 1968, and the third even more powerful tug "Kaimai", arrived in October 1977 giving the Port in 1978 combined tug power exceeding 60 tons bollard pull.

"Kere-iti" (meaning "little digger"), in almost continuous use since 1953, and "Teremoana" (Dec. 1970),

KEY TO FRONT COVER



- ① Ocean Beach, Bay of Plenty. Summer surfing and swimming resort. ② The Borough of Mount Maunganui. ③ The Port of Tauranga. ④ Tauranga City. ⑤ Tauranga Wharves. ⑥ Port slipway, fish processing complex. ⑦ Sulphur Point, 89 ha potential.

both cutter suction dredgers, have deepened and reclaimed substantial areas of the harbour. The latter has dredged out over 2 million cu. yards and is presently reclaiming land at Sulphur Point, which has a potential of 89 ha (220ac) for future industrial and port purposes.

And all this tremendous activity has involved an annual capital expenditure averaging over the 20 years some \$1.2 m. Assets of less than \$205,000 in 1956 have grown in 1978 to more than \$32 million indicating the tremendous activity which has marked the advance of the Port of Tauranga to major port status, the fourth largest in N.Z. and the country's largest export-tonnage Port. It has been estimated that Port operations are generating either directly or indirectly almost 20% of the Tauranga urban area's total personal income alone of more than \$9 million and the Port's importance not only to Tauranga but to the region it serves is obvious.

Regional Expansion:

Back in the Port's hinterland other events also shaped the progress of a region which has become inextricably linked with development of the Port of Tauranga—a region nationally recognised, as is the port, as one of the fastest growing and most important to national economic well being.

For example—

- Port access roads were upgraded to Class 1 and State Highway status in massive reconstruction programmes.
- Government has completed a \$56 m major rail deviation through the Kaimai mountain range, shortening rail distances between the Port and Rotorua/Waikato areas by 51-100 km.
- Several major hydro-electric stations, and a geo-thermal power station were constructed to provide much needed electrical energy for North Island industrial expansion, which in the port region conservatively exceeded \$300 million.
- New Zealand's two largest pulp, newsprint, and kraft paper mills, N.Z. Forest Products Ltd. and Tasman Pulp and Paper Coy. Ltd., and many log and timber

exporters, substantially stepped up production, plant expansion, and export marketing.

- The N.Z. Dairy Board in 1968 decided to centralise much of the butter and milk product exports through the Port which is closer to production centres than to any other North Island Port. By 1973/74 the Port was handling almost 250,000 tonnes, or 38% of N.Z.'s total dairy exports.
- An export freezing works was established at Rangiuru within 40 km of the Port.
- Population within the port hinterland has expanded between 1961-1978 by 43%, and projected regional growth is one of the fastest in N.Z.
- Two flour mills, five oil companies, a fertiliser works, and iron/steel importers soon followed establishment of the Port. Over the years many major industries have been established in close proximity to the Port, and now enjoy the advantages of low cost import/export distribution, through fast, efficient cargo handling.

The North Island's first wood and saw chip export terminal became operational during August 1972, and Dominion Salt (N.Z.) Ltd., established a North Island salt refinery (the second in Australasia) at the Port during 1972/73.

Board assumes control:

Ten years after the wharf was officially opened the 1,292 m (4,240 ft) Mt. Maunganui wharf was officially handed over on 13 November 1965 to the then Tauranga Harbour Board by the Rt. Hon. Sir Keith Holyoake, G.C.M.G., C.H., Prime Minister, signifying completion of the harbour works originating by agreement with the Crown on 4 November 1953. In so doing the Prime Minister made a statement which still exemplifies the co-operation between the Board and other organisations. He said—"Your Port, City and surrounding area are developing and prospering as a result of close co-operation between the Government, the Cities, Boroughs and Counties in the district and the Tauranga Harbour Board. The team work which has been evident and the confidence each party has had in the other is to be commended. It is this type of teamwork between the Government and the people of New Zealand, which ensures the further development and prosperity of our country."

The Port region is in the midst of unprecedented growth and its economic progress is being keenly observed not only by the rest of New Zealand but also by numerous visiting overseas industrialists, and importers/exporters.

Coupled with agricultural and forestry productivity, the region is actively developing the tourist trade and cruise liners are making regular visits. The Port's capacity to handle cargoes efficiently and speedily has become world recognised and its future as a major sea terminal is assured.

Where are tomorrow's ports ?

... your future trading partners.

They are shown in the annual world survey of port construction and dredging projects, published in the October issue of

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Orbiter Probe

Review of Maritime Transport, 1977 prepared by the UNCTAD secretariat (Extracts)

1. THE DEVELOPMENT OF INTERNATIONAL SEABORNE TRADE

The growth of seaborne trade in 1976 and 1977 was significantly influenced by an economic recovery in developed market-economy countries which was, however, short-lived.

World seaborne trade in 1974-1976 is shown in table 1. Figures for 1977 are not yet available. World seaborne trade increased by 9 per cent in 1976 in terms of goods loaded. According to preliminary estimates, trade rose again in 1977 by some 3.3 per cent in terms of weight and by 4.3 per cent in terms of ton-miles. The share of tanker cargo rose marginally to 53.6 per cent of the world seaborne trade; in 1977 it should increase further since, according to preliminary estimates, tanker cargo loadings rose by 5 per cent compared with a 2 per cent increase for dry cargoes.

The percentage shares of various groups of countries in the volume of world seaborne trade, separately by loadings and unloadings and types of cargoes, in 1974 and 1975, are shown in table 2.

2. PORT DEVELOPMENTS

In summary, ports in developed countries are continuing their efforts to modernize existing installations and are

developing new facilities mostly for containers and ro-ro, while ports in developing countries are expanding, restructuring and modernizing their facilities. In particular, they are constructing many new specialized facilities, for example for containers and ro-ro, sugar, cereals and other bulk cargoes.

(1) Demand for port services

The demand for port services has been affected in the past year by various factors, of which the following are of particular interest:

- (a) The increased use of the roll-on/roll-off type of ships which lends greater flexibility to shipping schedules, and in particular to the choice of the ports of call;
- (b) The development of new feeder services;
- (c) The increased utilization of medium-size tankers and the stabilization of the largest ULCC size around 500,000/550,000 dwt.

Containerization is not developing at the same rate in all regions. In developing countries, containerization is spreading fastest in Asia. Other significant developments may be observed also in West Africa, the Caribbean and some Latin American countries.

Table 1
Development of international seaborne trade, 1974-1976
(goods loaded)

Tanker cargo			Dry cargo				Total (all goods)	
			Total		Of which: main bulk commodities*			
Year	Millions of tons	Per- centage increase/ decrease over previous year	Millions of tons	Per- centage increase/ decrease over previous year	Millions of tons	Per- centage increase/ decrease over previous year	Millions of tons	Per- centage increase/ decrease over previous year
1974	1 832	— 2	1 471	5	668	7	3 304	1
1975	1 644	—10	1 428	—3	635	—5	3 072	—4
1976	1 797	9	1 555	9	646	2	3 352	9

* Iron ore, grain, coal, bauxite/alumina and phosphate.

Table 2

World seaborne trade in 1974, 1975 and 1976 by types of cargo and shares of groups of countries
(Millions of tons and percentages of world total)

Country group	Goods loaded					Goods unloaded			
	Year	Petroleum		Dry cargo	Total all goods	Petroleum		Dry cargo	Total all goods
		Crude	Products			Crude	Products		
World total				(Trade in millions of tons)					
	1974	1 497	335	1 472	3 304	1 470	312	1 472	3 254
	1975	1 364	280	1 428	3 072	1 373	287	1 395	3 055
	1976	← 1 797 →		1 555	3 352	← 1 614 →		1 619	3 233
World total				(Percentage share of each category of goods in total)					
	1974	45.3	10.2	44.5	100.0	45.2	9.6	45.2	100.0
	1975	44.5	9.1	46.5	100.0	45.0	9.4	45.6	100.0
	1976	← 53.6 →		46.4	100.0	← 49.0 →		50.1	100.0
Developed market-economy countries				(Percentage share of trade by groups of countries)					
	1974	1.7	29.3	62.1	31.4	79.0	80.3	77.0	78.3
	1975	2.4	30.0	62.4	32.8	79.2	79.0	73.7	76.6
Socialist countries of Eastern Europe and Asia	1974	2.9e/	10.0	7.2	5.5	1.7	2.1	5.3	3.3
	1975	3.7	12.3	7.3	6.1	1.9	2.1	6.5	4.1
Developing countries	1974	95.4	60.7	30.7	63.1	19.3	17.6	17.7	18.4
	1975	93.9	57.7	30.3	61.1	18.9	18.9	19.8	19.3

In 1976/1977 attempts were made to improve inland waterways and the corresponding ports and their access. This is an important development since it will allow sea-going ships to navigate further on certain inland waterways and will thus make for a better integration of sea-going and inland waterway transport.

(2) Supply of port services

While 1975/76 was marked by an unprecedented port development effort in developing countries, 1977 was characterized by a consolidation of the port development schemes and, for certain subregions, a reconsideration and scaling down of the improvement projects.

A number of important port projects will also be financed by the World Bank and other international lending institutions. Table 3 gives a full listing of the port development loans which were granted by IBRD and IDA in 1976/77. These projects cover the construction of bulk facilities, general cargo facilities and container and roll-on/roll-off terminals. The loans for the 1976/77 period amount to a total of \$248.9 million for 10 projects, which compares with \$107.5 million for 8 projects in 1975/76.

(3) Adequacy of port services

Figures for the first four months of each year since 1971 show the following progression:

Year	Average of waiting days per ship
1971	2.2
1972	2.3
1973	4.0
1974	4.8
1975	14.3
1976	39.5
1977	22.0

Since reports tend to come from the regions that suffer from the worst congestion, they are not representative of world-wide port conditions; rather, they show how conditions in the severely affected regions have developed. Clearly, conditions were still serious in 1977, but there was some improvement in comparison with 1976 figures.

Conditions in ports previously included in the survey have improved, notably in the Gulf; other ports that were not congested before are now appearing in the reports, especially ports of the Red Sea and South America. So while congestion is less severe in individual ports, it seems to be becoming more widespread.

Although emergency measures have been taken with success in some ports, the major steps which have eased port congestion have been physical port expansion and strengthened management.

(Continued on next page)

Table 3
World Bank loans or credit for port development granted in 1976/77

Country	Type and date	Amount of loan/credit (million \$)	Total project cost
Algeria	IBRD May 1977	80	80
	Construction of a new deep-water port near the town of Jijel to serve mainly the new Jijel steel complex. Maturities: 1981-1994; Interest rate: 8.2%		
Burma	IDA December 1976	10	16.1
	Port of Rangoon rehabilitation, deepening the access channel. Maturities: 1987-2026; Service charge: 3/4%		
Cameroon (United Republic)	IBRD September 1976	15	120
	IDA September 1976	10	
	Expansion and building of new facilities, building of a new dock yard and floating dock, road and rail access to the port. Maturities: IBRD: 1981-1996; IDA: 1986-2026; Interest rate: IBRD: 8.9%; Service charge: IDA: 3/4%		
Guatemala	IBRD July 1976	2.3	
	Reconstruction (earthquake) Maturities: 1980-1998; Interest rate: 8.85%		
Honduras	IBRD April 1977	12 (of which \$5 m. is a third window loan)	29.9
	IDA April 1977	5	
	Building of new port at Puerto Castilla and expansion of new facilities at San Lorenzo. Maturities: IBRD: 1983-2001 \$5 m; 1982-1997 \$7 m; IDA: 1987-2027; Interest rates: IBRD: 4.5% \$5 m; 8.5% \$7 m; Service charges: IDA: 3/4%		
Indonesia	IBRD November 1976	32	79.3
	Improvement of Port of Tanjung Priok, containers and general cargo handling. Maturities: 1981-1996; Interest rate: 8.7%		
Korea (Republic of)	IBRD April 1977	67	112
	Development of port of Busan: container berth, access road, dredging. Maturities: 1981-1994; Interest rate: 8.5%		
Mauritius	IBRD November 1976	3.6	23.5
	Expansion of port of Port Louis and improvement of operating conditions. Supplement to the \$10 million loan granted in 1974. Maturities: 1983-2001; Interest rate: 4.7%		

(Continued on next page)

Country	Type and date	Amount of loan/credit (million \$)	Total project cost
Senegal	IBRD April 1977	6	23.9
	Expansion of port of Dakar. Improvement of existing conditions and operations of industrial fishing fleet. Maturities: 1983-2001; Interest rate: 4.2%		
Yemen Arab Republic	IDA May 1977	6	27.9
	Development of port of Hoddeidah and rehabilitation of the lighterage port of Mocha. Maturities: 1987-2027; Service charge: 3/4%		

Publications

1. "Ship Demand to 1985" (Volume 6) Price £152.00/\$304.00 Surface Mail
Graham & Trotman Ltd.
Bond Street House, Mayfair
14 Clifford Street
London W1X 1RD
England
2. "Containerization International Yearbook 1978". Compiled by Containerization International. £17.00 postage paid in U.K. \$33 by surface mail overseas.
The National Magazine Company Ltd.
Chestergate House, Vauxhall Bridge Road
London, SW1V 1HF
England

Seminars, Conferences, etc.

Legend: ●) Title, Purpose/Location

2) Organization/Convention Coordinator

3) Date/Fee

- 2nd Container Technology Conference/Metropole Hotel, Brighton, England
- 2) CS Publications Limited
- 3) December 6-8, 1978
- Xth IALA Lighthouse Conference, Tokyo 1980, Tokyo Prince Hotel.
- 2) International Association of Lighthouse Authorities
- 3) November (probably 10-19) 1980

"Portos e Navios"

APRIL 1978

- São Paulo's Institute for Technological Research finished the projects of a model-ship to be introduced in Amazônia for the transportation of cargo and passengers.
- Mr. Wanderlino Mariz de Oliveira, President of the Association of Brazilian Exporters, shows the ports' weak points.

Ports & Waterways

- The National Bank of Economic Development approved a financing of 1.1 billion cruzeiros for Companhia Docas do Rio de Janeiro, to be channelled to the construction of a coal terminal at Sepetiba Port, with a capacity of 5.6 billion tons per year.
- The lack of resources is causing Portobrás to delay main river works, including the Tietê-Paraná connection.

MAY 1978

Ports & Waterways

- The Port of Manaus received recently three electric cranes to operate on rails, replacing the old ones which operated on wheels.
- An agreement has been signed between Portobrás and representatives of the stevedores of Porto Velho Port, regulating the situation of that working class.
- The dryness which afflicts the South of Brazil will cause an appreciable decrease in the soia and corn harvests, reducing considerably the exportations via Port of Paranaguá.

Battles of the small ships

Nanaimo Harbour News:—Nanaimo will have its own sea battles, staged during Port Days. One of the highlights of the events, on September 29 and September 30, will be the visit of the small ships from Vancouver.

The small ships are 14 ft. converted Sabot Brigantines fully rigged with two masts and ten sails which, as the Small Ships Society says, are meant to "be facsimiles of the tall ships, used in the great days of sail." They can be sailed single-handedly.

