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PORTS and HARBORS

December, 1980 Vol. 25, No. 12

IAPH celebrates the 25th Anniversary.

IAPH Conference Nagoya May 1981

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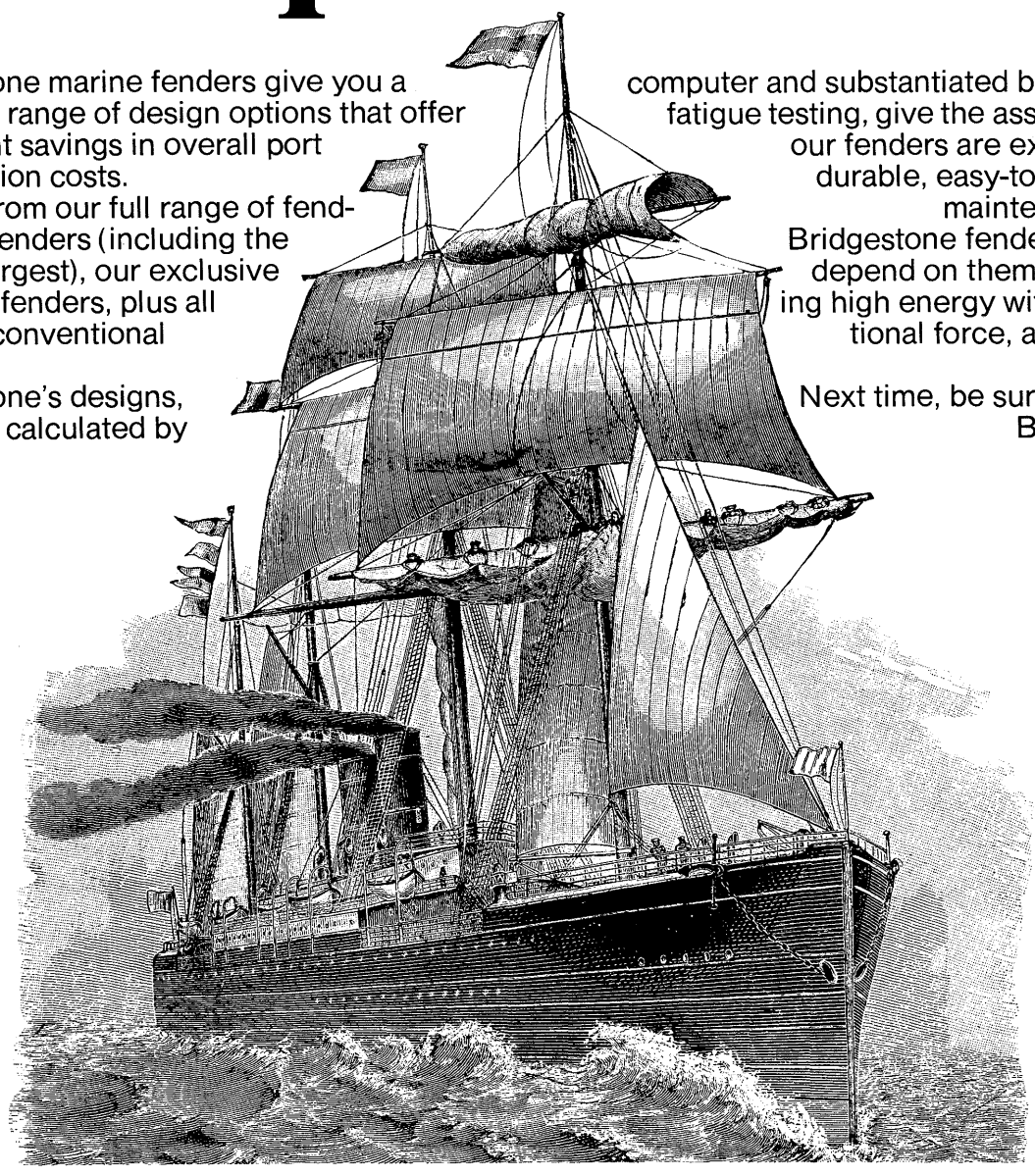

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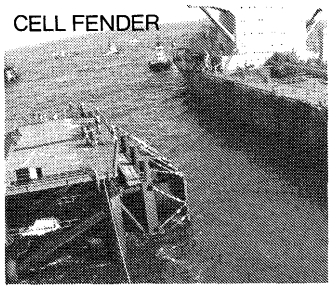

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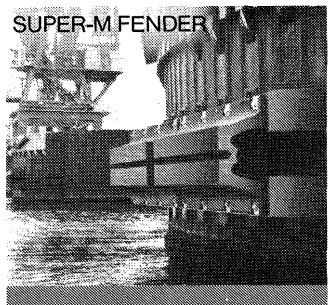

