

# PORTS *and* HARBORS

May, 1981 Vol. 26, No. 5

**IAPH celebrates the 25th Anniversary.**



**Port of Nagoya**  
Kinjo Pier

**IAPH Conference Nagoya May 1981**

The Publisher: The International Association of Ports and Harbors

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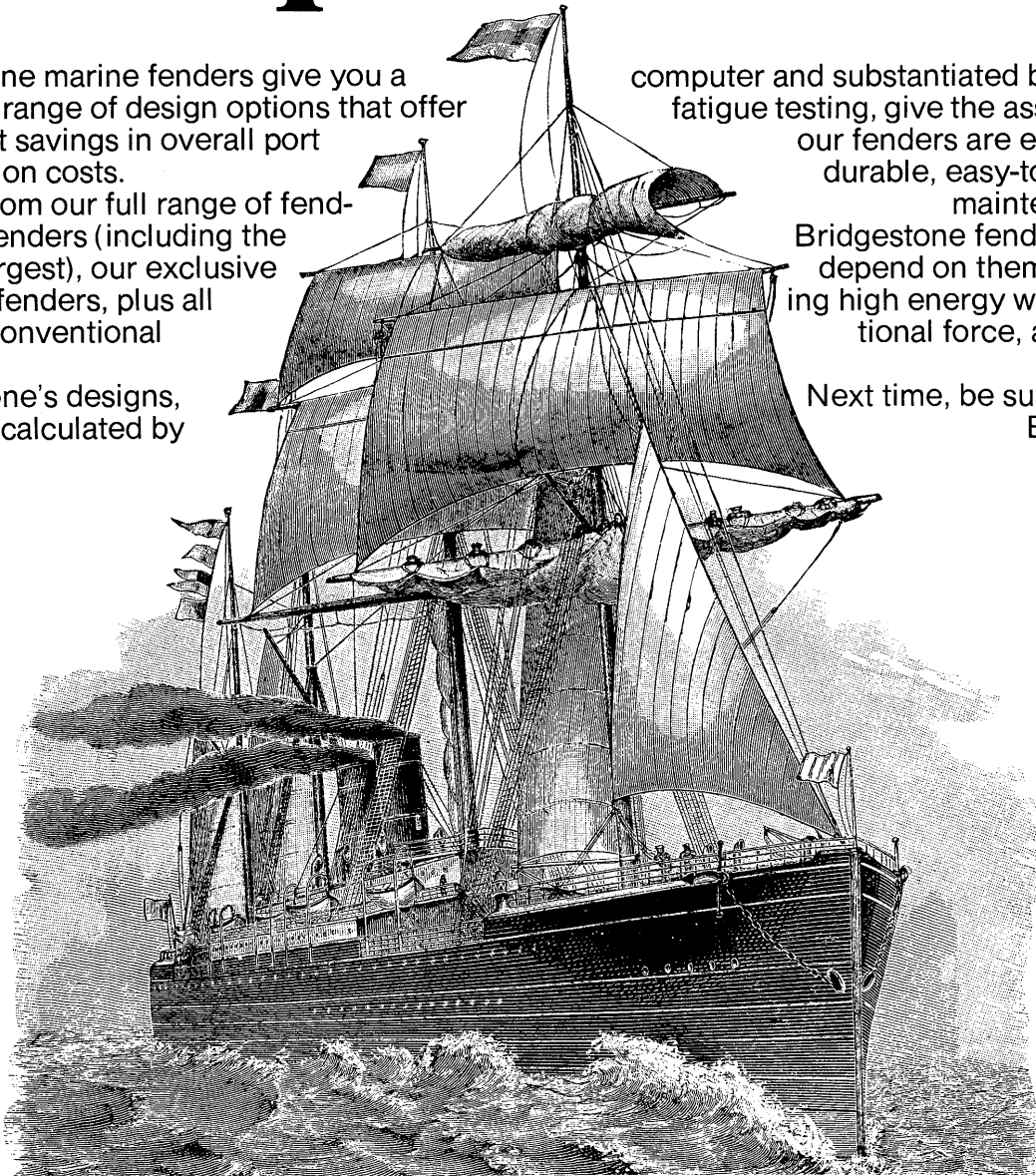
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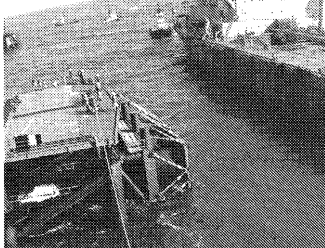
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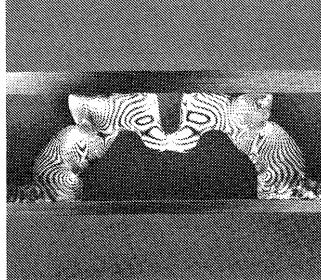
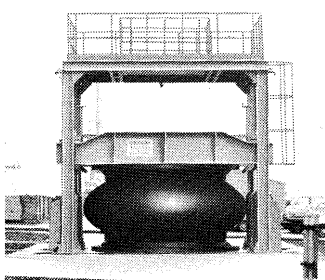
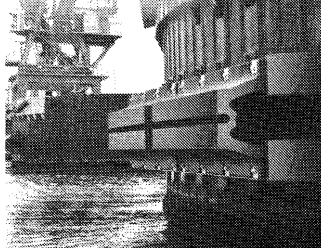
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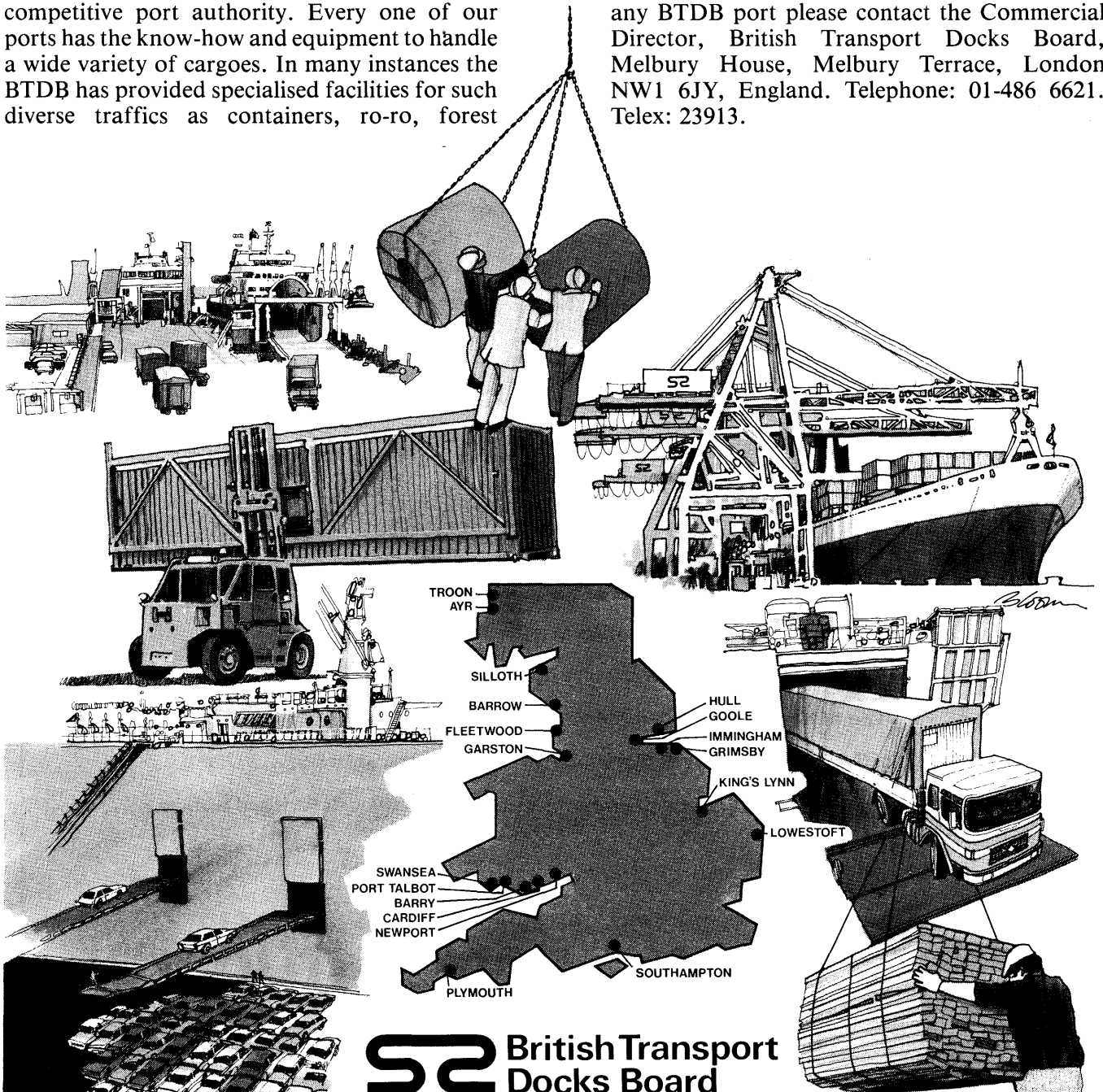


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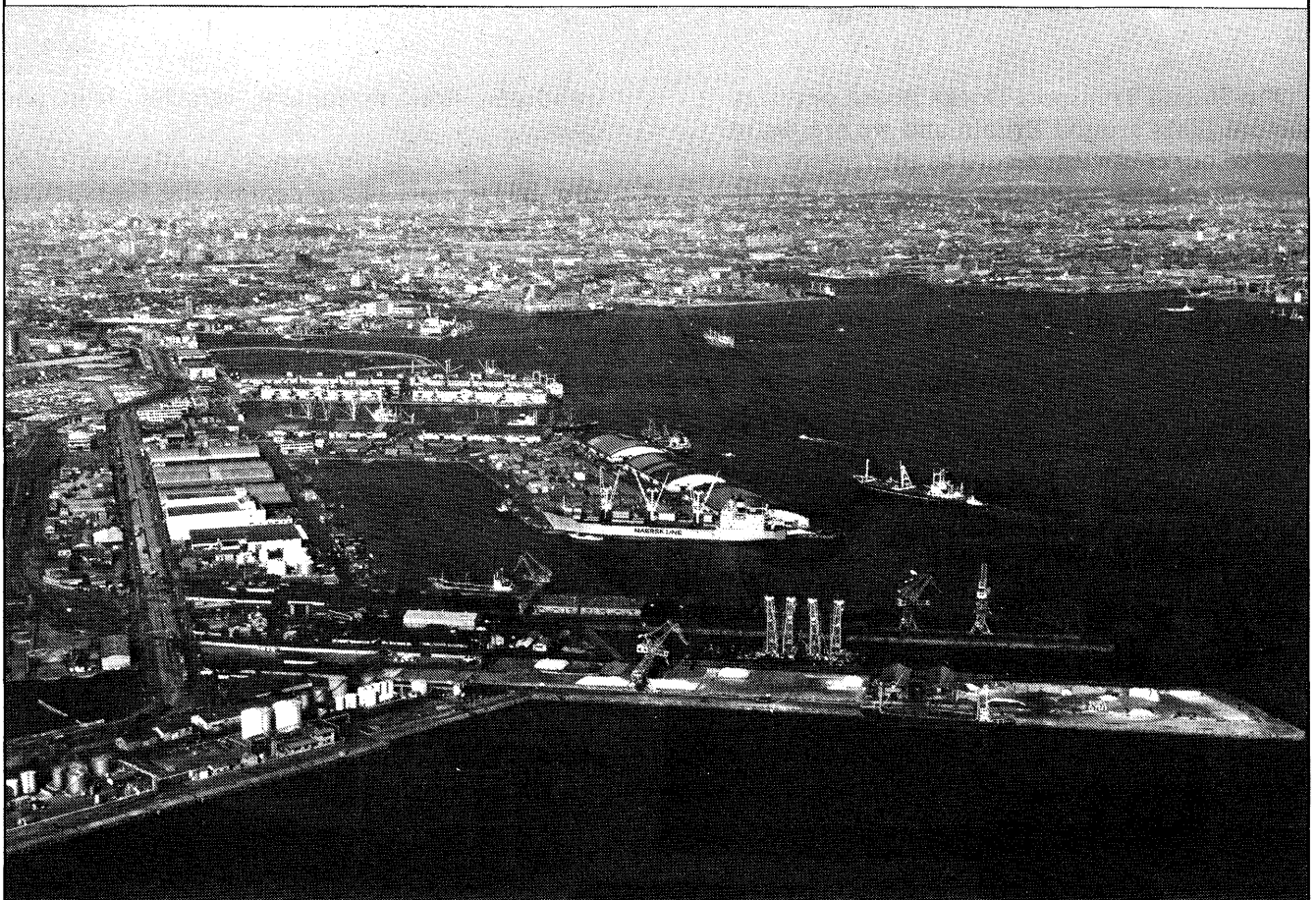
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# PORTS *and* HARBORS

Published monthly by

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<b>The Cover:</b> Situated in the heart of Port of Nagoya, Kinjo Pier serves as the central base for foreign liners, boasting an area of 1.91 million square meters. At present twenty-six berths are available for public use, including two container berths. When completed, the pier will extend 6,350 meters, and simultaneously will be able to accommodate 35 large ships, including a 50,000 DWT passenger liner. In 1979, 7.43 million tons of cargo (incl. containerized) were handled here. It handles the most cargo among Nagoya's public piers. Green areas, Port-playland, and plazas are being completed in the very center of Kinjo. Nearby are located Nagoya's International Exhibition Hall, which is used for exhibitions, concerts and so no. On Friday, May 28, 1981, IAPH delegates are invited to Japan Night—Pier-Head Reception in this Hall by the conference host.	

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# IAPH announcements and news

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## IAPH/ IAPH Foundation Arrangement coming into a New Era

As readily reported in the March 1981 issue of the journal, the Association decided to disengage, effective January 1, 1982, the Agreement entered with the IAPH Foundation in 1973, by adopting the resolution to the effect at the meeting of Regular Members by correspondence on December 28, 1980 and by sending the consequential letter of intention by the President Bastard addressed to Mr. T. Akiyama, President of the IAPH Foundation.

In response to the IAPH intention, the IAPH Foundation has been working on the detailed procedures for the separation and prepared a new agreement, with consultation with the IAPH Officers, to conclude the existing Agreement. The Board meeting of the IAPH Foundation held on March 31, 1981, endorsed that the arrangement be so processed between the Foundation and the Association. The draft text of the new agreement is now being scrutinized by Mr. P.J. Falvey, Chairman of IAPH Legal Counselors.

The draft text of the new agreement:—

### New Agreement (Draft)

**THIS AGREEMENT**, made and entered into this \_\_\_\_ day of MAY 1981, by and between **THE INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS**, an unincorporated association (hereinafter referred to as "the Association") and **THE INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS HEAD OFFICE MAINTENANCE FOUNDATION**, renamed from the effective date of this Agreement as **THE INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS CO-OPERATION FOUNDATION**, a Japanese corporation (hereinafter referred to as "the Foundation"),

### WITNESSETH:

WHEREAS, the Foundation was established to help the Association financially and has been successfully fulfilling its duties of maintaining and operating the Head Office of the Association under the Agreement made and entered into on the ELEVENTH day of MAY 1973 (hereinafter referred to as "the Old Agreement"),

WHEREAS, the Association now has succeeded in achieving financial independence through its continued efforts; and

WHEREAS, the Foundation has been served with the notice on the TWENTY-EIGHTH day of DECEMBER 1980, in accordance with the provisions of Section 11 of the Old Agreement, to terminate the Old Agreement on the THIRTY-FIRST day of DECEMBER 1981, from the President of the Association duly authorized by the membership of the Association, and

WHEREAS, the Foundation willingly accepts the notice of termination of the Old Agreement, knowing that the financial self-sufficiency of the Association has been

successfully accomplished, now, therefore, it is

AGREED BETWEEN THE FOUNDATION AND THE ASSOCIATION AS FOLLOWS:—

1. The Foundation relinquishes and waives all claims for reimbursement of the financial subsidies which it has given to the Association during the period of maintaining and operating the Head Office of the Association,
2. The Foundation shall donate, without claim for reimbursement, FIFTY-THREE MILLION YEN (53,000,000 Yen) in cash or its equivalent to the Association for its operational fund, to be used for the Association purposes, on the effective date of the Agreement,
3. From among persons now employed by the Foundation, necessary and qualified individuals to fill the following positions of the Association shall be transferred to and become employees of the Association, upon the effective date of this Agreement, under the same working conditions they enjoyed as employees of the Foundation:

Deputy Secretaries General	2 (one is being unfilled)
In servicing department	
Senior Secretary	2
Junior Secretary	1
In clerical department	
Chief clerk	1
Assistant clerk	1

4. The Association shall be responsible for providing retirement benefits for all the Association employees. For employees transferred from the Foundation, their claims of retirement benefits already accrued against the Foundation on the abolishing day of the Old Agreement shall be assumed fully by the Association. Assets to each claim now held under the item of the retirement allowance reserve fund by the Foundation shall be transferred to the Association upon the effective date of this Agreement.
5. The Foundation shall return to the Association all such usable and moveable equipment and working documents of the Head Office of the Association listed in the inventory contained in the Declaration of Take-over, made and signed on the FIRST day of JUNE 1973, in their existing condition, without compensation. The Foundation shall reimburse the Association for missing items at the book value in the said inventory and upon reimbursement therefor the Foundation shall be relieved of any claim in connection therewith. The Foundation shall also transfer to the Association, at the same time, ownership of any usable and moveable equipment, supplies and working documents for the Head Office of the Association, in addition to those specified in the said inventory, which are necessary for proper functioning of the Head Office of the Association. Also, at the same time, the Foundation shall reassign to the Association all

of its right, title and interests in and to any agreements relating to the Head Office outstanding at that time, except those relating to the Library room.

6. The books, magazines and papers now being held in the Foundation Library shall remain under the property of the Foundation, and in the future when the Association wants to dispose of any of its supplies, books, magazines and papers, it shall first refer the matter to the Foundation. The Foundation shall have the option of selecting such books, magazines and papers it deems worthy to be kept in its Library. The Association shall have the right of free access to any material kept in the said Library.
7. This Agreement shall become effective on the FIRST day of JANUARY 1982. The Old Agreement will become altogether invalid upon the effective date of this Agreement.

The Association shall approve, after the effective date of this Agreement, that the Office space, now being used by the Foundation as the Head Office of the Association, be jointly used by the Foundation. The Association and the Foundation shall share the common office expenses, such as rent, fees for common service, water, heat and light charges in proportion to the number of personnel working in the office.

8. After the abolishment of the Old Agreement, the Foundation, within the scope of its Articles of Incorporation and its financial capacity, upon the request of the Association, will cooperate with the Association to achieve its objectives, in cases such as the Association's financial crisis caused by irresistible reasons.

**IN WITNESS WHEREOF**, the parties hereto have caused these presents to be executed the day and year first hereinbefore above written.

THE FOUNDATION  
A Japanese Corporation

.....  
President  
Attest .....  
Managing Director  
Attest .....  
Permanent Chairman, The Council of  
the Foundation

THE ASSOCIATION  
An Unincorporated Association

.....  
President  
Attest .....  
President-Designate  
Attest .....  
Secretary General

### **The IAPH Foundation decides on the Donation of 100,000 dollars to the Special Port Development Fund**

At its regular meeting of the Board of Directors held on March 31, 1981, the IAPH Foundation decided to make a 100,000 dollars donation to the IAPH Special Technical Assistance Funds to commemorate the 25th Anniversary of IAPH.

The newly announced donation by the Foundation will take place at the Silver Jubilee Ceremony on May 25th, 1981 at Nagoya and will encourage those port personnel

from the developing countries by assuring them of increased chances to participate in the training and seminars conducted at different ports or institutes of the world and at the same time stimulating their ideas to contribute papers on how to improve their ports under the IAPH Bursary and Award schemes.

The Foundation is also to sponsor a series of the Silver Jubilee events, such as, the memorial services for the late Mr. Matsumoto and Dr. Haraguchi, IAPH Founding Fathers, financial assistance to the recipients of the Silver Jubilee commendations to attend the Conference, the publication of the book "IAPH—The First 25 years" and the Silver Jubilee ceremony and luncheon.

### **IAPH Bursary Scheme 1980 granted to 9 officers from developing ports**

At the 11th Conference of the Association held in France, May, 1979, it was decided that altogether 10 bursaries for an increased value of US\$3,000 each (formerly US\$2,500) would be made available.

As of March 31, 1981, 9 bursaries out of the total 10 units allocated for the applications made within 1980, were granted to the following applicants by the Association, as a result of the screening by the Committee on International Port Development, Chairman of which is Mr. J.K. Stuart, British Transport Docks Board.

1. Mr. J.K. Enyame, Crane Supervisor, Ghana Ports Authority, to attend a course on Mobile Crane Instructions in December, 1979. (In the event Mr. Enyame was unable to attend, and funds allocated were used by him later on a course from March 2, 1981 at the Port of Singapore Authority.)
2. Mr. A.W. Odera, Assistant Engineer, Kenya Ports Authority, to attend a course on Port Equipment Maintenance at Port of Singapore Authority commencing June 12, 1980.
3. Mr. P.K. Pelly, Computer Programmer, Penang Port Commission, Malaysia, to attend a Computer Course at the University of Aston, UK, commencing October 5, 1980.
4. Mr. Yeslam Award Albas, Assistant Operations Manager, Yemen Ports Authority to attend Cargo Operation, Conventional Wharves, and Planning and Operations, Container Terminal Course at Port of Singapore Authority, commencing September 22, 1980.
5. Mr. A.S. Sulliman, Training Officer, Yemen Ports Authority to attend the same course as Mr. Yeslam Awad Albas.
6. Mr. Nleno, Engineer, Cameroun National Ports Authority, to attend the Port Management and Operations Seminar at the Port Study and Research Institute, Le Havre, France, commencing March 9, 1981.
7. Mr. Kauamou, Engineer, Cameroun National Ports Authority, to attend the same course as Mr. Nleno at Le Havre.
8. Mr. A.K.M. Hamidur Rahma, Deputy Secretary, Chittagong Port Administration, Bangladesh, to attend the Port Administrative Management Course at Port of Liverpool, UK., commencing April 20, 1981.
9. Mr. Elegbe, Port Authority of Cotonou, Benin, to attend the Port Management and Operations Seminar, the same course as the trainees from Cameroun at Le Havre, France.

The Bursary scheme for the new term will be decided and announced after the Nagoya Conference, May, 1981.

## A New Legal Counselor appointed by the Board

At the Board of Directors' meeting by correspondence met on March 27, 1981, Mr. Robert W. Parkin, City Attorney, City of Long Beach, was appointed to serve the Association as Legal Counselor, succeeding Mr. Leslie E. Still, Jr., who had retired as the Vice-Chairman of IAPH Legal Counselors.



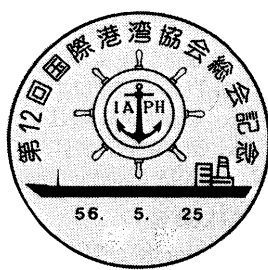
Mr. Robert W. Parkin

## Introducing Commemorative Stamp for the 12th Conference

On March 24, 1981, the Japanese Ministry of Posts and Telecommunications announced that a special commemorative stamp for the 12th IAPH Conference would be issued on May 25, 1981 and introduced at the Opening Ceremony of the Conference.

According to ministerial bulletin, the stamp (25 mm x 33.5 mm/five colors/24 million circulation) will be sold nation-wide on and after May 25, and Special Post Marking will be done at selected post offices, including the one to be specially located at the Conference site in Nagoya and Portopia in Kobe, during seven days from 25 to 31 May, 1981.

Commemorating the 12th Conference and the issuance of the stamp, a special exhibition featuring the IAPH, Nagoya Port and maritime affairs in general will be held at Matsuzaka-Ya Department Store in Nagoya from 21 to 26 May, under the joint sponsorship of the Tokai (Nagoya) District Bureau of the Ministry and the Conference Organizing Committee.



(Designed by: Mr. F. Ohtani, MOPT) Special Post Mark

## Sir Leslie Ford passes away

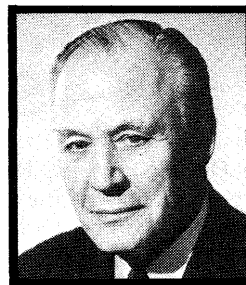
The sad news of Sir Leslie Ford, former General Manager, Port of London Authority, reached the Tokyo Head Office on March 28th from the SITPRO London Office by telex. It read "Regret to inform you that Sir Leslie Ford died on 22 March. Memorial Service date will be announced shortly".

Sir Leslie has been selected as one of the 13 recipients of the IAPH Silver Jubilee Commendation for his meritorious contribution to the Association. His obituary in the Times of London of 30 March referred to this fact that this year "IAPH planned to present him with their silver medal as a mark of particular appreciation of his service to the international port industry".

It was only February 4th that Sir Leslie wrote to the Secretary General about his willingness to attend the May Conference in Nagoya with Lady Ford and stating that he

would look forward to meeting all his friends in IAPH then.

President Bastard in France sent the Association condolences (as per reproduced hereunder) and so did Secretary General to Lady Ford at the address: 26 Bedford Gardens, Campden Hill, Lodon W8 7EH, U.K., through Mr. John Raven, SITPRO, London who informed the Secretariat of the news and relayed the Association's message of condolences to the bereaved family.