The battles, with cannons and smoke bombs, last about 20 minutes and are very exciting. Demonstrations at the recent Pacific National Exhibition in Vancouver attracted record crowds.

Nanaimo Port Days—1978 will also provide with the following main events:

- Tours by students of ship loading in Port.
- Display of Port materials handling equipment.
- "Story of the Port of Nanaimo" audio/visual display.
- Demonstrations of Oil Spill Cleanup Harbour Protector.
- Coast Guard Cutter in Port.

Basic data on the Least Developed Countries

(Extracts from UNCTAD document TD/B/AC. 17/8)

Exports and Imports:

Least developed countries	Exports in 1977			Imports in 1977		
	Value (\$ million) f.o.b.	Per cent of GDP in 1977	Exports per capita(\$) (dollars)	Value (\$ million) c.i.f.	Per cent of GDP in 1977	Imports per capita(\$) (dollars)
Afghanistan	270	9.7	13.3	380	13.6	18.7
Bangladesh	450	8.0	5.5	650	11.5	7.9
Benin	90	15.3	27.4	220	37.5	66.9
Bhutan	—	—	—	—	—	—
Botswana	200	58.1	281.7	220	63.9	309.9
Burundi	85	16.5	21.5	75	14.6	19.0
Cape Verde	10	13.1	32.3	40	52.2	129.0
Central African Empire	55	11.7	29.4	60	12.8	32.1
Chad	40	7.4	9.5	150	27.9	35.6
Comoros	—	—	—	—	—	—
Ethiopia	300	9.6	10.4	450	14.4	15.6
Gambia	50	53.6	90.9	75	80.4	136.4
Guinea	250	24.0	53.9	130	12.5	28.0
Haiti	150	13.8	31.6	170	15.7	35.8
Lao People's Dem. Rep.	15	4.5	4.3	100	30.3	29.0
Lesotho	20	18.3	18.5	160	146.3 ⁽²⁾	148.1
Malawi	180	19.9	33.9	195	21.6	36.7
Maldives	—	—	—	—	—	—
Mali	110	16.2	18.4	170	25.1	28.4
Nepal	90	6.6	6.8	180	13.1	13.7
Niger	110	14.7	22.6	150	20.0	30.9
Rwanda	130	23.1	29.5	90	16.0	20.5
Samoa	15	33.5 ⁽³⁾	100.0	35	78.1 ⁽³⁾	233.3
Somalia	100	23.7	29.9	160	37.9	47.9
Sudan	620	12.0	37.5	1000	19.4	60.5
Uganda	600	19.3	48.6	400	12.9	32.4
United Rep. of Tanzania	670	22.7	41.7	800	27.1	49.8
Upper Volta	90	12.8	14.3	200	28.4	31.7
Yemen Arab Rep.	10	0.6	1.4	650	38.1	91.8
Yemen Democratic	220	52.1	122.2	500	118.4	277.8
Total above	4930	13.9	19.1	7410	20.9	28.7
All developing countries ⁽¹⁾	125730	17.4	75.4	148510	20.6	89.1

(1) Excluding major petroleum exporters.

(2) 79.5 per cent of GNP (instead of GDP).

(3) Per cent of GDP in 1976.

Per capita GDP and population, levels and growth

Least developed countries	Per capita GDP (in US dollars) (at 1976 prices)			Projected per capita GNP in 1990 ⁽²⁾ (dollars) (at 1976 prices)			Population	
	1970	1977	Increment	A	B	C	(in millions)	Average annual growth rates
							1976	1970-1976
Afghanistan	158	184	26	180	254	291	19.80	2.5
Bangladesh	64	65	1	79	85	107	80.56	2.4
Benin	172	169	-3	207	168	275	3.20	2.7
Bhutan	—	70 ⁽¹⁾	—	—	—	113	1.20	2.2
Botswana	202	456	254	560	1555	715	0.69	3.8
Burundi	125	124	-1	60	116	199	3.86	2.4
Cape Verde	327	237	-90	195	118	363	0.30	2.1
Central African Empire	302	239	-63	211	147	387	1.83	2.2
Chad	113	121	8	89	150	194	4.12	2.1
Comoros	216	179	-37	316	113	291	0.31	2.5

Least developed countries	Per capita GDP (in US dollars) (at 1976 prices)			Projected per capita GNP in 1990 ⁽²⁾ (dollars) (at 1976 prices)			Population	
	1970	1977	Increment	A	B	C	(in millions)	Average annual growth rates
							1976	1970-1976
Ethiopia	106	103	-3	130	93	167	28.19	2.6
Gambia	135	160	25	200	256	259	0.54	2.6
Guinea	165	169	4	141	165	267	4.53	2.4
Haiti	183	217	34	193	285	340	4.67	1.6
Lao People's Dem. Rep.	96	89	-7	120	75	146	3.38	2.2
Lesotho	64	96	32	104	208	151	1.06	2.2
Malawi	116	161	45	211	279	254	5.18	2.6
Maldives	—	110 ⁽³⁾	—	—	—	178	0.14	2.1
Mali	98	107	9	77	117	167	5.84	2.5
Nepal	96	99	3	98	107	159	12.86	2.3
Niger	149	146	-3	215	148	246	4.73	2.7
Rwanda	108	121	13	158	152	194	4.29	2.6
Samoa	—	299 ⁽⁴⁾	—	—	—	484	0.15	1.0
Somalia	92	119	27	105	201	193	3.26	2.6
Sudan	325	296	-29	274	189	469	16.13	2.5
Uganda	298	239	-59	318	146	395	11.94	3.3
United Rep. of Tanzania	153	175	22	339	220	277	15.61	2.7
Upper Volta	107	106	-1	150	98	170	6.17	2.3
Yemen Arab Rep.	207	255	48	295	394	405	6.87	3.0
Yemen Democratic	195	222	27	100	308	353	1.75	2.7
<u>Total above</u>	131	135	4	152	146	217	253.16	2.5
<u>All developing countries</u>	408	491	83	696	696	775	1934.69	2.5

(1) GNP in 1976 at average 1974-1976 prices.

(2) The figures in column A assume a continuation of the growth rate of per capita real product in the period 1960-1970; those in column B assume a continuation of the growth rate of per capita real product in the

period 1970-1977; those in column C assume the growth rate of per capita gross product of 3.5 per cent called for in the International Development Strategy.

(3) GNP in 1975 at average 1974-1976 prices.

(4) 1976.

Shipments increase

Nanaimo Harbour News:—In the first seven months of this year, shipments of lumber through the Port of Nanaimo showed a healthy increase over last year, says Bob Chase, manager of marketing and public relations.

During that period export shipments were nearly 300,000 tonnes compared with 255,000 tonnes for the same period last year. "It confirms the view that this will be a record year for the shipment of lumber through the port" says Chase. Major volumes of lumber are going to the U.S. Atlantic Coast, Japan and the Continent.

Quebec Port Manager heads Canadian Port Group

Toronto, Ontario, Canada:—Henri Allard, manager of the Port of Quebec, is the new president of the Canadian Port and Harbour Association.

Mr. Allard was elected at the association's annual meeting held recently in Ottawa, Ontario. He succeeds Mowbray Alway of the Hamilton Harbour Commissioners.

Gordon Moulard, Saint John N.B., was elected First Vice-President and Don Rawlins, Nanaimo, B.C., Second Vice-President.

Half-year container figures show 11 percent increase at DMT

Baltimore, Md.:—Total container tonnage at Dundalk Marine Terminal for the first half of 1978 was 11 per cent higher than the same period last year, the Maryland Port Administration has announced.

In comparing year-to-date figures, the total container tonnage so far in 1978 at 1,491,846 is 149,447 tons higher than the 1977 figure of 1,342,399 tons. In container volume, this year's total so far of 122,396 is 12 per cent higher than the number of containers handled during the same time last year, which was 109,236. These are total import/export figures which include both 20 and 40 foot boxes.

These half year statistics further support MPA predictions that this is a record-breaking container tonnage year in the making. They also make completion of Hawkins Point Marine terminal, which could free as many as 100 acres at Dundalk Marine Terminal for container and general cargo use, more attractive than ever.

Break-bulk cargo soars to a record

South Carolina State Port Authority:—General cargo volumes at State Ports Authority facilities at Charleston increased 163,522 tons during the 1977-78 fiscal year,

despite the adverse impact of a two-month container strike.

Break-bulk cargo tonnage soared to a record level of 1,354,462 tons, up 213,618 tons.

Despite the strike, cargo in containers reached 1,338,692 tons, only 50,096 less than a year ago. Strike-caused losses in containerized cargo last October and November were estimated at 250,000 tons. The port moved more than 93,000 containers.

Bulk shipments at Charleston showed a decline, as a result of a decline of grain shipments at the North Charleston Grain Elevator.

The decline was attributed to the impact of the drought of the summer of 1977. The grain elevator was built by the Ports Authority and is operated by the S.C. Farm Bureau Marketing Association.

Sharp increase in petroleum thruput

Port Everglades handled 6.9 million barrels of petroleum products during the month of August, 1978. This was up 22 per cent over the corresponding period one year ago (5.6 million barrels). It was a 41.5 per cent increase over August, 1976's thruput of 4.8 million barrels.

The commodity experiencing the greatest amount of growth in barrel quantity was diesel fuel.

Another commodity experiencing substantial growth in the area of petroleum products was jet fuel.

F.M.C. issues wharfage decision

(Port of Houston Magazine):—The Federal Maritime Commission in a decision served June 8, 1978, in Docket 77-47, In Re: Far East Conference Amended Tariff Rule Regarding the Assessment of Wharfage and Other Accessorial Charges, has ordered the Far East Conference to show cause why a proposed tariff change relating to the assessment of wharfage charges was not lawful. This case involved a proposed tariff change by the Far East Conference, which would have changed the steamship lines system of assessing port charges, i.e., wharfage at the North and South Atlantic ports. The current system of assessing wharfage, is for the steamship lines to absorb wharfage charges at the North Atlantic and South Atlantic ports and not pass this wharfage on to the customer. However, in this case, the Far East Conference was attempting to amend their tariff to eliminate this absorption; however it was protested to the Federal Maritime Commission and the F.M.C. ordered the Far East Conference to show cause why proposed changes were not lawful. This practice in the North Atlantic and South Atlantic ports differs from the practice at the Gulf ports where the wharfage charges are assessed against the shipper and are not absorbed by the steamship lines, even though many of the ocean rates are equalized.

Port Authority of NY & NJ inspects resource recovery plants

Chairman Alan Sagner of The Port Authority of New



Los Angeles:—TERMINALS LINKED—The final concrete pile was recently driven across Slip 232, the massive Seaside Container Terminal complex being developed in the Port of Los Angeles. Over 800 concrete piles span the slip, connecting the Overseas Shipping Company and Evergreen Marine terminals. Construction is in progress on the rock dike which is being built across the mouth of the slip.

Spoil dredged from the Los Angeles Main Channel will be deposited behind the dike to create 10 acres of new backland area. The resulting 5,000-foot wharf will accommodate five or six modern container vessels and will offer the services of six, high-lift capacity container cranes on continuous track.

When completed in 1981, the Seaside Terminal will include 129 acres and will be the largest container terminal complex on the Pacific Coast.

York and New Jersey, together with Executive Director Peter C. Goldmark, Jr. and Industrial Development Department Director Neal R. Montanus, have planned a series of meetings to acquaint European business leaders with the new Port Authority industrial development program. In addition, visits are planned with executives of engineering and manufacturing firms which have developed resource recovery plants in West Germany and Switzerland.

The trip follows up technical fact-finding visits in both the United States and abroad by Port Authority engineers last year. It has been planned as one of the first official actions by the Port Authority to implement the legislation signed by the Governors of New Jersey and New York on August 24.

Port Corpus Christi 1977 Annual Report

• "Report to the Commissioners" (Extracts from)

"During 1977 the Port of Corpus Christi achieved its greatest record ever, with total cargo handled being well over 60 million tons and 26 per cent greater than the year before.

"Much of the rapidly increasing commerce through the Port has resulted from tremendous expansions by existing plants as well as from new plants located here."

"During 1977 a project of special interest to this department was participation in studies and experiments to determine the best native vegetation to stabilize dredge material and the banks of the ship channel. This is being done in an effort to minimize erosional effects of wind and water on the channel shoaling and disposal areas, to enhance the aesthetics along the waterways and adjacent disposal areas and to increase estuarine productivity."

"Improvements in technical equipment made during 1977 included the installation of a computer and of more sophisticated and diverse radio equipment.

"An IBM System 3 Model 4 computer now in operation receives information and makes it accessible electronically through visual display terminals. All accounting and personnel record keeping are automated on the system, as well as statistical information concerning cargo and vessel activity. When fully implemented the system will provide improved management information and more efficient financial, accounting and personnel record keeping."

"New marine radio equipment was placed in operation during the year to establish base stations at both the harbor master's office and the Navigation District office. The equipment provides eight very high frequency channels for communications with ships and all Coast Guard stations in the Corpus Christi and Port Aransas areas, including the outer bar."

"Total operating revenue for the calendar year 1977 amounted to \$5,309,724.80. Operating expenses for the year totalled \$4,556,422.62, leaving a net operating income for the year (not allowing for depreciation) of \$753,302.18. With the addition of the net non-operating revenue totalling \$565,953.00, the net income for the year amounted to \$1,319,255.18."

"During 1977 the Navigation District made the final payments on two of its remaining outstanding bond issues. One of these was the last of the District's ad valorem tax bonds, issued in 1957 in the original amount of \$2,325,000, bearing 4 per cent interest, to pay for construction of the Bulk Materials Dock and the District's portion of the cost of relocating the railroad tracks and replacing the bascule bridge."

"The other series, issued in 1959 and redeemed two years ahead of maturity, was a total of \$1,900,000 in revenue bonds to finance the extension of the ship channel to Viola Basin. This series was retired by wharfage fees paid by Sun Oil Co. for use of the docks at its refinery.

"As 1977 drew to a close the Navigation District was approaching approval by all environmental agencies involved for several dredge disposal areas so that maintenance dredging could begin to restore the ship channel to its

former depth of 40 feet and for further deepening to its authorized depth of 45 feet.

"We can truly be proud of our accomplishments during 1977. But we could not have had such a successful year without the help and guidance of our Navigation Commissioners who serve our Port with such devotion and dedication."

Harry G. Plomarity
Port Director

• Review of Port Operations

The Port of Corpus Christi had its biggest year ever in 1977.

A total of 60,699,825 tons of cargo moved through the four deepdraft divisions of the Port. This was a 26 per cent increase from the year before and more than twice the total volume of cargo handled in 1973.

Ships calling at the Port keep getting bigger each year, but the number of sailings also keeps climbing. Total sailings in 1977, including dry cargo ships, tankers and barges, were 5,224, up 10 per cent from the 4,731 sailings in 1976.

Petroleum, both crude and refined products, totaled 48,512,060 tons, approximately 80 per cent of all cargo in 1977. Grains were the second biggest commodity in the Port's cargo mixture, with 3,452,437 tons.