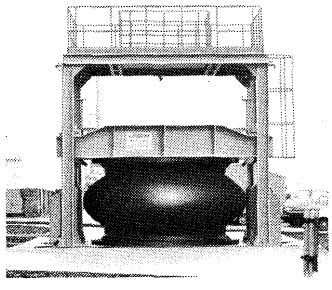

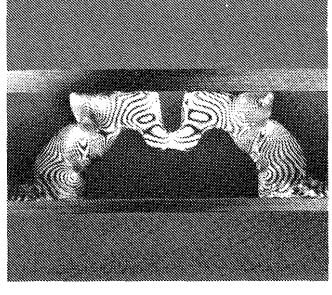

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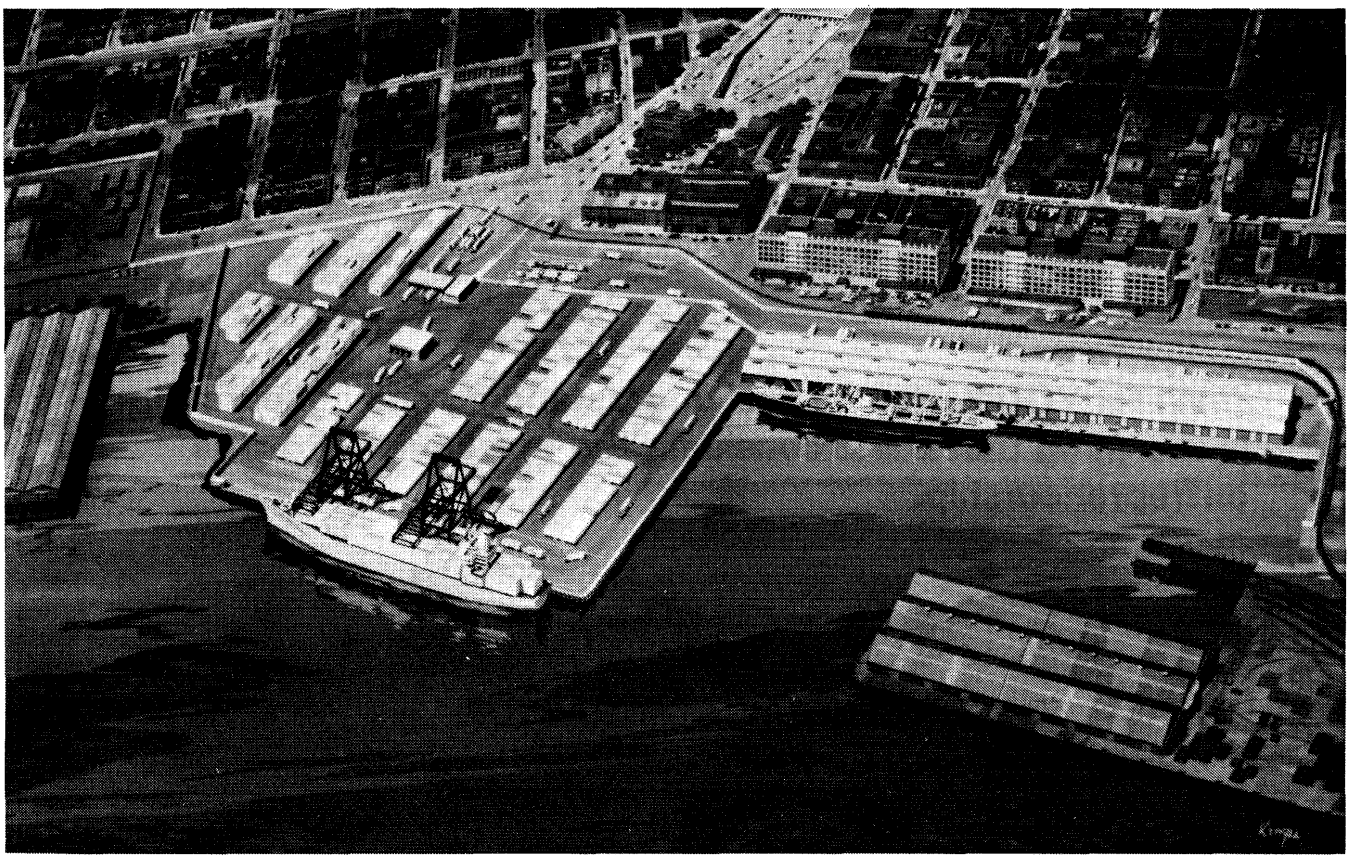

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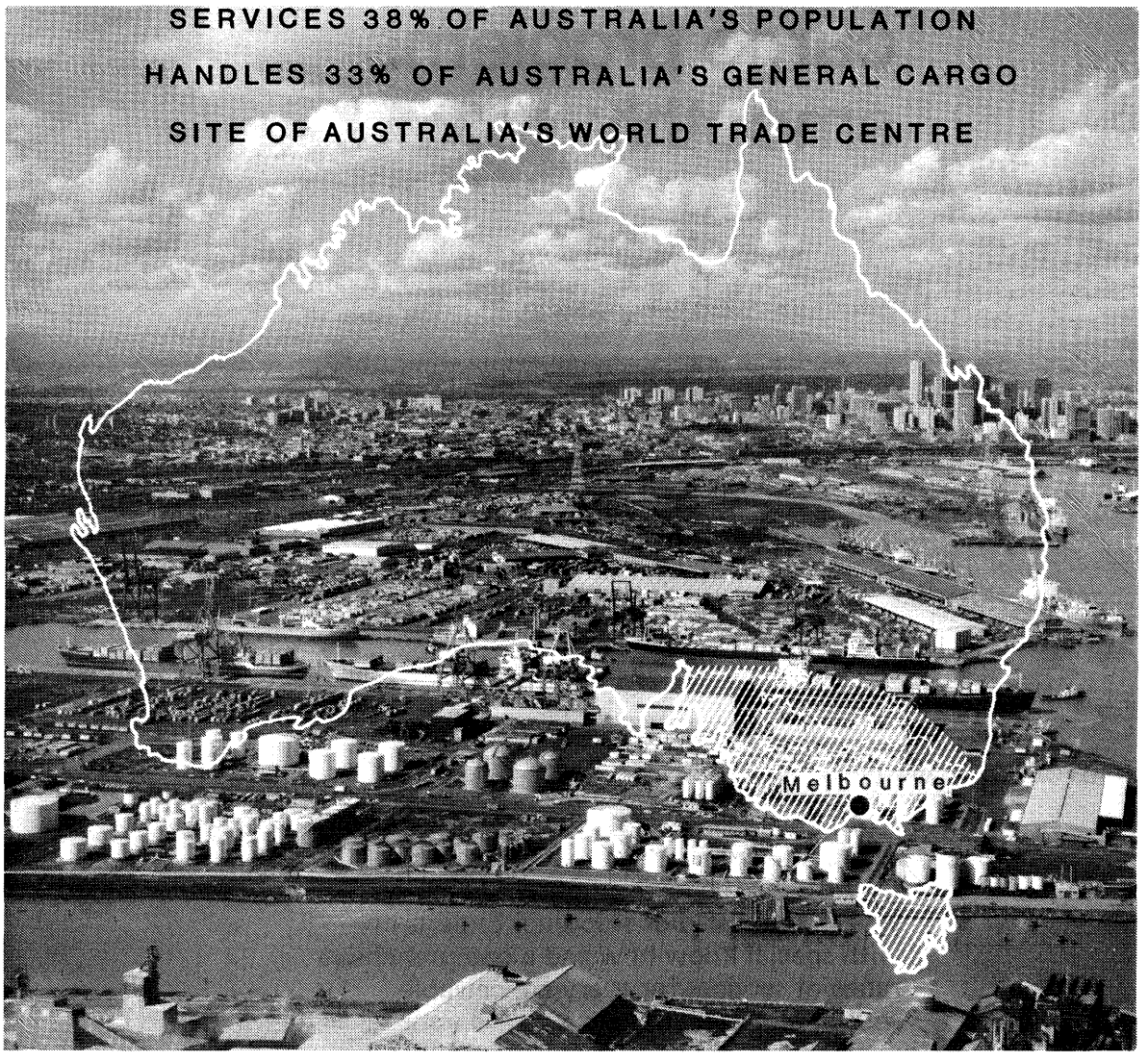