Sir Leslie Ford

## Presidential Condolence Message

On my return from a short trip in Nigeria, I am sincerely grieving over Sir Leslie Ford's death.

Our Association knows what great contribution and achievements we all owe to him: among others he had magisterially run the 4th IAPH Conference when the Association was needing such conferences to make great strides and get the strength we know it has acquired now.

My grief is all the greater that it had been decided that Sir Leslie Ford would be commended at the coming Silver Jubilee Ceremony of IAPH at Nagoya.

Henceforth my great sorrow as the sad news came to my knowledge.

Would you please receive and convey to the Port of London Authority, and more particularly to Lady Ford, the expression of our distressed friendship and be assured that our Association and all its members will long remember Sir Leslie Ford.

P. Bastard

## Successful "Seatec" seminar held in Singapore

Many of the issues facing port developers in the Asia/Pacific region were actively discussed by the 175 delegates from 27 countries attending "Seatec" seminar in Singapore during the first week of March. Under the theme of "Asian ports development and dredging", the event was Sponsored by United Nations ESCAP and by IAPH, the International Association of Ports & Harbors. Of the delegates, 106 were from developing economy countries and the highest number, 53, were ports authority personnel. Also attending and contributing through the knowledge of their own disciplines were dredging contractors (32) and consulting engineers (27), the remainder being delegates from Government agencies, research bodies, dredger builders and equipment suppliers.

Altogether, some 32 papers were presented, bound volumes being available from the Organisers at US\$166 per set. Organised by "Dredging + Port Construction" journal and its sister company in Singapore, MarIntec S.E.A. (Pte) Ltd., the seminar was held concurrently with "Marintec Asia 81" exhibition. This show attracted over 400 exhibiting companies from around the world and was inaugurated by Hong Kong shipping magnate Sir Yue-Kong Pao.

In June 1982 MarIntec are organising the "Portech 82" ports technology conference and exhibition in co-operation with the Port of Singapore Authority. This major international event is right in the centre of the world's largest port development area, where an estimated US\$1,217 million is earmarked for the expansion of 27 regional ports within the next few years.

# Mr. A.J. Smith reports on Inert Gas Systems on Chemical Tankers

On January 19, 1981, the meeting of the preliminary study group on the feasibility of establishing an inter-industry Working Group to examine the question of installing inert gas systems on chemical tankers, was held in London, attended by the representative of

International Chamber of Shipping (ICS)  
Oil Companies International Marine Forum (OCIMF) by  
Conseil European des Federation de l'Industries  
Chimique (CEFIC)  
International Tank Storage Association (ITSA), and  
IAPH

Conclusions were:—

1. The current position of discussion on the question as to whether inert gas should be used on chemical tankers was of such importance that it was decided to establish an inter-industry group to examine that question and related matters.
2. The objective of the Working Group should be to investigate the practical and safety implications of the use of inert gas on chemical carriers carrying flammable liquids, and to develop, if necessary, equivalent standards for controlling the flammability hazard.
3. The terms of reference of the Working Group could be defined as follows:—
  - (a) to establish a programme of work
  - (b) to co-ordinate the programme of work in Europe
  - (c) to liaise with all other bodies associated with the objective stated above.
4. The work programme should include:—
  - (a) a survey of related literature and work done in related fields by other organizations
  - (b) the study of existing cargo operations on chemical tankers
  - (c) flammability studies
  - (d) control of explosion
  - (e) study of quality problems
  - (f) assessment of hazards on chemical tankers with and without inert gas systems
  - (g) cost/benefit analysis
  - (h) recommendations/guide lines for safe operation
5. Membership of the Working Group should comprise representative of the organizations represented at the meeting on January 19, 1981.
6. Dr. J. Bond of CEFIC was appointed Chairman of the Working Group for the length of the study, and Secretariat functions will be carried out by the International Chamber of Shipping.

He further noted:—

It would be helpful to receive information from IAPH members as to ongoing work of a relevant nature, or indeed, work already carried out. Such information would then be fed into the general store of knowledge available to all to deal with this matter.

## Membership Notes

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(Mr. Dale J. Brou, Port Director)

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Tel.: 231 07 54

#### The Western Australian Port Authorities Association

(Class B)

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Office Phone: 35 49 45  
Telex: 87369 jupo e  
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#### Sea Ports Corporation

P.O. Box 2534, Khartoum, Sudan  
Office Phone: 79114  
Telex: 464 MAWANI  
Cable: MAWANI KHARTOUM  
(Mr. Khalid Elsadig Onsa, Chairman)

### Visitors

On March 2, 1981, Mr. Lee, Sung-Kon, Director-General, Port Management and Operation Bureau of Korea Maritime & Port Administration, accompanied by Mr. Kim, Sei-Chan, a staff member of the Administration, visited the Head Office and was received by Dr. Hajime Sato, Secretary-General, and his staff. During the meeting, Mr. Lee informed that Mr. Moon, Myung Rhin was appointed as the new KMPA Administrator and conveyed of Mr. Moon's continued preparedness of extending support to the IAPH activity.

**CORRECTION:** In the article "Ports in Japan: A Profile of Port Development Policy" by Mr. Yoshio Takeuchi, President of the Overseas Coastal Area Development Institute of Japan, published on page 25-28 of the March 1981 issue, the footnote "2" of Table 5 on page 28 was erroneously printed. The footnote should read as follows:—

"Figures in ( ) show the foreign trade traffic in the Total."

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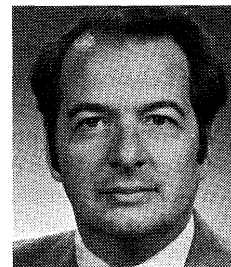
## Open forum: Port releases:

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# The National Harbours Board Activities and New Port Policy

**Speech by Mr. Jacques Auger,  
Vice-Chairman of the National  
Harbours Board, at the Canadian  
Industrial Traffic League Twenty-Fifth  
Annual Traffic and Transportation  
Conference on February 26, 1981 at  
the Queen Elizabeth Hotel in Montreal**



Mr. Jacques Auger

It is indeed both an honour and a pleasure to address you on the occasion of the 65th Annual Meeting of the Canadian Industrial Traffic League. Before I begin I wish to pay my respects to the Canadian Ports Traffic Development Committee which I understand was originally known as the Canadian Ports Committee.

I am also told that over the years this Committee and its members who represent a very substantial cross section of the Canadian Transportation and industrial traffic industry have done a most admirable job in promoting the growth of Canadian ports in general and in particular the National Harbours Board.

The transportation field in a political sense, has always held a predominant place in the evolution of societies. It has always been considered as the focal point of evolutionary ideologies and of progress from generation to generation. Considering the importance of the transportation mission, one can easily understand why it has always been a source of life and dynamism for Canadians.

Today, I would like to elaborate on some of the National Harbours Board activities in the last decade and attempt to trace out its involvement within our national transportation system.

Canada's ports are vital to the health of the national economy. Without proper organization and the good management of ports, Canada simply would not be able to compete effectively in international trade. The NHB was established as a crown corporation in 1936 to improve the then uncoordinated and financially weak port structure in Canada. Today, the NHB assumes the responsibility for management and control of 15 key ports across Canada.

NHB promotes the economic and efficient distribution of many commodities, and has a particular interest in the export of those bulk resource commodities for which Canada is noted. It is also very much interested in the safe and efficient movement of general cargo on which Canada's import and export commerce is so dependent. In order to meet these demands the NHB has played a very supportive role in the past and is planning to do so even more in the future by improving the operation management of existing facilities.

In the last decade NHB has vigorously matched the demands for container handling capacity by adding container berths and back up space in all of our container ports. For example, in the last four years we have constructed the first phase of Racing Terminal in Montreal. We are now completing the construction of a second container terminal in Halifax to be operational in 1982. We have also expanded Rodney Terminal in Saint John, N.B. by adding a third berth. In Vancouver we are presently embarking on a very major container terminal improvement program.

All of this accounting for a direct injection of over 70 million dollars in support of the movement of trade through Canadian ports.

The NHB has made numerous improvements to the non containerized general cargo facilities such as increases in shedded terminals, open space, and roll-on/roll-off facilities, etc.. To illustrate this, suffice it to mention NHB's vital interest in maintaining an active part in the development of port facilities to accommodate some of Canada's exported commodities such as forest products, grain, potash and coal.

The forest products' industry has provided a source of income for many Canadians all across Canada. The industry, while it has been marginal from time to time in the past, has always renewed itself, investing heavily to keep up with technological progress.

NHB is proud to say that we have invested in port facilities which were absolutely needed for the export of our forest products being newsprint, pulp, paper or lumber. For example, our newly built forest product terminal in Saint John has now successfully completed its first year of operations serving the eastern Canadian producers.

(\* The Port of Quebec has actively contributed to the establishment of an export consortium for forest products for the purpose of stimulating of the export of timber, in particular to European and Middle East markets.

(\* At the port of Trois-Rivieres, for example, reconstruction work has been carried out to make three berths into a terminal for forest products which will be fully operational later this year. These renovated facilities, will make it possible for the port to serve more effectively the pulp and

paper industries in the region.

We are continuously monitoring the shipments of forest products at the Port of Vancouver and are cognizant of the sustained growth over the last seven years, reaching 6.4 million tonnes last year. Trends indicate that this direction will continue in the future and consequently NHB is presently engaged in the expansion of Lynnterm, a general cargo and lumber products terminal at the Port of Vancouver.

(\*) As you doubtless know, Canada ranks among the world's leading exporters of grain. The National Harbours Board possesses ten grain elevators with a total storage capacity of approximately 50 million bushels.

(\*) In order to maintain the position Canada holds on the international grain market, major renovations have been realized in the facilities of Quebec and Montreal. The works presently carried in Montreal will permit the increase of transit capacity. In the port of Montreal works for the automation and modernization of two other grain elevators are also being carried out. All these improvements will decrease not only the operating costs and users' waiting time, but also will meet the new governmental standards concerning pollution and safety.

On recognizing the growing demand of Pacific rim countries for Canadian grain, the NHB has recently started the site preparation for a grain terminal at Ridley Island Prince Rupert the total cost of this development is estimated to be more than \$30 million. This site has been leased to a consortium of 6 grain companies that will erect a 10 million bushel capacity high performance grain elevator at an estimated cost of 200 million dollars and the facility is expected to be ready in 1984.

Another bulk commodity which has predominated the Canadian and world market is coal. Coal exports from the western provinces are expected to increase as nations, particularly in the Pacific rim, seek to satisfy their demand for energy from sources other than petroleum.

During the last decade over 75 million tonnes of coal were exported through the Roberts Bank Bulk Terminal. Our market research study indicates that the demand for Canadian coal, both coking coal and steaming coal, will continue to rise. Therefore, the NHB has committed itself to triple the capacity of Roberts Bank by creating three new terminals representing approximately 150 acres of land. The completion of this project is scheduled for 1983 at a total estimated cost of \$48 million.

The NHB has also called for proposals for the design, construction and operation of a 10 million tonnes coal terminal to be built at Ridley Island Prince Rupert. This terminal will serve the mines of Northeast B.C. and northern Alberta which are expected to be on stream in 1984.

All of the projects mentioned until now are restricted to our own participation and I would be remiss if I would not mention the very important contribution the private sector has made to the development and provision of port facilities. For example, over the past 10 years the private sector has invested well over 30 million dollars in heavy equipment such as container cranes in the Port of Montreal not counting their investment in small equipment and other sundry expenditures.

The ports to survive also need the cooperation of local and provincial governments. Whether it be in the form of transfer of land and waterlots, in direct monetary contribution or in the provision of road access it is essential that a close cooperation exist between the NHB, and all other

levels of government.

The management required for coordinating all of NHB's activities is critical and indeed is evolving. With this thought in mind, I would like to demonstrate how management has played a vital role in the development of NHB.

The current philosophy of NHB management leans towards the view that Canada's ports system should operate in the most efficient manner and should be able to sustain the test of good management based on the rules of the game applied in the private sector. This can only be achieved with strong participation and involvement of port management in the decision making process. Not so long ago most decisions were submitted to Ottawa for approval, causing the risks of backlog and delays which lead to inefficiency. As a positive move to correct this anomaly the Board in 1976 delegated authority to various manager at the ports. This has resulted in giving effective powers to senior managers at the local level so as to enable them to make smooth and efficient operating decisions. We will continue to improve on the present system to streamline it to a point where ports need only to come to Ottawa for major decisions.

(\*) In addition to these improvements, the National Harbours Board has implemented in 1977 a very detailed five year development plan. This plan allows us, on the one hand, to better set our objectives and, on the other, it helps us establish an action scheme and strategies and programs to attain these objectives. The new objectives we set for financial and administrative schemes have made us to obtain better profits from our facilities. Other measures such as stricter financial controls, a more effective utilization of resources, and a better marketing procedure will permit the National Harbours Board to better meet the requirements of the market. For example, we considerably decreased personnel during the last five years. Indeed, the average number of employees fell from more than 2,200 in 1975 to 1,800 in 1980, or a decrease of 400 employees while maintaining a high level of service in all the ports during a period when the workload considerably increased. This great management success is attributable mostly to the managers and employees of the Board. Allow me to underline the contribution of our general managers and in particular that of Mr. N. Beshwaty who is here with us.

Good and efficient management is only one of NHB's objective. The Board also recognizes the necessity to skillfully plan the development of the harbours under its administration. It is bearing this in mind, that we have launched a few years ago a series of studies to develop a long range port master plan for each major port in our system. The objective of this exercise is to develop a comprehensive development scheme for ports that will take into consideration the needs of the port as well as certain limitations or conflicting environmental or urban objectives. These plans when completed will offer NHB broad strategic options to assist in coordinating various activities and projects needed for a fundamental and effective port system.

We are also of the opinion that efficiency and financial viability have to be regarded in the light of competition whether it be competition from other Canadian ports, foreign ports or alternative modes of transportation. We certainly do not have any intention to price our services out of the market or to affect any of your markets by unreasonable NHB pricing. We therefore want to have a greater knowledge of the people we serve, a better under-

standing of the total transportation costs and also want to assist our users in reaching and capturing greater markets. To do so, the Board has strengthened its marketing functions both in our major ports and at headquarters. Our aim is not only to gain a better understanding of the market but to share some of our knowledge with you the traffic experts. Along these lines we will be publishing over the next twelve months a series of commodity studies covering a wide range of subjects such as containers, grain, coal, iron ore, etc. These studies will encompass a look at the world demand and supply of a given commodity, its transportation parameters and more specifically focussing on port needs and associated problems. We feel that these studies will not only help NHB in identifying the problems and opportunities, but will also help the private sector in actively seeking new business opportunities.

In addition to the foregoing we are launching the first phase of a global advertising campaign to inform people on the Canadian port system and the efficient trans-Canadian surface transportation systems connecting ports to the markets. It is also our intention to put together joint publicity campaigns with other intervenants such as the surface transportation industry and we will pursue that objective during the coming year.

The NHB has witnessed a rise of new social and economic system. Confronted with the rapid changes in ships, cargoes, port terminals and new management techniques, the NHB has and is adapting swiftly to changes. At this time, the issue in state is what is needed to greater enhance the whole of the NHB. The answer is a new ports policy.

In this very same city, three days ago, the Minister of Transport Mr. Jean-Luc Pepin in a speech to the Montreal Chamber of Commerce addressed this important topic of discussion. The Minister of Transport outlined some of the essential elements of this new ports policy. These are, the present NHB act of 1936 is "archaic" and very much centralized. In this regard, amendments to the NHB Act are envisaged, that would make the Act more responsive to present demands for greater local authority to manage and operate major ports in this country. This objective may be achieved by permitting the Board to establish subsidiary corporations with their own Board of Directors responsible to the parent crown corporation. Within this structure, the parent corporation would be empowered to manage some ports directly. Broader regional representation on the parent Board would be accomplished by significantly increasing the Board membership. The main thrust is to establish greater decentralization with a more efficient and effective management structure.

Mr. Chairman, I would like to close by expressing that the general development of today's transportation system, reveals that ports are vitally important to the economic development of this country. To retain our position in the trade and to preserve the commercial viability of the ports as a whole, the NHB will continue to work in planning and providing port facilities required for the economic development of our nation. To ensure that ports are developed in harmony with the environment, the NHB will also consider other environmental requirements, such as the quality of life and the balance of ecosystems.

Canada National Ports function as gangways between the land and sea transport mode, and as such, it must rest on firm foundation at both ends. This can only be accomplished and maintained by close working relationship

between the intermodal system.

The success and the advancement of the industry depends greatly on our mutual efforts and cooperation and you may rest assured of my full dedication in the pursuit of our mutual objective.

Note: (\*) The original French version was translated into English by the IAPH Head Office.

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# The Private Sector in Port Operations

By Professor R.O. Goss, M.A., Ph.D.,  
F.C.I.T., F.N.I., Master Mariner

Department of MARITIME STUDIES  
University of Wales Institute of  
Science and Technology

Wakeford Lecture, University of Southampton,  
16 March 1981



Prof. R.O. Goss

Throughout much of economics, as of politics, there is a conflict between those who stress the virtues of free, competitive market forces and those who lay more emphasis on the virtues of planning and co-ordination. Sometimes the former is described by the rather value-loaded term "free enterprise"; though nobody pretends that it should be free of all governmental restrictions, (for example those concerning the law of contract and the protection of the consumer); and, looking at the recent history of this country, one sometimes feels that it might have been rather more enterprising, for example in adopting innovations more readily, and in spending less time describing factors beyond its own control. Sometimes **public** enterprise (to use an equally value-loaded term) is regarded as developing public service and dedication. But there are places where this has turned from dedication to depredation—Mr. Spiro Agnew's effects on the State of Maryland being just one example. Nor is the British record a perfectly clean one, neither in terms of honesty nor in terms of efficiency.

One of the advantages of economic science is that it may attempt to examine such questions dispassionately and remove both from the peculiarities of local situations and the complexities of real life. One may also try to set oneself at a distance from current fashions in political and economic thinking. As Lady Bracknell said in another context: "The line is immaterial."

It would be misleading to pretend that economics, in its present state of development, can give any general or uniform answer to such questions as whether the private sector, (enterprising or otherwise) is **generally** better than public operation. But we can consider the extent to which public and private sector operations actually appear in seaports; and we can consider, in the light of this, whether there are any strong or, indeed, over-riding reasons why the public sector should be so involved; substantially or at all.

It seems particularly appropriate to do this at present, partly because the institutional arrangements in Britain are being modified by the abolition of the National Ports Council and the proposed introduction of private capital into British Transport Docks Board. A second, and more general, reason is that some market-oriented ideas, for example those of the Institute of Economic Affairs, should cause us to question, if nothing more, the validity of conventional wisdom in this as in other fields.

There are, as far as I know, very few seaports in the world that are wholly in the private sector. Felixtowe and Larne are two examples in the UK and the first is often held up as an example of efficiency. It is, however, extremely common for there to be large-scale private sector operations within ports. In some countries such as the USA and Canada firms may lease whole areas comprising numbers of berths and called terminals, which may have been built to their specification by public port authorities who finance themselves by borrowing on the open market or

from the relevant treasury. Alternatively, stevedoring firms may handle cargo on publicly-owned quays; this used to be common in Britain. In both these circumstances there are, in fact, a multitude of possible combinations and most of them may be observed working more or less efficiently today to the satisfaction of those concerned. Sometimes, as at Bangkok, Toronto and Tacoma, such private companies do the shipboard work while the port authority's employees do that on the quayside. One might suppose that this division would lead to constant friction, for example about who damaged what, but the fact is that such arrangements are considered, by users as well as the officials responsible, to work satisfactorily. I have reported elsewhere on this extraordinary diversity of practices—indeed I provided a summary of it here 2 years ago. My conclusion was that these variations needed to be considered against the whole background of the country and culture concerned; its constitution and its general way of doing things. Does this, then, give us any guidance?

The argument for the private sector is that, through competition, it can be efficient. Indeed, if we look back at one of Bernard Shaw's original **Fabian Essays**, one of the great socialist works and one which has inspired so many of our non-Marxist politicians of the left, we find, under the heading: "when municipal trading does not pay" the advice that if an industrialist says:

"I will so organise the work, and so command and inspire my industrial troops that I will do the work for less . . . and do it better and have a satisfactory profit for myself into the bargain. Here is my tender which is lower than the estimate of your Works Department,"

it should be accepted. But effective competition means many competitors. Is there the opportunity for this in a modern port? How many independent terminal operators might we see in, say, Southampton, or Cardiff, or in the Seaforth Dock at Liverpool? And, of these, how many would be competing for the same line of business? In Sydney, NSW, there are but 2 stevedoring companies ready to handle general cargo, in many major ports the situation is not very different and in some of them there are price-fixing agreements as well. Vancouver and Melbourne are examples of this. It should not be necessary to say that effective competition involves price competition; and it is no defence to say that profits are modest for it is the level of costs that really matters.

Of course, there may also be competition between ports and, on the whole, a country like Britain, densely populated and with good internal transport systems is suitable for this. But are the ports to compete independently or may the same terminal operating or stevedoring company be found at several of them? This happens in Australia



where their Prices Justification Tribunal found a number of curious practices which persuaded it to insist upon a reduction in charges when an increase had been requested by one of these firms.

In the operation of seaports, as elsewhere, then, any reliance upon competition as a means of inducing efficiency needs to be accompanied by means of ensuring that competition actually exists, within ports and between them. Given that, however, it is perfectly possible for the series of links in the transport chain to be in quite separate ownership, whether they are hired by some co-ordinating through transport operator or not. Some of these links, and especially perhaps the longer-lived items like the quays and channels forming port infrastructure, may be in public ownership: others may be in the private sector.

Why, it may be asked, should any of it be in the public sector? Is it because port infrastructure, like that of roads, should be supplied by the community and free to all users? This is a doctrine enthusiastically adopted by some continental ports and from which we, as British consumers, benefit every time we buy goods which have been economically transhipped there. It is a doctrine which has led to massive port investments operating at costs which exclude any financial return on the infrastructure and consequently attracting correspondingly large volumes of cargo. It is one which does not attract me, since I have seen no evidence that the benefits in increased **total** (as distinct from particular or local) economic activities are sufficient to justify the undoubted and considerable costs.

To me, at least, the case for public sector activity in ports must rest on other grounds. One might be that it is doing a good job already and that the possible benefits of major re-organisation would not be worth while "mucking about".

Another is that there are some distinctively public functions to be performed in, or in respect of, seaports which the private sector is unlikely to perform sufficiently or at all. Economists present will recognise this as the classic "public goods" argument, upon which are based defence, law enforcement, health, education and many other activities largely undertaken by the state.

Consider a port whose facilities are scattered amongst many competing private companies, and whose approach channel needs deepening to receive modern ships. This will benefit some, but not all such firms but, even if it were to benefit all of them, how are they to be compelled to contribute? Just as with, say, policing or street lighting, it will be in the interests of each to encourage the others whilst paying nothing himself; for, in that way, he will get all the benefits he needs and bear none of the costs. Precisely the same arguments apply to navigation aids and everything else, including lock entrances which are used in common. Where there are many stevedoring companies it would probably apply to quays as well. Such an argument would not apply where the port was in sole private ownership unless, as at Felixtowe, the same channel provides access to other ports. Then some such public body as the Harwich Haven Commissioners may be needed, upon whose Board Felixtowe may be represented but from whose charges there is no escape.

But, if a port is in sole private ownership are the conditions for the beneficial effects of competition satisfied? Until recently we would generally have said they were not, but the advent of motorways and other road improvements has so increased inter-port competition that this matters

much less. Such a private monopoly might still do harm, however, if there were a local port user—import, export or both—whose goods had high inland transport costs or needed specialised handling equipment not available at competing ports. Again, the optimal pricing policy for such a private port authority might be to levy higher charges on goods with **local** origins and destinations. This effect would be limited but not removed by the costs of inland transport and proximity of competing ports.

The strongest argument for a public port authority, is that of co-ordination. If a channel, or a lock entrance is to be publicly provided, how can it be properly designed unless the berths to be served, or the dock layout, are planned by the same people? Moreover, it is highly probable that some statutory powers will be needed, as with a railway, for acquiring land and somewhere to dispose of the dredging spoil—preferably somewhere useful, like land reclamation. Such powers are rarely given to private monopolists save in return for their accepting degrees of state regulation to which the Institute of Economic Affairs would almost certainly object.

The same forces which have worked to reduce, though not to remove, the damage which might be done by a private port monopolist have increased the case for there being some co-ordination between ports. This is much enhanced by the remarkable increases in the capabilities of specific port installations and the corresponding degree of waste in their unnecessary multiplication. It is perfectly possible to envisage a container berth handling over 2 mn tons of cargo a year in a country like Britain and it is nonsense to have more than a very few container terminals, each consisting of a few such berths. Worse, it is a waste. The same applies to grain silos and other bulk-handling equipment. In short, they apply to most modern port investments.