Statement of Income for the year ended December 31, 1977

Operating Revenue	\$000	\$000
Wharfage		
Petroleum	1,234	
Dry cargo	399	1,634
Dockage		
Petroleum	228	
Dry cargo	179	
Corpus Christi Grain Elevator	108	517
Others		3,158
Total Operating Revenue		5,309
Operating Expenses		4,556
Net Operating Income		753
Non-operating Revenue		642
Non-operating Expenses		76
Net Income		<u>1,319</u>

Balance Sheet as at December 31, 1977

ASSETS:	\$000
Current Assets	11,127
Fixed Assets	30,234
Other Assets	78
Restricted Cash and Temporary Investments	2,677
Installment Sales Receivable	33,285
Total Assets	<u>77,402</u>
LIABILITIES AND CAPITAL:	
Current Liabilities	3,883
Long-term Liabilities	34,745
Total Liabilities	38,628

(Continued on next page bottom)

102,410,601 Tons: A New Record For The Port of Houston

At the Port of Houston 1977 was a year of exceptional achievement when, for the first time in history, more than 100 million tons of cargo moved across the public and private wharves lining the banks of the Houston Ship Channel.

Records also were set in foreign trade tonnage and dollar value, in the number of automobiles imported, and in the number of ships calling at the Port.

Houston's booming economy attracted many new maritime businesses in 1977. During the year, 26 freight forwarders, 11 steamship agencies, eight motor freight lines, and four ship brokers and charterers opened offices in Houston. Additionally, 22 previously unrepresented steamship lines began offering regular service to the Port of Houston.

Total Port Statistics

Port Authority statistics show that a total of 102,410,601 tons of cargo were handled at the Port of Houston in 1977, 14 per cent more tonnage than the 90 million tons passing through the Port in the record year of 1976.

The all-time high 1977 foreign trade figures of 51,020,278 tons valued at \$10.9 billion show an increase of 22 per cent for tonnage and 14 per cent for dollar value over the 1976 totals of 41.9 millions tons valued at \$9.6 billion.

Import cargoes in 1977 totaled 35,513,713 tons with a value of \$5.3 billion, while 15,506,565 tons of goods worth \$5.6 billion were exported.

Automobile imports numbered 192,171 cars, a 7 per cent increase over the 179,886 brought in during 1976.

The Houston International Seamen's Center, located in the Turning Basin area of the Port, welcomed more than 80,000 seamen during 1977, more than visited any other such agency in the world.

Ship Arrivals

A total of 4,882 vessels representing the flags of 61 nations entered the Port of Houston in 1977, 358 more than had called Houston in 1976. Of the total, 2,806 were dry cargo vessels, 1,930 were tankers, and the remainder were container, Seabee, LASH, or LASH/container vessels.

Capital	38,774
Total Liabilities and Capital	<u>77,402</u>

Cargo Report for the year 1977

	000 Short Tons
Main Harbor	46,716
Other Terminals	
Harbor island	6,964
Ingleside	1,459
La Quinta	5,529
Grand Total	<u>60,669</u>

Port of Houston Authority

The Port Authority, which constructs, owns and operates public facilities at the Port of Houston, also had a banner year in 1977.

At the Authority's Barbour's Cut Intermodal Terminal, two 1,000 foot container wharves, the terminal building and amenities buildings were completed; the CONICS container information computer system went into operation, and the first ships were handled at the container wharves. During the year, the Port Commission approved construction of a Roll on/Roll off ramp and extension of a rail spur to the facility.

The Authority had determined in 1976 to proceed with the development of additional Port facilities in the Turning Basin area and at the new Barbour's Cut Terminal. If revenue bonds were sold, such improvements could be financed without committing taxes.

An impediment to revenue bond financing was overcome when the Port Commission voted to use surplus revenues on hand and an innovative technique for the defeasance of an outstanding issue of subordinate lien revenue bonds. This action eliminated a restrictive bond covenant and allowed the issuance in April, 1977, of \$25 million in revenue bonds, the proceeds of which will be used to finance at Barbour's Cut Terminal a third container wharf, container terminal improvements and additional container handling equipment. In the Turning Basin area, improvements to existing wharves and roadways will be constructed without taxpayer expense.

Later in 1977 a unique opportunity presented itself to the Authority when the former Dickson Gun Plant property was offered to the Authority at an attractive price. The Authority was again able to avoid the commitment of any tax moneys by devising a favorable plan of revenue bond financing and through decisive action of the Port Commission was able to effect the timely issuance of \$11 million of junior lien revenue bonds to purchase the Dickson Property. This 115 acres of prime waterfront property, located adjacent to other Authority property, lies only two miles downstream from the Turning Basin and contains 438,000 square feet of warehouse and storage space, nineteen cranes with lifting capacities from 10 to 25 tons each, internal access roads, six rail spurs, and approximately 430,000 square feet of fenced parking area.

The purchase of the Dickson Property also gives the Authority waterfront space for future construction of additional wharves in the prime upper Channel area. Although there are no immediate plans to commence construction of additional wharves on the Dickson Property, the Authority is receiving revenues from the lease of existing warehouse and storage space.

In December, the Port Authority held a well-attended news conference to announce the lease of 114 acres of Authority land to Soros Associates of New York for construction of a high capacity coal terminal. The terminal, estimated to cost more than \$20 million, will be the first such facility on the Channel.

National Port Week 1978

New York:—The contributions of the New York-New Jersey Port to the economy of the metropolitan region and the United States were emphasized by speakers at National Port Week ceremonies at the New York Passenger Ship Terminal.

Some 300 trade, civic and maritime executives were the guests of the New York-New Jersey Port Promotion Association, The Port Authority of New York and New Jersey and the New York City Department of Ports and Terminals at the presentation. It was followed by an informative tour of the Port aboard a Circle Line vessel which cruised past the modern, efficient marine terminals on both sides of the bi-state harbor.

The ceremonies also featured the premiere of a new Port Authority-produced film, "On Line for Service... The Modern Port", highlighting the advanced computer technology used in the New Jersey-New York Port's container operations.

James P. McAllister, President of the Port Promotion Association and a prominent figure on the New York maritime scene for many years, presided.

Citing President Jimmy Carter's proclamation of National Port Week, Mr. McAllister noted that ports provide the vital link between land and water carriers. "The port industry contributes enormously to the nation's economy," he continued, "This facilitates international trade, employs significant numbers of people, provides substantial personal and business incomes, and generates revenues for States and local government."

NATIONAL PORT WEEK 1978 BY THE PRESIDENT OF THE UNITED STATES OF AMERICA A PROCLAMATION

Since the days of its early settlement, the United States has been dependent on water transportation for its trade. Populations tended to locate around harbors which rapidly became the economy centers of the New World. Now there are some 170 commercial seaports in this country as well as numerous ports on navigable inland waterways. The result has been the creation of a network of ocean and inland ports that includes many of the country's most important centers of industry, distribution, finance, and education.

Ports provide the vital link between land and water carriers. The port industry contributes enormously to the nation's economy. This facilitates international trade, employs significant numbers of people, provides substantial personal and business incomes, and generates revenues for States and local governments. NOW THEREFORE I, Jimmy Carter, the President of the United States of America, in order to remind Americans of the importance of the port industry of the United States to our national life, do hereby designate the seven calendar days beginning September 17, 1978, as "National Port Week". I invite the Governors of the several states, the chief officials of local governments, and the people of the United States to observe such week with appropriate ceremonies and activities.

IN WITNESS WHEREOF, I have hereunto set by my hand this 15th day of September, 1978, in the year of our

Lord 1978, and of the Independence of the United States the 203rd.

JIMMY CARTER
PRESIDENT OF THE UNITED STATES
OF AMERICA

Number one status for net port income

Port of Los Angeles:—Los Angeles Harbor Department General Manager, Fred B. Crawford has reported that during the 1977-78 fiscal year the Port of Los Angeles had retained its number one status for net port income among all ports in the nation. The net income attained for the past year was \$25.7 million. This increase of 82 percent over the prior year's \$14.1 million net income was reported in the Department's Interim Fourth Quarter Financial Report.

According to the Fourth Quarter Report, the port's 77-78 gross revenues from operations totaled \$45.8 million, a 32 percent increase of \$11.0 million from \$34.8 million in the prior year. Shipping services revenue increased \$10.2 million, a 43 percent increase, while rentals revenue increased \$1.5 million—a 17 percent increase.

Crawford praised port management for holding down increases in expenses to just eight percent (to \$17.3 million) while they increased port revenue 32 percent—resulting in an 82 percent increase in net Port income.

The Financial Statement shows a total cash flow of \$51.8 million received in 77-78 while \$34.3 was expended. Cash on hand increased \$17.5 million to a total of \$50.5 million on July 1. Most of this cash however, is encumbered for the construction of new facilities.

Preliminary tonnage statistics reveal that the past year's total billed revenue tons for the year amounted to 38.6 million tons. This compares to 35.1 million tons in 1977, a 3.5 million ton increase. There were 2.5 million tons of the increased tonnage in general cargo while one million tons were in bulk petroleum.

The Port of Los Angeles is one of the few major ports of the world that is entirely self-supporting without relying on taxation of any kind. All funds for operation, new construction, maintenance, bond repayments come from port charges and rentals.

NY & NJ to establish a new Foreign Trade Zone

New York:—The Port Authority Board of Commissioners has recently authorized the filing of an application with the Foreign Trade Zones Board of the United States Department of Commerce to establish a Foreign Trade Zone in Port Newark and at the Elizabeth-Port Authority Marine Terminal.

Chairman Alan Sagner announced the commerce development action and he emphasized that the application for the experimental 208,000 square foot zone had been developed with the support of the New Jersey Department of Labor and Industry, through its Division of Economic Development and Office of International Trade. The zone would generate about 100 jobs in handling and processing

34,000 tons of cargo a year valued at about \$55 million.

In addition to sponsoring the experimental New Jersey zone, the Port Authority, at the request of New York City, the sponsor of Foreign Trade Zone 1, will promote the availability of Foreign Trade Zones on both sides of the Hudson River.

It is anticipated that the new tonnage generated would require expansion of the initial zone size. Expansion to one million square feet could generate an estimated 163,000 tons of cargo valued at \$266 million and employment for approximately 500 people.

Port Authority Police mark 50th Anniversary

"Via Port of New York-New Jersey"—Outdoor ceremonies on the plaza at the World Trade Center were held recently to mark the 50th anniversary of the police force of The Port Authority of New York and New Jersey. This unique bi-state force, with both police and firefighting capabilities, provides protection for all land, sea and air transport facilities at the Port of New York and New Jersey operated by the Port Authority.

The force, now numbering over 1,200 men and women, provides coverage for all Port Authority facilities, including the three major airports; the Hudson River crossings; the Staten Island Bridges; PATH; the Port Authority Bus Terminal; the World Trade Center; the New York City Passenger Ship Terminal; the Brooklyn-Port Authority Piers, and Port Newark/Elizabeth.

Through close liaison between the Port Authority's police and tenant security agencies, a high level of cargo security has been maintained at the Brooklyn-Port Authority Piers and the Port Newark/Elizabeth complex, and the free flow of traffic has been expedited.

Export from U.S. West Coast up 9%: Oakland Foreign Trade Analyst Service

Port of Oakland:—Export trade aboard liner vessels from U.S. West Coast ports was up 9 percent for the first quarter of 1978 over the same period a year earlier, new figures compiled by the Port of Oakland indicate.

Seventy percent of that increase was accounted for by Northern California ports, whose export cargo share was up by 30 percent over the same period in 1977.

In all, West Coast ports handled 2.3 million short tons of liner vessel exports between January and March of this year, valued at \$2.2 billion. Liner vessel imports for U.S. Pacific ports totaled 1.9 million tons in the first three months of this year—valued at \$4.5 billion.

In all, West Coast ports exported some \$155 million-worth of fruits and vegetables, \$323 million-worth of cotton and textile fibers, \$104 million-worth of lumber, wood, pulp and waste paper, \$460 million-worth of industrial and electrical machinery and parts, and \$145 million-worth of road vehicles and transport equipment during the first quarter of 1978.

These and other data on West Coast maritime trade, including tramp exports and imports, with special emphasis

on commodities passing through ports of the San Francisco/Oakland Customs District by country of origin and destination, are being made available by the Port of Oakland for the first time on a quarterly basis to subscribers to the Port's Foreign Trade Analysis Service.

Subscribers receive a quarterly compilation of U.S. Department of Commerce statistic, translated into easily read and readily interpreted form. The new publication makes such data accessible to shipping lines, shippers, importers, exporters, freight forwarders, consignees and consulate commercial departments in a uniquely convenient and timely format. Requests for subscriptions or more detailed information about the service should be addressed to Charles Seifert, Port of Oakland Public Relations Department, 66 Jack London Square, Oakland 94607, (415) 444-3188.

Foreign trade vital to state's economy

Port of Seattle:—Foreign trade is nearly twice as important to Washington State's economy as it is to the nation's economy as a whole, according to a report by the Washington State Department of Commerce & Economic Development.

Prepared by Department economist Richard S. Conway, the report, "International Trade and the Washington State Economy—The Impact of Foreign Exports 1963-1985," is a comprehensive evaluation of the importance of international trade to the state's economy.

The report shows the importance of exports has increased dramatically in recent years, that more normal rates of foreign-export expansion are anticipated for the future, and that opportunities exist for increased diversification of exports in the future.

The value of exports in 1976 from Washington producers reached \$4 billion in current prices. In the same year Washington State's sales abroad amounted to \$1,100 per capita, while national exports totalled only \$600 per capita. Over the past 15 years Washington foreign sales in constant dollars increased at an average annual rate of over 11%, nearly double the U.S. rate over the same period.

Foreign sales in 1976, the report shows, supported 32% of the natural-resource jobs, 18% of the manufacturing jobs and 17% of the service and government jobs in the state's economy.

Foreign exports provided the strongest expansionary force in the region between 1963 and 1976. During this period foreign sales, as a percentage of the state's total exports, rose from approximately 8% in 1963 to 20% in 1976. With a high, but decreasing, historical growth rate, future foreign exports in constant dollars are anticipated to expand at an annual rate of between 4 and 5%. This indicates that foreign export-related employment in the economy will remain at about one in every six jobs for the foreseeable future.

Tampa to be a distribution point for vehicles

Tampa Port Authority:—The Port of Tampa has been
(Continued on next page bottom)

The Port of Antwerp in 1977

Port of Antwerp Promotion Association

After the partial recovery in 1976 from the economic crisis which affected all European sea-ports, the year 1977 seems to have exerted a more stabilizing effect. Although bulk cargo traffic in Europe declined the port of Antwerp nevertheless can produce a favourable 1977 balance, mainly on account of the progress in the general cargo traffic, for which the port of Antwerp enjoys a good reputation.

Shipping and goods traffic

In all 17,703 sea-going vessels called at the port of Antwerp last year, which means a status quo as compared to 1976 in which year 8 vessels more were recorded. In 1977, however, the overall ship's tonnage was higher, viz. 68,242,145 BNT as against 66,343,697 BNT in 1976.

This increase of about 1.9 Million BNT points to the fact that ever larger vessels are calling at the port, this due to a better navigability of the river Scheldt.

With respect to goods traffic provisional figures from the Harbour Masters' Office, communicated by the General Management of the Port, reveal that the year 1977 was closed with a profit margin.