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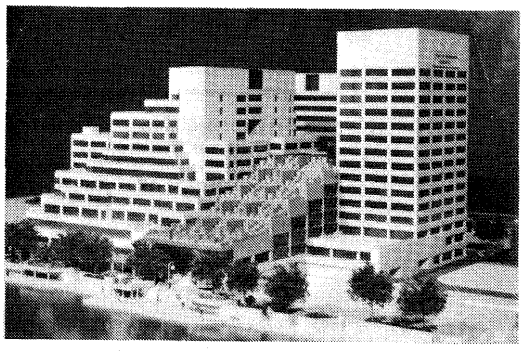

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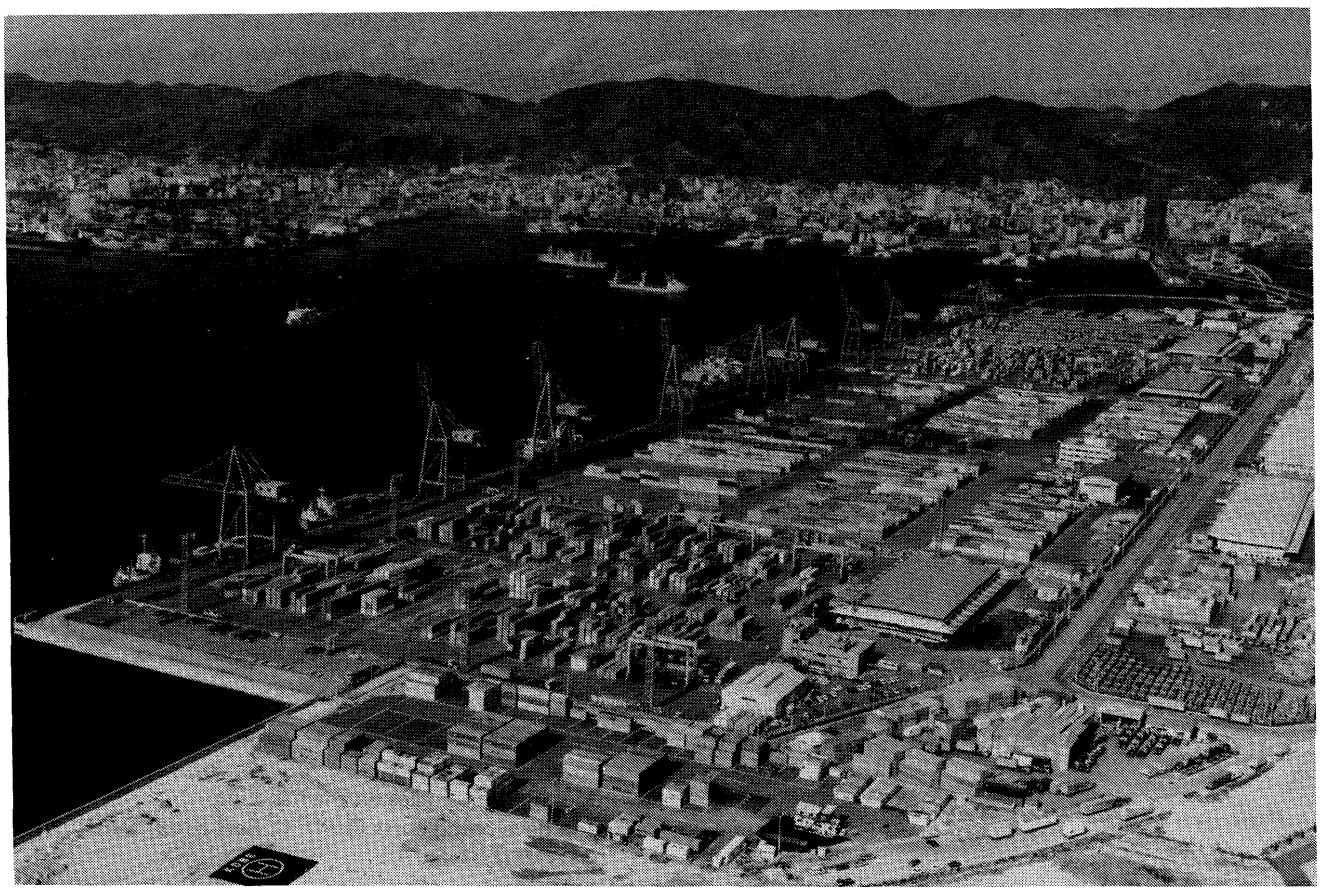