One might think these things were too obvious to need saying, were it not that our lately defunct National Ports Council never took them into account and that there now seems little prospect that anyone else will do so. For the NPC, in its investment appraisals, worked on a strict discounted cash flow basis, and took no account of the effects on other ports. We may recall, indeed, that the Rochdale Report of 1962 recommended a National Ports Authority, which was to control, and not merely to advise on, all major investments. The warning in the Rochdale Report about the over-simplification inherent in what they called the Morton's Fork argument (if the scheme is economically sound then the port authority can meet its expense: if they cannot then it ought not to be allowed) is greatly increased since they wrote it. And their failure to distinguish between economic and financial effects is also worth stressing, as is their failure to say anything effective on the basic **structure** (as distinct from the level) of port charges—though his Lordship squeezed that into a later Report on Shipping.

Having responsibility for advising on port investments but none for their financial outcomes, having no operating responsibilities and being given the impossible task of producing a National Ports Plan without either a national plan for the trades moving through those ports or adequate terms of reference, it is hardly surprising that the National Ports Council was less than a resounding success and that it often had uneasy relations with those who might be regarded as its constituents. Yet it had its successes. It estab-

(Continued on next page bottom)

# Annual Report 1980: Massachusetts Port Authority (Extracts)

## 1. Two multi-million dollar seaport container terminals

In the first major seaport development project in Boston Harbor since 1972, Massport began initial construction work on its \$15 million container terminal at Castle Island in South Boston.

Due to open in mid-1981, the single-berth, two-crane complex with a 1,000-foot wharf will be able to work the most modern containerships afloat and will offer ten acres of paved storage for chassis-mounted containers. With a capacity of 15,000 containers per year, the new terminal will increase container-handling capability in the Port of Boston by 20 percent and ease shipping pressures on Massport's Moran Container Terminal in Charlestown.

In anticipation of the new Castle Island facility, several steamship lines have requested guaranteed berths at the new terminal.

Following successful negotiations with the City of Boston, Massport also launched a large-scale seaport construction project to create a 47-acre container terminal at the site of the old South Boston Naval Annex.

Massport Marine Terminal, as it will be called, is scheduled for full container operations in the 1990's, following interim use during the 1980's for open storage of

general and neo-bulk cargo behind its 2,700-foot wharf.

The initial stages of construction, beginning in September of 1980, call for the removal of the original finger piers, rehabilitation of the 11-acre north jetty, and erection of a half-mile long dike beyond the existing pier face. Once the dike is completed, in mid-1981, 36 acres of Boston Harbor will be filled with nearly two million cubic yards of earth—much of which will be provided by the MBTA from its Southwest corridor excavation.

The environmental review process for a project of this magnitude—normally 35 to 45 months—has been extraordinarily expeditious. All issues between public agencies and private community groups were settled and permits issued within 12 months.

When fully developed for exclusive container use, the Massport Marine Terminal will handle more than 80,000 containers per year, enlarging container capacity in the Port of Boston more than 50 percent beyond its present level.

## 2. Small Business Export Program

In September, 1977, Massport, in conjunction with the Smaller Business Association of New England, launched an innovative program to help small businesses in New England learn how to market their goods and services overseas.

Three years later, Massport's Small Business Export

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(Continued from page 15)

lished a very good system of statistics, and of trade forecasts. It secured a system of investment appraisals in the ports, even if it was, in my view, not the appropriate one.

As I see it, therefore, the real problem facing those of us who wish British ports to serve British needs most effectively throughout the decades to come is not that of whether, or how much, the private sector should be permitted to re-enter the industry, for the private sector is indeed capable of operating in ports, to markedly varying extents and with markedly varying degrees of efficiency: rather, the question is that of whether the public sector is prepared to shoulder the public responsibilities which it has not exercised so far, neither in the period to 1962 upon which the Rochdale Report commented so adversely nor, for a variety of reasons and despite the construction of machinery which might have been used for that purpose, since that date.

If this is to be done, and I regret to say that I see little sign of it, then it is first of all necessary that all those concerned, whether in the private sector, in our largely public port authorities or in government, should learn to work effectively together, co-operating rather than regarding each other with suspicion. Too often, civil servants regard businessmen as seeking merely the maximum subsidy by one means or another (or by all at once); too often, businessmen regard any government activity as "interference"; too often, both of them regard trade union activities as primarily disruptive. That there are sometimes well-founded bases for these attitudes merely makes the problem more important as well as more difficult.

The Transport Bill now before Parliament gives greatly-increased powers to the British Transport Docks Board, whose name is to be changed from that awful mouthful,

redolent of that awful, and long since defunct, monstrosity the British Transport Commission to "British Ports" and which is to be opened to private capital. Yet the great, indeed the only, argument for the private sector is its efficiency and this ordinarily stems from competition. If, therefore, these wider powers are to be used to control more (perhaps most, or even all?) of British seaports then they will be suppressing competition between them even more. Nor, unless British Ports becomes a monopoly, will it be able to co-ordinate their activities effectively so as to prevent that over-investment, misconceived, misplaced and mistimed investment that was, as Rochdale found, a feature of the pre-1962 regime and which, to a much lesser extent, continued in the era of the National Ports Council.

It is hard to see how the present bill is to do any of this, and the six extra people in the Department of Transport who are, we are told, to take on some of the functions of the 60 employed at the NPC are not likely to do very much either, unless they are given the firm leadership which has been the essential ingredient omitted from all previous recipes and of which there is no sign at present.

Thus, we will continue to be told that, because bygones are bygones, maintaining idle docks cost little or nothing. British seaports (and perhaps British Ports) will continue to suffer from overcapacity, demoralisation and harsh criticism from their users. We are less likely to be told of the great opportunities they may present for re-development for other purposes not necessarily having any connexion with maritime matters. In many ports around the world large-scale land reclamation of former port areas has provided space for industry or has enlarged the cities' central business districts to the advantage of public and private sector alike.

Program (SBEP) had taken representatives of 31 carefully selected firms on five foreign trade missions to meet with business officials from 14 different European countries. The result: millions of dollars in export sales for participating firms and national recognition for Massport.

Federal legislation to establish a national export aid program patterned after Massport's was filed in January, 1980, by Congressman J. Joseph Moakley of Massachusetts and Senator Gaylord Nelson of Wisconsin. Four months later, Massport Executive Director David Davis was the leadoff witness at Congressional hearings on legislation to provide federal grants to state agencies and authorities which adopt similar export assistance programs.

In May, 1980, the Small Business Export Program was nominated for the Presidential "E" Award—for export services—by the U.S. Department of Commerce. The Governor of Massachusetts, writing about SBEP in July, 1980, said: "Massport has taken the lead in helping small companies export their products and services. These efforts have resulted in the creation of new jobs, and we expect to dramatically increase those statistics in the future."

Massport and the Commonwealth are engaged in a close partnership at the Authority's European office in Brussels, where a newly installed representative of the Massachusetts' Foreign Business Council is promoting the state's interests abroad.

### 3. Powerful economic and employment benefits for the region

In fiscal 1980, Massport maintained its role as a powerful force in generating economic benefits and employment opportunities in Massachusetts and New England. Because the Authority continued to enjoy fiscal strength, it was able to invest a substantial sum, \$30 million, in development and maintenance at virtually all of its facilities—airport, seaport, fish pier, bridge, and elsewhere.

Over the next decade, Massport plans \$80-\$100 million in development activities, an investment that will produce nearly 10,000 new jobs and at least \$100 million annually in regional economic benefits.

These investments include: \$25 million at the new Massport Marine Terminal, leading eventually to 2,000 seaport-related jobs and some 250 jobs per year in construction; an estimated \$50 million to develop Bird Island Flats, yielding 1,300-1,600 air freight-related jobs and requiring hundreds of construction workers; \$15 million at the new Castle Island container terminal, a project which will add 500 industry jobs when it opens in mid-1981; and \$6 million at the Boston Fish Pier, which is providing 100 construction jobs presently and will eventually trigger 2,000 jobs in fishing and related industries.

As a result of its 1978 Trust Agreement, the Authority was able to undertake these development projects during fiscal 1980 without entering the highly volatile, and usually expensive, outside money markets.

Amid this development surge, Massport expanded its Minority Business Enterprise program which resulted in \$3.7 million in contract awards for firms owned by minorities. A similar program for businesses owned by women was introduced during fiscal 1980 and produced more than \$100,000 in contracts. At the same time, Massport experienced zero growth in the number of positions within the Authority itself; its 717 positions remained unchanged from fiscal 1979.

## 4. Balance Sheets, June 30, 1980 and 1979

Assets	1980	1979
	(In Thousands)	
Cash	\$ 346	\$ 689
Investments in U.S. Government obligations and certificates of deposit, at amortized cost, which approximates market, including accrued interest	99,768	97,939
Accounts receivable, less allowance for doubtful accounts of \$339,000 in 1980 and \$345,000 in 1979	7,364	7,447
Prepayments and other assets	<u>3,887</u>	<u>3,469</u>
	111,365	109,544
Investments in facilities		
Facilities completed:		
Airports	381,431	362,270
Bridge	46,382	46,244
Port	<u>53,326</u>	<u>49,871</u>
	481,139	458,385
Less accumulated depreciation	<u>(138,574)</u>	<u>(121,469)</u>
	342,565	336,916
Construction in progress	13,940	5,822
Net investment in facilities	<u>356,505</u>	<u>342,738</u>
	<u>\$467,870</u>	<u>\$452,282</u>
<b>Liabilities</b>		
Accounts payable and accrued expenses	8,476	7,690
Accrued pension costs	7,448	7,672
Accrued interest payable	8,173	8,294
Funded debt	<u>237,640</u>	<u>242,480</u>
	261,737	266,136
Deferred Income	1,462	1,525
Contingent Liabilities and Commitments		
Fund Equity		
Retained earnings	178,453	163,604
Contributed capital, grants-in-aid construction	26,218	21,017
Total fund equity	<u>204,671</u>	<u>184,621</u>
	<u>\$467,870</u>	<u>\$452,282</u>

## 5. Statements of Income and Changes in Retained Earnings for the years ended June 30, 1980 and 1979

	1980	1979
	(In Thousands)	
<b>Revenues</b>		
Tolls, fees and sales of services	\$ 45,824	\$ 43,940
Rentals	21,665	21,308
Concessions	21,442	20,648
Income on investments	11,152	7,587
Other	<u>789</u>	<u>803</u>
	100,872	94,286
<b>Expenses</b>		
Operations and maintenance	37,104	32,827
Administration	9,113	8,911
Insurance	1,307	1,318
Pension costs	2,407	2,260
Interest on funded debt	16,346	16,364
In lieu of taxes	<u>4,077</u>	<u>3,660</u>
	70,354	65,340
Income before depreciation and extraordinary item	30,518	28,946
Depreciation, including \$1,436,000 in 1980 and \$1,176,000 in 1979 on assets acquired with contributed capital, grants-in-aid of construction	<u>17,105</u>	<u>16,139</u>
Income before extraordinary item	<u>13,413</u>	<u>12,807</u>

(Continued on next page bottom)

# 1980 Annual Report: Port of Los Angeles (Extracts)

## 1. Executive Director's Report (extract)

With the eighties forecast as the "Decade of the Pacific Basin," Los Angeles leads the way as the West supplants the East as the import/export center of the nation. The increase in general cargo handled at the Port of Los Angeles from 12.8 million revenue tons in 1979 to 14.0 million tons in 1980 is indicative of this trend. Total revenue tons billed in the past year were 40.9 million.

Phenomenal in this picture of progress and growth is the general economic slump being experienced by the country as the decade changes.

Here in a competitive worldwide marketplace where some 95% of commodities are moved by sea, the continued flow of goods through Los Angeles Harbor has a critical bearing on 20,000 Los Angeles area businesses. In the changing game of freight and cargo handling, over 130,000 jobs in the Southland market's five-county area are at stake.

In recent months, this Port as well as other West Coast ports gained millions of dollars in new container cargo business diverted from the Panama Canal all-water route between the Far East and the United States. As an increasing number of shippers find the combined water-land routes more economical, it is predicted that nine out of 10 shippers of Far Eastern cargo destined for East and Gulf Coast cities will use the landbridges, minibridges or microbridges beginning on the Pacific. From some 1,000 cargo containers arriving monthly in Los Angeles in 1976, the Port now boasts more than 12,500 TEUs (20-foot equivalent units) per month attributable to minibridge traffic. Total containers handled through the Port reached 657,000 TEUs last year. Dollar savings resulting from landbridge routes—or minibridge and microbridge, depending on the ultimate destination of the cargo—are rising as the techniques of intermodal transfer between ships, trucks and railroads are improved and expanded.

Planning for future exports and further intermodal expansion, the Port of Los Angeles has undertaken a joint project with its neighboring harbor at Long Beach to develop a railyard near the San Pedro Bay waterfront to provide even faster, more economic transfer of containers. As proposed, the Intermodal Container Transfer Facility (ICTF) reduces the need to truck containers to the downtown railhead some 20 to 25 miles from either harbor. Costs for drayage currently are estimated at \$150 per container.

The Port has applied for a \$25 million grant under the Coastal Energy Impact Program for this project, based upon

resultant shorter trucking distances which are expected to effect an over 80% net reduction in truck pollutant emissions and fuel consumption.

In August 1980 the Port Master Plan, an ambitious land-use study and forecast in which proposed growth through long-and short-term development is outlined, was certified by the State Coastal Commission, with certain exceptions. This action gave the Harbor Commission development permit authority. Spanning a five-year period with an investment of approximately \$434 million in capital projects, the Plan includes provisions for expansion of general cargo, petroleum and container terminals, and redevelopment of commercial fishing facilities, as well as for a Terminal Island landfill project and a multi-use West Channel/Cabrillo Beach Recreational Complex.

Much of the development depends upon long-awaited Main Channel dredging from -35 to -45 feet, which was approved by the California Coastal Commission. This deepening will open the Port of Los Angeles to the estimated 35% of the world's containerships currently unable to enter the harbor because of their deep drafts.

By mid-August 1980, the contract for the \$61 million project had been awarded, including stipulation for the use of environmentally sound electric dredging equipment. Now underway in cooperation with the U.S. Army Corps of Engineers, the harbor deepening will be completed by 1983 when the Port will be able to accommodate the fourth and fifth generation ships of the coming decade, some of which are expected to draw nearly 45 feet.

In designing the recreational portion of the Master Plan, the Board of Harbor Commissioners, in an unprecedented move, selected a broad-based citizen advisory committee to prepare a precise plan for the West Channel/Cabrillo Beach Recreational Complex. The committee's recommendations were adopted in full by the Board, providing a format for the expansion of existing facilities and the construction of others. Involvement by this group has been recognized by other local agencies as a model of citizen participation in future developments.

As proposed, the Complex includes a 3,000 slip small craft marina and other facilities suited to all types of interests. Construction on the Complex, which won a major national award for urban design and planning excellence from the American Society of Landscape Architects, is scheduled to begin in 1981.

Profiting from the experience of the Cabrillo Beach advisory committee, the Board early in 1980 established a similar body to develop a plan for the expansion and improvement of the nation's second largest commercial fishing port. The newly-appointed committee includes representatives of the canneries, fish markets, fishermen's associations, city and state agencies, and group with a vested interest in commercial fishing.

The Port Master Plan also provides for improvements at the Matson Terminal to facilitate increased container traffic that will result from construction of a computer-assisted overhead crane system. This innovative concept in container handling is still another revolutionary piece of equipment developed by Matson Navigation Company

(Continued from page 17)

Extraordinary item:		
Gain on refunding of funded debt (will be substantially offset in future years by increased interest costs)		45,645
Net income	13,413	58,452
Add credit arising from transfer of depreciation to contributed capital	1,436	1,176
Retained earnings beginning of the year	163,604	103,976
Retained earnings end of the year	<u>\$178,453</u>	<u>\$163,604</u>

which also introduced containers to the Port of Los Angeles more than two decades ago. A key component of the new system is a patented conveyor which transfers the containers between a yard gantry and the dockside crane that loads and unloads ships. By providing more continuous motion than convention crane systems, Matson ships will be able to reduce ship turnaround time to an unheard of 24 hours.

Looking back, the year saw the Port of Los Angeles continue its leadership role as an international seaport, with its total gross revenue tons billed as perhaps the most pertinent gauge of harbor trade traffic. The Port's increase in this area, however, was partially offset by greater expenses and maintenance cost. Resultant net income from operations was \$30.1 million, 4.9% over last year.

The Port operates well as a self-sustained, diversified business unsupported by taxpayers' dollars. Under the management of a five-member Board of Harbor Commissioners, it continues to enjoy an enviable record of service and expansion. That record over the last eight years reveals a fivefold rise in net income with only a 20% rise in personnel operating the Port.

The Port's ability to maintain its ranking position among the world's ports is in large part due to the Harbor Commission's accountability for holding the line on personnel and other costs, while at the same time directing any profits into expansion and growth. The Harbor Department did not increase its staff to handle additional trade. Instead, employment at the Port has remained near the 600 mark for the past four years.

Late in fiscal 1979-80, the Board of Harbor Commissioners adopted measures aimed at maximizing efficiency in the Harbor Department while also reducing budget appropriations for the coming year. This cost-cutting action was consistent with the Commission's firm belief that bottom-line economizing is required, particularly in the face of the harbor's program of needed growth and expansion.

Growth—services—progress—facilities. Key words at the Port of Los Angeles. Los Angeles, international gateway of the Pacific Coast.

The Port of the Eighties.

## 2. Balance Sheets

June 30, 1980 and 1979

ASSETS	1980	1979
Current assets:		
Cash and cash equivalents:		
Cash on hand and on deposit with City Treasurer . . . . .	\$ 1,025,114	\$ 1,077,587
Cash, time deposits . . . . .	<u>71,000,000</u>	<u>61,700,000</u>
Total cash and cash equivalents . . . . .	72,025,114	62,777,587
Accounts receivable, less allowance for doubtful accounts of \$500,000 in 1980 and \$500,000 in 1979 . . . . .	10,221,129	7,499,720
Accrued interest . . . . .	1,753,295	1,434,037
Materials and supplies . . . . .	1,229,330	1,290,295
Prepaid expenses . . . . .	<u>517,444</u>	<u>475,411</u>
Total current assets . . . . .	\$ 85,746,312	\$ 73,477,050
Bond funds		
Cash on deposit with City		
Treasurer . . . . .	204,757	232,500
Time certificates of deposit . . . . .	<u>4,780,000</u>	<u>5,217,591</u>
Total bond funds . . . . .	4,984,757	5,450,091
Properties:		
Land . . . . .	84,096,087	73,928,412
Wharves, sheds, facilities and equipment, less accumulated		

depreciation of \$72,606,010 in 1980 and \$68,545,595 in 1979 . . . . .	131,506,410	107,437,832
Construction in progress . . . . .	<u>23,120,035</u>	<u>32,316,700</u>
Total properties . . . . .	238,722,532	213,682,944
Other assets:		
Notes receivable . . . . .	420,760	450,815
Preliminary costs—capital projects . . . . .	1,699,744	717,691
Total other assets . . . . .	<u>2,120,504</u>	<u>1,168,506</u>
Total assets . . . . .	<u>\$331,574,105</u>	<u>\$293,778,591</u>

## LIABILITIES AND EQUITY

### Liabilities

#### Current liabilities:

Accounts payable . . . . .	\$ 6,129,678	\$ 4,554,680
Bond indebtedness outstanding:		
To be paid within one year . . . . .	2,405,000	2,305,000
Bonds and coupons not presented for payment . . . . .	76,846	98,259
Accrued interest on bonds . . . . .	343,384	359,496
Accrued employee benefits . . . . .	<u>2,131,228</u>	<u>1,925,525</u>
Total current liabilities . . . . .	11,086,136	9,242,960

#### Long-term liabilities:

Bonded debt—Harbor Revenue		
Bonds:		
First issue of 1960, maturing to 1985, interest at 3.9% . . . . .	4,118,000	4,623,000
Second issue of 1960, maturing to 1986, interest at 3.5% . . . . .	4,251,000	4,561,000
First issue of 1965, maturing to 1990, interest from 3.1% to 3.45% . . . . .	6,610,000	7,105,000
First issue of 1971, maturing to 1997, interest from 4.3% to 5.9% . . . . .	11,750,000	12,175,000
	<u>26,729,000</u>	<u>28,464,000</u>
Less amount to be paid within one year . . . . .	(2,405,000)	(2,305,000)
Total bonded debt . . . . .	24,324,000	26,159,000
Due to the City of Los Angeles . . . . .	876,309	1,626,309
Other liabilities . . . . .	<u>581,550</u>	<u>457,395</u>
Total long-term liabilities . . . . .	25,781,859	28,242,704
Total liabilities . . . . .	36,867,995	37,485,664

### Equity

Contributions/land valuation equity . . . . .	78,314,003	77,290,457
Retained earnings . . . . .	<u>216,392,107</u>	<u>179,002,470</u>
Total equity and retained earnings . . . . .	294,706,110	256,292,927
Commitments and contingencies		
Total liabilities, equity and retained earnings . . . . .	<u>\$331,574,105</u>	<u>\$293,778,591</u>

## 3. Statements of Income

Years ended June 30, 1980 and 1979

	1980	1979
Operating revenues:		
Shipping services:		
Dockage . . . . .	\$ 5,928,988	\$ 5,459,498
Wharfage . . . . .	29,661,122	27,697,831
Storage . . . . .	458,929	507,687
Demurrage . . . . .	1,139,685	1,147,125
Pilotage . . . . .	2,124,636	1,989,005
Assignment charges . . . . .	843,499	1,009,796
Wharf and shed revenue . . . . .	438,855	196,020
Cranes . . . . .	1,475,616	1,095,541
Total shipping services . . . . .	42,071,330	39,102,503
Rentals		
Land . . . . .	10,488,575	9,630,839
Buildings . . . . .	254,156	305,464
Warehouses . . . . .	<u>1,517,515</u>	<u>1,165,707</u>
Total rentals . . . . .	12,260,246	11,102,010
Royalties, fees and other operating revenues:		
Fees, concessions, royalties . . . . .	921,636	543,208
Oil royalties . . . . .	3,735,596	2,469,100
Other . . . . .	<u>366,345</u>	<u>425,021</u>

# Annual Report 1979-80: Port of Brisbane Authority (Extracts)

## 1. Chairman's Report

The 1979/80 financial year was a particularly busy, if somewhat frustrating period for the Port of Brisbane Authority.

During the year, more than satisfactory progress was made towards the completion of the new port facilities on the Fisherman Islands—in fact, by the time this report is in print. I am certain that cargo will be flowing across the islands modern wharves.

That first ship to the islands will be a vessel to welcome in a style befitting an event of historical importance, and certainly will be an occasion for celebration. The Board hopes to involve the public of Brisbane in the official opening of the islands' terminals.

In the long term, the entire future of our great port-city hinges on the acceptance and success of this bay-port concept and it has been towards this goal that the Authority has been working, even before its actual formation as an independent body in December 1976.

It has been said before and, in the context of the point which I have been expanding, it is worth repeating: "Brisbane is first and foremost a port. The city exists today only because the river recommended itself as a suitable port site to our pioneers. The industrial, employment and economic ties which evolved between port and city are as critical today as they were 150 years ago. Without them, Brisbane would be a very sorry shadow of its present, prosperous self."

With that knowledge to spur our collective endeavours, the entire Authority realises that it is carrying a heavy responsibility on behalf of present and future generations.

It is a load which we accept with alacrity and confidence. In return, all we expect from the community is an understanding of what the port means to every individual in Brisbane, and the vast region which it serves.

## Negotiations

As instructed by the State Government, the Authority's Board began lease negotiations with Brisbane Amalgamated Terminals Limited to cover the operation of No. 1 terminal, Fisherman Islands, as a container handling facility.

By June 30, that lease was very close to acceptance by all parties.

Concurrently, the Board set in motion the procedures to find a suitable operator to utilise No. 2 terminal for the handling of containers. Eventually, negotiations commenced with Seatainer Terminals Limited, Sydney.

As at June 30, the Board learned that State Cabinet had decided that No. 2 terminal was not to be used for the handling of containers.

The Government's decision was apparently made in the belief that the operation of No. 2 terminal would be unviable as a container handling facility in the immediate future. Based on the knowledge, figures and projections at the Board's disposal, the Board does not agree with this view and will ask the Government to reconsider the situation.

## Changes

In many respects, the period under review will be remembered for several very significant changes to and within the Authority.

First—there were changes to the Board, the most important of which was the retirement of our first chairman, Sir Charles Barton, because of age considerations.