During last year maritime traffic amounted to 69 million tons representing an increase as compared to 1976 (67.1 million tons) of 2.8%.

As to bulk cargo in 1977 a decrease of 0.8% was recorded (-9.1% incoming and +20% outgoing).

General cargo traffic on the contrary revealed a 9.5% increase (-9.9% incoming and +24% outgoing).

A remarkable progress was recorded by the iron and steel traffic (+18.9%) this as a result of temporarily better export chances of European steel on the American market. Also the container and Ro/Ro-traffic remarkably increased.

Container traffic

In 1977 too the continuous evolution in the cargo handling techniques reflected itself in a growing container traffic. In 1977, 17,101 more containers were discharged and 39,795 more loaded, leading to a total increase of 56,896 units, empty containers not being taken into account. Here too the evolution was characterized by a

scale increase since the containerized cargo volume rose from 3,723,225 tons in 1976 to 4,878,466 tons in 1977, i.e. a 31% increase (+18.6% incoming and 42.2% outgoing).

In this respect it should also be pointed out that the shipping possibilities for containers from Antwerp considerably increased. New container lines were opened, i.a. to the ports of the American West Coast, the African West Coast and especially to the Persian Gulf, whereas as to Ro/Ro traffic new services were inaugurated i.a. to Gothenburg (Sweden), Sharjah (U.A.E.), Lagos/Apapa (Nigeria), Hodeidah (Yemen), Helsinki and Hamina (Finland). Ro/Ro-traffic reached 1 million tons, i.a. an increase of 25% against 1976.

In 1977 a new container consortium to the Persian Gulf was created, involving CMB together with Hansa, Nedlloyd and NCHP.

Infrastructure and port extension

On the right river bank work is carried on in view of the extensions of the port infrastructure. The quay walls of the new harbour dock have been completed whereas the realization of the junction between the 5th Harbour Dock and the America Dock is nearing its final stage.

As to the road system improvements were made mainly in the northern port area and to the junction with the E3-waterway in southern port area. A second bridge over the Van Cauwelaert lock, the construction of which started in 1977, will improve road infrastructure in the centre of the port. Also the port equipment has been extended and at the end of 1977 12 new general cargo cranes were bought. On the left bank port area dredging works were carried out at the first part of the dock, which will be put into use together with the Kallo lock, the access channel of which is nearing completion.

Conclusion

The recovery from the economic crisis of 1975 comes about rather slowly and the progress made in 1976 as against 1975 could only be difficultly maintained. In 1977 continuity of investments could, however, be secured and a large amount of storage space could be put into use, which points out that the Antwerp distribution function is continuously gaining in importance.

Portbury walling wins Award

(Port of Bristol):—The Snow Award, 1978, for innovation in the field of concrete, awarded by the Concrete Society, will this year be presented to Mr. F. Irwin-Childs, F.I.C.E., of Rendel, Palmer and Tritton, for the development of the three-dimensional conception of a diaphragm wall structure used in the construction of the Royal Portbury Dock lock.

The winner has achieved international acclaim for his work and the U.K. has established a lead in this type of construction, with costs 30% below the cheapest, and over 50% below the average cost of recent comparable structures.

selected as the port of entry and compound location for processing the Chevrolet Series 9 LUV trucks, further strengthening the port's position as an important distribution point for imported vehicles.

Tampa will be considered the Southeastern distribution point for the LUV trucks, with an anticipated annual volume of 20,000 units or 1,600 per month.

The new operation will serve to further establish the Port of Tampa as a general cargo distribution point, in addition to providing economic benefits to the community in the form of jobs and services.

The Royal Portbury Dock lock set new records for cost and concrete volume, costing about half as much as other recent European locks, and involving only two-thirds of the equivalent construction material. The walls are the largest and most economic examples of cantilevered reinforced concrete construction.

Portbury matches the best

(Port of Bristol):—Outputs reached at Royal Portbury Dock last August during the discharge of Gearbulk's Jean L.D. were equal to those produced at other comparable U.K. Forest Products Terminals.

This fine performance shows that dockworkers at Royal Portbury are fast acquiring the necessary expertise to provide the type of service needed to build trade at the new dock.

The Jean L.D. commenced discharge on the night shift of Sunday August 13th and completed on the night shift of Wednesday August 16th.

A total cargo of nearly 19,000 tonnes of woodpulp and timber were discharged from the ship and throughput at the terminal on August 15th reached a record 8,000 tonnes.

Another Portbury record was broken on September when 6,889 tonnes of pulp was discharged from the m.v. Lista in the 24-hour period. The previous record for a similar period was 6,300 tonnes.

The continuing increase in outputs at Portbury has been achieved by improvements to mechanical handling equipment as well as the general increase in handling expertise.

Ports Council views the future

Port of Bristol:—Mr. William Rodgers, Secretary of State for Transport, told the House of Commons on 17th May that he had asked the National Ports Council, in discussion with those concerned, to let him have their recommendations on the way in which plans for the future of ports should be developed.

That report has now been published and Portfolio features this month some of the main points it makes.

The national objectives of the ports policy are to ensure that—

- (a) Ports are and will be adequate to handle the country's trade.
- (b) Ports make the best use of economic resources and impose the minimum charge on the nation's trade compatible with reasonable viability for themselves.
- (c) Port undertakings individually are well organised and well managed, and together make good use of the available human resources.

Port trading results 1977-1978

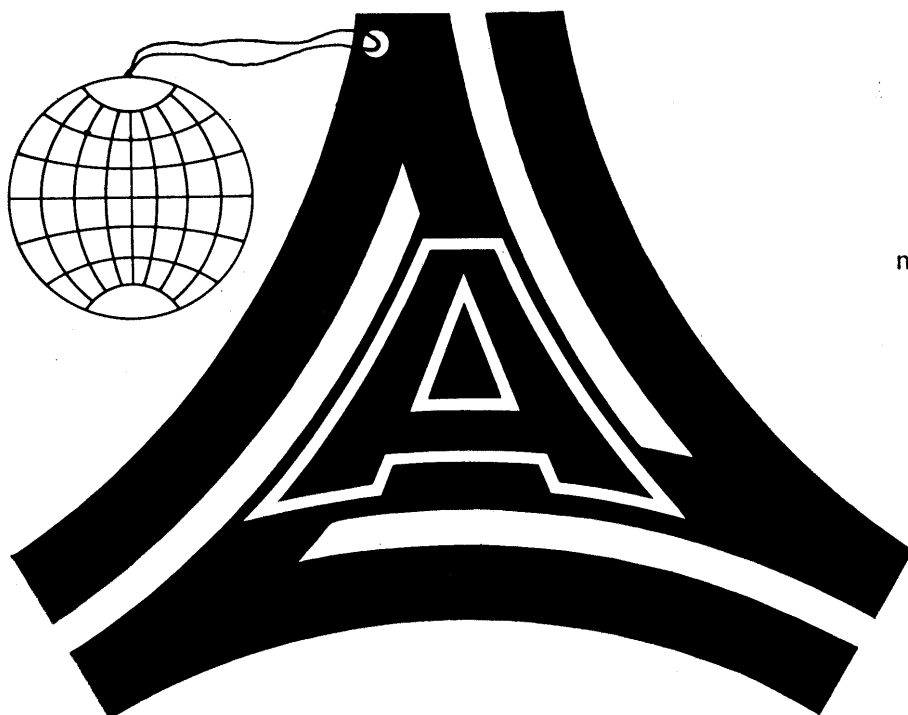
(Port of Bristol):—Bristol Port Authority's Annual Report and Accounts show that the Port suffered a set-back during the year ended 31st March, 1978.

Whilst trade in total continued at the same level as in the previous year the report draws attention to the decline in total revenue stemming from a loss of valuable revenue to other ports.

This revenue loss which occurred during an extended period of industrial unrest is reflected in the disappointing

multi-purpose and permanent

The multi-purpose and "round the clock and year" activities are some of the assets symbolized by the new P.R.-emblem, stressing the fact that the Antwerp service to port users **at all times** meets all requirements of international trade and transport.



PORT OF ANTWERP

Information: General Management of the Port, Town Hall, Antwerp, Belgium.

financial results for Avonmouth and Portishead Docks. The net surplus was only £367,237 compared with £1,660,203 in 1976-77 and this at a time when the strain on the Authority's resources is at the highest possible level.

The table below sets out how the Avonmouth and Portishead Docks derived Revenue last year and how each £1 of Revenue was disposed of.

In addition the Port had to find £3,732,000 for the new dock. An operating loss of £523,000 incurred as the result of delay in opening it to commercial traffic and interest charges of £3,209,000 made up this sum which was too much for the slender resources of the Port to stand so that the Port was forced to fall back on the City to give financial support. The support was given to the tune of £2,100,000 which represents approximately a 3p levy on every rate-payer in Bristol.

Here is where it came from		Here is what we have done with it	
Cargo handling, cranes and plant	51p	Employees direct earnings, pensions and Nat. Ins. contributions	69p
Dues earned on ships and goods	38p	Supplies, materials and services	18p
Warehouse and storage	5p	Interest and repayment charges	8p
Rents and related revenue	4p	Depreciation	3p
Miscellaneous items	2p	Surplus	2p

Big newsprint contract

"Docks", B.T.D.B.:—Southampton had won a major contract to handle imports of newsprint from North America.

The contract, which was signed after more than twelve months of negotiation, is for the handling of 120,000 tonnes of newsprint and other forest products every year.

'This is an entirely new trade for Southampton', commented the port director, John Williams, 'and is a significant step in the continuing development of the port as a leading deep-sea cargo terminal'.

New scrap exports at Lowestoft Docks

(British Transport Docks Board):—Scrap is being exported on a regular basis to Spain for the first time through Lowestoft Docks. This is a totally new regular traffic for the port.

Mr. Dennis Mellor, of A. King of Norwich, the company shipping the scrap, says that they chose Lowestoft for this service because it is so well-connected.

BTDB manager, Robin Nicholls, is pleased that Lowestoft is maintaining its momentum in extending its scope to new areas and new traffics. "So far this year Lowestoft has won four new services, all of them to new places. Now we are branching out into handling new traffics, and I am very satisfied with the trend".

It is expected that there will be a sailing a week, bringing total tonnages for 1978 to the region of 20,000 tonnes. Next year it is expected that this figure will reach 50,000 tonnes.

Ayr's new coal shipping terminal becomes operational

London:—The British Transport Docks Board's new high-capacity coal shipping terminal at Ayr went into full swing recently, after a series of trial runs, with a shipment of 1,850 tonnes of coal for Northern Ireland.

The new terminal is capable of loading vessels twice as fast as the heavy lift coaling cranes previously used.

From the middle of October it is expected that there will be daily shipments of the order of 2,000 tonnes, which, it is forecast, should bring the 1978 total to something in the region of 600,000 tonnes, considerably up on the 1977 figure.

First ship for new Northfleet Hope Container Terminal

PLA News:—Britain's newest container ship facility, a £24 million complex designed to handle over 75% of Britain's total liner trade with Australia and New Zealand, received its first ship (September 15th) when OCL's "Encounter Bay" berthed at Tilbury, Northfleet Hope Container Terminal.

The terminal is a major British port development and the largest single engineering project in the Port of London since the construction of Tilbury Docks extension ten years ago.

The development is a joint investment by two of the Port's major customers and the Port of London Authority.

The terminal will be operated by Tilbury Container Services who have equipped the terminal with modern mobile plant, quayside container cranes, refrigeration installations and other specialised facilities. They will run it as a self-contained terminal leased from PLA who are labour contractors to TCS for terminal operations. The terminal will operate on a 3-shift, round-the-clock basis.

Annual throughput will be about 170,000 TEUs, the equivalent in tonnage terms of 15-20 conventional general cargo berths.

BTDB Chairman leaves for Far East

Sir Humphrey Browne, chairman of British Transport Docks Board, leaves for a 10-day trade visit to the Far East.

Accompanied by Mr. Eric Pollock, BTDB's marketing manager, Sir Humphrey will meet shipowners, importers and exporters in Indonesia, Malaysia, and Singapore to discuss port requirements of their trade with the UK.

BTDB ports have established a pre-eminent position in UK/Far East trade over the past five or six years, handling almost half of all non-fuel imports from the Far East in 1976, compared with only one-fifth previously, and nearly two-thirds of UK exports other than fuels to the Far East, as against less than a quarter in 1971.

The Board's share of containerised Far East traffic is even greater, having reached 92 per cent, and their ports are now also dealing with 75 per cent of forest products imports from Malaysia and Singapore.

Hunterston Ore & Coal Terminal

Clyde Port Authority

Clyde Port Authority is providing for the British Steel Corporation, and for other users, what will be one of the largest deep-water jetties in the world, certainly the largest in the U.K., with the capability of berthing and handling vessels of up to 350,000 dwt. The jettyhead will be constructed more than 1½ km. offshore and linked to the Terminal land area by a bridge approach and a causeway.

Work started in July, 1975 with a 27 month plan for completion, phased to the development of the Terminal as a whole. The first pile was driven early in October, 1975.

The Clyde Estuary is largely fiordic in character. Hunterston was chosen as the optimum site for the Terminal since, in addition to deep water, the region has the additional advantage of good stretches of coastal flat land and suitable areas for reclamation. The jetty is being sited to provide an adequate depth of water at its outer berthing face; laden vessels will approach from the north and unladen vessels will depart to the south. The optimum alignment was determined from Hydrographical, geophysical and meteorological studies.

The jettyhead will be 443 m. long by 34 m. wide with a deck level at 7.0 m. above Newlyn Ordnance Datum. It will provide two berths; the outer one, for the import of iron ore and coal, will be capable of berthing vessels in the range 20,000 dwt. to 350,000 dwt. the inner one, an export berth, will eventually accommodate vessels from 20,000 dwt. to 150,000 dwt. Some dredging will be required inshore of the inner berth to provide an adequate channel width approach to that berth for vessels exceeding 80,000 dwt. It is not intended to carry out this dredging work until such time as the need arises to accommodate export vessels in the 80,000 dwt. to 150,000 dwt. range. A mooring dolphin will be sited off the north east end of the head and connected to it by a walkway. Office buildings, messing facilities, switch rooms and transformer rooms, roadways and parking areas will be provided, as will special fendering, bollards and capstans, lighting, navigational lights and berthing aids, fresh water and fire water services. The special conveyors, unloaders and other handling systems will be provided by the British Steel Corporation.

The 422 m. long bridge approach will connect the jettyhead to a 764 m. long causeway leading to a reclaimed section of the shore stacking area. The approach will have a 6 m. wide roadway with footways and service ducts on either side. The conveyor system will be elevated over the road.