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IAPH announcements and news

Disengagement of the IAPH Agreement with IAPH Foundation now under way

by Meetings of Board and Regular Members

Hereunder is the communications sent to the Board by the Secretary-General asking for Board's position toward the disengagement of the IAPH Agreement with the IAPH Foundation since 1973. Based upon the recommendation of Executive Committee, the issue is being considered by the Board, at its meeting by correspondence called on November 25, 1980. The issue further will be placed before the regular members at its meeting to be called toward the end of this year.

I. Explanation about the Agreement with the IAPH Foundation

1: As the result of the world prevailing inflationary trend, energy problems and the consequential monetary turmoil which erupted in the early part of the 1970s, the financial status of the Association was badly affected.

2: In order to relieve the situation, the Association, at its 8th Biennial Conference held at Amsterdam/Rotterdam in May 1973, entered into an agreement with the International Association of Ports and Harbors Head Office Maintenance Foundation, a Japanese foundation, (herein-after referred to as the "IAPH Foundation"), for the maintenance and operation of the head office (herein-after referred to as the "Agreement"), effective June 1, 1973.

3: The Association, at the same time, adopted the resolution aimed at the achievement of the financial self-sufficiency of the Association (herein-after referred to as the "Amsterdam Resolution"), and initiated a series of counter-measures for the improvement of the financial capability of the Association, by establishing a standing committee, known as the Finance Committee.

4: The arrangement derived from the Agreement has been working quite effectively and smoothly causing no problems to the Association. The accumulated amount of the financial support given by the IAPH Foundation was ¥97,864,000 (or, ≒US$466,000, at the exchange rate of US$1=¥210) by the end of 1979. The contribution thus made to the Association has been very substantial and indeed helpful, for which the Association is extremely grateful to the IAPH Foundation.

5: On the other hand, the Association during the years since 1973, has been quite actively engaged in the improvement of the financial situation. Counter measures taken and scheduled, being supported by the good understanding of the members, have brought to the Association a positive prospect to the financial status of the Association. Major counter measures introduced are:—

1) Introduction of a compulsory dues scheme in accordance with the size of the port
2) Revision (increase) in the unit value of the membership unit
3) Introduction of the SDR unit as the basis of the dues unit

6: As the result of hard work by the Finance Committee, extraordinary leadership and guidance displayed by the President, Officers, and Exco members, and enthusiastic support of all IAPH members, the financial status of the Association has gradually been improved.

7: The Finance Committee made an extensive study of the financial prospects during the forthcoming 5 years until 1986 and obtained the impression that the Association could maintain its financial self-sufficiency if the Association continued its efforts to absorb the inevitable increases from the commodity price hikes and general inflation. The Committee thus recommended that the Association should take steps to materialize the Amsterdam Resolution by abolishing the Agreement.

8: The Executive Committee, met at Gold Coast, Australia, April 1980, concluded that the suggestion of the Finance Committee should be so put into effect should the Association members so desire, effective January 1, 1982 after officializing the disengagement at the forthcoming 12th Biennial Conference to be held at Nagoya, Japan, in May 1981.

9: The pertinent section of the Agreement requires that the intention of disengagement should be notified in a written form to the other party one year in advance of such disengagement. Therefore, it was decided by the Committee that the matter be placed firstly before the Board of Directors so that the matter could then be placed before all IAPH regular members and the Association could notify the IAPH Foundation of its intention of disengaging the Agreement effective January 1, 1982.

10: In this connection, it has to be mentioned that the IAPH Foundation kindly offered that all the negative financial results of the years 1973-1981 would not have to be paid back by the Association, and further offered that the IAPH Foundation would donate 30 million yen (≒US$142,800, at the exchange rate of US$1=¥210), at the time of disengagement to help the Association in its financial independence.

Notes:

a: Full text of the Agreement and the Amsterdam Resolution are carried in the July/August joint issue of "Ports and Harbors" 1973.

b: Details of the meetings of the Finance Committee and the Executive Committee are carried in the June, July/August joint, and September issues of "Ports and Harbors" 1980.

II. Resolution Abolishing the Agreement with the IAPH Foundation

WHEREAS, THE INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS, at its 8th Biennial Conference held at Amsterdam/Rotterdam in May 1973, accepted an agreement with THE INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS HEAD OFFICE MAIN-

(Continued on next page bottom)

ICS/IAPH/OCIMF Jointly submit "Ship/Shore Safety Check List" to IMCO

Mr. A.J. Smith, IAPH Liaison Officer with IMCO, in his recent communication to the head office, informed that the ICS/IAPH/OCIMF jointly submitted to the IMCO Secretary-General the check list as above to supplement the revised "Recommendations on the Safe Transport, Handling and Storage of Dangerous Substances in Port Areas".

His report to the IAPH Secretary-General: The paper, together with the Check List which accompanies it, represents the very successful outcome of combined effort by representatives of IAPH, ICS and OCIMF over a two-year period. It is hoped that IMCO would accept the recommendation at paragraph 6 of the paper, and, in that regard, it would be most helpful for IAPH Directors to seek and obtain the necessary cooperation from their respective national delegations to IMCO. It is suggested, that it would be very beneficial for each IAPH member to receive a copy, or copies, of the Check List so that a basic standard procedure could be adopted in ports of the world as soon as possible. Guidelines for the completion of the Check List would be supplied to the IAPH as soon as they were completed by the parties concerned.