I was fortunate enough to be appointed to fill that particular vacancy and now place on record my personal recognition of the worth of Sir Charles in those vital, first three years of the Authority's existence. His astuteness, integrity and calming presence were invaluable qualities from which the Authority derived great inner

(Continued from page 19)

Total royalties, fees and other operating revenues . . . . .	5,023,577	3,437,329
Total operating revenues . . . . .	59,355,153	53,641,842
Operating and administrative expenses:		
Revenue-producing facilities . . . . .	9,326,035	7,299,602
Nonrevenue-producing facilities . . . . .	1,737,616	2,026,896
General operating . . . . .	6,322,484	5,184,064
Administrative . . . . .	6,851,696	5,733,885
Total operating and administrative expenses . . . . .	24,237,831	20,244,447
Income from operations before depreciation . . . . .	35,117,322	33,397,395
Provision for depreciation . . . . .	4,994,198	4,730,054
Income from operations . . . . .	30,123,124	28,667,341
Nonoperating revenues (expenses):		
Other (expense) income, net . . . . .	96,818	(422,803)
Interest income from investments . . . . .	8,381,344	5,072,213
Interest expense on bonds . . . . .	(1,211,649)	(1,261,276)
Nonoperating revenues . . . . .	7,266,513	3,388,134
Net income . . . . .	\$37,389,637	\$32,055,475

## 4. Statements of Changes in Contributions/Land Valuation Equity and Retained Earnings

Years ended June 30, 1980 and 1979

	Contributions/ land valuation equity	Retained earnings	Total
Balance, July 1, 1978 . . . . .	\$ 75,782,948	\$146,946,995	\$222,729,943
Net income . . . . .	—	32,055,475	32,055,475
Federal grant from Economic Development Agency for facilities constructed . . . . .	1,507,509	—	1,507,509
Balance, June 30, 1979 . . . . .	77,290,457	179,002,470	256,292,927
Net income . . . . .	—	37,389,637	37,389,637
Federal grant from Economic Development Agency for facilities constructed . . . . .	1,023,546	—	1,023,546
Balance, June 30, 1980 . . . . .	\$ 78,314,003	\$216,392,107	\$294,706,110

See accompanying notes to financial statements.

strength and resolve. His term will be a difficult "act" to follow.

The vacancy left by the resignation of Alderman Frank Sleeman (Lord Mayor of Brisbane) was filled by Mr. John Hurlstone (General Manager—Refineries, Ampol).

The "new" Board comprises men of great ability and I'm sure it will serve with distinction to the credit of us all.

#### Act Amended

The Port of Brisbane Authority Act was amended during the year.

The most noteworthy of the alterations was the State Government's decision to eliminate the representative status of Board members.

In future, all appointments to the Board will be by decision of the Governor in Council on the recommendation of "the Minister".

The Governor in Council also has been given the power to remove from the Board any Member for any reason.

In addition, the Act now empowers "the Minister" to issue directions to the Authority on matters of policy and enjoins the Authority to carry out those instructions.

Only time will prove whether these changes will be for the long term benefit of the port. It is to be hoped that they will not inhibit the decision making process of the Board to the point where economies and operational efficiencies are affected.

In any event, the Board will do everything possible to abide by the decision of Government in a spirit of co-operation and goodwill.

#### Trade

I am delighted to record that the port had an extremely buoyant period of trade in 1979/80.

For the first time, the total throughput exceeded 9 million tonnes. The final figure was 9,742,000 tonnes. This is 1,001,000 tonnes more than the 1978/79 result and 678,000 tonnes above the previous record of 8,862,000 tonnes, established in 1976/77.

Had it not been for a slight falter in one or two of our traditional trade areas, plus a couple of untimely industrial disputes which jarred the normal arrival and departure of shipping, the port almost certainly would have topped the 10 million tonnes mark.

However, the final result can only be described as "very satisfactory."

The upward surge was largely due to the continued strength of the grain exports, wheat in particular. Grain exports attained a record high of 1,768,000 tonnes which is nearly 500,000 tonnes better than the record 1978/79 year (1,283,000 tonnes).

One can only hope that this pattern will continue and—with the opening of the Fisherman Islands project—in the 1980/81 financial year, I'm sure we can all anticipate even bigger things from the port in the year ahead.

Finally, I wish to pay tribute to the very high level of co-operation and support which I've received from the Authority's staff since my appointment.

Of course, having—during my term as Minister for Maritime Services and Tourism—worked and associated with many of the Authority staff, I expected nothing less and I must comment that the esprit de corps within the Authority is a credit to all concerned.

Hon. A.M. Hodges  
Chairman

## 2. Statements of Income and Expenditure for the Harbour and Graving Dock Funds for the Year ended June 30, 1980

	Harbour Fund		Graving Dock Fund	
	1980 \$	1979 \$	1980 \$	1979 \$
<b>Income</b>				
Harbour dues	8,217,127	6,994,785	—	—
Dock, slipway and wharf dues—				
Authority's vessels	—	—	59,259	64,147
Other vessels	—	—	298,439	206,110
Dock services—				
Authority's vessels	—	—	2,221,929	1,900,128
Other vessels	—	—	1,552,980	1,298,609
Services and dues—				
fixed price contracts	—	—	1,097,526	1,594,955
Wharfage and berthage	760,810	572,292	—	—
River dues	400,936	373,205	—	—
Mooring fees	198,629	140,517	—	—
Rental	436,511	519,304	—	—
Management fees	408,313	374,846	—	—
Interest	650,996	660,958	—	—
Dredging services	2,008,352	2,057,669	—	—
Maintenance construction and other services	314,108	143,785	—	—
Engineering services	69,567	—	—	—
Pollution control and survey services	100,964	127,317	—	—
Recoveries—inter-fund	490,002	2,039,910	—	—
Sale of fixed assets—net	29,623	19,333	(86)	(53)
Other	21,778	44,853	64,125	52,240
<b>TOTAL INCOME</b>	<u>14,107,716</u>	<u>14,068,774</u>	<u>5,294,172</u>	<u>5,116,136</u>
<b>Expenditure</b>				
(Depreciation)	(628,507)	(698,496)	(480,429)	(473,357)
<b>TOTAL EXPENDITURE</b>	<u>11,345,844</u>	<u>9,079,685</u>	<u>5,395,507</u>	<u>4,923,588</u>
<b>NET INCOME (EXPENDITURE) BEFORE EXTRAORDINARY ITEM AND APPROPRIATIONS</b>	2,761,872	4,989,089	(101,335)	192,548
Extraordinary item	(394,726)	—	(92,283)	—
Transfer to capital work reserve	(2,000,000)	(4,800,000)	—	—
<b>SURPLUS (DEFICIT) FOR THE YEAR</b>	367,146	189,089	(193,618)	192,548
Accumulated funds at beginning of year	20,168,775	18,443,579	(1,288,327)	(1,447,699)
Adjustment to accumulated funds	—	(225,759)	—	(33,176)
Grants for capital works	300,000	1,761,866	—	—
<b>ACCUMULATED FUNDS AT YEAR END</b>	<u>20,835,921</u>	<u>20,168,775</u>	<u>(1,481,945)</u>	<u>(1,288,327)</u>

(Continued on next page bottom)

# Annual Report 1979-'80: Port of Melbourne Authority (Extracts)

## 1. Chairman's Review

Before reviewing the past year's result, I would refer to the vital role that ports play in any nation's economy.

For some years now, as President of the Association of Australian Port and Marine Authorities and Chairman of the Port of Melbourne Authority, I have attempted to emphasise their vital necessity to Australia. Therefore, when I read a recent American article concerning the importance of ports to that nation, I was impressed by the meticulous research which confirmed this point. And so it is in Australia!

The Port industry is vital to Australia as we are more dependent on sea transport than any other country. Therefore, it is the given duty of every Government, Federal or

State, to support, encourage, and protect, in a material way, the efficient movement of exports and imports through our ports. Ports are servants to the community, they generate business and personal incomes; provide jobs, directly and indirectly; promote tax directly and indirectly to the Government; are both customers and investors; are essentially vital growth centres, and foreign trade is their lifeblood. What big city and community today has achieved economic progress without an efficient port of some description?

The financial year 1979-80 has been one in which the Port of Melbourne has achieved further success.

For the first time since the advent of containerisation, in excess of half a million containers (511,327) were handled in one year—representing an increase of 8% on the previous year.

A record 18.81 million tonnes of cargo passed through the Port, an increase of 7%. Of this total, 15.25 million tonnes were general cargo.

Revenue for the year was a record \$39.35 million and expenditure was \$38.35 million. The yearly operating surplus amounted to \$1,004,125, whilst capital expenditure, including the World Trade Centre, was \$32.1 million.

Although there were fewer ship calls recorded in the Port, gross tonnage of vessels reached a record 26.14 million tons. It is worth noting that currently night navigation applies to vessels to a length of 259 metres (850 feet) and the guaranteed depth of water in the river channel has been increased to 13.1 metres (43 feet) at low water.

Record figures have been achieved in a year where a number of factors affected trade. Of special significance were industrial stoppages, particularly the Victoria-wide workers' compensation dispute in March with the State Government during which 368,400 working days were lost, and the prolonged dispute which affected wool trade; escalating fuel prices which resulted in a reduced tourist vehicle trade with Tasmania and decreased trade in new vehicles and parts; and a continued slump in the State's building industry. Regrettably, the number of manhours lost in the Port itself increased from 12.1 thousand hours per month in 1978-79 to 17.1 thousand hours per month this past year.

The success of a Port is dependent on the buoyancy of world trade and the facilities it has available for shipping. In both respects, the Port of Melbourne is most fortunate.

In addition to servicing an extensive hinterland covering the entire State of Victoria and stretching into South Australia and the Riverina, Melbourne is also the major transshipment port for Tasmania and the mainland terminal of the Bass Strait ferry service. In all, approximately 38 per cent of Australia's population resides in this area and in terms of value, 25.7 per cent of the general cargo shipped into and out of Australia is handled in the Port.

Melbourne was a pioneer in the introduction of containerisation to Australia. In the year under review, 70 per cent of the general cargo was carried in containers. The Port's container complex at Swanson Dock handled 51 per cent of the container traffic while the four Roll-on Roll-off

(Continued from page 21)

## 3. Balance Sheets for the Harbour and Graving Dock Funds as at June 30, 1980

	Harbour Fund		Graving Dock Fund	
	1980	1979	1980	1979
	\$	\$	\$	\$
<b>Current Assets</b>				
Cash on hand and at bank	282,181	261,685	1,788	71,528
Debtors	928,582	1,279,771	123,779	134,267
Investments	5,328,814	7,205,998	90,732	94,002
Inventory	5,000	5,000	121,811	101,535
Work in progress	1,066,160	516,613	4,774	52,521
Other debtors and prepayments	217,639	111,028	3,033	2,630
<b>TOTAL CURRENT ASSETS</b>	<b>7,828,376</b>	<b>9,380,095</b>	<b>345,917</b>	<b>456,483</b>
<b>AMOUNTS DUE FROM OTHER FUNDS</b>	<b>2,122,000</b>	<b>2,226,000</b>	—	—
<b>Sinking Fund Investment (at cost)</b>	<b>189,663</b>	<b>116,662</b>	<b>56,811</b>	<b>47,028</b>
<b>Fixed Assets</b>	<b>50,752,409</b>	<b>38,572,987</b>	<b>8,817,160</b>	<b>9,295,855</b>
<b>TOTAL ASSETS</b>	<b>60,892,448</b>	<b>50,295,744</b>	<b>9,219,888</b>	<b>9,799,366</b>
<b>Current Liabilities</b>				
Creditors and accruals	3,718,529	2,078,138	210,273	143,218
Employee provisions	943,620	802,548	297,379	281,290
<b>TOTAL CURRENT LIABILITIES</b>	<b>4,662,149</b>	<b>2,880,686</b>	<b>507,652</b>	<b>424,508</b>
<b>Non-current Loans</b>	<b>28,594,378</b>	<b>22,446,283</b>	<b>8,072,181</b>	<b>8,437,185</b>
<b>Amounts owing to other Funds</b>				
Rehabilitation loan	—	—	1,266,065	1,266,065
Working fund advances	—	—	855,935	959,935
	—	—	2,122,000	2,226,000
<b>Accumulated Funds and Reserves</b>				
Capital works reserve	6,800,000	4,800,000	—	—
Accumulated funds (deficit)	20,835,921	20,168,775	(1,481,945)	(1,288,327)
<b>TOTAL ACCUMULATED FUNDS AND RESERVES</b>	<b>27,635,921</b>	<b>24,968,775</b>	<b>(1,481,945)</b>	<b>(1,288,327)</b>
<b>TOTAL LIABILITIES AND RESERVES</b>	<b>60,892,448</b>	<b>50,295,744</b>	<b>9,219,888</b>	<b>9,799,366</b>



berths at Webb Dock accounted for a further 22 per cent. When completed in 1981 with additional berthage and cranes, and an area of 80 hectares (200 acres), the Swanson Dock complex will be capable of handling seven ships continuously and will have an annual capacity of at least 8 million tonnes of cargo and 450,000 containers.

With the continuing growth in container traffic and the increasing use of Roll-on Roll-off vessels much of the Authority's expenditure during the year has been on the provision of new facilities, or the updating of berths to cater for the specialised needs of modern shipping.

Major projects in hand during the year included the lengthening of the East side of Swanson Dock and the provision of an additional common user area, scheduled for completion in March 1981, at a cost of \$5.5 million; the continued reconstruction of the 16 Victoria Dock complex for completion in December 1980; construction of a fifth berth at Webb Dock and the repaving of 19 and 21 South Wharf to enable these areas to take the heavy wheel loads of modern cargo handling machinery. In addition to the dredging of the main river channels, the widening of Victoria Dock entrance is nearing completion.

Early in the year under review, the PMA commissioned leading landscape designers to prepare a landscape strategy encompassing an overall plan for the improvement of public access and the landscape environment of the Port area. This plan is now being considered by the Authority and when adopted, will be used in future years to co-ordinate works in different areas of the Port. It will mean the PMA spending \$1 million annually, for the next 10 years, which is a cost of approximately 6¢ per tonne of cargo during that period. Under the plan 60 hectares (150 acres) of land will be lost for Port operations.

Once again it is pleasing to report that no serious incidents occurred in the Port area. The fine safety record is due largely to the vigilance and enforcement of Port Regulations by the Port Emergency and Port Security services. Shipowners and other port users expect a port to be reliable and Melbourne's reputation of being a safe port is one of which the Authority is justly proud.

A further asset to the Port Authority is the loyalty and expertise of its officers and employees. It is worthy of note that one in every three employees of the PMA has completed fifteen or more years service. The Board is fully appreciative of the part played by each and every employee and acknowledges that without their support, the Port could not provide the high standard of service and facilities enjoyed by the port users.

The World Trade Centre has now been under construction for fifteen months and substantial progress has been made. Unfortunately with interest rates increasing by 25% and with inflation similarly rising, the estimated completion cost has risen to \$75M.

Completion of the first building in the complex is scheduled for November 1981, with the balance to be progressively completed before the end of 1982.

When available, the World Trade Centre will play a vital role in fulfilling a national and state need to further the trading opportunities of the nation.

A.S. MAYNE

## 2. Revenue Statement for the Year ended 30th June 1980

	1980 \$000's	1979 \$000's
<b>Operating Revenue</b>		
Charges on Ships	5,182	4,824
Charges on Goods	23,984	20,618
Charges for Port Services	3,090	2,879
Rents & Licence Fees	5,503	5,076
Interest Received	1,494	742
Other Revenue	103	91
	<u>39,356</u>	<u>34,230</u>
<b>Operating Expenses</b>		
Contribution to Consolidated Fund	769	667
Port Services	9,593	8,783
Administration	2,801	2,620
Maintenance	9,619	8,512
Depreciation	8,577	6,394
Interest on Loans	5,799	4,937
Other Expenses	1,194	1,272
	<u>38,352</u>	<u>33,185</u>
Operating Surplus	1,004	1,045
Non-Operating Revenue—Interest on Sinking Fund Investments	318	177
Surplus for the Year transferred to Accumulated Net Revenue Account	<u>\$ 1,322</u>	<u>\$ 1,222</u>

## 3. Balance Sheet as at 30th June 1980

	1980 \$000's	1979 \$000's
<b>Funds Employed</b>		
Long Term Borrowings	100,833	86,448
Reserves	107,770	51,387
Sinking Fund	4,868	2,852
Accumulated Net Revenue Account	<u>40,672</u>	<u>11,249</u>
	<u>254,143</u>	<u>151,936</u>
<b>Represented by:</b>		
Fixed Assets	255,237	146,781
Advances for Housing	502	483
Investments	18,012	21,244
<b>Current Assets</b>		
Cash on Hand and at Bank	355	325
Debtors	2,360	1,250
Stock	1,992	2,813
<b>Total Assets</b>	<u>278,458</u>	<u>172,896</u>
<b>Less Bank Overdraft</b>	1,552	1,740
<b>Sundry Creditors &amp; Accrued Liabilities</b>	7,072	5,589
Superannuation Fund	4,031	3,173
<b>Provisions—</b>		
Service Grant Gratuities	215	191
Long Service Leave	1,318	1,134
Insurance	6,288	5,609
Superannuation	3,839	3,524
	<u>24,315</u>	<u>20,960</u>
	<u>\$254,143</u>	<u>\$151,936</u>

**25**

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# Annual Report 1979-80: The Maritime Services Board of New South Wales (Extracts)

## 1. President's Message (extract)

A record trade year and the completion of several important projects made 1979/80 a year in which we may take pride. It is therefore with pleasure that I present the 45th Report of The Maritime Services Board of New South Wales. I propose to comment on the main activities for the year ended 30 June 1980 under separate headings.

### TRADE:

The Ports of New South Wales experienced a record year in which 75.5 million tonnes of cargo were handled, nearly five million tonnes more than in 1978/79.

The Sydney Ports (Port Jackson and Botany Bay) and the Port of Newcastle achieved record tonnages. Port Kembla, although not bettering its previous record trade year, was within 60 000 tonnes of that figure. This year, Port Kembla exported 600 000 tonnes more coal than in 1978/79. Total trade through Port Kembla was 17.7 million tonnes.

The most impressive gains overall were wheat and coal exports and increases in containerised cargo movements.

Bulk wheat exports from Port Jackson and Newcastle rose by 79.4 per cent to 3.33 million tonnes and coal exports overseas and interstate from Port Jackson, Newcastle and Port Kembla increased by two million tonnes to 21.7 million. The Port of Newcastle alone exported one million tonnes more coal this financial year to reach a record total of 11.8 million tonnes. Total trade through the Port of Newcastle was 20.7 million tonnes.

General cargo handled through the Sydney Ports reached a record nine million tonnes and of this amount 5.6 million tonnes was containerised.

The Port Botany container terminal, which commenced operations in March of this year, handled almost 384 000 tonnes of containerised cargo by the end of June.

Two of the State's smaller trading ports also showed significant increases.

Total trade at Twofold Bay increased by more than half a million tonnes, the contributing factor being the export of woodchips which rose by 34.4 per cent to nearly two million tonnes.

Imports of bulk oil into Trial Bay more than trebled to almost 237 000 tonnes.

### SHIPPING:

The gross tonnage of ships using New South Wales ports rose by 2,051,190 tons to 66,888,758 tons. This represented 4420 vessels which visited all ports, six fewer than in the previous year.

Port Jackson, Botany Bay, Newcastle and Port Kembla accounted for 4308 vessels (20 fewer) whilst the five minor trading ports accounted for 112 vessels (14 more than in 1978/78).

A highlight of the year's activities was the commissioning of three new 16.1-metre aluminium-hulled pilot vessels which represented the completion of a \$1 million project to modernise the existing pilotage service.

Named Governor Hunter, Governor King and Governor

Bligh after the second, third and fourth colonial governors of N.S.W., the vessels were built for the Board by Striker Boats (Australia) Pty. Ltd. of Brisbane.

Each has a service speed of 18 knots and superior handling capabilities which enables it to cope with the greater speeds of modern shipping.

### PORT DEVELOPMENT:

The commissioning of the Brotherson Dock container terminal complex and the official opening of the 42-hectare Australian National Line (A.N.L.) terminal at Port Botany on 10 December 1979 marked a significant advance towards meeting the needs of the expanding container trade through Sydney Ports.

The development of this world-class port on the northern foreshore of Botany Bay will more than double Sydney's container handling capacity.

There are two container terminals in Brotherson Dock each of three berths involving almost two kilometres of wharfage. The A.N.L. facility occupies the northern side of the dock. On the opposite side, the Container Terminals Australia Limited (C.T.A.L.) terminal, covering 38 hectares, is nearing completion. It is expected to commence operations in 1981.

Port Botany already boasts the most modern bulk liquids berth in Australia.

At Newcastle, the \$80 million Harbour Deepening Project has progressed to the stage where, in October, 1980, sufficient rock will have been removed to enable a depth of 12.5 metres to be achieved.

Deepening to the contract depth of 15.2 metres is scheduled for completion during the latter part of 1982.

In order to provide additional draught for wheat and coal ships in Port Jackson, the channel from Millers Point to White Bay was deepened to 12.2 metres.

The general cargo berth at No. 3 Darling Harbour is nearing completion and work has begun on the cargo shed, which will be similar to that at the adjoining No. 4 Berth.

On Goat Island, in Port Jackson, a museum to record the Board's history is soon to be established in the original Officers' Barracks, built in 1836, which the Board has restored and extensively renovated for the purpose.

Final planning, design and site preparation has been completed for the \$10 million multi-purpose berth at Port Kembla and tenders for construction will be called in August, 1980. The facility will accommodate vessels up to 110 000 dwt for general cargo discharge, ship repairs and tie-up. It is expected to be in operation by 1982.

Coal export continues to demand more and improved facilities and to this end the Board is progressively upgrading coal loading facilities at Newcastle, Port Jackson and Port Kembla. The contract for the upgrading of the Balmain coal loader in Port Jackson to increase the annual capacity from 2.8 million tonnes to 4.5 million tonnes is well in hand.

At Newcastle, Port Waratah Coal Services Ltd. (P.W.C.S.), which owns the Steelworks Channel Coal Loader, has undertaken to upgrade the facility in order to

increase its capacity to match the anticipated increase in coal exports from the Port.

In conjunction with P.W.C.S., the Board is currently undertaking a planning study for a coal loading facility at Kooragang Island.

The new coal loader at Port Kembla, to be in operation by the end of 1982, will have an initial capacity of 14 million tonnes. All contracts have been awarded for the facility, which will consist of a new berth, ship loading capacity of 5000 tonnes per hour and a major new stockpile area with a nominal capacity of 850 000 tonnes to replace the existing 200 000-tonne area. The cost of the plant is estimated at \$140 million.

#### FINANCE:

The operations for the year resulted in a net surplus of \$1,966,524 as against \$118,080 for the previous financial year. Total expenditure amounted to \$124,005,401 from revenue earned during the year of \$125,971,925.

Private loans totalling \$28.5 million were arranged locally through private lenders to finance the Board's major works. The Board was also granted authority to negotiate an overseas loan, the equivalent of \$35 million, for the construction of the new Port Kembla coal loader.

J.M. WALLACE,  
President

## 2. Balance Sheet — as at 30 June, 1980

1978-79 \$	LIABILITIES	1979-80 \$
259,159,307	CAPITAL:	283,138,269
	FUNDS OTHER THAN CAPITAL USED FOR ACQUIRING	
84,962,409	ASSETS:	103,912,590
54,992,528	RESERVES:	66,773,162
	CURRENT LIABILITIES AND PROVISIONS:	
5,205,202	Creditors—	6,410,700
12,342,885	Provisions—	8,444,876
17,548,087		14,855,576
43,286	TRUST ACCOUNTS:	67,040
<u>\$411,500,415</u>		<u>\$468,746,637</u>
	ASSETS	
	FIXED ASSETS:	
155,155,946	Wharves and Jetties	173,554,592
14,861,403	Shore Buildings	15,017,425
76,553,576	Deepening of Ports	94,202,220
72,645,638	Reclamations	79,227,164
5,615,688	Port Roadways	5,660,422
16,569,143	Coal Loading Works	34,634,245
13,467,057	Floating Plant, Workshops, Depots, etc.	13,103,518
354,868,451		415,399,586
4,121,796	CURRENT ASSETS:	7,831,288
275	SECURITIES:	275
20,300,000	INVESTMENTS:	5,000,000
1,577,759	CASH IN TRANSIT:	1,191,314
	CASH AT TREASURY:	
16,119,389	The Maritime Services Board Fund—	17,510,637
	The Maritime Services Board Renewals Fund—	12,101,063
3,266,329		29,611,700
19,385,718	NEWCASTLE HARBOUR DEEPENING:	9,712,474
<u>10,273,512</u>		<u>9,712,474</u>
<u>\$411,500,415</u>		<u>\$468,746,637</u>

## 3. Income and Expenditure Account for the year ended 30 June, 1980

1978-79 \$	INCOME	1979-80 \$
	HARBOUR RATES:	
17,281,438	Inward Oversea	19,036,089
15,814,551	Inward Interstate	16,183,409
3,056,098	Inward State	3,170,976
<u>36,152,087</u>		<u>38,390,474</u>
	TRANSHIPMENT RATES:	
21,774	Oversea	20,552
25,038	Interstate	26,813
98,571	State	159,885
<u>145,383</u>		<u>207,250</u>
	HARBOUR RATES:	
20,460,093	Outward Oversea	24,840,697
1,367,931	Outward Interstate	1,528,130
98,257	Outward State	113,532
<u>21,926,281</u>		<u>26,482,359</u>
	TONNAGE RATES & BERTHING CHARGES:	
5,653,946	Tonnage Rates	6,382,506
310,537	Dolphin and Tie-up Berths	319,873
	Passenger and Cargo Handling Facilities	81,692
93,048	Berthing Charges—Small Craft	70,750
<u>57,185</u>		<u>70,750</u>
<u>6,114,716</u>		<u>6,854,821</u>
<u>64,338,467</u>		<u>71,934,904</u>
	NAVIGATION & SHIPPING CHARGES:	
4,631,209	Pilotage Charges	4,731,439
2,213,750	Harbour and Light Rates	2,214,937
<u>6,844,959</u>		<u>6,946,376</u>
2,003,346	LICENSE FEES:	2,301,714
647,403	STORAGE CHARGES:	969,617
1,760,847	INTEREST ON DEPOSIT	3,237,870
606,198	MISCELLANEOUS RECOVERIES:	753,810
	MISCELLANEOUS SERVICES:	
117,757	Water Supply	137,737
1,994,061	Cranes on Wharves	2,146,709
291,300	Telephones on Unleased Wharves	263,792
21,428	Hire of Plant	31,209
11,158	Survey Fees	10,213
24,769,223	Coal Loaders	30,275,534
964,393	Other	1,087,196
28,169,320		33,952,390
4,563,819	RENTS:	5,716,001
108,934,359		125,812,682
<u>147,782</u>	BOND CHARGES:	159,243
<u>\$109,082,141</u>		<u>\$125,971,925</u>
	EXPENDITURE	\$
	Administrative Expenses	7,425,377
	General Charges	8,734,765
	Collection of Harbour and Tonnage Rates	574,956
	Navigation, Shipping and Boating Services	9,395,382
	Survey of Ports	1,129,728
	Maintenance of Property	13,607,456
	Sundry Services	6,386,162
	Dredging	464,688
	Demolition of Wharves and Buildings	6,677
	Coal Loading Facilities	21,273,127
	Payments re Agreement with B.H.P. under Port Kembla (Further Dev.) Act, 1971	600,000
	Bond Store Operations	236,157
	Transfer to Newcastle Harbour Deepening Account	14,162,405
	Renewals Fund Transfer	14,500,000
	Surplus transferred to Nett Revenue Account	27,475,045
		<u>\$125,971,925</u>

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# Annual Administrative Report '79: Penang Port Commission (Extracts)

## 1. General Review

1979 has been another good year for the Port of Penang. Cargo handled increased by 11% attaining the figure of 5.47 million tonnes. The Penang Port Commission handled a total of 3.18 million tonnes of breakbulk and bulk cargo. This was an increase of 11% over 1978.