The project has been planned for speedy and efficient construction. As much use as possible has been made of precast concrete in the design of the works. An early order was placed for the 12,000 tonnes of steel piling and stock control is carefully phased to constructional needs. By the early completion of the causeway the contractors have been given easy access to the approach site. Before the end of the construction period, access will be given to the erectors of the conveyors, unloaders and outloader. It is anticipated that the jetty will be in operation by late 1978 with an

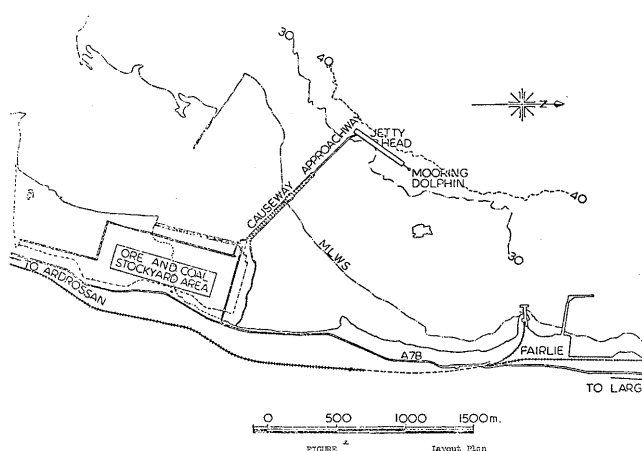
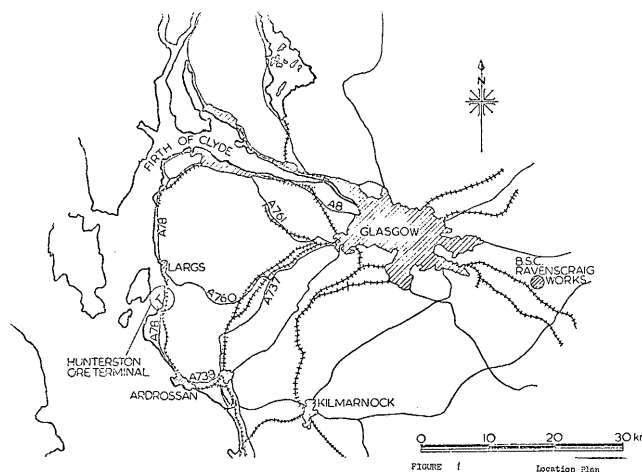
annual throughput, initially, of 4 m. tonnes of ore and 1 m. tonnes of coal.

Outline of Facilities

1. Jettyhead

- (a) Length—443 metres with mooring dolphin 60 m. beyond N. end.
- (b) Breadth—34 metres
- (c) Deck Level +7.0 m. O.D. Newlyn
- (d) Depth of Water
 - Front Berth—(29 metres low water)
 - Back Berth—(22 metres low water)
- (e) Maximum Vessel Size:
 - Front Berth—350,000 dwt.
 - Back Berth—70,000 dwt. approx.*

* Vessels up to 150,000 dwt. can be accommodated if some approach dredging carried out.



2. Discharging Equipment

- (a) TWO grab unloaders—3,000T/hr. capacity.
- (b) Outreach—43.5 m. beyond cope.*
 - * (Front fenders—4.5 m. dia.
 - (Back fenders—3.3m. dia.

(Continued on next page bottom)

Plymouth — Geared up and ready to go

A BTDB feature Article

by Geoffrey Paul

London, July 1978

Plymouth, Millbay Docks, centre for Brittany Ferries for their roll-on/roll-off services for freight and passengers to Brittany and Spain, is geared up for the summer season peak.

In the three months since the new weekly Spanish service started operating out of the British Transport Docks Board's most southerly port, high traffic levels have been achieved, proving the popularity and need for such a route.

But the standing of the port has not always been so secure. If anyone had looked into a crystal ball five years ago and said that by the end of 1977 Plymouth would be the third most successful small port within the BTDB people would have been excused for raising an eyebrow in surprise.

However, during that time the partnership of local management and staff with the help of the BTDB, has completely changed the operating and financial picture of

the port, with the prospect of a further good performance this year following the start of the new Spanish route.

The story of Plymouth is a common one, although in this case there is a difference in the ending. Like so many other ports it was destined to have a "riches to rags" tale linked to its name, with the decline of the regular transatlantic liner service.

As the last liner left the port so a change in emphasis in traffic had to come. It was in 1972 that change came with the decision of the BTDB to provide a roll-on/roll-off terminal for Brittany Ferries and their freight service between Plymouth and Roscoff in Brittany.

By the end of 1973 Plymouth started to show itself extensively as a ro/ro port, although still retaining a healthy traffic in general cargoes, and became the base for the only ferry service directly linking the western half of Britain with Europe.

Almost £1 million was invested by the BTDB, in the facilities, creating a modern ferry port to meet the operational requirements so that both holidaymakers and freight vehicle operators could receive the best possible service.

Geographically Plymouth is a convenient port of call for many UK trade routes. Greatly improved inland motorway routes have linked the port to the national motorway network and in turn all the major industrial areas of the country. Improved access to the port resulted in 1976 with the £35,000 expenditure on providing a new access road to the dock system.

Confirming their confidence in Plymouth, Brittany Ferries added the new route to their daily sailing to Brittany in April, when their 700 passenger (170 cars) ship "Armorique" started operating between Plymouth and Santander on the north coast of Spain, bringing the sea crossing down from 36 hours to 24 hours, with only one night spent at sea.

This service provides two sailings a week, each way, opening a new "bridge" between the industrial areas of the UK with those of Spain and Portugal. The regular Brittany service offers a year-round daily sailing for passengers, their cars and freight vehicles, with an increased frequency in the period May–September.

It is well known that there is no other port in the UK offering ro/ro facilities closer to Spain than at Plymouth and local management are keen to emphasise this and the speed of crossing that can be offered. Spain's proposed entry into the EEC is expected to improve the commercial activities between the two countries, along with a better tourist trade—working in both directions.

Commenting on the success of the port over the past years, Plymouth's Docks Manager, Mr. E.S. Chapman, said "Traffic has soared in recent years and an awareness of the port and its facilities is becoming more noticeable as inquiries from potential customers increase.

"Plymouth is a versatile and vital port and although aware of competing ports and its susceptibility to trading trends, we aim to continue our past record by providing good service to those using the port."

(Continued from page 35)

- | | |
|--|-------------------|
| (c) Grab clearance to deck level—28.0 m. | } Total wt. lift— |
| (d) Grab capacity—37.7T. ore | |
| (e) Grab weight —25.3T | |
| (f) Discharging rate— | |
| Free (cream) digging—3,000T/hr. | 63T. |
| Average (50%) —1,500T/hr. | |

- | | | |
|--|------------|------------|
| 3. Conveyors | IN | OUT |
| (a) Belting to Stockyard | * 1 | * 1 |
| * Future potential | 2 | 1 |
| (b) Width | 1.6 m. | 1.4 m. |
| (c) Capacity | 6,000T/hr. | 4,000T/hr. |
| (d) Speed | 3 m./sec. | 3 m./sec. |
| (e) Hopper release to conveyor belts—3 rates
i.e. 0–3,000T/hr.—6,000T/hr. | | |
- 4. Stockyard** Ground area not available
- (a) Storage capacity —1.7 million Tonnes—ORE
(extended) —0.25 million Tonnes—COAL
This is B.S.C. stock requirement and includes allocation for D.R. plants at Hunterston. No spare capacity.
- with
- (b) 1 additional conveyor in there is facility to increase ore storage to some 2.5 m.T. No additional coal stock would be required.
- (c) Stacker/Reclaimer
Stacking rate—6,000T/hr.
Reclaiming —4,000T/hr.
- 5. Outloader**
- (a) ONE outloader.
- (b) Capacity—loading out up to 4,000T/h.
- (c) Conveyors—as above.

Le Havre: 1st French Port for containers

(IAPH 11th Conference at Le Havre, May 12-18, 1979)

Port of Le Havre Series No. 7

By its history and its geography, Le Havre had to become the first French port in the field of containerization.

From an historical point of view because the Norman port has had as chief partner for centuries, the country which gave birth to the marine container: the United States of America. It is therefore natural that Le Havre equipped itself so as to receive the first container-carrier ships and that it has followed if not preceded the evolution of this carriage and handling technique which has, little by little, spread over most of the trading nations.

From a geographical point of view, because Le Havre is an almost ideal site to receive expensive ships such as the big, modern container-carriers. Situated at the mouth of the River Seine, it is directly accessible at any time, either day time or night time.

As to the Land, let us remind that Paris is 200 kms far from Le Havre, that is, two hours by motorway or one hour and 45 minutes by train. Between Le Havre and Paris besides, more than 10 million people are living, working consuming; an immense market which finds interest in Le Havre for two good reasons: It is the first port of the region concerned with the arrival of ships bringing goods from all over the world and the last port concerned with the departure of manufactured products made in the natural hinterland of Le Havre port. And it means, as a consequence, a most valuable saving of time for both the shippers and the receivers.

The figures are here to shown clearly that the financial efforts made by Le Havre port in the field of containerization have not been vain:

	<u>1968</u>	<u>1972</u>	<u>1977</u>
Number of handled Containers	21 000	138 000	368 000
(in 20 feet equivalent)			
Corresponding tonnage	176 000	1 117 000	3 300 000
(in tons)			

Those results are very good considering the dull situation of international trade and the strike of the American dockers during the last term of 1977. They account for the importance of the developments being made, whose aim is to consolidate the position of Le Havre in so far as containerization is concerned. It is be noticed, in that course of ideas, that the containerization rate for the traffic of general cargo (all bulks excluded) has reached 49.8% in 1977; yet it was only 45.6% in 1976.

To meet this increasing containerized traffic, Le Havre Port Authority pursues its investment effort. It disposes of 3 container terminal units thoroughly equipped; the last built, the Bougainville quay, went into service in 1977. And now, it spreads over boom and includes a 15,000 m³ warehouse, 3 travelling gantry cranes and a 36 ha stacking surface. Important extension works of this quay are being carried out, since, by the end of 1978, 350 m are bound to be worked in the North of the acutal quay and 200 m in the South. Those new posts will make possible the



1) Port of Le Havre—Container Terminal—quai de l'Atlantique



2) Port of Le Havre—quai de l'Europe—Container Terminal



3) Port of Le Havre—quai Bougainville—Container Terminal

concentration in one place of all the traffic with the Africa coast; this traffic which, in Le Havre, goes through a tremendous extension with both the container-carrier ships and the composite ships. To deal with those traffics, the

port will acquire movable cranes on tyres, with a high capacity. A new travelling-gantry crane is ordered for this quay while a floating bridge will enable the port to deal with back-door ships. Finally, a 15 ha plate-form and 3 new warehouses will make this equipment complete.

Of course, Le Havre dispose of a labour force matching those investments, that is a highly skilled reliable labour force, working 24 hours a day, 7 days a week to secure the best service for the ships and their freight.

The traffic prospects in 1978 appear favourable. Thus, in March, the monthly record of containers handling, counting the 3 special terminals, has been broken. 27,523 containers have been counted including: 9,224 containers at the Atlantic quay, 9,079 at the Europe quay, 9,220 at the Bougainville quay. It is interesting to notice that the activity level at the Bougainville quay, put into service last year, is from now on, comparable to that of the other terminals, and that a remarkable balance has been established between the three container quays: as a matter of fact, the figures are about the same.

It is observed, furthermore, that because of the potential of containerized lines, Le Havre port serves more and more as a turntable for the traffic. Its considerable custom in so far as container lines are concerned makes it possible, indeed, by the transferring from one ship to another, to connect the continents without regular lines at the present time: which shows plainly the geographical advantage of a port situated at the confluence of the main maritime routes.

Traffic off to a good start

Port of Marseilles:—During the first months of 1978, the tendencies recorded during 1977 have been confirmed: the general cargo and bulk traffic continues to progress very satisfactorily, whereas oil traffic and ship repairs continue to decline.

Comparing the first quarter of 1978 with the same period of 1977, the increase in general cargo of +19% is impressive.

The excellent figures for exports of iron and steel products through Fos (+60%) and of the container and general cargo traffic through Fos (+69%) are particularly noteworthy.

Already down in 1977, the figures for oil traffic fell by a further 20% in the first quarter of 1978. This drop is to a large extent due to the fall in the re-exports of crude following the opening of the SUMED pipeline in Egypt.

The rate of occupancy of the Port's dry docks during the first quarter was again disappointing and proved that the upswing recorded during the last quarter of 1977 was merely a flash in the pan. The quarterly figures are given below in millions of GRT:

	1977	1978
1st quarter	13.82	8.82
2nd quarter	14.02	—
3rd quarter	8.89	—
4th quarter	13.87	—

The Port's traffic figures for the month of April, which have recently been published, show some deviations from the above-mentioned tendencies.

On the whole, the traffic for the first four months of the year is as good as can be expected in the circumstances:

general cargo up by 19.1%, dry bulk up by 9.4%, liquid bulk up by 12.6%, and oil down by 15.9%.

At the Board meetings

Port of Marseilles:—

- Part of the meeting was devoted to the consequences that can be drawn at a local level from the «AMOCO CADIZ» disaster. Although it was recognized that the risk of a similar disaster occurring in the Port of Marseilles had a much smaller degree of probability than in Brittany, the Board of Directors nevertheless decided to purchase additional oil spill and anti-pollution control equipment to reinforce the means already available in the Port.
- Af Fos, the Board decided to start the dredging preliminary to the construction of a new oil terminal in the Gulf of Fos, which has now become necessary due to the saturation of the existing berths.
- The Board examined the accounts for the financial year 1977 which closed with a deficit of 3,278,000 francs, whereas the financial year 1976 had closed with a profit.

The causes of the deficit are, firstly, the level of tariffs in 1977 which were strictly limited by the Barre Plan and which were only raised late in the year after a considerable delay; and secondly, the heavy losses caused to the Port by the crisis in the ship repair industry.

The loss of receipts due to the fall in oil traffic has been largely compensated by increased receipts from other types of traffic that are steadily progressing, particularly general cargo and bulk traffic.

Finally, the Board again considered the problems besetting the Marseilles ship repair industry. In this respect, the Board emphasized that the Port of Marseilles Authority is in no sense a guardian of this industry, but simply one of its suppliers, and as such has suffered financially probably more than any other. Nevertheless, for reasons of social solidarity, the Board will continue to show the greatest interest in finding solutions which will permit a revival of this industry on a sound basis as soon as possible.

Marseilles container terminal

Port of Marseilles:—The project to develop a new container terminal at Marseilles has recently been approved.

The decision has been taken to develop a new container terminal on the quay at Mourepiane. The existing ground surface will be reinforced and the containers will be handled by stevedoring companies to whom an area will be leased which will be served by gantries belonging to the handling companies. The quay will be 530 meters long and will be equipped with two Caillard gantries. If this type of container traffic develops, other terminals of this type may be developed in La Pinède basin and on Léon Gurret Mole.

Bremen International

• Port management textbook

International seminars arranged by the German Institute of Shipping Economics, Bremen, in—up to now—Europe, Africa and Asia, have resulted in a summary of the most important material, leading themes and experience, now being compiled in a Port Management Textbook; just presented by Dr. Hans Ludwig Beth, director of the world-famous institute, to international expert circles. The

400-page textbook encompasses, for the first time all the problem-centres of modern port management within the framework of general port-economy, economy as a whole—particularly in the spheres of planning, investment and organisation—and deals with many specific questions, such as labour-application, training, information, statistics, consulting, safety, waiting-times etc. (Subsidised issue: 1,000. Price DM 48.—Plus postage. Apply from the Institute:—Werderstr. 73, D-2800 Bremen. Tel: 0421/500233).