SUB-COMMITTEE ON FIRE PROTECTION FP XXV/11/-
25th session - Agenda item 11

SUB-COMMITTEE ON BULK CHEMICALS BCH VIII/15/-
8th session - Agenda item 15

HANDLING OF DANGEROUS GOODS IN PORT AREAS - REVISION OF THE "RECOMMENDATIONS ON SAFE PRACTICE ON DANGEROUS GOODS IN PORTS" (Assembly Resolution A.289 (VIII))

Submitted by ICS, IAPH and OCIMF

1. In the report of its thirty-first session the Sub-Committee on the Carriage of Dangerous Goods invites the Maritime Safety Committee (CDG XXXI/15; paragraph 15.1.5) to approve the revised "Recommendations on the Safe Transport, Handling and Storage of Dangerous Substances in Port Areas" (a revision of Assembly Resolution A.289 (VIII)). Assembly Resolution A.435 (XI) authorises the MSC to circulate the revised Recommendations to Member States as soon as it has adopted them.
2. Paragraph 5.4.2.2.2 of the revised recommendations requires that:—

> "The MASTER of a SHIP and the BERTH OPERATOR should before liquid BULK DANGEROUS SUBSTANCES are pumped into or out of any SHIP from or into a shore installation - complete and sign the appropriate safety check list, showing the main safety precautions to be taken before and during such HANDLING operations."

A footnote indicates that a safety check list is under development and will be circulated as a supplement to the Recommendations. In this connection ICS and IAPH advised IMCO that efforts were being made to co-ordinate the various check lists currently in use. ICS and IAPH were joined by OCIMF and other industry organisations in co-operating to achieve this aim and the check list which has been agreed by the organisations is attached.

3. The three organisations are mindful that the promotion of safe operational practices and procedures for ships and ports is undoubtedly assisted by the development of internationally acceptable standards. It is considered that the attached check list is a valuable contribution in this regard. The organisations intend to develop guidelines for the completion of the check list which will assist in ensuring that the questions will be clearly understood. The check list will be given wide distribution and its use encouraged by all those concerned.
4. The check list is applicable to the handling of bulk liquid cargoes and is based on check lists contained in the various safety guides which have been published, such as the International Safety Guide for Oil Tankers and Terminals (ISGOTT). It has been developed in this way to build upon the considerable existing experience and to ensure that the safety checks are listed in a form to which potential users are already accustomed.
5. The check list is designed for use as follows -

Cargo	Complete
Crude Oil/Petroleum Products	Part A
Chemicals	Part A and Part B
Liquefied Gases	Part A and Part C

In addition, the section on tank cleaning should be completed as appropriate. The Declaration, to be completed in all cases, also includes a requirement that, where necessary, repetitive checks should be carried out in order to ensure the continuing safety of operations.

6. The organisations believe it would be to the benefit of member governments and industry in their pursuit of safety, if the Sub-Committees were to agree to submit the check list promptly to the Maritime Safety Committee with a re-

(Continued from page 7)

TENANCE FOUNDATION relating to maintenance and operation of the Head Office, in order to relieve the critically worsening financial status of the Association all caused by the world prevailing inflationary trend, energy problems and the consequential monetary turmoil; and

WHEREAS, the Association at the same time adopted a resolution expressing the goal of the Association to realize financial self-sufficiency at the earliest practicable time; and

WHEREAS, the Association, during the years since then, has made every practicable effort to that end including the adoption of the compulsory dues scheme in accordance with the size of port, the increase in the unit value of the membership dues unit, and the adoption of the SDR unit as the basis of the membership dues unit; and

WHEREAS, the effort thus exerted by the Association has gradually been rewarded and the financial prospect at least up until 1986 seems to be sufficient to maintain self-sufficiency assuming that the Association continues its efforts to absorb those predictable increases in prices; now, therefore, be it

RESOLVED that the Association herewith notifies the IAPH Foundation, in accordance with the pertinent sections of the Agreement, that the Association now intends effective January 1, 1982 to disengage from the Agreement with the IAPH Foundation to defray the expenses of the Head Office as confirmed by the Resolution of the Association adopted at this meeting of Regular Members by correspondence held on this 28th day of December, 1980.

commendation that it be accepted for appending to the revised Recommendations.

Ship/Shore Safety Check List

Ship's Name _____

Berth _____ Port _____

Date of Arrival _____ Time of Arrival _____

INSTRUCTIONS FOR COMPLETION

The safety of operations requires that all questions should be answered affirmatively ☐ If an affirmative answer is not possible, the reason should be given and agreement reached upon appropriate precautions to be taken between the ship and the terminal. Where any question is not considered to be applicable a note to that effect should be inserted in the remarks column.

☐–the presence of this symbol in the columns 'ship' and 'terminal' indicates that checks shall be carried out by the party concerned.

The presence of the letters A and P in the column 'Code' indicates the following:

A–the mentioned procedures and agreements shall be in writing and signed by both parties.

P–in the case of a negative answer the operation shall not be carried out without the permission of the Port Authority.