The number of ships calling at the Port rose by 8% from 3,360 in 1978 to 3,630 in 1979.

The highest increase in cargo handling was recorded at the Container Terminal which handled a total of .53 million tonnes of cargo in 35,179 Twenty-foot Equivalent Unit (TEU) containers. The figures for 1978 were .36 million tonnes in 23,998 TEUs. Thus cargo throughput at the Container Terminal recorded an increase of 47%. This reflected the worldwide trend in containerisation and in the use of mechanised methods of cargo handling. Containerised cargo constituted 15.3% of the total volume of general cargo handled through the Port.

The increase in cargo throughput at Penang reflected the rapid growth of industrial activity around the Port of Penang and in its hinterland. Although Penang has declined as an entrepot port, the growth of the Port is now dependent on the development of industries in Penang and the neighbouring states.

The export of palm oil has increased significantly over the last few years. In 1979, .40 million tonnes were shipped compared to .31 million tonnes in 1978.

Satisfactory progress was achieved in the development projects undertaken as part of the Third Malaysia Plan. Additional container equipment including a gantry crane and two transtainers were introduced in 1979. The Bulk Cargo Terminal at the Prai Industrial Estate became partially operational in 1979. Work on the Vegetable Oil Tanker Pier progressed satisfactorily. The feasibility study on the deepening of the North Channel was completed and the study confirmed the economic viability of deepening the North Channel entrance to the harbour.

The volume of vehicular traffic using the ferry service increased by 8% over 1978. Passenger traffic also increased by 5%. Two additional ferry vessels for vehicular traffic were ordered in 1979 and they are expected to be delivered in 1980 and 1981 respectively.

## 2. Development

Working on the following projects under the Third Malaysia Plan progressed satisfactorily in 1979.

### 1. Bulk Cargo Terminal

The terminal structure was completed and the berth became partially operational at the beginning of the year. The installations of the conveyor belt system and the crane were the only items left to be completed. The whole project costing \$46,440,000 when completed in April 1980 would provide mechanical bulk loading and discharging facilities in the Port of Penang.

### 2. Container Handling Facilities

A gantry crane and two transtainers were installed at the Container Terminal. At the same time, approval was

given for the purchase of another transtainer and three units of heavy forklift trucks under the Mid-Term review of the Third Malaysia Plan. The extension of the Container Yard by another 4.5 acres and the construction of the Control Tower cum Office and the new workshop progressed satisfactorily in 1979 and are expected to be completed by mid 1980.

### 3. Vegetable Oil Tank Pier

Satisfactory progress on the construction of this project was made in 1979 and the Pier is expected to be ready for operation in May 1980. This Pier would provide a specialised berth for bulk oil tankers loading palm oil and other vegetable oil at the Port of Penang.

### 4. North Channel Study

The study on the feasibility of deepening the North Channel was completed by a firm of consultants and the study has indicated that it is physically feasible and economically viable to undertake the deepening of the North Channel so that vessels with a draught up to 42.5 ft. can use the Port.

### 5. Management Accounting Study

The major part of the study on the Accounting, Management Reporting and Tariff System of the Port of Penang was completed in 1979. Implementation of the recommendations is now in progress.

### 6. Phase III Port Development Study

The first part of this study was almost completed in 1979 and the report is awaited from the Consultants in early 1980. The second part would commence in early 1980 and is expected to be completed in late 1980. The recommendations of this study would be the basis for the future development of the Port in the eighties under the Fourth Malaysia Plan.

### 7. Floating Craft

The Commission took delivery of two small tugs, three pilot launches and two passenger launches as replacement for old craft. A new dredger together with a hopper barge to replace one of the Commission's old dredgers was delivered to the Commission in 1979. Another hopper barge will be delivered in October 1980.

### 8. Ferry Vessel

Two ferry vessels were approved for purchase under the Mid-Term Review of the Third Malaysia Plan. One ferry vessel costing \$5.4 million, ordered in 1979, is to be delivered in early 1980. The other costing \$6.3 million is to be delivered in early 1981.

### 9. Computer System

The Commission acquired a more advanced and powerful computer system with multi-programming and teleprocessing capabilities, in June 1979 with the view to develop a responsive, flexible and comprehensive com-

(Continued on page 30 bottom)

# Marketing in Germany.

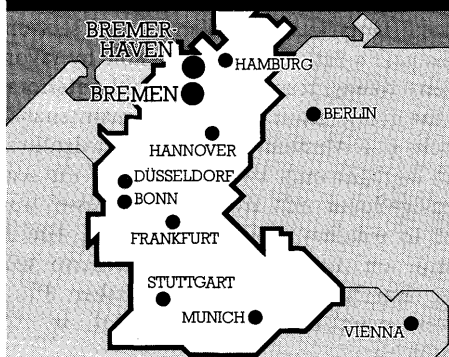
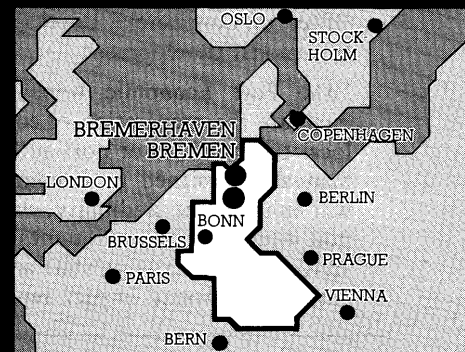
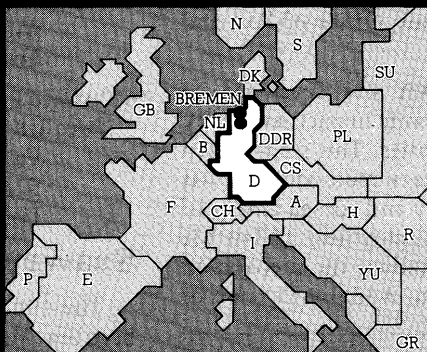
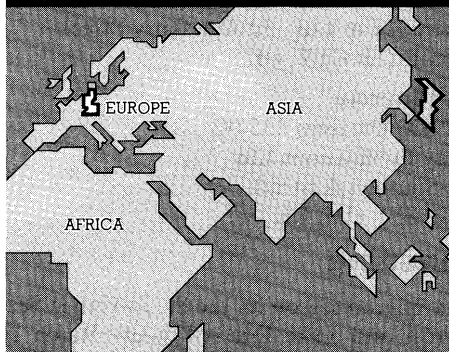
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# International maritime information: World port news:

## Publications

1. "Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk"—1980 Edition Incorporating Amendments 1 to 9 Sales No. 80.13.E price £3.50
2. "International Maritime Dangerous Goods (IMDG) Code" (Amendments 17-79 and 18-79) Sales No. 80.14.E price £12.00  
IMCO Secretariat, Publications Sections  
101-104 Piccadilly, London W1V OAE, UK
3. "Port Economic Impact Kit":  
U.S. Department of Commerce, Maritime Administration  
Office of Commercial Development, Office of Port and Intermodal Development

"The Port Economic Impact Kit was developed to facilitate the preparation of economic impact reports by local communities or port authorities. This step-by-step manual is designed to standardize a methodology that will enhance the credibility, clarity and comparability of port economic impact studies. Employment of this Kit should involve existing staff and reduce the preparation costs of economic impact reports. Additionally, use of

the Kit should allow periodic updates of impact estimates at minimal expense."

4. "Containerisation International Yearbook 1981"  
Size 11" x 7 7/8", 608 pages  
Price £28 (plus £2 postage and packing in the UK) £33 by surface mail overseas; Copies airmailed to Europe cost £39; to the rest of the world £49  
Containerisation International Yearbook  
National Magazine House, 72 Broadwick Street  
London W1V 2BP, UK
5. "The Effect on the Operation of Tanker Terminals following International Safety and Pollution Prevention Standards"  
Price £2.00  
Witherby & Co. Ltd., 32 Aylesbury Street  
London EC1R OET, UK
6. "World Port Directory"  
Price UK £29.00 Overseas £35.00  
Fairplay Publications Ltd  
52/54 Southwark Street  
London SE1 1UJ, UK

## Seaway opening

The 1981 navigation season on the St. Lawrence Seaway between Montreal and Lake Erie will begin March 25 at 8 a.m. (EST). This will be the second earliest opening for the Montreal-Lake Ontario and Welland Canal sections of the seaway. This year's date was made possible by favorable weather in recent weeks, resulting in a rapid deterioration of ice, and by the acceleration of extensive maintenance on the two U.S. locks near Massena, New York. Navigation will be permitted in daylight only in some areas of the seaway until lighted navigational aids are in place. Vessel transits will be subject to weather and ice conditions. The 1980 navigation season on the Montreal-Lake Ontario section extended from March 24 through December 19. The 271-day season equaled the record set in 1975. (AAPA ADVISORY)

## Seaway traffic in 1980

Overall tonnage moving through the Montreal-Lake Ontario section of the St. Lawrence Seaway during 1980 dropped 11 percent according to year-end statistics issued by the U.S. Department of Transportation. In 1980, seaway cargoes amounted to 49.5 million metric tons, compared to 55.3 million metric tons in 1979. Last year was the first since 1976 that tonnages dipped below the 55-million level.

Hardest hit was iron ore, down four million metric tons in 1980, due mainly to reduced demand by U.S. automotive and iron and steel industries in the Midwest. Grain cargoes, on the other hand, climbed by eight percent to nearly 27 million metric tons—the second highest grain shipment year in the seaway's history. Wheat exports, primarily from Canada, were responsible for the increase.

(Continued from page 28)

puter service in support of port administration and operations.

The recently acquired computer system is being deployed to implement the improved accounting and reporting systems as recommended by the Management Accounting Consultants. Other applications planned include online billing system, a port operations information system, a container information and control system, and a planning and control system.

### Commission's Handling of Port Tonnage

(millions of tonnes)

Year	Tonnage handling by the Commission	Total Port Tonnage
1975	2.00	3.84
1976	2.44	4.22
1977	2.35	4.60
1978	2.87	4.93
1979	3.18	5.47

### Container Statistics

Year	TEUs			Tonnage (in tonnes)		
	Import	Export	Total	Import	Export	Total
1975	4,525	4,327	8,852	35,700	73,540	109,240
1976	7,050	7,142	14,192	63,916	110,011	173,927
1977	9,000	9,037	18,037	123,697	147,975	271,672
1978	12,015	11,983	23,998	184,830	171,973	356,803
1979	17,358	17,821	35,179	280,445	245,466	525,911



Corn, soybeans, and barley registered decreases. General cargo declined also because of reductions in iron and steel imports, reflecting a 28 percent decrease in European steel exports to the U.S., and the continued impact of the U.S. trigger pricing policy.—(AAPA ADVISORY)

## U.S. Corps FY 1982 navigation projects

The U.S. Army Corps of Engineers is requesting \$3,365,500,000 for its fiscal year 1982 Civil Works program. That includes \$1,190,931,000 for navigation. Construction funds are provided for major projects at the ports of Los Angeles, Port Everglades, Charleston, Corpus Christi, Texas City, Ashtabula, Barbers Point, and for the Mississippi River from Baton Rouge to the Gulf, the Mississippi River Gulf Outlet, the Lake Washington Ship Canal, and from San Francisco Bay to Stockton Harbor. The budget also provides for continuation of planning and engineering studies for Savannah, Mobile, and Norfolk. The table below compares the FY 1982 requests with actual appropriations for FY 1981.

Corps Navigation Projects Funding		
	<u>FY 1982 Request</u>	<u>FY 1981 Appropriation</u>
General Invest-		
gations	\$ 17,972,000	\$ 16,115,000
Advanced Engineer-		
ing & Design	1,500,000	5,765,000
Construction	569,908,000	583,616,000
Operations &		
Maintenance	601,551,000	545,400,000
Totals	\$1,190,931,000	\$1,156,896,000

Overall, the proposed budget for navigation works is up just 2.9 percent over 1981. In an economy wracked by double digit inflation, it's plain that the Corps, given the essential static character of its budgets since 1970, is able to do less and less with the available monetary resources. Particularly significant is the fact that approximately 72 percent of the funds proposed for navigation construction (or \$411 million) would go for Tenn-Tom, Lock & Dam 26, and the Red River Waterway.—(AAPA ADVISORY)

## Brazilian port news in brief: Portos e Navios

- The ro-ro terminal of the Port of Rio de Janeiro shall be built by Concic Engenharia, company which has won the bid opened by Portobrás/CDRJ. The terminal shall cost 600 million cruzeiros and shall be built in an area of 90,000 m<sup>2</sup>.
- The Minister of Transportation, Mr. Eliseu Resende, guaranteed that the 11 billion cruzeiros foreseen for Portobrás are to be maintained without reduction.
- The Port of Santos has been transferred from Cia. Docas de Santos to Cia. Docas do Estado de São Paulo (Codesp); it shall be the first Brazilian port to be directed by an Administrative Council and shall have also a Council of Users, consultative agency of the administrations of a large part of the Brazilian ports.
- Portobrás is already in possession of the engineering design for the construction of the two locks for the

transposal of the Tucuruí dam, which shall transform the rivers Araguaia and Tocantins in a waterway of 2,200 km. In 1981, 1 billion cruzeiros are to be invested in this work.

- According to the forecasts, the Port of Rio de Janeiro is going to export, in 1981, 3 million coffee sacks, thus recovering the position of second largest exporting port of this product, in Brazil.
- Portobrás succeeded in obtaining a loan of 15 million US Dollars at the Commerz Bank, of the German Federal Republic, for the conclusion of the works of the terminal for wheat and soya, of Rio Grande.

## Good start for 1981: Nanaimo Harbour

The Port of Nanaimo did record trade for 1980, and figures for January indicate a healthy start for 1981.

Bob Chase, managing of marketing for the Nanaimo Harbour Commission says the year has started well for the port, better than the lean time January is usually. Chase said high inventories in December traditionally keep January shipments modest.

However with the Japanese market showing no signs of slacking off, a continuing high level of shipping is registering in the Port of Nanaimo. In January 51,000 MT of lumber were shipping out, together with 4,100 MT of plywood and 6,300 MT of pulp.

"That's holding well compared to the same period last year, and according to all reports the second half of 1981 will be brighter than last year. We've certainly weathered the storm."

## Port of Toronto registers total tonnage increase

The total amount of cargo moving through the Port of Toronto in 1980 showed an increase of 63,919 metric tons over the previous year.

The port handled 2,535,526 tonnes of cargo last year compared with 2,471,607 tonnes in 1979.

Domestic tonnage in 1980 rose from 1,761,903 to 1,957,674 tonnes while overseas cargo decreased from 709,704 to 577,852 tonnes.

A tonnage increase of 98,884 tonnes was recorded in coal shipments. Grain shipments increased by 137,481 tonnes while salt was up by 75,742 tonnes. Miscellaneous cargo showed an increase of 25,564 tonnes.

## Industrial park could create 1,300 new jobs: Toronto Harbour Commission

A report by a special task force, established by the City of Toronto and the Toronto Harbour Commission (THC), outlines a plan for an industrial park at the foot of Leslie Street that could ultimately create 1,300 new jobs and bring \$1.7 million in tax revenues annually.

The report, entitled Port Industrial Development Task Force, points out that the port area represents the largest single inventory of undeveloped industrial land within the city. The area, more than 1,000 acres in size, has existing and potential space to look after present and future port activities and port-related heavy and recycling industries.

In outlining industrial strategy for the area, the task

force report protects future port requirements. Aside from Hamilton, Toronto has the only Seaway-depth harbour on the western end of Lake Ontario which has a sheltered water area capable of handling substantial port expansion.

The task force believes that with the rising cost of fuel—a general shift is expected toward greater utilization of water transportation—the most energy-efficient method of moving goods.

“In order to accommodate changing techniques in the logistics of ship loading/unloading, coupled with the anticipated increase in demand for water transportation, it may be necessary to create new port facilities tailored to meet the specialized shipping techniques,” the report states. “This would likely require lands currently vacant, along the north shore of the Outer Harbour.”

The task force feels that the existing industries in the area should be encouraged to remain and that space should be provided for those industries which must have “either access to water transportation or port facilities, or require a location in the port area.”

The task force points out that the area has a number of advantages including proximity to road, rail and water transportation; closeness to downtown Toronto; centrality within the region and its markets, suppliers and labour force; a plentiful supply of raw water; and the general attractiveness of a waterfront setting.

On the other hand, the port location has some disadvantages which the task force says can be overcome.

One is the higher cost of construction. Because the entire area consists of landfill, stronger and more expensive foundations would be required for all structures. Other drawbacks are higher land costs and the lack of services.

To help overcome these disadvantages, the task force proposes that the extra foundation costs should not be subject to a property tax. In addition; it suggests that the City of Toronto spend between \$2 and \$2.5 million to build roads, sewers and watermains.

Besides the tax change, the report says that allowing up to twice the density common in suburban industrial parks could also help offset extra costs.

The first phase of the industrial park development would involve a parcel of land at the foot of Leslie Street just under 100 acres in size. The second phase would include an area of some 85 acres for an overall total of about 185 acres.

Since the second phase would involve one of the primary areas which could accommodate future port-related industry and port facilities, the task force recommends that this section of the waterfront be identified for “either the second phase of industrial park development or for the port-related industry or port facilities.”

Before development could proceed, the task force says that the Provincial Government and the Toronto Harbour Commission should resolve the ownership of the land beyond the southerly limits of present THC water lots.

Under the task force recommendations, the Commission would be the developer, but the City would have a say in the planning. The day-to-day development of the park would be carried out by a project manager whose salary would be jointly funded by the THC and the City.

A Port of Toronto Industrial Park Co-ordinating Team would be established to expedite the implementation of development and facilitate co-ordination between the

Commission and the City. The team would include representatives from both bodies.

## Port of Boston's FTZ/27 opens

The Port of Boston has gained another business asset. Massport opened Foreign Trade Zone/27 at Commonwealth Pier, as the first of two sites it will have in the port. The zone provides new opportunities for business and enhances Massport's service structure for port trade.

Foreign-trade zones are areas under U.S. Customs supervision where foreign merchandise may be exhibited, stored, assembled, or used without being subject to Customs regulations. An FTZ provides direct services to importers and exporters, as well as the advantage of cash flow savings. Duties need not be paid on goods or their end products until they are shipped from the zone into U.S. Customs territory. Exports pay no duty. Boston's zone is one of approximately sixty in operation or development in the United States.

In addition to the 40,000 square foot Commonwealth Pier site, the United States Department of Commerce has designated the Commonwealth Storage Yards as part of FTZ/27. The Storage Yards will be developed in the future as business increases.

In the future, the zone could be used to assemble high technology products or for light manufacturing.

Massport's Foreign Trade Zone is a growing regional resource important to the commercial revitalization of the Port of Boston. Massport is optimistic about its future.

## SPA to market \$27 million in revenue bonds for Wando: South Carolina State Ports Authority

A \$27-million revenue bond issue for the Wando River Terminal Project has been approved by the State Ports Authority.

Resolutions required by state law were adopted in connection with both fiscal matters. The bond market's unfavorable condition at present induced the board to provide for interim financing which will keep the project on schedule.

Originally estimated in 1974 to cost \$56 million, the Wando's price tag has increased dramatically to \$83 million. Soaring inflation, major delays in construction start-up and unforeseen additional road, dredging and funding costs escalated the budget figure.

The SPA was thwarted in starting physical work on the Wando project by two overriding factors. One was the inordinately-long and involved process of obtaining a U.S. Army Corps of Engineers permit. The other was adamant opposition by several federal agencies and by well-funded environmental and ecological organizations, some of which operate nationwide.

## Charleston: Wando River Terminal



This is the Port of Charleston's Wando River Terminal site as it appeared in January, 1981, with its first berth under construction. Initial stages of construction, expected to be completed in the fall of this year, include 2,400 feet of linear berthing, four container cranes, and some 115 acres of finished open storage.

## Port Corpus Christi continues effort to get Deepport approved

Work continues toward obtaining a construction permit for Deepport—the Harbor Island deepwater port project.

A final environmental impact statement (EIS) must be formulated and released before the Army Corps of Engineers can make a permit decision.

With the help of various consultants, the Port has been collecting data, re-evaluating project dimensions and preparing responses to hundreds of comments concerning the Draft EIS.

Port Director Harry Plomarity said the Port is continuing with procedural efforts while waiting for improvements in interest rates and world oil supply stability. He said Deepport is still needed and remains viable.

If Deepport were in operation by 1985 it would result in an estimated annual transportation cost savings of \$250 million. Plomarity said these savings are needed to keep area refiners competitive, sustain employment and attract new processors.

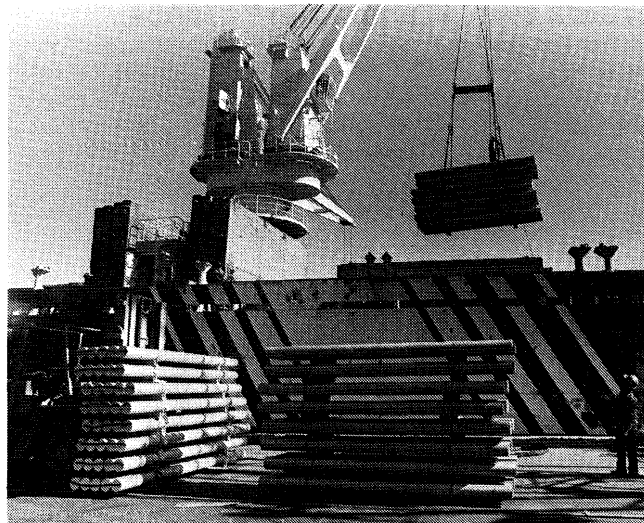
Because of dropping production levels from South Texas fields, demand for imported crude oil at Corpus Christi's refining complex will not be checked by domestic drilling or conservation efforts, Plomarity explained.

Inflation and higher interest rates have pushed up the cost of Deepport (\$430 million in 1978). This has forced planners to look for ways to scale down the project's cost at the same time they devise modifications that will reduce environmental impacts.

Adjustments have been made that will reduce the use of wetland acreage to the same range being approved for other projects while maintaining navigational safety. Channel depth has been reduced from 80 to 74 feet and the configuration of the docking and turning basins has been modified.

The Corps has the option of granting the permit,

## Charleston: Aluminum ingots



Alumax of South Carolina recently moved 1,265 tons of aluminum ingots and extrusion billets through the Port of Charleston from its aluminum reduction facility in nearby Goose Creek, S.C. Extrusion billets here being loaded at the South Carolina State Ports Authority's Union Pier terminal went aboard Galleon Lines' vessel "Onyx" enroute to Alumax forming plants in Mexico.

rejecting it or issuing a permit with conditions. Such conditions might include an operating depth of less than 72 feet or some new site configuration.

## Port of Los Angeles approves major coal terminal concept

The Los Angeles Board of Harbor Commissioners directed that an Environmental Impact Report be prepared for the development, including the dredging of a 65-foot channel to the southern portion of Terminal Island and the creation of necessary landfill in the Outer Harbor for relocation of hazardous liquid bulk terminals presently located adjacent to the harbor community, both projects included in the Port's extensive Master Plan and capital development program.