● Worldwide: Bremen Seminars

The Port and Export Management seminar for 26 personnel from Southeast Asia, in Bremen, in Sept./Oct. will be followed, in the Spring of 1979, by seminars for Egypt and the Sudan.

● Softly as she goes: Port railway

Bremen, 11.9.78 (BremIn). With the introduction of new track-brakes the noise volume will be reduced to a quarter in the disassembly and reforming of trains by the port-railway of Bremen; the shrill screeching will be dispensed with entirely. The initial experience with the new train-brakes was undoubtedly positive.

● 3 Percent More in the First Seven Months

The increasing tendency of maritime cargo handling of goods from 67 countries over the Bremen ports of Bremen and Bremerhaven continues. In the first 7 months of 1978 a total of 13,905,100 tons were handled (1977: 13,502,300), of which 8,735,000 t were generals (8,638,900) and 5,169,700 t were bulk (4,863,400). This is an overall increase in the first seven months, against the previous year, of 3%. For the Bremen ports one anticipates a handling increase for all of 1978 of a bare 1 million tons.

● Know-how from Bremen

Customs officers from Jordan, Malawi, St. Lucia, Sudan, Cyprus, Egypt, Bangladesh and the Philippines are studying customs-practice in Bremen, within the framework of an advanced training program of the German Institution for International Development.

River traffic

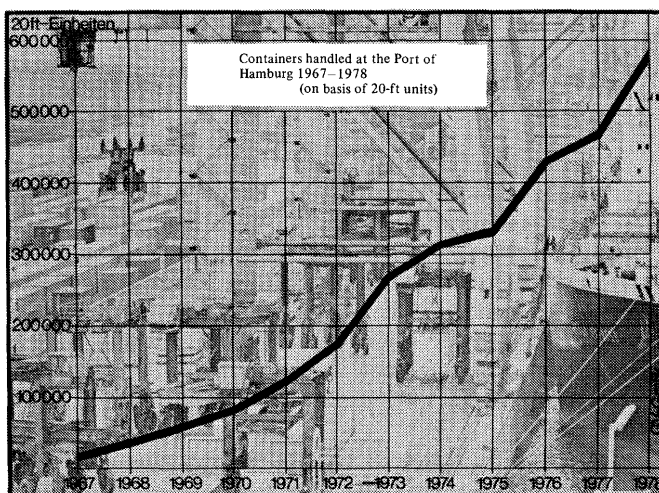
Port of Marseilles:—River traffic on the Rhône between Lyon and the sea reached 3,195,457T in 1977, an increase of 2.95% over 1976 which was already up by 5% on 1975; whereas the French internal traffic declined generally by 8%.

Since November 1977, the Rhône represents a navigable inland waterway of 290 kilometers from Port Saint-Louis-du-Rhône to Vaugris, with a depth of three meters.

World's container ships to top 1,000

Port of Hamburg, Tokyo Office:—According to estimates of experts, next year over 1,000 container ships (the present figure is some 770) will transport the big boxes to practically all the world's major ports.

Thirty-fold rise in Hamburg's container traffic



Port of Hamburg, Tokyo Office:—Container traffic increased by more than thirty times at the Port of Hamburg since this type of transport was introduced there in 1967. In 1967 a "modest" 15,000 containers were handled in the port, while in 1977 the figure jumped to 471,000. The weight increased correspondingly—from 91,000 tons in 1967, to 4.1 million tons in 1977.

In 1977, the share of loaded containers at the Port of Hamburg also rose. Of the total number of units, 81.6 percent (1976 = 78.6 percent) were loaded and 18.4 percent (1976 = 21.4 percent) were empty units.

With the growth in container traffic, the share of container handling in general and bagged cargo transshipment also rose, namely from only 0.8 percent in 1967 to 25.7 percent in 1977.

World Trade Center Rotterdam

(Rotterdam Europoort Delta 78/2):—In the Rotterdam Mercantile Bourse building on Coolsingel in the heart of the city, construction of a Rotterdam World Trade Center has begun. Fairly drastic alterations are needed. For the time being 1150 sq. metres' floorspace is created, spread over two storeys.

All facilities will enable the Rotterdam Center to discharge all the functions of a world trade centre, although on a modest scale in the beginning.

Contacts with many organisations and membership of the World Trade Center Association will enable the Rotterdam WTC to supply international commerce with information.

In addition WTC will promote contacts between firms and organisations especially on the personal level. It is moreover planned to have an educational function through the organisation of courses and seminars.

1.7 millions

The alteration and equipment of part of the Rotterdam Mercantile Exchange building will cost 1.7 million guilders. The City of Rotterdam will contribute one and a half millions and the Rotterdam Chamber of Commerce two hundred thousand guilders. The work is expected to take six months.

Professor worked in port for weeks and designed boys training school

25th Anniversary of Port Training School

(Rotterdam Europoort Delta 78/2):—After a close involvement in the establishment of a modern training school for underground miners in a Dutch coal mining district, an institution highly appreciated by the students and consequently successful, he was asked by Rotterdam whether he was willing to design also a training school for young people planning to find jobs with firms in the port of Rotterdam. The approach was an initiative of Scheepvaart Vereeniging Zuid, an organisation of Rotterdam Port employers.

Professor Rutten knew little or nothing about port work and was doubtful whether he should accept. After some time, however, he replied he was prepared to take up the invitation if they would let him and an assistant work in the port for a couple of weeks.

He dressed the way port workers did at the time, found a room and board in one of the old city quarters, spent time in pubs with his temporary mates and joined in their games. 'They accepted me, though it was clear they thought I was slightly off my rocker,' he reminisces.

The professor noted everything there was to note, collected sharp impressions of the work, working conditions and social position of port workers. The report he made on his experiences resulted in the establishment of a training course for adult port workers in September 1949.

This was something, but no more than a provisional start. It had been one of Professor Rutten's chief conclusions that training should be aimed especially at young students. His model for a port training school for young people comprised elements that were revolutionary, and certainly in those days.

We had to provide technical training focusing gradually on the actual jobs during the course, he says. But Professor Rutten felt that human and social education of the students was at least of equal importance. They had to learn to value their work, to understand its significance for their firms, their families and their colleagues. They had to learn how to work well in teams, but also to meet the requirements of social life to gain respect as well-trained, capable people also outside the port.

The educational element had a large place in his plans. Like in his training school for miners, he wanted a youth leader to be attached to the school to look after the human, personal guidance of the students. Teachers do not always have enough time for this, he said.

After his apprenticeship as a port worker Professor Rutten had a clear idea of the programme and especially of the climate in which such specialised training should be given.

His concern was mainly about the question whether one would succeed in forming a team of teachers capable of understanding the need for such a climate. His institute should not be just another vocational training school or technical school! Another uncertain factor was: the reactions of the parents. Would they be prepared to send their

boys who were going to work in the port anyway, to school—a clear break with custom?

Developments soon put the professor's mind at rest. When the first port training school for boys opened in 1953, 22 students enrolled. The young training institution—which was unique in the world at the time—soon acquired an excellent name for itself in the port of Rotterdam and flourished.

In the city district south of the river there are now—close together—two modern school complexes, one named after Professor Rutten and the other after Dr. A.J. Teychiné Stakenburg, another man with great merits in port training. In one of the harbours north of the river lies in addition a big former passenger vessel which now also serves as a port and transport school.

The training is since many years no longer confined to primary (technical and operational) courses, but also comprises secondary and tertiary port and transport training in technical and administrative subjects. Students are trained on all levels in a multitude of training programmes, although the primary, operational courses naturally remain the most important.

In its first 25 years the Professor Rutten School has produced nearly 1500 graduates. The course now takes four years. The school and the training institution in the former passenger vessel 'Jan Backx' now have about one thousand young students.

One in every twelve people working in the port of Rotterdam under a collective labour agreement has been trained at the Professor Rutten School. Nearly 75 per cent of its trainees have found jobs in the port and transport sector. This major success was one of the findings of a survey on the careers of former students.

Former students who do not work in the port or are no longer working there have sometimes landed in remarkable occupations: they include one ship's engineer, a ship's officer, a skipper, but also a hotel proprietor, a TV reporter, a driving school owner, a teacher and a manager of a rent-a-truck firm . . .

Another striking finding was that none of the former students were unemployed.

The complex training organisation which the Transport and Port Training Courses Foundation has become in a quarter century, has fifty teachers and a few dozens of mentors and instructors. Depending on the subjects taken by the students, they are taught Dutch, English, German, mathematics, physics, economic sciences, port sciences, practical port work, handicrafts and physical training.

After a four-year day course, students may take further training at secondary level or as employed apprentices. A choice for the latter does not mean a break with the school: the students go and work as apprentices with a port or transport firm and return to school one or two days a week, depending on their age. Official State certificates are issued to all trainees upon successful completion of their courses.

Port of Gothenburg Annual Report Summary

The National economy

According to Governmental records, the Swedish GNP decreased by 2.4% between 1976 and 1977. From 1975 to 1976, there was an increase in GNP at 1.7%. Total production in the Swedish industry decreased during 1977 by 4.5%.

Sea-borne exports—excluding iron ore—from Sweden decreased from 26.8 million tons in 1976 to 26.2 million tons in 1977, or by 2%. Sea-borne imports (exclusive of oil) went down from 23.3 million tons in 1976 to 21.3 million tons in 1977, equal to a decrease of 9%. Imports of oil decreased by 2% from 31.8 million tons in 1976 to 31.1 million tons in 1977.

Port trade

In spite of the decreasing Swedish sea-borne international trade, exports via Port of Gothenburg (excluding oil) rose by 1% as compared to 1976.

Imports (excluding oil) decreased by 1.5%.

Consequently, the port's share of Sweden's total sea-borne international dry cargo trade (excluding iron ore) increased, exports to 14.1% and imports to 13.2%, or by 0.3 and 1.0 percentage units, respectively.

The following table illustrates traffic to and from the Port of Gothenburg in 1977 as compared with 1976:

	1977 mill tons	1976 mill tons
Throughput of Cargo		
Exports (incl transhipment)		
Mineral oil	0.38	1.16
Other export cargo	3.33	3.29
Total exports	3.71	4.45
Imports (incl transhipment)		
Mineral oil	8.53	10.15
Other import cargo	2.81	2.85
Total imports	11.34	13.00
Domestic trade		
Mineral oil	4.60	5.04
Other domestic cargo	0.08	0.08
Total domestic trade	4.68	5.12
Grand total	19.73	22.57
Unit Load Traffic	Number	Number
Containers and flats (20 ft TEU)	212 000	211 000
Roll on/Roll off vehicles	206 000	200 000
Total (excl palletised cargo and packaged forest products)	418 000	411 000

The total unitised cargo trade represented 74% of imports of general cargo (as against 71% in 1976).

Improved facilities

The Port's fixed capital expenditure in 1977 totalled 55.4 mill Swedish Crowns.

Finance (Salient figures)

Profit and Loss Account		1977 kkkr 000 SwCrs	1976 kkkr 000 SwCrs
Operating Revenue		84,193	84,380
Rents		23,144	22,463
Port charges (on ships)		14,308	14,457
Port charges (on cargo)		27,607	26,183
Cranage		9,488	8,969
Sunday services and facilities		3,926	3,785
Interest and misc		5,720	8,406
Works on contract		16,089	23,840
		100,282	108,220
Operating and General Expenditure		65,175	71,726
Administration and Other			
General Expenditure		11,925	11,906
Operating and maintenance		37,161	35,980
Works on contract		16,089	23,840
Operating profit before Depreciation and Internal Interest		35,107	36,494
Depreciation		12,946	13,220
Internal interest		22,161	23,274
Net Profit		0	0
Balance Sheet		1977 kkkr 000 SwCrs	1976 kkkr 000 SwCrs
Assets			
Current Assets		103,881	93,638
Fixed Assets		488,951	448,224
Grand total		592,832	541,862

Big rise in dry cargo exports

Port of Gothenburg:—Cargo traffic via the port of Gothenburg increased by 13 per cent during the first six months of this year, compared with the same period last year.

While the import of dry cargo was one per cent below, the dry cargo export was 22 per cent above last year's jan-through-june figures.

Oil traffic also showed a considerable increase. Import was up 24, export 50 per cent.

All in all, imports and exports together were 17 per cent above 1977 figures. Low activity in domestic shipping adjusted the total result to +13 per cent.

Gothenburg Tall Ships Race starts off

Port of Gothenburg:—This year's Tall Ships Race went from Gothenburg via Fair Isle (one of the Shetland Islands) to the Oslo Fjord. The start of the race off Gothenburg on August 6th was watched by about 100 000 people, carried by a number of pleasure craft probably exceeding 10 000.

The biggest ships to compete in this year's race were two barques, the Russian "Kruzenshtern" and the German "Gorch Fock", each with a crew well over two hundred. But in addition there were about forty other contenders, from state-owned training ships to privately owned Bermuda sloops.

The result of the 1978 edition of the Tall Ships Race was that the "Gorch Fock" won the big class and the Swedish ketch "Gratitude" won the smaller class. The "Gratitude" made race history due to its all-female crew.

Middle East Ports — Facing the Future

by Robin Crawshaw
CASPR News Release

Over-reaction to congested port conditions of the past, and the urgent need for Middle East Gulf countries to seriously review their port development plans were two of the themes in an address to the recent "Arab Ports '78" conference in London.

In a paper entitled "Middle East ports—facing the future", the President of Port Management Services Ltd., Mr. Robin Crawshaw, made a strong plea for a more cautious and analytical approach in the future.

His company, a subsidiary of Seatrain Lines Inc., manages the UAE seaports of Port Khalid and Port Khor Fakkan.

"There is no escaping the fact that in some Gulf countries port building has become almost the national sport", Mr. Crawshaw told the conference. "Little consideration has been given to co-ordinating port facility plans with even the wildest economic forecasts for future trade. You might say that 'berth control' has been out of fashion", he noted.

Mr. Crawshaw pointed out that the Gulf has approaching 500 deep-water berths available or planned to come on stream—making Gulf ports "surely the most modern in the world".

"We must now ask whether next we will all be sitting with our magnificent new ports and our shiny new equipment, looking over the horizon for the next ship", he said, and "in certain areas of the Gulf, learning how to cope with this situation is already becoming the biggest headache for the future".

"Unless action is taken, and in some cases taken very quickly", said Mr. Crawshaw, "certain areas of the Gulf will be continuing to produce port facilities which will at best be redundant before they are built, or at worst will damage both the economic development of their own markets and those of their neighbours."

"What the motivation is behind such economic waste is difficult to grasp and riddled with hearsay", Mr. Crawshaw said, "certainly what is clear is an over-reaction to the congested port conditions of the past".

Port Management Services Ltd. were among the first to identify and quantify the Gulf over-berthing problem, in a study produced 18 months ago. Other more recent reports have tended to confirm the company's view that the Gulf area faces a major excess of port facilities by the early 1980s.

Part of the problem has been the creation of too many conventional berthing facilities in an era of swiftly developing containerisation, though Port Management Services Ltd. have also quantified a likely excess in custom-built container handling facilities in the area.