PART A Bulk Liquids–General	Ship	Terminal	Code	Remarks
A1 Is the ship securely moored?	☐	☐		
A2 Are emergency towing wires correctly positioned?	☐	☐		
A3 Is there safe access between ship and shore?	☐	☐		
A4 Is the ship ready to move under its own power?	☐		P	
A5 Is there an effective deck watch in attendance on board and adequate supervision on the terminal and on the ship?	☐	☐		
A6 Is the agreed ship/shore communication system operative?	☐	☐	A	
A7 Have the procedures for cargo, bunker and ballast handling been agreed?	☐	☐	A	
A8 Has the emergency shut down procedure been agreed?	☐	☐	A	
A9 Are fire hoses and fire fighting equipment on board and ashore positioned and ready for immediate use?	☐	☐		
A10 Are cargo and bunker hoses/arms in good condition and properly rigged and, where appropriate, certificates checked?	☐	☐		
A11 Are scuppers effectively plugged and drip trays in position, both on board and ashore?	☐	☐		
A12 Are unused cargo and bunker connections including the stern discharge line, if fitted, blanked?	☐	☐		
A13 Are sea and overboard discharge valves, when not in use, closed and lashed?	☐	☐		
A14 Are all cargo and bunker tank lids closed?	☐	☐		
A15 Is the agreed tank venting system being used?	☐	☐	A	
A16 Are hand torches of an approved type?	☐	☐		
A17 Are portable VHF/UHF transceivers of an approved type?	☐	☐		
A18 Are the ship's main radio transmitter aerials earthed and radars switched off?	☐			
A19 Are electric cables to portable electrical equipment disconnected from power?	☐	☐		
A20 Are all external doors and ports in the amidships accommodation closed?	☐	☐		
A21 Are all external doors and ports in the after accommodation leading onto or overlooking the tank deck closed?	☐	☐		
A22 Are air conditioning intakes which may permit the entry of cargo vapours closed?	☐	☐		
A23 Are window-type air conditioning units disconnected?	☐	☐		
A24 Are smoking requirements being observed?	☐	☐		
A25 Are the requirements for the use of galley and other cooking appliances being observed?	☐	☐		
A26 Are naked light requirements being observed?	☐	☐		
A27 Is there provision for an emergency escape possibility?	☐	☐		
A28 Are sufficient personnel on board and ashore to deal with an emergency?	☐	☐		
A29 Are adequate insulating means in place in the ship/shore connection?	☐	☐		
A30 Have measures been taken to ensure sufficient pumproom ventilation?	☐			

PART B Additional Checks–Bulk Liquid Chemicals	Ship	Terminal	Code	Remarks
B1 Is infromation available giving the necessary data for the safe handling of the cargo including, where applicable, a manufacturer's inhibition certificate?	☐	☐		
B2 Is sufficient and suitable protective equipment (including self-contained breathing apparatus) and protective clothing ready for immediate use?	☐	☐		
B3 Are counter measures against accidental personal contact with the cargo agreed?	☐	☐		
B4 Is the cargo handling rate compatible with the automatic shut down system if in use?	☐	☐	A	
B5 Are cargo system gauges and alarms correctly set and in good order?	☐	☐		
B6 Are portable vapour detection instruments readily available for the products to be handled?	☐	☐		
B7 Has information on fire fighting media and procedures been exchanged?	☐	☐		
B8 Are transfer hoses of suitable material resistant to the action of the cargoes?	☐	☐		
B9 Is cargo handling being performed with the permanent installed pipeline systems?	☐	☐	P	

PART C Additional Checks–Bulk Liquefied Gases	Ship	Terminal	Code	Remarks
C1 Is information available giving the necessary data for the safe handling of the cargo including, where applicable, a manufacturer's inhibition certificate?	☐	☐		
C2 Is the water spray system ready for use?	☐	☐		
C3 Is sufficient and suitable protective equipment (including self-contained breathing apparatus) and protective clothing ready for immediate use?	☐	☐		

PART C Additional Checks–Bulk Liquefied Gases	Ship	Terminal	Code	Remarks
C4 Are void spaces properly inerted where required?	☐	☐		
C5 Are all remote control valves in working order?	☐	☐		
C6 Are cargo tank safety relief valves lined up to the ship's venting system and are by-passes closed?	☐			
C7 Are the required cargo pumps and compressors in good order, and have the maximum working pressures been agreed between ship and shore?	☐	☐	A	
C8 Is reliquefication or boil off control equipment in good order?	☐			
C9 Is gas detection equipment set for the cargo, calibrated and in good order?	☐	☐		
C10 Are cargo system gauges and alarms correctly set and in good order?	☐	☐		
C11 Are emergency shut down systems working properly?	☐	☐		
C12 Does shore know the closing rate of ship's automatic valves, does ship have similar details of shore system?	☐	☐	A	
C13 Has information been exchanged between ship and shore on minimum working temperatures of the cargo systems?	☐	☐	A	

	Ship	Shore
Are tank cleaning operations planned during the ship's stay alongside the shore installation?	Yes/No*	
If so, have the port authority and terminal been informed?	Yes/No*	Yes/No*

**Delete Yes or No as appropriate*

Declaration

We have checked, where appropriate jointly, the items on this check list, and have satisfied ourselves that the entries we have made are correct to the best of our knowledge, and arrangements have been made to carry out repetitive checks as necessary.

For Ship	For Terminal
Name	Name
Rank	Position
Singnature	Signature

Time

Date

CCC Sessions Observed by IAPH

The 55th and 56th sessions of the Customs Cooperation Council, held at Brussels, from June 16 to 20, 1980, were observed by Mr. A. Hoewerckx, Deputy Adviser, Port of Antwerp, as an IAPH observer, by the good offices of Mr. R.L.M. Vleugels, Director-General of Port of Antwerp and Chairman of IAPH Committee on Trade Facilitation.

His report: The Council dealt with reports of the Valuation Committee and reports of the Interim Technical Committee on Customs Valuation. Further Progress Reports of the Nomenclature Committee of the Harmonized Systems Committee and of the Permanent Technical Committee were presented.

In the reports of the Permanent Technical Committee some draft annexes to the International Convention on the Simplification and Harmonization were proposed, which could be interesting to ports, e.g. a draft annex concerning customs treatment of stores.

The subject of possible measures to facilitate the carriage of goods in customs transit is kept on the agenda. This subject is for the moment also being studied by the ECE (Economic Commission for Europe) bodies and it is considered advisable to follow the discussion within the ECE before taking any action to the Council.