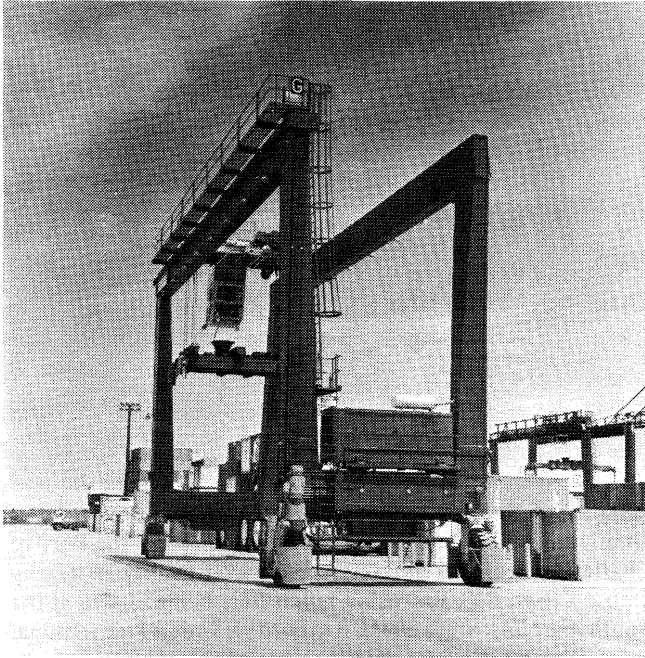
Los Angeles Mayor Tom Bradley expressed his full support for the Commission action, citing that increased coal export traffic through the Port of Los Angeles will serve to reduce the nation's trade deficit with the Far East, now the primary destination for coal shipments emanating from the U.S. West Coast.

Mayor Bradley added, "We hope to bring a major coal handling terminal to Los Angeles, one capable of storing millions of tons of coal and able to load in excess of 20 million or more tons each year in vessels approaching 250,000 dwt."

It has been estimated that the U.S. holds almost 31% of the world's coal reserves, with some 60% of that in the western states. Present coal shipments through the Port of Los Angeles originate in Utah, Colorado, Wyoming and New Mexico and are shipped primarily to Japan, Korea and Taiwan.

Current coal traffic through the Port of Los Angeles' bulk loader facility at Berth 49-50 totalled 700,000 tons in

## Long Beach Container Terminal orders two Transtainer® cranes



The two Paceco Rubber Tired Transtainer cranes will be added to the two Transtainer cranes recently delivered by Paceco and put into operation at the Port of Long Beach, Pier J container terminal.

These 30 Long Ton terminal cranes will have 74 foot spans giving them the capability of stacking 20 foot and 40 foot containers four high and six wide, including a truck roadway. They will be equipped with reeved-in telescopic spreaders and air conditioned cabs for operator comfort.

The new terminal cranes are scheduled for delivery in mid-1981.

the last six months of 1980. Projected coal tonnage for the entire calendar year 1981 is estimated at two million tons for the three-million-ton-capacity facility.

### Draft Risk Management Plan approved: Port of Los Angeles

In its meeting recently the Los Angeles Board of Harbor Commissioners approved the draft of a Risk Management Plan for distribution to interested persons, organizations and governmental agencies including the California Coastal Commission (CCC).

The Risk Management Plan covers new Port land use developments and existing facilities which involve the transporting, handling and storage of hazardous liquid bulk cargoes. Individual hazardous cargo facilities may create their own hazard areas, known as "hazard footprints." The Plan will, therefore, eliminate or minimize the overlap of such footprints with resources that are vulnerable to those hazards, such as residential or high-density working populations.

The Risk Management Plan supports the creation of a landfill south of Terminal Island specifically for the

## Throwing the switch



Los Angeles Mayor Tom Bradley (second from left) and Congressman Glenn M. Anderson (center) team up on March 16 to symbolically switch on the power to activate the electric Hydro Pacific dredge which is deepening the Port of Los Angeles to -45 feet. On hand for the ceremonies marking the start of the \$61 million project were (from left): Stacy Lynne Hart, Miss Port of Los Angeles; Mayor Bradley; Congressman Anderson; 15th District Councilman John S. Gibson Jr. and Harbor Commission President Jun Mori.

handling of dry and liquid bulk commodities. Such a development would provide new areas with deepwater access since the dredging of a 65-foot channel to Terminal Island is proposed. Relocation of existing hazardous cargo facilities to this more remote site would significantly increase public safety.

The draft Risk Management Plan was prepared as an amendment to the Port's Certified Master Plan and is a conditional requirement imposed by the California Coastal Commission before that body delegates permit authority for hazardous liquid bulk facilities to the Board of Harbor Commissioners.

### Mexican landbridge can accelerate New Orleans Port container traffic

The opening of the Mexican landbridge across the 182-mile Isthmus of Tehuantepec can have a major impact on container traffic through the Port of New Orleans. Scheduled for first operation in late Spring 1981, the system is designed to transship containers across the Isthmus between the Gulf of Mexico and the Pacific Ocean. The new landbridge should be a boon to the Port, which steadily increases and improves its container facilities.

Much of the shipments between the Far East and points within the U.S. now make use of rail connections to and from the West Coast, called a minibridge. A new route for containers using the Mexican landbridge with the Port of New Orleans serving as a transshipment point for rail and truck carriers could be competitive with the minibridge if

the Port could develop a system for shuttling containers to and from Coatzacoalcos at the Gulf end of the Mexican landbridge. Such a system is now being explored by the Port.

The success of the Mexican landbridge-Port of New Orleans route would depend strictly on economic factors. One advantage is that sailing time between Japan, for example, and Salina Cruz on the Pacific end of the landbridge is no greater than sailing time to Los Angeles. Another factor would be the operating efficiency of the Mexican landbridge. Recognizing the importance of that factor, the Port has been working with Servicio Multimodal Transistmico (SMT), the agency of the Mexican government that will operate the landbridge, and its director, Fernando Buena Alvarez, in developing the landbridge. Two SMT representatives have been given training at the Port's France Road Container Terminal on the operation of a container facility.

Reports of what has been planned for the Mexican landbridge indicate a thoroughly modern facility. Equipment is said to include four Marathon Le Tourneau SHU-100 straddle hoists for transferring cargo to rail and truck carriers. Each hoist has a total load capacity of 45,360 kilograms and can span six rows of cargo containers and a truck lane or flatcar rail spur. Containers can be stacked three high with space to pass over the top or stack four high. The hoist, which has the ability to hoist, trolley, steer and travel simultaneously, has been proven at the container yard at Le Havre, France, and other ports around the world.

Each port will have a large container crane for loading and unloading the ships. SMT has indicated it expects to handle between 70,000 and 90,000 units of containerized cargo during the first year, with an annual volume of 500,000 units anticipated within five years. There are studies which show that trade between the Orient and Europe will use the Mexican landbridge for 10 percent of the total volume in 1981, reaching 50 percent by the year 2000.

The single-track rail line between the two ports has been double-tracked at certain points to permit trains to pass. Three new bridges have been built, some curves eased, and grades improved. SMT has already purchased 140 ninety-foot TWX flatcars fitted to carry containers and bogeys and also 10 GE 2,250-horsepower diesel electric locomotives. There will also be 50 trucks available at each of the two terminals. These will travel along a two-lane highway that has been widened at some points to facilitate passing. Neither the rail line or the highway will exceed an altitude of 1,000 feet, and the trip will take six hours by rail and twelve hours by truck. Sailing time between New Orleans and Coatzacoalcos is about three days.

The potential of the Mexican landbridge operating in conjunction with the Port of New Orleans is indicated by the spectacular growth of containerized cargo handled by the Port in recent years. In fiscal year 1978-79, the Port handled 256,000 units, a 35% increase over the previous year. In 1979-80, the figure rose to 256,000 units, a further increase of 17%. The Port estimates that container units in fiscal year 1980-81 will reach 329,000 units, up 10% from the previous year.

## **\$128,000 annual scholarship program starts for children of longshoremen at New York Harbor**

Waterfront labor and management in the Port of New York and New Jersey recently announced start of a pioneering scholarship program to provide children of union longshore workers with awards up to \$16,000 towards a four year college level education.

It involves some 10,000 area members of International Longshoremen's Association, AFL-CIO and New York Shipping Association, management representative of ocean carriers, stevedoring companies and other employers engaged in marine trade in the harbor.

According to union president Thomas W. Gleason and James J. Dickman, president of NYSA, the program will fund eight new scholarships annually with awards up to \$4,000 each. When fully implemented in the fourth year and each year thereafter, the plan will maintain 32 separate scholarships at a total outlay of \$128,000 yearly.

It will be supported by employer contributions to an existing fund covering movement of coastwise and inter-coastal cargo shipments.

"This is the first program of its kind in our industry. It's also the beginning of a long term joint effort by waterfront labor and management to assist in education of dependent children of union workers in the port here. Undoubtedly, it will be expanded in the years ahead to include ILA members and their families in other areas," they added.

## **APL to test 45-foot containers**

American President Lines (APL) recently announced that it has contracted to build two prototype 45-foot containers in order to evaluate their feasibility for use in international trade. Twenty and 40-foot containers are the standard lengths in general use today by the maritime industry.

The prototypes, which are being built by Fruehauf Corp., Detroit, will be tested for operational feasibility throughout APL's intermodal system, according to Richard L. Hill, APL vice president, Land Operations, and project manager.

Hill emphasized the importance of testing the new equipment as part of the industry's quest for greater operating efficiency. The larger containers have the potential of speeding the loading and off-loading of vessels, and reducing drayage costs and the costs of inland transportation via the U.S. rail system, which the company uses extensively in its intermodal operations.

Eugene K. Pentimonti, vice president, Engineering, said the company's three C-9 diesel containerships, which are scheduled for delivery in 1982, were designed with a structure which can be modified to accept 45-foot containers, as well as the standard 20- and 40-foot lengths. Those containerships will be the largest ever built in the U.S., with a capacity of 2,500 twenty-foot equivalent units (TEU's).

Evaluation of the 45-foot containers is underway both from the operations and the marketing perspectives. G.E. Bart, senior vice president, Marketing, said APL, as one of the largest intermodal carriers in the industry, feels an obligation to move forward with testing new designs and concepts to provide better service to shippers and also to

keep abreast of equipment technology already in use in the U.S. highway system.

## Ports of Portland and Chiba unite

In a move to further stimulate trade and promote cultural and educational exchanges between Oregon and Japan, the Port of Portland and the Port of Chiba became "sister ports."

One of Japan's largest ports, Chiba is second only to Kobe in terms of cargo volume. Chiba is located in Tokyo Bay in the center of the Boso Peninsula and is the capital city of the Chiba Prefecture.

In announcing the sister port relationship, Executive Director Lloyd Anderson said, "We are honored that such a significant port as Chiba welcomes Portland as her sister port. This serves to formalize our long friendship and sincere interest in Japan—Oregon's largest trading partner." The City of Portland has a sister-city relationship will Sapporo, Japan.

Anderson said last year Oregon's maritime business with Japan totaled in excess of \$2.7 billion.

Anderson called attention to many similarities between the two port cities. "Chiba, like Portland, has taken an active role in protecting its environment and providing its citizens with recreational opportunities within the port. We are both major seaports and large ship repair centers," he said.

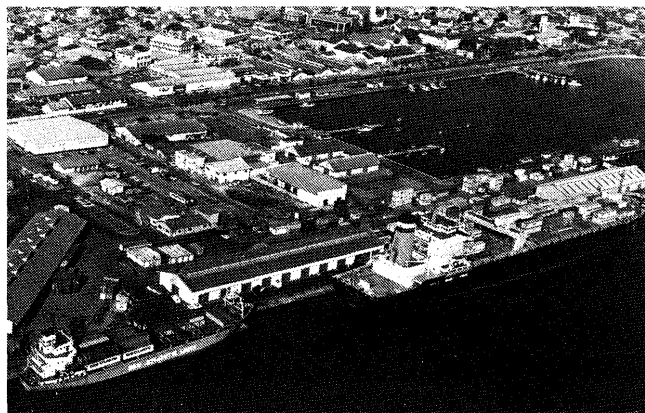
## Port reconstruction in Aruba

Before the end to this year works will start on the construction of a new container terminal on the island of Aruba, Netherlands Antilles. Aruba is well situated near the major trade routes to and from South and Central America. The Aruban Island Government realised that the development of modern port facilities might be an important factor in bolstering the economic development of the island. Therefore, it decided to develop plans, not only to built new facilities, but also to create a new organisational structure for port management. Within the framework of technical cooperation with The Netherlands, assistance was obtained from a team of experts from the Port of Rotterdam, world's largest port. After a series of studies, final plans were presented to the Aruban Island Council, marking the starting point of a very interesting new port development in the Caribbean.

### Labor-Issues

The problems to create a new management structure for the port were very great indeed. At present, ships agents act also as stevedores and the labour force is being engaged on a ship-by-ship basis. Workers are not employed by any company and a strange situation has developed, namely that the port union is responsible for deviding the work among its members. Port equipment is hired from private companies also on an ad hoc basis. This structure is basically unstable and caused very high costs resulting in being Aruba one of the most expensive ports in the Caribbean.

One of the first successes of the Island Government policy was the creation of a pension fund for port workers of US\$4.4 mln. This made it possible if drastically diminish the labour force to a number less than 200. Starting January 1, 1981, these remaining workers are employed by



a newly established stevedoring company, the Aruba Harbour Corporation Ltd. On the equipment side, the two major companies in this field merged into a new one, the Aruba Port Equipment Company Ltd.

All activities of these two private companies and especially the tariffs will be controlled by a new full government owned enterprise, the Aruba Ports Authority. This Authority has the overall responsibility of all Aruban ports excluding the Lago Oil Terminal at San Nicolas. It will possess a wide range of powers in the field of land development, infrastructure, port operations, pilotage and towage. When profits of the two private companies exceed a certain percentage, a profit-sharing plan will come into force, enabling the Port Authority to prevent monopolistic tendencies.

The Port will be basically run as a private enterprise with a maximum freedom of action. The Island Government, however, will retain certain powers concerning major policy matters, such as large investments and nomination of top management. As managing-director the Island government attracted Dr. Christiaan van Krimpen, former deputy director of the Port of Rotterdam and also Vice-chairman of COLS. Mr. Van Krimpen will also be responsible for the construction of a new terminal.

### New Container Terminal

Together with the introduction of a new port management organisation modern container facilities will be constructed during the next two years.

The new Aruban container port will have a waterdepth of 12.30 meters, enabling the largest container vessels now in operation to enter without any restrictions. It will have a dual function: firstly to accommodate the domestic trade and secondly the handling of transit cargo.

Port experts expect a breakthrough in containerisation in South America during the middle of this decade. This will generate a large number of containers to and from this continent. Aruba's Port Commissioner Nelson Oduber is fully confident that shipping companies will use Aruba as a transit port on outbound routes to the Westcoast of the USA and to Japan. Inbound cargo for neighbouring South and Central American countries can also be transited through the new Aruban terminal. The initial design of the terminal is based on a maximum annual throughput of 60.000 TEU's. This number can, however, be increased by stacking containers two or three high in the terminal area of 12 hectares. The terminal will have two berths, one for large

container vessels and one for feeder ships. Beside that there are two ramps for ro-ro vessels. On the new 250 meter long, quay wall a full 50-ton container crane will be erected with a mobile crane for a back-up. The operation on the terminal will be partly based on the use of a large number of terminal chassis and on toploaders.

One existing large warehouse, will be reconverted into a Container Freight Station. Further on, the construction of container repair facilities are planned.

### Passenger facilities

The construction of a new container port enables the Island Government to reshuffle all the port activities in the Oranjestad area. The port facilities will be divided into three categories: container and ro-ro handling in the most western part of the port; general cargo handling and storage in the middle part, while the most eastern quay will be almost exclusively reserved for passenger ship accommodation. This last activity is very important for the Island's booming tourist industry. Aruba is an attractive place for tourist ships to visit as shopping facilities in the town of Oranjestad are extensive and very sophisticated.

Commissioner Nelson Oduber, who leads the development, is now drawing up plans to construct a modern passenger terminal building, aiming at making Aruba even more attractive than it is already today.

Finally a second phase development of the industrial port of Barcadera is planned. This port was originally created to accommodate a large chemical plant. The chemical activity in this area was however terminated some years ago. Now the port is reserved for off-shore activities, as oil-exploration activities are expected to commence within two years.

### Time Scale

In the beginning of the next year, considerable building activities will be seen in the Aruban ports. A call for tenders on the quay wall construction is already issued in January 1981. Actual construction is expected to commence in July, 1981. The total project costs are estimated at US\$. 24 mln.

The project is financed under the terms of the Dutch Development Fund and after the approval of the Aruban Island Council in November 1980 nothing stands in the way of what is expected to be the development of one of the leading Caribbean ports of the future.

## Antwerp becomes first European port for banana imports

As from 1st April 1981, United Brands Continental, the European daughter of the American fruit multinational, will import their bananas—commercialized under the brand Chiquita—via the port of Antwerp. Consequently, every week some 4,000 additional tons of bananas will be discharged in Antwerp.

The bananas mainly originate from Panama and Honduras and will be handled at the fruitterminal of Belgian New Fruit Wharf (B.N.F.W.). B.N.F.W. was able to attract this traffic of bananas, which at present is still being handled in a neighbouring port, thanks to a thorough modernization of its terminal facilities which enabled them to depress the costs of handling.

Recently a new specialized device for discharging bananas out of a seavessel was installed. This system allows the unloading of 3,600 boxes an hour free of shocks and independent of weather conditions.

On an annual basis it represents an additional banana traffic of some 200,000 tons for the port of Antwerp. Since at present the installations of B.N.F.W. already handle 185,000 tons a year and those of Noord Natie another 85,000 tons, Antwerp will become the first European port for bananas. This will also boost overall fruit traffic in the port which already amounted to c. 550,000 tons in 1980.

The bananas will be imported by modern reefer vessels. Consequently, shipping movements in the port of Antwerp will rise with at least 50 units per year. Since the transshipment and the reforwarding of bananas require labour-intensive some 150 new jobs are created by this new traffic.

## BTDB news

### ● Record timber cargo for King's Lynn

The largest ever packaged timber cargo handled by the British Transport Docks Board port of King's Lynn completed discharge recently, from the Hamburg registered m.v. "Maria Graebe", 1,366 tonnes dwt.

Shipped from the Finnish port of Yxpila, the record cargo comprised 695 standards—(3,250 m<sup>3</sup>)—of Scandinavian softwood which was all preslung except for the deck cargo, and was for delivery to J.T. Stanton & Co. Ltd.

Measuring 78.14 metres overall, with a beam of 12.81 metres and drawing 5.3 metres—close to the maximum dimensions for vessels entering the port—"Maria Graebe" berthed at King's Lynn's Bentinck Dock.

Discharge began at 07.45 hrs. direct to road transport and was completed at 13.40 hrs. on the following day. One gang was employed achieving a discharge rate of 257 m<sup>3</sup> per gang hour.

Commenting on the discharge of the "Maria Graebe", the firm's King's Lynn Branch Office Manager, Mr. Jim Latus, said: "The dock workforce have performed particularly well with this consignment and we are very pleased with the speed of discharge. Since timber merchants are currently holding smaller stocks than they would in more buoyant times, quick delivery becomes even more important."

On average, King's Lynn handles between 70,000 and 80,000 tonnes of imported timber per year. In 1979 this commodity accounted for 11.3% of the total import tonnage passing through the port.

### ● New cranes improve throughput at Immingham

The last of three new grabbing cranes installed as part of a major rehabilitation scheme at the Mineral Quay at the Humber side port of Immingham was commissioned recently.

Installation of the three electrically operated 20 tonne grabbing cranes and associated mobile hoppers is part of a continuing investment programme by the British Transport Docks Board aimed at providing replacements for facilities at the Mineral Quay, which are subjected to heavy use.

Extensive works involving the re-surfacing of the quay and the installation of new drainage systems, rail tracks and services have already been completed.



This 1,350 foot long quay is the principal discharge point for bulk materials and it can accommodate two vessels of approximately 30,000 dwt which are the largest able to enter the dock.

Equipped with six 10 tonne and two 6 tonne cranes in addition to the new cranes the quay has a high level of occupancy; handling about one million tonnes of ores, other basic materials and imported/exported steel cargoes annually.

The "SOUNION" the first ship to use the two 20 tonne cranes already operational discharged 19,808 tonnes of Ilmenite and Rutile sand from Australia in a total working time of 59½ hours, achieving a throughput of 333 tonnes per crane hour.

Mr. John Hughes, docks manager, Grimsby and Immingham said that the rehabilitation of the quay was in keeping with the Docks Board's policy of making sure that its ports kept pace with users needs and that the facilities were technologically the best available. "This sort of investment is self-financed by the Docks Board" he added, and went on to say "It is in this way that our profitability is ploughed back for the benefit of all our port users and we are planning to replace more cranes in the near future".

#### ● Two million tonne record set by Fleetwood

Cargo traffic passing through the British Transport Docks Board port of Fleetwood last year reached an all-time record level of two million tonnes—a 6.5% increase over the total tonnage handled in 1979.

Roll-on/roll-off traffic on the thrice-daily freight only service to Ireland leapt by over 13,000 units to total more than 135,000. Another major increase was in scrap metal tonnages which, at more than 132,000 tonnes, were 33% up.

#### ● British shipbuilders purchase Southampton dry docks

Following a meeting in London yesterday (3rd March 1981), British Shipbuilders and the British Transport Docks Board jointly announced agreement for the purchase by British Shipbuilders of numbers 6 and 7 dry docks at Southampton.

The docks are used by British Shipbuilders' subsidiary, Vosper Shiprepairers.

### Port of Dunkerque news

#### ● Extension of the sugar terminal

The board of directors has allowed the extension of the storage grain silo belonging to the Société TRANS TERMINAL SERVICE (T.T.S.) located in the Freycinet 9 berth. In this manner its capacity will rise from 50 000 to 75 000 T of sugar in bulk.

Dunkerque was the first European sugar port with in 1980 a record figure of 1 120 000 T for export of which 200 000 T passed through the T.T.S. terminal.

The private sector will assure the total financing of the extension.

#### ● In Dunkerque total is adapting . . . and enlarging

The Raffinerie des Flandres located in the Dunkerque's industrial and port area will cover a 200 000 m<sup>2</sup> additional area.

In fact, as early as 1979 the Compagnie Française de Raffinage (Total) had decided to build a catalytic cracker to adapt itself to the market's development.

A unit of this type will enable to turn petroleum heavy fractions into light fractions. The advantage is twice:

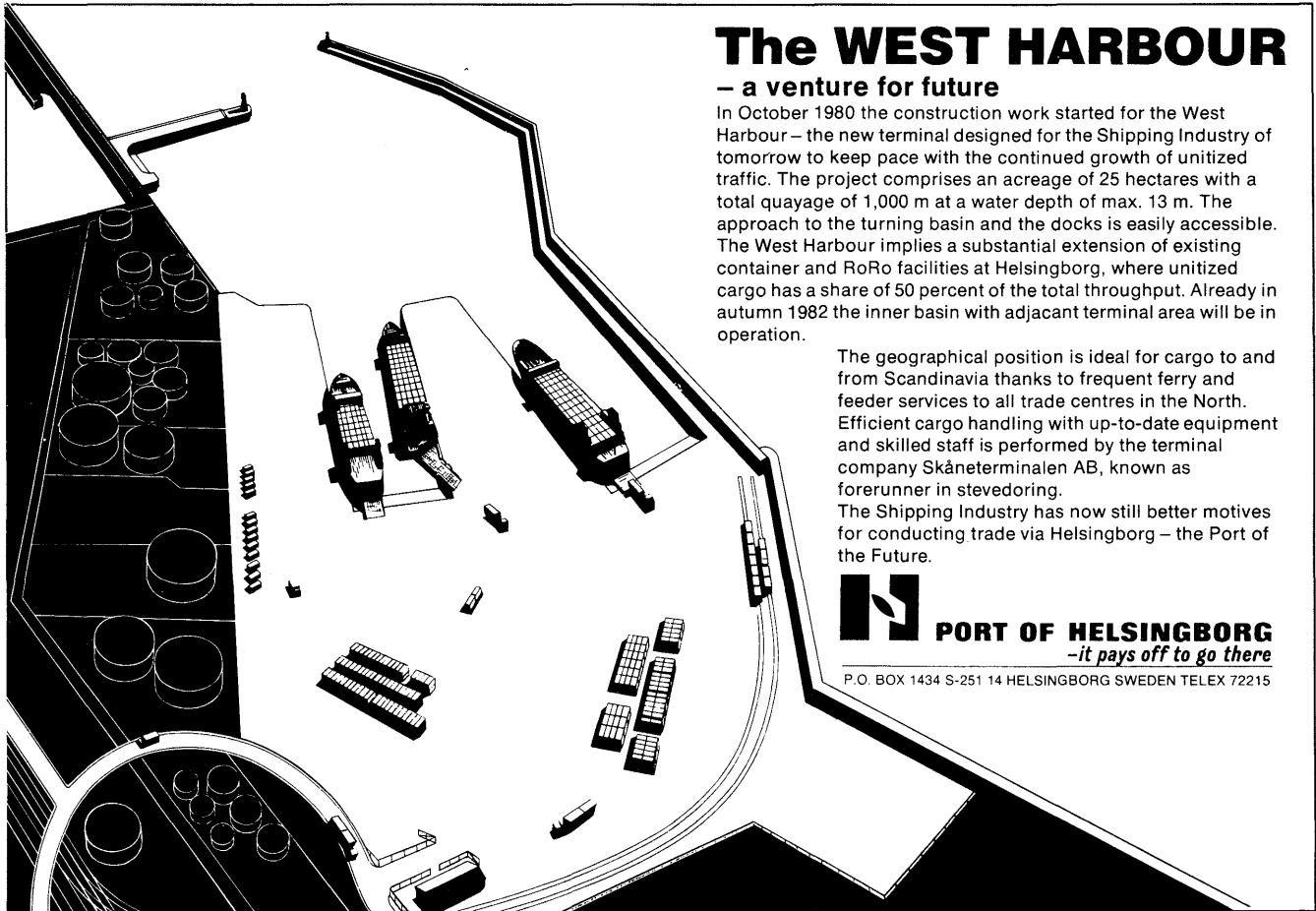
- On one hand, crude oil purchase will become more economic (the price difference between petroleum rich in heavy fractions and petroleum rich in light fractions can reach 20%),
- On the other hand the rapid development of nuclear energy will involve a decrease in the demand for heavy fuel oil which presently is the main feeding source of the electric power stations. Moreover, the petrochemical industry will need more and more petroleum rich in light cuts.