Mr. Crawshaw cited an example of the overall problem as the UAE: "destined to have almost 50% of the total number of berths in the Gulf, with 5% of the imports and 2% of the population. That is, 170 deepwater berths for around 5 million tons or 80 tons per day per berth! For the UAE, the future for its ports is, at best, difficult".

Relating this to traffic forecasts, Mr. Crawshaw said:

"One objective forecast suggests that by 1980 the UAE will have a little better than a quarter usage for its ports or, put another way, that 75% of its facilities will be idle and empty all the time. The situation is not expected to improve by 1985 as infrastructure projects are completed".

Mr. Crawshaw expects that:

"Competition in the future will therefore inevitably become more intensive and it is more than likely that it will go beyond normal commercial boundaries into the political arena"

"Unless there is to be a governmental decision to merely subsidise the ports as a national service industry, it is our view that the solution to the problem is the common solution to intensive competition in any sector of the commercial world—specialisation", said Mr. Crawshaw.

"Based on the view that a port is a commercial operation, we believe that it should function like any other business and show a return on its investment", he added.

In the view of Port Management Services Ltd., future port operating strategy in the Middle East must be geared to optimising revenue through specialisation, and minimising costs through increased efficiency.

"We believe that the approach in future, needs above all, to be more analytical", said Mr. Crawshaw. "Port authorities must take stock of their own local market demand and that of each of their neighbours—they must identify the type of demand and the kind of facilities necessary to handle that demand".

And he concluded:

"Supporting the development of business, both manufacturing and service orientated, in and around the port, will become an increasingly important aspect of the work of a port authority in the new competitive market of tomorrow".

Port Management Services Ltd. is engaged in consultancy and port management projects world-wide. The company is presently seeking to expand its Middle East involvement with new assignments in the UAE, Saudi Arabia, Egypt and Iran.

India launches first fully containerised service

Adelaide:—The East German built Vishva Mohini and six more container vessels delivered from GDR yards will ply the Bombay-Cochin-Colombo-Singapore-Fremantle-Adelaide-Port Pirie-Melbourne-Sydney-Sourabaya run in rotation.

DCN reports that SCI (Shipping Corporation of India) container vessels will be given immediate priority by the Bombay Port Trust and will operate to a regular schedule. They are equipped with their own container handling gear in order to increase flexibility where shore equipment is not available and to allow them to avoid berthing delays where congestion occurs.

Sifting Australia's transport needs —keynote address from WA

South Australian Ports & Shipping Journal, Adelaide, June, 1978

The Bureau of Transport Economics international freight transport workshop at Canberra in April turned up some interesting thoughts, none more-so than those of J.E. Knox, director-general of Transport in Western Australia.

The seminar was a prelude to an even more intensive study of Australian transport in September, when senior transport management from around the nation will gather for the Transport Outlook conference.

Extracts from the central address by Mr. Knox in Canberra are contained in the following article:—

"The value of Australia's exports and imports is currently around 25 billion dollars per annum. Exports make up slightly more than half of this figure.

The cargoes these annual export and import figures represent weight almost 200 m tonnes. Only about 100,000 tonnes of this cargo is air freighted. The remainder, in tonnage terms more than 99.9 p.c. of it, is seaborne cargo. Therefore, it is with the movement of this seaborne cargo we at this workshop must be primarily concerned—inland to the ports, through the ports and then overseas.

A very large proportion of this 200 m tonnes, something like 10,000 ship loads, is carried in vessels owned and operated by overseas shipping companies. Whatever the terms and conditions of hiring are, most of the shipping capacity provided for Australian exports and imports is either owned or controlled by powerful, often multi-national organisations which have reputations for being tough negotiators. This applies particularly to ship owners and operators in the so-called liner trades. Some of them have been at it since the 16th century.

Of the 200 m tonnes, about 165 m tonnes are exported and about 35 m tonnes are imported. In commodity terms, the 200 m tonnes is made up roughly as follows: 42 p.c. iron ore; 16 p.c. coal and coke; 10 p.c. other minerals such as alumina and nickel concentrates; 8 p.c. petroleum and petroleum products; and 6 p.c. grain. Other agricultural and forestry products, including sugar, make up something like 5 p.c. of the 200 m tonnes.

All of the tonnage in these categories is catered for in one or another form of bulk shipping.

What is known as general cargo makes up just over 5 p.c. of the 200 m tonnes. Included in this general cargo category are most of Australia's exports of wool and meat and all containerised freight.

Containerised freight probably makes up about 2 p.c. to 2.5 p.c. of the 200 m tonnes.

Together, vehicles, machinery, chemicals and general cargo make up only about 8 p.c. of the 200 m tonnes. However, in value terms these items account for well over 50 p.c. of Australia's total overseas trade (and about 80 p.c. of the nation's imports). Nearly all of the freight in these categories makes up the cargo for liner shipping which connects Australia to overseas ports by regularly scheduled services.

BTE

The Bureau of Transport Economics was established in June last year by the amalgamation of the Commonwealth Bureau of Roads and the Bureau of Transport Economics, a multi-disciplinary research organisation. Its primary function is to assist and advise the Commonwealth Government, but it has the major secondary function of providing objective advice and information to State and local governments, government instrumentalities and to private enterprise.

BULK AND LINER TRADES

Relatively speaking, bulk shipping does not present such a problem to shippers as does liner shipping. Negotiations over freight rates and terms and conditions etc. only occur when new contracts are being written and these negotiations usually take place between multi-national type corporations. The shipping company, if it is not tied up in some way with one of the principal negotiators, can in these circumstances, find itself in the position of having to accept whatever freight rates and conditions are offered. This has been particularly true over the last five or six years as there is considerable excess tanker and bulk shipping capacity available throughout the world. Shipping arrangements for crude oil are similar. For grains, the situation is slightly different, as contracts often have to be renegotiated each year.

Liner shipping is both more interesting and more volatile than bulk shipping. Because their cargoes are more valuable and time is often an important element in their transport requirements, shippers, in the liner trades are, individually, more demanding. Collectively, however, they have difficulty not so much in making their demands known, but in having them satisfactorily fulfilled in negotiations with shipping companies. On the other hand, ship owners and operators in the liner trades are well organised for negotiating freight rates and terms and conditions for the movement of cargoes.

The two most significant characteristics of liner shipping are the institutionalised organisation of ship owners and operators into shipping conferences, and containerisation.

Shipping conferences, on Europe-Australia routes, have existed for almost 100 years and generally, have been a change resistant force. Containerisation is a phenomenon of the last decade. The containerisation movement is still developing and during this development phase is a force for continual change in the liner shipping. Yet, paradoxically, shipping conferences and containerisation are complementary. There is little doubt that the economic and negotiating power of shipping conferences has been strengthened since the introduction of containerisation.

SHIPPING CONFERENCES

The conferences, in which owners and operators of vessels engaged in liner shipping between Europe and Australia are participants, are known as "closed" deep sea

conferences.

Under their conference agreements, owners and operators of vessels in "closed" conferences act together to make common prices, to admit or exclude applicants from conference membership, to share trade in various ways amongst themselves, as well as to make common policy on such matters as discounts and rebates, combating competition from non-members, and pooling and sharing earnings. There are more than a dozen conferences related to Australia. The corporate structure of the participant organisations and groups of companies is complex and intricately interwoven both within and across the conferences. A very close knit group of traditional British shipping companies are, perhaps, the dominant force among these liner ship owners and operators. Their presence in "closed" deep sea shipping conferences is ubiquitous.

The economic influence liner conference participants have on the costs of moving containers between Australia and the rest of the world is not confined merely to the operation of container vessels. One or other of them has interests in container terminals, stevedoring, and container hire. One can question whether this is appropriate, particularly in view of the new arrangements on the waterfront which may Government forthrightly opposed. The proof of the pudding will be in the eating. There can be no real argument with the proposition that within these conferences liner shipping services act as cartels, if that word is used in its economic sense. Thus, in the economic environment in which shipper/shipping conference negotiations are conducted, consignors and consignees of Australia/Europe container freight have generally been rate takers and conference participants rate makers. It is difficult to imagine any legislative framework devised to strengthen the hand of shippers in negotiations held in Australia which could significantly alter the relative economic positions of these two groups. However, that does not mean the present situation cannot be improved.

CONTAINERISATION

Since containerisation was promoted by some owners in 1966, the growth of liner container services has been explosive. Now, about 450 container ships are in service on deep sea routes around the world.

Enormous capital outlay is required, not only for container vessels, but for terminal and handling facilities at ports, distribution systems and for the containers themselves. Ship owners and operators often were forced into mergers or joined consortia to take advantage of the economies scale and technological advancement that containerisation offered.

Examples of these consortia are: on Australia-Europe routes AECS and ACT(A)ANL, and on Europe-Far East routes, Trio, Ace and ScanDutch. With greater capital investment and more intricate amalgamation of ship operators and owners, greater protection of shipping capacity has been sought through conference agreements. In addition, through containerisation, the traditional giants of shipping have been able to attract a greater proportion of general cargo trade than they enjoyed in the days when break bulk vessels dominated liner trades. Consequently, containerisation has generally strengthened the institutional structure as well as the economic influence and power of the "closed" conference on deep sea routes.

Despite its advantages, containerisation has produced some problems and caused some uncertainty for shippers and port in Australia.

There is a very great need for an intelligent approach to resource use in port development. We also welcome the B.T.E.'s cargo centralisation study. We have a suspicion which we can't prove, that across the board centralisation—which appears to have the ideological authority of an ex cathedra Papal statement—has cost Australia dearly. We are not persuaded that the benefits—reputed to flow in the form of lower than otherwise sea freight rates—are not heavily outweighed by the internal transport costs.

It is significant also that now, whether looked at in terms of tonnage or value of cargoes, three of Australia's five most important ports are on the west, not the east coast of the continent. They are Fremantle, Port Hedland and Dampier.

I could continue at length on other issues such as:

- The price of energy and its effect on international transport;
- How deliberately do we as Australians—not just Western Australians—use and structure our transport system to readily exploit the burgeoning Middle East and South East Asian markets. I don't think we have touched them yet;
- The significance to Australian international transport arrangements of the transshipment and entrepreneurial ports of Singapore and Hong Kong and Marseilles/Fos;
- How slowly, but surely, do we devise what people are pleased to describe as a national transport policy? My political masters and I tend to approach "national" policy initiatives with suspicion and we have very good reasons based on bitter experience to do so. I wonder however whether the time might not have arrived to more rigorously explore—through existing institutions—what common ground could be developed about the two important issues in inland transport, regulation and resource cost.

TWO SHIPPING STUDIES

Late last year two study reports were released which, we believe, have very important implications for liner shipping serving Australia. I believe the participants at this workshop should consider both of these seriously during the next few days. The studies are:

- The Commonwealth Department of Transport Overseas Cargo Shipping Legislation Report.
- A policy research paper released from my own office entitled "Options for Western Australia—Europe Container Traffic."

The economic and institutional influences on freight rate and other shipper/shipowner negotiations, and the "efficiency" of liner services are the essential subject matter of the Commonwealth report. It is concerned particularly with the Federal Government's ability or need to influence there behavioural characteristics. My Government's view is that someone—we don't particularly mind who—must develop that ability.

The study undertaken by my senior economist, Frank Gallagher, was essentially a response to the potential crisis facing Fremantle in 1975. However, the methodology developed, and the conclusions reached in it have greater than local implications.

Port of Portland (Australia) Annual Report

(Extracts) Chairman's review

(Chairman: Mr. T.C. Jarret, O.B.E.)

In presenting the 26th Annual Report of the Commissioners for the year ended June 30th, 1977, it is pleasing to draw attention to the fact that despite the difficult economic conditions prevailing during the period the port was able to record an increase in the overall volume of cargo handled.

Total trade of 694,054 tonnes represented an increase of 7.6 per cent on the preceding year.

Imports rose by 16.7 per cent to 419,708 tonnes largely as a result of increased tonnages of petroleum products, phosphate rock, and coffee beans.

Exports showed a slight decline of 3.8 per cent to 274,346 tonnes; due mainly to a dearth of bulk oats available for shipment.

During the year under review the State Government decided that there was to be only one bulk grain handling authority in Victoria, despite the recommendations handed down by the State Development Committee following its exhaustive investigation into grain handling.

Legislation was subsequently enacted to enable the reconstitution of the Grain Elevators Board, and the stage was set for a new era in grain handling to commence with the 1977/78 harvest.

After many years as a successful grain handling Au-

thority the Trust has been divested of its powers to continue in this activity, and so loses any direct leverage it may have been able to exert towards achieving an increase in port trade through the operation of its grain terminal.

The net effect remains to be seen; but it may be assumed that, in return for an assurance that the Australian Wheat Board will declare a rail freight advantage zone in respect of wheat having such an advantage to the port, and will ship wheat through Portland when it suits the Board to do so, the port will lose part of its valued oat trade and may not again see grains or seeds grown in the Riverina districts of New South Wales.

The importance of trade between Australia and the Middle East countries is highlighted in port statistics. These show that 20 per cent of our total export tonnage, and 25 per cent of the sixty four vessels engaged in our export trade, were involved in servicing these expanding trade outlets.

The prospect of increasing both the variety and volume of traffic through the port was highlighted still further during the latter half of the year with the introduction of a regular service between the West Coast of Africa and Australia. This service was initiated by a Yugoslav shipping company and resulted in the discharge of two consignments of coffee beans, plus the loading of a small quantity of wool destined for discharge at Adriatic ports.

During the year the Trust continued to take every

(Continued from page 44)

Perhaps the most important conclusion of our study was that Fremantle, and ports like it, have a role in promoting and serving smaller container vessels on alternate and supplementary route patterns to those developed by the major deep sea liner shipping consortia—as far as we are concerned, outside the traditional conference structure if possible.

In addition, our study has shown that, regardless of our changes of influencing the establishment of liner shipping services terminating at Fremantle, it is possible to devise practicable methodology, particularly in relation to costing the operation of liner services, which can be used in developing better bases for negotiations with shipping conferences and the participants in them. Thus, the main thrust of the study was at strengthening the hand of shippers' representative organisations, such as the Western Australian Shippers Advisory Committee, and the Australian Shippers Council, in their negotiations with shipping conference participants.

After protracted argument, Western Australia secured regional, as opposed to commodity group, membership of the Australian Shippers Council. We have made no secret of the fact that we see this as step one.

Step two is to reach a situation which the Western Australian Shippers Advisory Committee, under the suzerainty of the Australian Shippers Council, becomes the body—designed or otherwise—which negotiates with Lines or conferences terminating in Western Australia. We also think a little further—the study points to ways in which we can encourage more owners to terminate in Western

Australia so that we enjoy the benefits of freight rates related to the actual sailing distance between ourselves and our trading partners, rather than freight rates related to some hypothetical midpoint halfway between Sydney and Melbourne. We already have three terminating lines and their interests and ours might be best served if we managed to encourage formation of a terminating conference.

AUSTRALIAN PORTS

At the end of World War II, the Australian coastline was dotted with major and minor ports, all serving agriculture and the liner trades.