In questions concerning customs and related matters before other international organizations, the observer for IMCO has drawn the Committee's attention to the fact that his organization had difficulties in obtaining the number of acceptances needed to modify the amendment procedure provided for under Article VII of the Convention on the Facilitation of International Maritime Traffic (1965), inviting the delegates of the countries to encourage their governments to accept the new amendment procedure, if they had not already done so.

Among the subjects of interest to the ports can also be counted the imminent publication of a Glossary of International Customs Terms finalized by a working party and adopted by the Permanent Technical Committee. The purpose of this Glossary is to set down in a single document definitions of certain customs terms in order to establish a common customs terminology. It contains definitions of terms approved by the Council. Although it has not the legal status of an international instrument, it is assumed that in practice the terms have the meaning attributed to them unless they are defined differently for the purpose of an international instrument.

ESCAP: 4th Session of Committee on Shipping, and Transport and Communications

Mr. J.B.P. Maramis, ESCAP Executive Secretary, in his recent communication (SP/PWP/CSTC-80, dated Sep. 25), informed that the 4th Session of the Committee on Shipping, and Transport and Communications will be held at Bangkok from 16 - 22 December 1980 and invited the Association to observe the meeting.

It is expected that the IAPH will be represented by a delegate to be assigned by the Port of Singapore Authority.

Recipients of the Silver Jubilee Commendation now announced

A resolution to commend 13 individuals of meritorious service to IAPH was passed at the recent meeting by correspondence of all Regular Members, with the actual commendation to be made at the forthcoming 12th Conference at Nagoya, Japan, marking the 25th anniversary of the founding of IAPH.

The recipients were chosen from among the candidates firstly by the Executive Committee meeting held in Gold Coast, April, 1980, and then with the matter being put before the meeting of Regular Members on November 15, 1980. As a result the following resolution was unanimously passed.

A RESOLUTION TO THANK AND COMMEND 13 INDIVIDUALS WITH MERITORIOUS SERVICE TO IAPH

WHEREAS, during the preparatory stage of the establishment of this Association and at later crucial points in its 25 year history, the following individuals have labored diligently and energetically as firm supporters of IAPH and have contributed to its development to the important international association it is today.

1. **Mr. B.J. Caughlin:**

   Former General Manager, Port of Los Angeles, who served as a leading organizer of the inaugural conference of IAPH at Los Angeles in November, 1955, and served as a chairman of the Ways and Means Committee (present Finance Committee) to improve the financial conditions of the Association.

2. **Ir. J. den Toom:**

   Managing Director, Port Management of Amsterdam, who was Vice-President and is an Executive Committee member and also acted as Conference Chairman of the 8th Conference in Amsterdam/Rotterdam in May, 1973, and further as Chairman of the Finance Committee worked to improve the financial conditions of the Association.

3. **Sir Leslie Ford:**

   Former General Manager, Port of London Authority, who served as the Chairman of the Organizing Committee of the 4th Conference in May, 1965, which served to attract major European ports to the Association, as a result of which the survival of IAPH was assured.

4. **Dr. Jen-Ling Huang:**

   Former Chairman, The China Merchant Steam Navitation Co., Ltd. and 4th President of the Association (July 1961 - May 1963) who personally and enthusiastically persuaded major ports of the world such as New York and London, of the importance of joining the Association, and by realizing their participation has enabled the Association to become a truly important international organization.

5. **Mr. Howe Yoon Chong:**

   Former Chairman of Port of Singapore Authority who served as Executive Committee member and 11th President of IAPH (March 1975 - April 1977) and hosted the 9th Conference in Singapore in March, 1975 and especially endeavored to stimulate and promote the interests of regional members.

6. **Mr. Hisato Ichimada:**

   Former President of the Bank of Japan who rendered great help to the late Mr. Gaku Matsumoto, the initiator of the Association prior to its official establishment, wherein the embryo Association had been under the most difficult financial conditions, and such assistance was the springboard to the prosperity that the Association enjoys today.

7. **Mr. P.K. Kinyanjui:**

   Former Chairman of the Kenya Ports Authority who served as Executive Committee member and 3rd Vice-President and hosted the Executive and other committee meetings in Mombasa in April, 1978, and especially endeavored to stimulate and promote the interests of regional members.

8. **Mr. Lloyd A. Menveg:**

   Former Chairman of the Board of Commissioners of the Port of Los Angeles, who hosted the inaugural conference of IAPH in Los Angeles in November, 1955 and served as 2nd President of IAPH (Feb. 1958 - June 1959).

9. **Mr. Ben E. Nutter:**

   Former Executive Director, Port of Oakland, who served as Executive Committee member and as Chairman of Containerization Committee preparing a number of reports and researches thus contributing to the development of containerization in many ports of the world.

10. **Mr. J.K. Rooney:**

    Former Port Attorney to the Port of Oakland, USA, who served as Legal Counselor of the Association for 22 years, guided the Head Office in running its business properly and efficiently during the period between conferences, and presided over the Resolutions and Bills Committee at conferences.

11. **Rt. Hon. Viscount Simon:**

    Former Chairman of the Port of London Authority, who hosted the 4th Conference in London in May, 1965 and acted as its Conference Chairman, and further served as 6th President of IAPH (May 1965 - May 1967) contributing to a great increase in membership and helping the Association become a truly important international organization.

12. **Mr. Gengo Tsuboi:**

    Vice-President of the Japanese Shipowners' Association who endeavored to establish the Association and

promote its growth and development as an Executive Committee member and also endeavored to integrate the Association with the Japanese port and business community while assisting and giving guidance to Head Office.