The works started for 6 months are likely to go on until mid-1982 and will require 1,8 to 2 million of working hours.

The major works will employ up to 600 people of which 80% belonging to local and regional companies.

After the extension the staff working at the refinery will rise from 190 to 240 people.





## The WEST HARBOUR – a venture for future

In October 1980 the construction work started for the West Harbour – the new terminal designed for the Shipping Industry of tomorrow to keep pace with the continued growth of unitized traffic. The project comprises an acreage of 25 hectares with a total quayside of 1,000 m at a water depth of max. 13 m. The approach to the turning basin and the docks is easily accessible. The West Harbour implies a substantial extension of existing container and RoRo facilities at Helsingborg, where unitized cargo has a share of 50 percent of the total throughput. Already in autumn 1982 the inner basin with adjacent terminal area will be in operation.

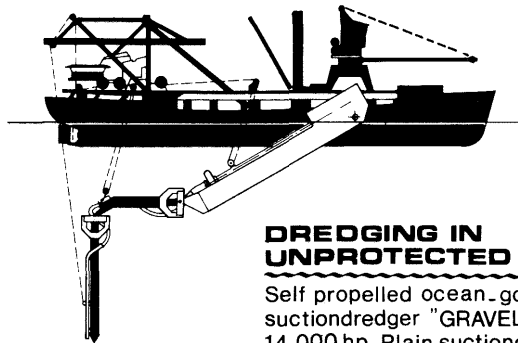
The geographical position is ideal for cargo to and from Scandinavia thanks to frequent ferry and feeder services to all trade centres in the North. Efficient cargo handling with up-to-date equipment and skilled staff is performed by the terminal company Skåneterminalen AB, known as forerunner in stevedoring. The Shipping Industry has now still better motives for conducting trade via Helsingborg – the Port of the Future.



**PORT OF HELSINGBORG**  
–it pays off to go there

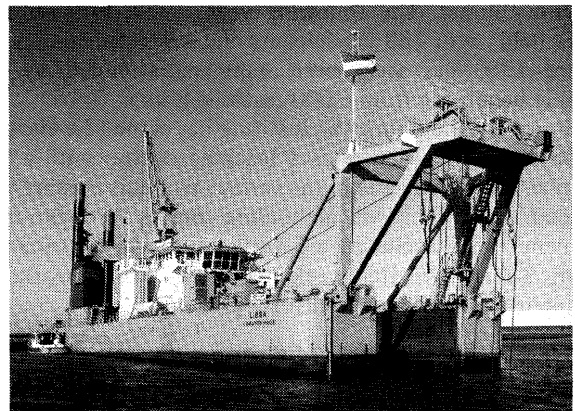
P.O. BOX 1434 S-251 14 HELSINGBORG SWEDEN TELEX 72215

## DREDGING ANYTHING ANYWHERE ANYTIME



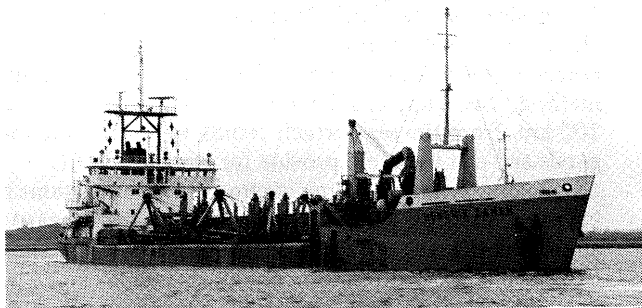
### DREDGING IN UNPROTECTED WATERS

Self propelled ocean-going cutter/  
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14,000 hp Plain suctiondepth 60.00m



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"AQUARIUS" and "LIBRA"  
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## Port of Le Havre news

### ● Changes in general cargo packing

A statistical analysis of the general cargo trade, bulks excluded, reveals a differing pattern of progress in its three main branches (containers, ro-ro and break-bulk).

The share of the trade falling to containers has never stopped rising, going up from 29% in 1973 to 46% in 1976 and 57% in 1979.

Ro-ro traffic dropped slightly at first, from 30% in 1973 to 28% in 1974, but then levelled out at 25% in each of the three years 1977, 1978, 1979. The real drop has unfortunately been in break-bulk cargo, which fell steadily from 41% of the overall general cargo trade in 1973 to 28% in 1976 and 18% in 1979. One of our main objectives now is to stop the decline, and if possible reverse it, since anything so labour-intensive needs encouraging at the present moment.

It is clear, though, that the main development since 1973 has been the rapid progress of containerisation, which has enabled us to add the Far East, South Africa and latterly the Arabian Gulf to the list of areas with which we trade heavily in general cargo.

### ● I.P.E.R.'s first three years

The Teaching and Research Institute for Port Affairs, known by its French initials I.P.E.R. (Institut Portuaire d'Enseignement et de Recherche) is unusual in that it was set up jointly by the Havre Chamber of Commerce and the Port of Le Havre Authority, with the help of the Ecole Nationale des Ponts et Chaussées, where top-flight engineers are trained.

The institute is now in its third year and has turned in some very encouraging results. For the first seminar, in 1978, there were 30 participants, for a total of 1,800 teaching hours. The following year, 1979, four seminars were held, with 180 participants and 4,920 teaching hours, while 1980 has seen seven seminars, attended by 250 people benefiting from 6,000 teaching hours.

In a very short time the Institute has earned Le Havre an international reputation as a teaching centre, with a large number of participants in the various seminars coming from abroad. In 1981 it will be holding courses throughout the academic year, including a 5 week course on port management, a long term (ten weeks) course on marine works and ten short courses on specialist subjects.

## Top French port for paper, forest products: Port of Rouen

Although Rouen is a port capable of handling all vessels up to 35,000 tons deadweight fully laden, and although it is a regular shipping line port, its advantages are all the more marked for specialized traffic since in this case full ships are concerned.

It is not therefore surprising that Rouen should be the main French port with 500,000 to 600,000 tons per year of paper industry products:

- 200,000 to 300,000 t. of newsprint,
- 150,000 to 200,000 t. of wood for paper mills,
- 100,000 to 150,000 t. of woodpulp.

Furthermore, 50,000 to 100,000 t. of sawn timber and about 50,000 t. of logs are received each year.

This is well known by the Nordic Countries for whom Rouen has always been the traditional port and more and more North-American exporters have begun to realize this.

What then are the advantages of the port of Rouen for paper, pulp and timber exporters? The two main ones are:

– Firstly its geographical position inland enables Rouen to replace land routes by a less expensive sea route. The saving in overall transport costs is quite valuable.

– Secondly, the know-how, particularly that of the dock labour who have always been used to fragile goods and well known for their speed and the care they take with the goods. There is also the know-how of the professionals whose energy and foresight has permitted gradual adaptation of the facilities to traffic requirements and recent changes in trends.

Ten years ago, the traffic consisted mainly of 1,000 to 2,000 t. coastal vessels, coming especially from the Scandinavian countries. Over the ten years we have seen:

– ship grow in size,

– ships become more specialized: roll-on roll-off vessels, S.C.A. vacuum lift ships, side-loaders, etc.

– diversification of origins and, in this respect, a larger contribution from North America as a supplier to France.

The port of Rouen has been adapted. Existing wharfs and facilities are essentially:

– the S.A.M.S. quay at Petit-Couronne, mainly used for receiving paper industry supplies for Chapelle-Darblay.

– the C.I.M.E.P. (International Consortium for newsprint handling and storage) facilities which has 7,000 square metres of storage area in the Bassin aux Bois distributed into two specialized sheds and the biggest shed of the port of Rouen (8,100 square metres), in the new forest products terminal of the Bassin de Rouen-Quevilly.

– the Honfleur quay, which offers useful possibilities for large ships which are not required to go up the Seine since they only make a part stopover, from 1,000 to 2,000 t. In particular, this quay receives logs and sawn-timber, but may also be used for basis products of the paper industry. As soon as the need becomes apparent, it will be doubled in capacity; at present, this quay handles about 60,000 t. a year.

– various wharfs for small paper products on the river banks and some public quays.

In conclusion, three points are to be considered:

1) For the North of France, in respect of timber and paper products, using Rouen is always possible from a technical point of view. Rouen is now the same size as many major northern European ports.

2) In view of the port's inland situation, and of the specialised terminals it offers to the traffic, Rouen is the best choice in terms of economy. The least expensive transport method, the ship, can be used to the maximum (up to 100 km. from the sea), which results in lower costs for the goods and can therefore provide for a higher profit.

3) Finally, in general terms, there are various options open between that of Honfleur, which is in the estuary and almost on the sea, and the more upstream choices. The port of Rouen is really offering an equipment «à la carte» which is a guarantee of high quality of service and a response suitable for any requirements. The dockers' know-how in handling of pulp and paper ensures the best quality of work as these French specialists have been handling the trade for several generations.

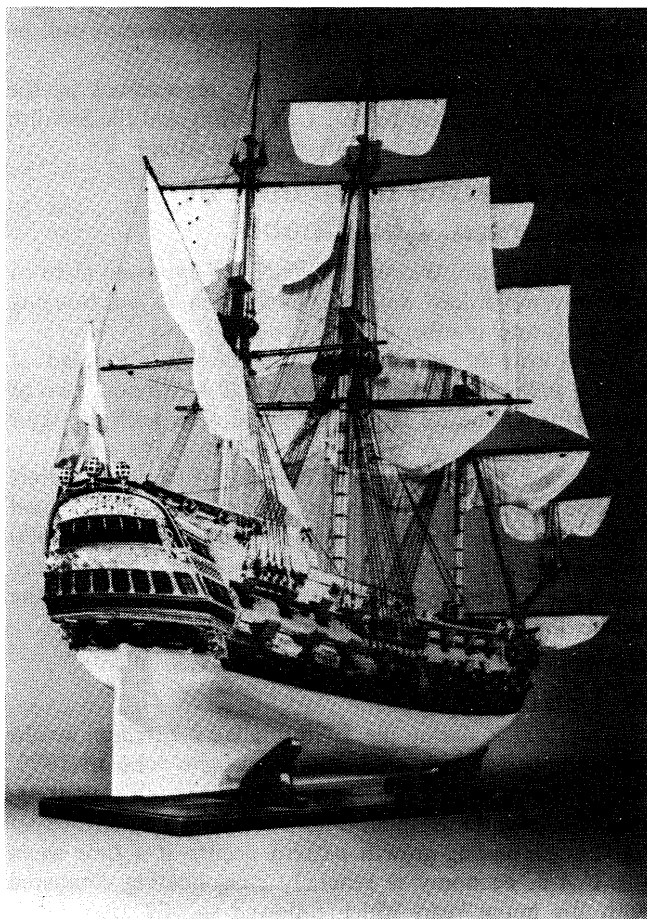
## Up-to-now world-unique service in Bremen/Bremerhaven

Messrs. Datenbank Bremische Häfen have now commenced taking up data-connection with some of the more important shipper customers in the Central European hinterland—initially in Vienna. Bremen port forwarders, Messrs. Emil Ipsen GMBH & Co, have joined the Vereinigte Edelstahlwerke AG, Vienna, to the Bremen ports' data-bank computer. Thereby, forms and dispatchnotes etc, which take days through the post, are electronically simplified and submitted within seconds, so accelerating the organisatory handling of steel shipment exports to all parts of the world. Some 20 overseas consignments, ranging between 100 kgs and 300 tons, come from the Vienna high-grade steelworks by rail or road daily to Bremen and Bremerhaven for being dealt with here. Quite often the respective papers have arrived too late, thereby not infrequently losing the best shipping opportunity. A spokesman for the forwarders: "We are, with this universally-unique computer connection-service, able to ensure speedier and more cost-favourable onforwarding of the shippers' goods to the consignees".

## Hamburg news

### • "Wappen von Hamburg" displayed at "Portopia '81"

A model of the ship "Wappen von Hamburg" has arrived in Kobe from the City of Hamburg, the Federal Republic of Germany, to be exhibited at International Pavilion 2, "Portopia '81" which is held on Kobe Port Island from



March 20 through September 15, 1981.

"Wappen von Hamburg" was one of the main stays of the fleet which consisted of five armed escort ships operating between Portugal, Spain and other Mediterranean regions. At that time, a merchant ship could not travel alone due to piracy. Therefore, the trade city of Hamburg invested huge funds to construct five armed ships to escort merchant ships in the 17th and 18th centuries.

"Wappen von Hamburg" was the fifth armed escort ship and was the most gorgeous. The ship was constructed not only to protect merchant ships but also to entertain governor-generals, diplomatic officials and other powerful officials on board at foreign ports of call in order to promote the city's position as a prosperous trade city. A number of splendid receptions were held on board of the ship and, therefore, the ship was called "a floating palace."

To commemorate "Portopia '81", the City of Hamburg has decided to send the "Wappen von Hamburg" model to the exposition as a symbol of the traditional relationship between Germany and Japan as well as relations between Germany's biggest port, the Port of Hamburg, and Japanese ports including Kobe.

### • Nearly 800,000 containers handled in 1980, up 23%

The total amount of container cargo handled in the Port of Hamburg in 1980 was 783,323 TEU, an increase of 22.9 percent compared with the previous year.

The weight of cargo transported in containers rose from 5.8 million tons in 1979 to 6.9 million tons last year, which amounts to an increase of 19.7 percent. The share of containerized cargo in total, general and bagged cargo volume (containerization degree) reached 38.1 percent. With the present result, the Port of Hamburg succeeded in further expanding its position as the biggest German container port.

Hamburg's top position in container traffic is not a mere coincidence. Over the past few years the facilities for container transshipment have consistently been expanded. Thus, the Port of Hamburg has over twenty container cranes and another one will go into service in the course of this year. Large-scale open air surfaces are available at the terminals for the handling and storage of containers—altogether more than two million square meters.

More than 100 container services provide shippers with outstanding shipping possibilities from and to countries overseas. An expanded rail and road network ensures fast connections with the hinterland. Hamburg is linked up with the West German inland waterway network by the Elbe Lateral Canal. Numerous freight trains, among them the container express "Delphin", serve over 60 railway stations in all parts of the Federal Republic every day.

Modern transshipment technologies increasingly demand the use of data processing systems. At the container terminals in the Port of Hamburg, operating processes are mainly controlled by EDP in order to enhance speed, safety and reliability when handling and transporting containers in the port area.

## Port of Gothenburg news

### • A little bit of unit-load



Conventional cargo handling methods are now applied to a mere 19 per cent of Port of Gothenburg's general cargo imports and exports, the rest being unitized. However, some of the things that make unit-load handling smooth can be used in conventional work, too.

One example is this terminal trailer, seen at work in Gothenburg's Free Port. Well before the ship arrives, complete craneloads are arranged on terminal trailers. Upon arrival of the ship, the trailers are towed down to its side and cranes begin to swing loads from trailer to cargo hold.

The benefit of the system is that a lot of fork lift trips between shed and ship can be avoided. Also, loading of the trailer can take place under less time pressure before the ship arrives.

### • Port of Gothenburg orders new container crane

The Port of Gothenburg Authority has ordered its fifth container crane. Like the present four, it will be put to work in the port's Skandia unit-load harbour.

The new crane is being manufactured by Conrad-Stork of Haarlem, The Netherlands. Scheduled for delivery by May, 1982, it will have a maximum lifting capacity of 60 tons (within the structure's base area, otherwise 50 tons) and will be equipped with a telescopic 20'·40' container spreader. Lifting height over quay is 27 metres and the outreach from the quayside rail is 37 metres.

The port's veteran container crane, a 1967 Paceco, has recently been brushed up and modified to a better-than-new standard. One of the very first container cranes put to work in Europe, it had a lifting capacity of 27,5 tons now increased to 30,5 tons.

Also, a new weight distribution device has been installed, as well as a new driver's cab.

### • Slight decrease at Gothenburg

A total of 22 333 000 tons of goods was handled at the Port of Gothenburg during 1980. This is a 3 per cent decrease compared with 1979, partly an effect of a Swedish port labour conflict in May-June 1980.

The oil traffic increased 3 per cent with 9 415 000 tons on the import and 1 268 000 tons on the export side.

Import of dry cargo fell one per cent to 3 107 000 tons and export 14 per cent to 3 622 000 tons, also mainly a result of the strikes and the lockout at the Swedish industries during the year.

Domestic traffic amounted to 4 921 000 tons.

142 384 containers were handled at the port during the year equalling 190 608 twenty-foot units.

The total unit-load traffic (containers, flats, lorries, trailers) amounted to 418 861 units or 81 per cent of all the export and import parcel goods, which is the highest percentage hitherto noted at the port.

## Gothenburg to host Ro-Ro 83 Conference

The organisers of the Ro-Ro Conference, Business Meetings Ltd, England, have chosen Gothenburg for the 1983 meeting. The Gothenburg conference will be the sixth in the series, following Ro-Ro 81 which will take place in Hamburg this year from June 30 to July 2.

The first conference was held in London 1976, the second also in London 1977, whereafter came Hamburg in 1978, Monte Carlo in 1980 and Hamburg in 1981. In 1982 there will be no conference.

Gothenburg has been in the forefront of ro-ro development from the very beginning. As a matter of fact, the Sessan Line as early as in 1936 started a ro-ro service between Gothenburg and Frederikshavn in Denmark which is claimed to be the birth of this technology. Later on, Broströms and Transatlantic made considerable contributions to the ro-ro technique, and the Port was among the first in Europe to start the construction of large new harbours especially designed for the handling of ro-ro and containerized goods—the Skandia Harbour, inaugurated in 1966.

The 1983 conference will take place in the Swedish Fair's new buildings centrally located in Gothenburg, and in connection with the conference a ro-ro exhibition will be arranged.

The Port of Gothenburg will be represented in the conference committee by Mr. Leif Carling and the Swedish Shipowners' Association by Mr. Lars Baecklund.

## 5 more berths to be built at Mina Zayed: Abu Dhabi

The Abu Dhabi Executive Council has approved plans to build five more deep water berths at Mina Zayed, bringing the port's total number of berths to 26.

Total cost of the expansion project is estimated at DH200 million or \$54.5 million. In all likelihood, two of the berths will be for large container vessels with drafts of 11 to 12 meters.

Plans are also afoot for the building of two breakwaters at Mina Zayed. The longer of the two walls will extend 2.600 meters northwest of the port. The other will be 600 meters long and extend from Sadiyat Island. Construction, which is expected to take about 18 months, will include the installation of 10 navigation beacons and lanterns.

## Sharjah Port again improves in 1980

Total traffic during the 1980 totalled 2.2 million weight tons compared with two million weight tons in 1979. Within the next few months the five year old port is expected to pass the 10 million ton mark.

This continuing growth pattern occurs at a time when the U.A.E. economy is generally consolidating compared with the boom years which followed shortly after 1973.

Long term prospects for Sharjah look extremely bright with the recent announcement of a major oil and gas discovery within the Emirate.

Over 12 per cent of Sharjah's total tonnage handled (276,000 tons) was in fact destined for re-export from the U.A.E. to neighbouring countries, which reflects Port Khalid's role as a major transshipment centre for the Gulf region.

### Saudi loan for Qasim Port

(Gulf News") The Saudi Fund for Development has lent Pakistan \$15 million towards financing the Mohammed bin Qasim Port near Karachi. The project aims at constructing a large port to be used to complement various Pakistan development undertakings.

The port is expected to be completed by 1985 at a total cost of \$502 million.

### Major Australian engineering plant for SA's Port of Adelaide

The Australian engineering and construction firm Eglo Engineering Ltd. is to establish a major national facility in the Port of Adelaide.

The company has reached agreement on a long term lease on 25 hectares of port industrial land adjoining the BHP steel terminal at No 29 Berth.

Establishment costs are estimated to be up to \$10 m and the company will require an initial workforce of 200 highly skilled metalworkers and welders, rising to 300 as the project gets into full swing.

Eglo is involved in engineering for the mining and chemical industries, refineries and petroleum production. In addition to its own workforce it will provide additional work on contract for other South-Australian companies.

Premier Tonkin said the Eglo project arose through a government program being undertaken by the Department of Marine and Harbors to develop large areas of first class industrial estates in the port for use by major port-related industries. The Eglo project was a good example of how government efforts to encourage new industry to South Australia were coming to fruition.

In welcoming Eglo to South Australia, the Premier had pointed out earlier that the company had made its decision on the basis of the port location's commercial, shipping and geographic advantages. No special incentives had been sought by Eglo, although the State Government would provide facilities through the department, including final site preparation, levelling, access ashore and dredging and preparation for a small dock giving shipping access to the main Port Adelaide River channel.

These were normal commitments associated with such projects and, the Premier added, it demonstrated the ability of Australian industry to stand on its own two feet in the highly competitive environment of heavy engineering.

### Hong Kong port traffic increases

Hong Kong, the world's third largest container port, handled an average of 301 ocean-going vessels and river trade craft a day.

A total of 10 229 ocean-going vessels used the port facilities in the whole year, a 4.3 per cent increase over the previous year. The vessels discharged and loaded 30.7 million tonnes of cargo—10.1 per cent more than that for

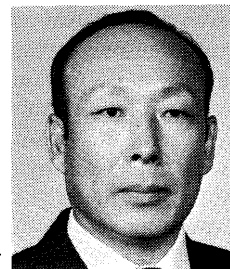
1979. And of this 6.6 million tonnes were fuel oil and petroleum products.

Last year, 51.3 per cent of all general cargo handled was containerised, and the total container throughput at the Kwai Chung Terminal Complex was 1.465 million T.E.U.s. (twenty feet equivalent units), an increase of 12.4 per cent over the 1979 throughput of 1.304 million T.E.U.s.

River trade also showed a marked increase with a total of 90 208 river trade vessels entering and clearing at the port. About 2.87 million tonnes of cargo was handled by these vessels.

### Mr. Moon, Myung-Rhin, KMPA Administrator

Prior to his appointment as the Korea Maritime and Port Administration (KMPA) Administrator in December 1980, he served the Ministry of Transport as Vice-Minister for six months. He also served the Ministry as Director-General of Civil Aviation Bureau for five years until July 1975, and the Assistant Minister for Transport Coordination until he was appointed as the KMPA Deputy Administrator in November 1977.



Mr. Moon, Myung-Rhin

### Federal Communications Minister expresses his satisfaction over excellent performance of Karachi Port

The waiting time of vessels had been reduced from 35 days in 1979 to Zero for over nine months as a result of which a saving of 100 million dollars a year to the national economy has been achieved.

Rear Admiral M.I. Arshad, Chairman of the Karachi Port Trust welcoming the Federal Communications Minister Mr. Mohyuddin Baluch at the KPT Hydraulic Model, gave a synopsis of the improvements made at the port during the last 12 months.

This difficult task, he said, has been accomplished by team work at the port, comprising the KPT, Federal Ministry of Communications, National Logistic Cell and Karachi Dock Labour Board.

On their part, the KPT streamlined the systems and procedures for arrival of vessels, unloading of cargo, storage and despatch from the port, he added.

Admiral Arshad said that by providing incentives, the labour productivity increased from an average of 4.2 tons per hook to 9.5 tons per hook an hour in 1980 and the NLC lined-up the clearance arrangements from the port with its fleet of new container trucks, and also by urging the Pakistan Railways for increasing the supply of wagons to the port.

He said that the KPT cleared the congestion from the transit area of berths through the construction of new container parks at M.I. Yard and shifting the containers from berths areas to container parks.

The Chairman said that all these factors coupled with round-the-clock coordination and sustained efforts

(Continued on next page bottom)

# Port of Nagoya in the Past Decade

## 1. Growth in Cargo Volume

A look at the development of the Port of Nagoya during the decade of the 1970's will serve as an introduction to the activities of today's Nagoya Port.

Total cargo handled in this ten-year period rose from 68.15 million tons in 1970 to 109.46 million tons in 1979, an increase of 60 percent. Although, the two oil crises of 1973 and 1979 during this period caused stagnation in the volume of cargo handled all ports, steady expansion continued at the Port of Nagoya; despite a drop of 1.5 percent in 1975 against the previous year, by 1977 total cargo volume had broken the 100-million-ton barrier. The Port of Nagoya thus became, in name and in fact one of Japan's most representative ports, and one of the world's leading international ports.