Over the past twenty years the role of ports on our coast has changed. With containerisation and cargo centralisation the number of ports on regular liner service schedules has been reduced to the capital city ports. Other ports along the coastline are now more specialised.

There are ports serving bulk ore shipments, such as Port Hedland, Dampier, Gladstone, Hay Point and Weipa; ports associated with oil refining and major industrial developments such as those at Port Kembla, Geelong, Westernport, Port Stanvac and Kwinana; and ports, such as Geraldton, Portland, Port Lincoln, Bundaberg and Mackay, which are associated with the shipping of bulk grain or sugar.

In a professional sense I welcome BTE initiatives through the Ports and Marine Council to do economic work in the area of port needs. We ourselves have already done some useful work on the financial structure of regional ports in Western Australia, many of which were quite clearly established to answer political as opposed to economic or transportation requirements.

opportunity to build up port trade and to assist where it could with the general development of the region it serves. It continued to actively support both the Portland Development Committee and the Hinterland Committee, both of which are under the auspices of the Division of State Development.

In respect of both the further development of port trade and the development of the region through the establishment of large processing industries in the area, it is becoming increasingly apparent that serious consideration will need to be given by Government into the provision of either a greatly boosted electricity reticulation system from the present power sources, or into the establishment of a separate generating station within the area.

Portland has always been an important port servicing the fishing industry, and it appears that this importance will increase. It is anticipated that the new grounds will support a sizeable trawler fleet, which in itself, is an exciting prospect with beneficial connotations both for the Town and the State.

Unfortunately, the Trust does not have any spare berths which it could allocate to a fleet of large trawlers, therefore additional facilities will have to be provided. Plans and estimates of cost have been prepared by the Trust and have been submitted to the State Government for consideration.

Revenue Statements

Grain Terminal Revenue

Revenue from the receipt, storage and outloading of grain for the year ended 30th June, 1977, was \$723,180. This was slightly lower than the comparable figure of \$760,299 for the previous year. The volume of grain handled in the year under review was again below capacity, being less than half of the record achieved in the 1971/72 financial year.

Consolidated Revenue Statement

Total operating revenue increased to \$1,662,095. This was 13.9% higher than last year's figure of \$1,459,180.

The main reasons for the higher figure, were that the Harbor Revenue and Shipping Services Revenue increased by more than \$90,000 and \$124,000 respectively.

On the other hand, operating expenditure rose marginally to \$1,373,854 from \$1,325,012 (an increase of approximately 3.7%), due partly to the effect of rising costs generally and partly to increased activity in some areas of the Trust's diversified services, particularly the Marine Section.

The non-operating expenditure item, Interest on Loans, reached the figure of \$1,402,418 which was \$97,686, or 7.5% more than last year.

The Government Grant was reduced by \$164,000 to \$1,220,000. This, unfortunately, proved to be insufficient to meet the year's short-fall in net revenue and so the accumulated deficit rose by approximately \$58,000 to \$487,579, which was almost identical to the situation two years previously.

Balance Sheet — Consolidated

Details of Inscribed Stock

	\$
Liability as at 30th June, 1976	19,710,909
Loans raised during 1976/77	<u>1,129,500</u>
	20,840,409

Less Redemptions and Conversions 1976/77	439,656
Liability as at 30th June, 1977	<u>20,400,753</u>

Loan Funds Advanced by the Treasurer of Victoria

Liability as at 30th June, 1976	3,672,900
Advances during 1976/77	<u>150,000</u>
Liability as at 30th June, 1977	<u>3,822,900</u>

Investments

Investments held by the Trust at 30th June, 1977 amounted to \$3,038,540 being made up as follows:—

General Investments	50,000
Sinking Fund Investments	1,726,326
Depreciation Fund	<u>1,262,214</u>
Total Investment as at 30th June, 1977	<u>\$3,038,540</u>

ADB approves \$1.5-M technical assistance loan for Songkla & Phuket Ports project

The Asian Development Bank recently approved a \$1.5 million technical assistance loan for the formulation of a project to develop two major deep-sea ports in southern Thailand.

The ports—Songkhla, which lies on the east coast facing the Gulf of Thailand, and Phuket, on the west coast facing the Andaman Sea—are about 500 kilometers apart and serve a hinterland that is becoming increasingly important in the country's economic development.

Of eight principal ports in southern Thailand, Songkhla is the largest, handling about 35 per cent of the southern region's seaborne trade. It has been declared an investment promotion zone and industrial development is being encouraged to be located there assisted by Bank-financed technical assistance for a feasibility study of an industrial estate in southern Thailand.

Phuket is the other growth area in the south, with plans for its future development resting on its two principal assets: mineral resources and tourism potential. As a port it is much smaller than Songkhla, accounting for just over 10 per cent of the region's trade, but it has two advantages: greater proximity to Europe and the U.S. Atlantic Coast than any other port in the country, and a coastline suitable for deep-sea port development.

The Bank loan will be used to finance the foreign exchange cost of engineering services to undertake detailed site investigations and to develop master plans for the immediate and long-term requirements of both ports, and to prepare detailed designs and tender documents for the construction stage.

Record trade for ports of New South Wales

Sydney, Australia:—Despite the continuing world-wide economic malaise, ports controlled by The Maritime Services Board of New South Wales posted record trade figures for the 1977/78 financial year.

Figures released in Sydney by the President of the Board, Mr. John Wallace, show that total trade through the ports of the State amounted to 71,964,519 tonnes—3,614,170 tonnes up on the previous year.

Mr. Wallace said the four major ports—Port Jackson, Botany Bay, Newcastle and Port Kembla—accounted for 70,098,922 tonnes of the State's total throughput.

The two major energy related commodities—coal and oil—dominated import/export figures, highlighting Australia's increasing dependence on imported crude and the move back to coal-fired power stations by many of our major trading partners.

The Outports of the State—Twofold Bay, Trial Bay, Clarence River and Richmond River—accounted for a total trade of 1,865,597 tonnes.

Newcastle harbour deepening

“Ports of New South Wales”—The deepening project was officially inaugurated in November 1977. When the M.S.B., The Maritime Services Board of New South Wales first announced the \$70-million project, it was announced that some blasting would be necessary to make Newcastle into a port fitted for its expanding role in the growing economy of New South Wales.

When the project is completed in 1981, the Port of Newcastle will be able to service ships of up to 12,000 DWT. At present it is restricted by depth to fully laden vessels of little more than 50,000 DWT.

To achieve the 120,000 DWT capability, two million cubic metres of rock and eight million cubic metres of sand and clay have to be removed.

Blasting is necessary because of the hard nature of much of this rock.

In April of this year, Mr. Wallace said the Board was determined to eliminate, as far as was possible, any inconvenience to members of the Newcastle public.

“In order to do so,” he said, “we have imposed vibration limits in the residential and business districts of Newcastle of half those recommended by the Standards Association of Australia.

“In addition to imposing these limits, the Board requires its contractor, West Ham Dredging, to use the heavy duty cutter suction dredge, W.H. Kunara, in preference to blasting whenever possible.”

The Kunara, Mr. Wallace explained, can generate 8,432 h.p. and is capable of moving all but the hardest rock. Because of this, he said, blasting will only be used when there is no alternative.

Cargo Shipping Documentation to be computerized

Nagoya Port News:—The day when complex cargo documentation can be handled faster and in completely uniform fashion is close at hand. The first export cargo information system has emerged from preliminary investigations, and recently a demonstration was given for one and all at the port. The demonstration involved actual computer handling of shipping documentation, issuing bills of lading from the required shipping instructions and making out the freight manifest. Besides this system, another new one is now in the developmental stages which will systematize ship information. Serving as the basis for Authority control of incoming and outgoing ships, this system will be launched this fall, well ahead of other ports in Japan.

Port of Chiba, Japan



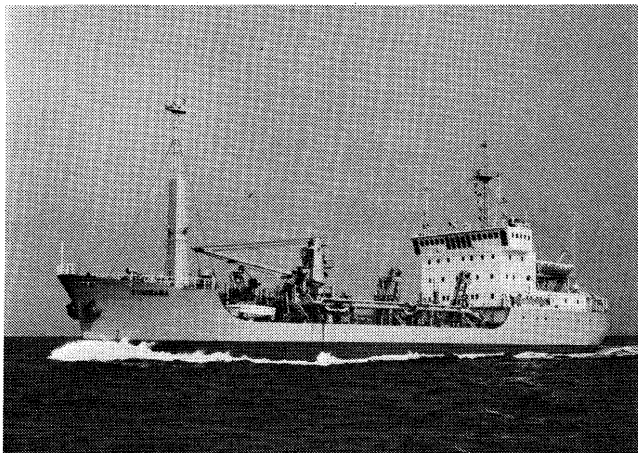
This photo shows a full view of Katsu-nan port area of the Port of Chiba, situated in the northeastern coast of Tokyo Bay, Japan, which functions as a leading distribution centre for Tokyo Megalopolis of food stuff, secondary steel products, variety of woodworks, etc. The Port of Chiba, which occupies an extensive bend of the coastline in the northeast and the east of the Bay embracing, the photoed area above, is administered by Chiba Prefectural Government and handles over 120 million tones of bulk and general cargo annually. It also is fast developing to be one of the largest ports for waterfront heavy and chemical industries.

Port Exhibition Corner unveiled



Nagoya Port News:—A colorful display of photos and a model panoramic view of present and future Port of Nagoya were opened to the public on July 29th in the Harbor Hall Lobby (1st floor). The exhibition corner is intended to give at a glance a sweeping view of the growing Port of Nagoya. In addition to the origins of the port, there are illustrations of the Atsuta Shrine vicinity, present-day port facilities, statistics, and shots of our Sister-City Port of Los Angeles.

Indonesian trailing suction dredger "Sumbawa"



Tokyo:—IHI, Japan, has recently delivered a self-propelled side trailing suction hopper dredger, named the "Sumbawa", to its owner, Department of Transport, Communications and Tourism of the Government of the Republic of Indonesia.

The dredger is designed as a shallow draft type for ports and channels in Indonesia.

The dredger is also provided with the Anti-Turbidity Overflow System developed by IHI to prevent turbidity on the sea surface, an ejector and draghead nozzles for efficient dredging and a travelling deck crane that facilitates the maintenance and repairing of dredge pumps and deck machinery.

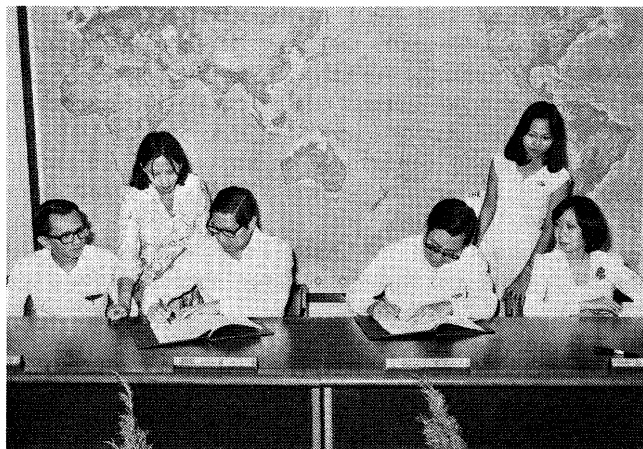
The "Sumbawa" has a hopper capacity of 1,000 m³ and can dredge up to a maximum depth of 20 meters by two diesel engine driven dredge pumps with a capacity of 3,500 m³/hour each.

Assigned berth for PIL

(PSA Press Release):—The Port of Singapore Authority assigned a berth (10/11) at Keppel Wharves together with its adjoining transit godown to Pacific International Lines (PTE) Ltd (PIL) for their sole use with effect from 1 Sept 78.

This is the second berth at Keppel Wharves to be assigned by PSA for use by a shipping company this year. The first one, berth 3/4, was assigned to Messrs Nedlloyd EAC Agencies on 1 Mar 78. This move by the PSA to assign berths to shipping lines is in line with the PSA's policy to increase the utilisation of conventional wharf space being made available as a result of increasing tonnages of cargo being diverted towards containers.

The transit godown at berth 10/11 with a storage area of some 3,700 sq m together with another 1,500 sq m of open storage area will be used exclusively for the storage of cargo to and from PIL vessels enabling the company to provide better terminal services to their shippers via the Port of Singapore.



The Port of Singapore Authority (PSA) assigned a berth (10/11) at Keppel Wharves and its adjoining transit godown to Pacific International Lines (PTE) Ltd. (PIL) for their sole use with effect from 1 Sept. 78.

The agreement was signed at the PSA Conference Hall on 30 Aug. 78. Photograph shows Mr. Goon Kok Loon, Secretary (seated second from right) signing the Agreement on behalf of the PSA and Mr. Y.C. Chang, Managing Director of Pacific International Lines (Pte) Ltd. signing on behalf of PIL (seated second from left).

A satisfactory six-month performance

Singapore:—The PSA registered a 13 per cent increase in cargo throughput at its gateways for the first six months of 1978 compared to the same period last year.

1978 is likely to be record-breaking year for dry cargo handled at the wharves in Singapore if the trend continues at the present rate. For the whole of last year, a total of 20.5 million tonnes of general and bulk cargo were handled at the six gateways. At the rate that traffic is currently increasing, the year-end total volume of cargo handled at the wharves for 1978 will probably be in the region of 23 million tonnes.

The volume of transshipment cargo through the wharves has also attained a new stature with the liberalisation of conditions for transshipment cargo. Transshipment cargo increased by nearly 83% for the first half of this year.

Of this, containerised transshipment cargo accounted for some 74%. The increase in transshipment activities in the Container Terminal has resulted from the continued expansion and introduction of feeder services by container shipping lines.

Containerised cargo traffic, as expected, has grown steadily at a rate of about 35 per cent. The total containerised cargo handled at the PSA wharves for the first six months of the year was 3.8 million tonnes, about a million tonnes more than that of 1977.

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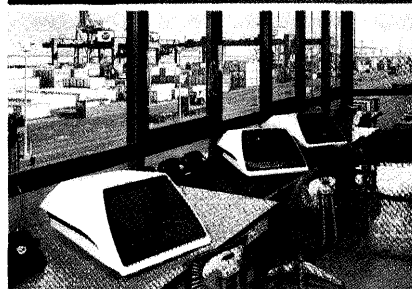
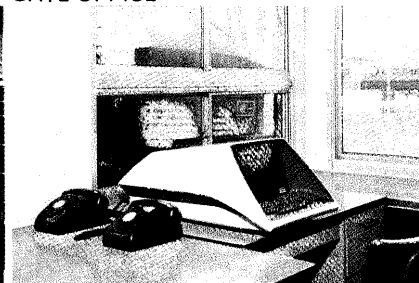
Major Application Software

1. Planning Support & Management System
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4. Marshalling/Shift Operations System
5. Report Generating System
6. Inquiry System
7. Back up & File Control System

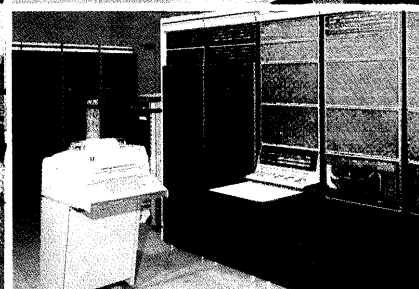
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