Within the total volume of cargo handled, domestic freight increased by only 40 percent in this ten-year period, while foreign freight grew by 80 percent due to favorable exports of transport machinery, principally to Europe and North America, and increased imports of crude oil accompanying the opening of an oil refinery in Nagoya's southern coastal Industrial Zone. Consequently, the Port of Nagoya became the only port among Japan's five major ports—Tokyo, Yokohama, Nagoya, Osaka, and Kobe—where the volume of foreign trade exceeded that of domestic trade.

## 2. Volume of Foreign Cargo Handled by Liners and Tramps

Viewed first in terms of export cargo volume, the share of export cargo handled by trampers is on the increase; it was 50 percent in 1970, but it had reached 70 percent by 1975 and 75 percent in 1979. The ratio of freight handled by liners to that handled by trampers has thus reached about 3 to 7. On the other hand, export cargo carried by liners in this period has remained stable at about the 4 million ton level. In other words, growth in exports during this decade was absorbed by increased trumper activity. The volume of export cargo carried by tramps has increased remarkably almost every three years on the average; growth in the past ten years by a factor of 3.6. At our port in

particular, handling of the main export cargo, transport machinery, grew 5.3-fold.

Next, concerning import cargo, also handled to a very large extent (90 percent) by trampers, the previous 20 million tons of cargo annually—mostly crude oil—have grown to 30 million.

## 3. Containerized Cargo

Since at the present time most liners are containerized, making integrated land-sea transport possible, we would now like to discuss the volume of containerized cargo handled.

The growth of the volume of containerized cargo at the Port of Nagoya has been remarkable. From 1970 to 1979, the volume of exported containerized cargo grew from 510,000 tons to 1.85 million tons, a 3.7-fold increase. Imported containerized freight grew from 210,000 tons to 1.23 million tons, a 5.8-fold increase, in the same period.

However, imports carried on containerized vessels exceed imports on conventional liners viewed quantitatively, although containerized vessels carry only 50-60 percent of the export cargo handled by conventional liners.

The three items at the top of the list of containerized export cargoes are transport machinery, other machinery, and ceramics. Alone, these three account for 75 percent of the total. The top items in imports are raw cotton and wool. Export-import container freight through the Port of Nagoya of these principal five items, is carried on three major routes: to and from the North American west coast, the North American east coast, and Australia and New Zealand.

Changes in the volume of export-import container cargo at the Port of Nagoya are shown, with comparisons to those of Yokohama and Kobe.

## 4. Changes in Harbor Entries by Ocean-going Vessels

In this section we will look at the changes that have occurred in the number of ocean-going vessels entering the Port of Nagoya for the last ten years, broken down by two year periods, and compare these figures with those for Yokohama and Kobe.

On the whole, ships have become increasingly large, and the percentage of ships of 30,000 tons or more has reached 30 percent for Nagoya, 40 percent for Yokohama, and 25 percent for Kobe. The percentages of container ships (both fully and semicontainerized) entering port in 1979 in terms of the number of ships and tonnage were 12 percent and 16 percent respectively for the Port of Nagoya, 17 percent and 18 percent for Yokohama, and 30 percent and 38 percent for Kobe. The figures for Nagoya are closest, then to Yokohama.

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(Continued from page 43)

resulted in elimination of congestion. The KPT further introduced penal charges on cargo not cleared from the port to prevent misuse of the port as a warehouse.

He said that during the year under review the harbour channel was dredged from 30 feet to 40 feet.

Admiral Arshad said that this was another major accomplishment, which would now enable the handling of 75,000 deadweight tonnage special purpose tankers and 45,000 DWT conventional tankers at the oil piers.

He said that the saving to the national economy in terms of freight rated from crude oil and oil products handled at the oil piers were estimated at 10 million dollars during 1980 alone.

The Federal Minister of Communications expressed his satisfaction over the excellent achievements of the Karachi Port during the last two years.

# Development of Indian Ports

**From "Indian Shipping", Vo. 32,  
No. 11/1980  
Extract from "Analysis and  
Recommendation of Pande  
Committee"\***

\*The Report of the National Transport Policy Committee headed by Shri B.D. Pande on a comprehensive Transport Policy for the country for 1980s.

## Port Development under Five Year Plans

At the time of independence, major ports in the country were in a poor and dilapidated state because of intensive use lack of proper maintenance and inadequate replacement of assets during World War II. The port of Karachi which to a large extent, served the needs of the areas now covered by Punjab, Harayana, Jammu & Kashmir, Rajasthan, Uttar Pradesh, Madhya Pradesh and Gujarat, became part of Pakistan and the remaining major ports of Calcutta, Bombay, Madras, Cochin and Visakhapatnam were not in a position to cope with existing traffic volume. To correct this imbalance, port development received continuous attention in determination of inter-sectoral investment allocations, with a view to meeting the evergrowing demand for port facilities. Not only new ports have been added to the list of major ports but additional capacities have also been created at existing ports. At the commencement of the First Plan in 1951, there were five major ports, namely, Calcutta, Bombay, Madras, Cochin and Visakhapatnam. Since then new major ports of Kandla, Mormugao, Paradip, Mangalore and Tuticorin have been added to the list. At present India has 10 major ports and 168 minor ports,

including 23 intermediate ports.

The main emphasis during the first two Plans was on rehabilitation and modernisation of existing facilities at the major ports and augmentation of their berthing capacities. Despite these efforts, ports remained sub-standard in many respects. Draft limitations, for example, precluded handling of modern bulk carriers and tankers, the size of which had grown beyond the drafts available at ports. Loading and unloading were manual as ports were not equipped with mechanical facilities. All this caused unnecessary delays to ships and mounting congestion at ports. To improve conditions and bring relief to port users, a concerted effort was made in the Third Plan to create new capacity and modernise existing facilities. This included modernisation and expansion of Bombay port, construction of deep draft port at Haldia to serve as a satellite port for Calcutta, and development of Mangalore and Tuticorin as major ports. The emphasis on improvement of port facilities continued to be the priority objective in formulation of subsequent three Annual Plans (1966-69) which accordingly, incorporated development of a number of port projects, including Madras Outer Harbour Project for handling large-size oil tankers and ore carriers, Visakhapatnam Outer Harbour Project for handling iron ore, and dredging of the main harbour channel at Bombay port.

The programme for port development in the Fourth Plan focussed mainly on completion of ongoing projects, particularly the Haldia Dock, expansion of capacities at Tuticorin, Mangalore, Visakhapatnam Outer Harbour, Madras Outer Harbour, and improvement of ore handling facilities at Paradip and Mormugao. The two new items added to port development programme were setting up of a General Dredging Organisation to build up dredging capacity and river training works in the Bhagirathi Hooghly River System, with a view to optimising benefits from the Farakkh Barrage. The main emphasis in formulation of the

## Course on Safety arranged: Karachi Port Trust

Rear Admiral M.I. Arshad, Chairman, inaugurated the course on Safety at Training Institute, Lalazar, of Karachi Port Trust on 7th March, 1981. The Training Course of 'Safety' was imparted under MTS Scheme which consists new methods and Techniques for Supervisors. On this occasion the Chairman K.P.T. also awarded Certificates to the participants who have successfully completed the Training Courses on Computers and Office Management.

In his inaugural speech, the Chairman high-lighted the importance of Trainings which plays a vital role in improving the efficiency of the works. He said the efficient workers produce the positive results which ultimately reflects on the Organisation and such trainings are very essential and specially for the big Organisations like Karachi Port Trust, where about Thirteen Thousand employees are working, which is playing an important role in the Country's economy.

In all 25 employees from various departments of Karachi Port Trust participated in the "Course on Safety".

## 12th IAASP Annual Conference

The Twelfth Annual Conference of the International Association of Airport and Seaport Polic will be held in Seoul, Korea from 8 (Monday)—12 (Friday) June 1981. The Conference arrangements are now being finalized by our host, Director General Heung-Soo Yoo, of the Korean National Police.

For the five days of the Conference, the Hyatt Hotel in Seoul will house discussions centered around the main theme, International Co-operation for the Prevention of Organized Crime Through Air and Seaports.

The programme will include experts in the field of organised crime and will present current methods being utilised by international criminal cartels for drugs trafficking, smuggling, marine fraud, piracy, hi-jacking of cargo and passengers and international terrorism.

Discussions will also centre on the exchange of information and material among law enforcement agencies through international and regional co-operation.

Fifth Plan was on completion of ongoing schemes. However, a few new schemes were taken up during this Plan period, which included replacement of oil pipelines at Bombay, offshore terminal project at Salaya to meet requirements of crude transport for the Mathura and Koyali refineries and, development of facilities at New Mangalore Port for the Kudremukh Iron Ore Project.

During the Fifth Plan period two port projects were completed. The Madras and Visakhapatnam Outer Harbour Projects were commissioned, although the high speed mechanical iron ore handling plant had not become fully operational. Secondly, the Haldia Dock System was put into operation in March, 1977 for coal and iron ore traffic. Work was still in progress on installation of mechanical facilities for handling fertilizers at the fertilizer berth, development of a jetty for handling salt and sulphur and a berth for container traffic at Haldia. At Cochin the first phase of a programme for providing handling facilities for container traffic was completed and container ships started calling at the port.

In the draft Sixth Five Year Plan (1978-83) emphasis was made on completion of facilities like warehouses and wharves to allow for optimal capacity utilisation. Provision has been made for development of container facilities at selected ports, and also for preparing a project report on Nhava Sheva Port near Bombay.

The total traffic handled by major ports has increased progressively from 19.2 m. tonnes in 1950-51 to 69.7 m. tonnes in 1978-79, except for a slight decline in 1977-78 due to a decline in iron ore export and import of food grains (Table I). A salient feature of traffic pattern is near stagnation of Calcutta Port which until 1950-51 was the premier port of the country. At the same time Bombay has emerged as the leading port, the traffic handled by it having increased from 7 m. tonnes in 1950-51 to 15.7 m. tonnes in 1978-79. Presently, the port of Bombay accounts for about 36 per cent of total traffic (excluding POL, iron ore and coal) handled at major ports in the country. There has also been a significant growth of traffic at Madras, Cochin and Visakhapatnam ports.

The composition of traffic handled at major ports has undergone significant changes since 1951. The two commodities which account for a major increase in share of port traffic are POL and iron ore. The traffic of these two commodities together increased from 3.1 m. tonnes in 1950-51 to 47.4 m. tonnes in 1978-79. The traffic of fertilisers also registered an increase of about 5 m. tonnes during this period. For food grains, however, there have been wide fluctuations from year to year; the highest level of traffic was reached in 1966-67 when 9.7 m. tonnes of foodgrains were imported. In recent years, following an improvement in foodgrains production in the country, the import of foodgrains has been stopped and, in fact, the process has been reversed with the export of 0.9 million tonnes of foodgrains in 1978-79.

### Traffic Projections

In planning port development a certain degree of foresight and advance planning is essential because construction of port capacity invariably entails a long gestation lag due to technical and other procedural reasons. For this it is necessary to have accurate and realistic projections of traffic in different commodities at various ports in India.

Since port capacity can only be used at specific locations and is not transferable to other locations without involving huge losses, there is great investment risk if expected traffic demand fails to materialise. This is all the more important particularly in a developing country like India, where the limited resources have to be allocated among different sectors of the economy.

The port traffic for 1982-83 worked out in the Draft Five Year Plan 1978-83 is estimated at about 100 m. tonnes on the basis of import and export target laid down in the Plan. Tentative projections of import and export of major commodities drawn up in the Planning Commission put total port traffic at about 120 m. tonnes in 1987-88 and 135 m. tonnes in 1992-93 (commodity-wise details of which are given in Table II. Traffic projections for 2000 A.D. have not been attempted by the committee but according to them these could be roughly around 155 m. tonnes. It will be observed from the Table above that out of the 30.5 million tonnes and 50.3 million tonnes increases in traffic during 1978-79 to 1982-83 and 1978-79 to 1987-88, the bulk cargo comprising, POL, iron ore, coal, fertilisers and foodgrains were of the order of 26.1 million tonnes and 43.2 million tonnes respectively. The corresponding increase in the quantum of general cargo were 4.4 million tonnes and 7.1 million tonnes. It is pointed out that there is a possibility of change in composition of our foreign trade with a larger share for such finished products as textiles and engineering goods. Obviously, such a change would greatly influence space requirements at ports. High value goods generally take the form of general cargo which is increasingly getting containerized, following technological developments in port handling facilities in advanced countries. Thus, even if the volume of traffic handled at our ports were to remain stagnant the qualitative change likely to occur in its composition will require substantial investment in modernisation and re-development of our port system. The committee, therefore, feels that it is in relation to these developments that the case for expansion and modernisation of port capacity has to be viewed.

A continuous assessment of port capacity in the country is considered to be essential for both optimal utilisation of available capacities and future addition to capacities to meet the growing needs of the country. Here a distinction should be drawn between capacity of a port to receive ships requiring different drafts and its capacity to handle cargo at berth with speed and efficiency to minimise ships detention time. The Committee is of the view that, as in any transport industry, port capacity has to be measured in relation to peak demand when maximum bunching occurs on arrival of ships. By and large, the demand for port capacity is location specific, particularly, in relation to liner trade. Hence, to draw a proper balance between port capacity and traffic demand, it is suggested to be more appropriate to relate projected traffic at each port to its available capacity instead of relating aggregate port capacity of the country to its aggregate demand. Further in view of the non-interchangeability of berths, capacity of a port should be assessed separately in relation to these broad categories viz. (a) wet or liquid bulk (b) dry or solid bulk and (c) break bulk.

The berth occupancy rate internationally considered optimal is 67%. As against the internationally accepted norms, the present berth occupancy at Bombay port, for



instance, is estimated at about 90% which reflects pressure of demand for berths at that port. While the international norm seems to be too liberal in the Indian context, any berth occupancy of over 70-75% must lead to poor port maintenance and hence to a deterioration in the quality of port service provided. The Committee therefore, suggests that any berth occupancy of over 75% must be avoided in the interest of port efficiency. Ministry of Shipping & Transport however, holds the view that berth occupancy should not be taken at more than the international standard of 67% and it has recently estimated port capacity at 111-115 million tonnes for 1982-83, broad details of which are given in Table III. While the estimates of port capacity and traffic for 1982-83 show surplus capacity for handling wet bulk and dry bulk cargo, the capacity for handling general or breakbulk cargo is likely to be short of demand at most major ports, particularly at Bombay.

### Container Traffic

In recent years, transportation of general cargo has undergone a revolutionary change by various methods of unitisation. The most remarkable aspect of this change is growth of containerisation, which facilitates door-to-door movement of cargo in standard unit and through mechanical handling at every stage of transport.

Containerisation, made a modest beginning in India in 1973 but over a short period since then it has recorded a phenomenal growth. Container traffic is presently being handled at the ports of Bombay, Calcutta and Haldia, Cochin and Madras. In 1977-78 as many 15,362 containers were handled at these ports compared to only 7,993 in 1975-76. In 1978-79, Bombay port alone handled 39,000 containers and during the current year these are being handled at a monthly average rate of over 6,000 units. But none of our ports except Haldia has specialised facilities for handling container traffic. Container traffic at Bombay port is presently being handled at the Indira Docks. Container ships also use Ballard Pierberth and the Ballard Pier Extension. In view of paucity of container parking space, containers are stacked at places where open space is available at the time of arrival of ships. The Port Authorities are presently considering a plan for developing a container freight station with a storage area of 20,000 sq. m. and acquiring handling equipment like gantry cranes and prime movers at a cost of Rs. 7.72 crores. However, with a limited back up space available at the port, this new equipment may only be able to handle about thirty to thirty-five thousand TEUs per annum.

Similarly, Calcutta Port also does not have facilities for loading and unloading of containers and, therefore, these are being stuffed or unstuffed on board. A full-fledged container terminal with shore equipment has, however, been set up at Haldia Docks. A yard for loading and unloading and stacking of 750 to 1000 containers has been provided in the first phase. The inadequate capacity of roads between Haldia and Calcutta and absence of Customs facilities, however hamper full utilization of container handling equipment at Haldia. The ports at Cochin and Madras do not have special container berths at all. The containers are handled at these ports at ordinary berths with existing shore facilities.

As a result, Indian importers or exporters have not been able to avail of full benefits of containerisation. For this the

committee has suggested the need for providing specialised handling facilities at major ports which are presently handling container traffic. As a long term solution, the committee has advocated the development of a separate container port at Nhava Sheva. It is also considered equally important to develop the connecting rail and road system, including inland depots for containers, so that factory-to-port or port-to-factory movement of containers is possible within the hinterland of ports.

TABLE I  
TRAFFIC BY COMMODITIES AT MAJOR INDIAN PORTS  
(1950-51 to 1978-79)

Port & Year	(in million tonnes)						Total
	Petroleum products	Iron Ore	Coal	Fertilisers including raw materials	Food grains	Other general cargo	
<b>CALCUTTA</b>							
1950-51	0.70	—	2.10	0.10	0.60	4.10	7.60
1965-66	1.43	1.02	1.37	0.23	1.53	4.26	9.84
1977-78	3.41	0.13	1.04	0.40	0.11	2.46	7.55
1978-79	3.91	0.09	0.84	0.69	0.11	2.34	7.98
<b>BOMBAY</b>							
1950-51	1.60	—	0.10	0.10	1.80	3.40	7.00
1965-66	9.92	0.06	—	0.45	2.84	4.84	18.11
1977-78	9.67	—	—	0.70	0.22	9.13	16.72
1978-79	8.04	—	—	1.06	0.15	6.42	15.67
<b>MADRAS</b>							
1950-51	0.50	—	0.40	0.10	0.50	0.70	2.20
1965-66	0.93	1.16	0.39	0.47	0.95	0.97	4.87
1977-78	3.47	2.32	0.08	0.41	0.02	1.82	8.12
1978-79	3.84	2.95	0.06	0.69	0.17	2.10	9.81
<b>COCHIN</b>							
1950-51	0.30	—	0.10	—	0.50	0.50	1.40
1965-66	1.04	—	0.19	0.21	0.58	0.85	2.87
1977-78	3.80	—	0.14	0.50	0.04	0.69	5.17
1978-79	3.83	—	0.11	0.67	0.05	0.80	5.46
<b>VISAKHAPATNAM</b>							
1950-51	—	—	—	—	—	1.00	1.00
1965-66	2.01	1.09	—	0.14	0.35	0.79	4.38
1977-78	1.73	6.06	—	0.81	0.01	1.11	9.72
1978-79	1.94	5.96	—	0.83	0.10	1.21	10.04
<b>KANDLA</b>							
1950-51	—	—	—	—	—	—	—
1965-66	0.93	0.02	—	0.13	1.25	0.18	2.51
1977-78	2.75	—	—	0.72	0.15	0.20	3.82
1978-79	4.37	—	—	0.79	0.19	0.52	5.87
<b>MORMUGAO</b>							
1950-51	—	—	—	—	—	—	—
1965-66	0.09	7.17	—	0.07	0.04	0.49	7.86
1977-78	0.70	10.25	—	0.02	—	0.31	11.28
1978-79	0.68	9.39	—	0.09	—	0.64	10.80
<b>PARADIP</b>							
1950-51	—	—	—	—	—	—	—
1965-66	—	—	—	—	—	—	—
1977-78	—	2.20	0.04	0.03	0.03	0.43	2.73
1978-79	—	1.73	0.03	0.07	—	0.33	2.16
<b>NEW MANGALORE</b>							
1950-51	—	—	—	—	—	—	—
1965-66	—	—	—	—	—	—	—
1977-78	0.20	0.01	—	0.04	—	0.13	0.38
1978-79	0.34	0.02	—	0.17	—	0.34	0.87
<b>NEW TUTICORIN</b>							
1950-51	—	—	—	—	—	—	—
1965-66	—	—	—	—	—	—	—
1977-78	0.35	—	0.02	0.12	—	0.14	0.63
1978-78	0.32	—	0.13	0.26	0.11	0.24	1.06
<b>TOTAL</b>							
1950-51	3.10	—	2.70	0.30	3.40	9.70	19.20
1965-66	16.35	10.52	1.95	1.70	7.54	12.38	50.44
1977-78	26.08	20.97	1.32	3.75	0.58	13.42	66.12
1978-79	27.27	20.14	1.17	5.32	0.88	14.94	69.72

(Source: Ministry of Shipping and Transport)

TABLE II  
PROJECTIONS OF PORT TRAFFIC

Commodity	Actual traffic 1978-79	Projected Traffic		
		1982-83	1987-88	1992-93
POL	27.3	28.9	36.0	44.0
Iron Ore	20.1	37.0	40.0	40.0
Coal	1.2	5.8	7.0	7.0
Fertilisers	5.3	8.2	13.0	17.0
Foodgrains	0.9	1.0	2.0	2.0
Other general cargo	14.9	19.3	22.0	25.0
Total	69.7	100.2	120.0	135.0

(Continued on next page bottom)

## VOICE — "I would like to know"

### Question 8101

#### Setting up of CFSs/ICDs

During past 3 years, container traffic at this Port has recorded a tremendous growth. Container traffic, which was around 5 to 6 thousand TEUs in 1975-76 and 1976-77, went up to 13,000 TEUs in 1977-78. Since then, it has been increasing in leaps and bounds. In 1978-79, the Port handled 39,000 TEUs and in 1979-80, 78,000 TEUs. At present, the Port is handling approximately 9 to 10 thousand TEUs.

This phenomenal growth in container traffic has been recorded in spite of lack of specialised facilities for handling containerised traffic at the Port. The Port has neither any specialised berth nor any specialised equipments to handle this traffic. The Shipping Agents make their own arrangements to handle the containers.

One major problem the Port has been facing is the lack of sufficient back-up space at the berths at which container ships are normally handled. Also, due to very strict Customs procedures, all the containers are required to be stuffed/stripped within the Port area.

The stuffing/stripping of containers is at present carried out at several points spread over the entire Port area. The arrangements made are certainly not satisfactory and the Port Administration is, therefore, setting up a Container Freight Station at Manganese Ore Depot, approximately 4 to 5 kms. from the Docks and has also approved, in principle, setting up of a Container Freight Station outside

the Port premises within a distance of 25-30 kms. from the Docks, on private lands.

In this connection, we would like to have some data regarding CFSs./ICDs. working at some of the important Ports in the world. It will be appreciated, if you would kindly assist us in getting the following information in respect of some of the CFSs./ICDs. in the world:

1. Name of CFS/ICD
2. Owner
3. Port served
4. Distance from the Port
5. Whether served by Rail/Road/IWT
6. Total area of the CFS/ICD
7. Covered area
8. Area for stacking containers
9. How many high containers are stacked
10. No. of slots for stacking
11. No. of TEUs stacked at a time
12. Average dwell time of containers
13. Total No. of TEUs handled per year
14. Any other relevant information

Thanking you,

Yours faithfully,

SR. Research Officer  
Bombay Port Trust  
Shoorji Vallabhdas Marg  
Bombay - 400 038  
India

(Continued from page 47)

Table III  
Major Ports — Traffic & Capacity

PORT	Traffic handled in 1978-79				Estimated traffic in 1982-83				Estimated capacity 1982-83			
	POL	Iron Ore	Others	Total	POL	Iron Ore	Others	Total	POL	Iron Ore	Other	Total
BOMBAY	8.04	—	7.63	15.67	12.90	—	9.84	22.74	14.50	—	6.00	20.50
KANDLA	4.37	—	1.50	5.87	1.40	—	2.11	3.51	*3.00 to 3.50	—	2.05	*5.05 to 5.55
MORMUGAO	0.68	9.39	0.73	10.80	0.80	13.40	0.69	14.89	1.50	14.00	0.35	15.85
COCHIN	3.83	—	1.63	5.46	3.70	—	1.60	5.30	3.50	—	1.95	5.45
CALCUTTA (including Haldia)	3.91	0.09	3.98	7.98	3.30	1.50	9.28	14.08	4.00	4.00	11.26	19.26
PARADIP	—	1.73	0.43	2.16	—	3.50	1.89	5.39	—	3.00 to 4.00	0.35	3.35 to 4.35
VISAKHAPATNAM	1.94	5.96	2.14	10.04	2.15	8.10	3.16	13.41	2.00 to 2.50	8.00	2.73	12.73 to 13.23
MADRAS	3.84	2.95	3.02	9.81	3.80	5.00	2.24	11.04	4.00	8.00	3.00	15.00
NEW TUTICORIN	0.32	—	0.74	1.06	0.51	—	2.68	3.19	1.00 to 1.50	—	4.25 to 4.50	5.25 to 6.00
NEW MANGALORE	0.34	0.02	0.51	0.87	0.33	5.50**	0.80	6.63	1.00 to 1.50	7.50	0.55	9.05 to 9.55
<b>TOTAL</b>	<b>27.27</b>	<b>20.14</b>	<b>22.31</b>	<b>69.72</b>	<b>28.89</b>	<b>37.00</b>	<b>34.29</b>	<b>100.18</b>	<b>*34.50 to 36.50</b>	<b>44.50 to 45.50</b>	<b>32.49 to 32.74</b>	<b>111.49*to 114.74</b>

\* Excluding capacity to handle 8.0 to 12.0 m. tonnes of POL at Salaya off-shore terminal.

\*\* Revised estimate against the earlier estimate of 7.5 m. tonnes.

(source : Ministry of Shipping & Transport.)



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