13. **Admiral C.G. Zermeno Araico:**

Former Minister of Maritime Affairs, Mexico, who hosted the 2nd Conference in Mexico City in June, 1959, overcoming many difficulties when the proposed host port was unable to hold this conference due to the political situation thus ensuring the continued development of the Association.

Be IT THEREFORE RESOLVED that on this Fifteenth Day of November, 1980, at its meeting by correspondence of all Regular Members of the Association as provided for in the Consititution and By-Laws that the Association, at the 12th biennial conference, marking the 25th anniversary of the founding of the Association, as a token of the esteem and thanks that the members of this Association have for them and their numerous achievements, dedication and service, commendations be made and silver medals and scrolls of honor be presented to the above 13 individuals.

World Maritime Day: Compiled were Replies for further study

In response to the IAPH Questionnaire on the IMCO World Maritime Day, as reported in the September issue, fifty six ports all over the world have contributed their replies. These replies were compiled into a report and circulated to the IMCO secretariat, IAPH Board and Executive Members and Members of the Committee on Community Relations, and the contributers as well.

IAPH to observe the IMCO meeting in Paris

A preparatory meeting for the establishment of the IMCO Ad Hoc Working Group on Barratry, the Unlawful Seizure of Ships and their Cargoes and other Forms of Maritime Fraud, which had been suggested by the ICC and decided upon by the IMCO Council at its 44th Session in June 1980, is planned to be held at the ICC Head Office in Paris in November 24-26, 1980. The IAPH was invited to take part in this Paris meeting, jointly by the Secretaries-General of the IMCO and ICC. (IMCO Circular Letter No. 751, Jul. 21 & ICC Letter CWR/EB 321, Sep. 24).

President Bastard, in his recent communication to the head office, informed that Capt. Fossert, Assistant to Mr. C. Mandrary, General Manager, Port of Rouen Authority, will represent the IAPH at the Paris meeting.

President sends goodwill message to the Cotonou Conference of the Port Management Association of West and Central Africa

Mr. Paul Bastard, IAPH President sent a telex message to the Conference of the Port Management Association of West and Central Africa which met in Cotonou recently and was presided over by Mr. B.M. Tukur, IAPH 3rd Vice-President and General Manager of Nigerian Ports Authority.

The English version of the Presidential message is reproduced hereunder.

Mr. Bastard's Message to Mr. Tukur

Dear President,

As the Conference of the Port Management Association of West and Central Africa is going to open in Cotonou, it is with great pleasure that I send you a very cordial message of friendship.

From the bottom of my heart I wish to thank you for the invitation you have sent me, on behalf of your Association, to participate in your Conference.

From Paris, where I am unfortunately kept busy all the week through by imperious professional duties, my thoughts will very often go to my colleagues and friends who manage African ports. I personally know several of them and I would have been very pleased to shake hands with them. Since you will act for IAPH at your Conference, I should like to ask you to convey to your Association the best wishes of success expressed by the International Association of Ports and Harbors for the sake of it.

The ports of the whole world constitute the links of an immense chain of solidarity and of friendship. Any event that occurs somewhere in the world has, if not immediately, at least very quickly an impact on it. This comes from the fact that the economic part they play on an international level makes them be continuously listening in the world. Each port plays also a major economic part on national and local levels: be it to ensure the imports necessary to the life and development of the country, be it to allow exports that will bring the foreign currency, or to promote industrial establishments along the side of big international maritime flows or be it to generate employment of an ever increasing technicality, ports assume the highest responsibilities.

Therefore it is only natural that the men of duty who assume these responsibilities, sometimes overwhelming, often feel the need to meet, so as to exchange their ideas, to compare their problems, to help each other, to know each other better.

Therefore I welcome with much pleasure the Cotonou Conference. It fits into the frame of such meetings that are always enriching. As will the IAPH Conference be, next year, whose sessions will be held under the topic of "Port Contribution to Human Prosperity". Therefore I wish to ask you to be the spokesman to our colleagues of the ports of your Association of the great pleasure with which I shall welcome to Nagoya in next May those of you who meanwhile would decide to join IAPH.

Once again all my personal wishes of great and full success go to your Conference.

Kind Regards,

Paul Bastard, President of IAPH

French version of IAPH brochure completed

Thanks to the great assistance by President Bastard and Executive Committee member Mr. J. Dubois, General Manager of Port of Le Havre Authority, the French version of the "Outline of IAPH" has been completed and sent to all French-speaking members of IAPH for their positive participation in the membership campaign. Copies are available from the Tokyo Head Office.

Cyprus Meeting of IPD: Reported by Mr. Stuart

I. Minutes of the Meeting of the IAPH Committee on International Port Development (CIPD) Held in Limassol - Cyprus, June 25-27, 1980

Present:

Chairman	Mr. J.K. Stuart British Transport Docks Board
Vice Chairman	Mr. J. Bayada Cyprus Ports Authority
	Mr. P. Coulomb Port Autonome de Marseille
	Mr. Pleindoux Port Autonome de Marseille
	Mr. J.D. Mturi Kenya Ports Authority
	Mr. F. Roovers Port of Massachusetts
	Mr. P.Y. Ten Arve Rotterdam Port Authority
	Mr. S. Ullman Port of Gothenburg
	Mr. E. Williamson UNCTAD
	Mr. D.R. George British Transport Docks Board
	Mr. N. Nicolaou Cyprus Ports Authority

A word of welcome by Mr. Bayada
Mr. Stuart, in reply, thanked Mr. Bayada for the welcome given to the Committee and for the arrangements made by the Cyprus Ports Authority, which, he anticipated would ensure the success of the Committee's visit to Cyprus.

1. Approval of the Minutes of the Meetings of the CIPD and the CIPD's W.G.S.P.S., Held in 1979 at Deauville and Rotterdam Respectively

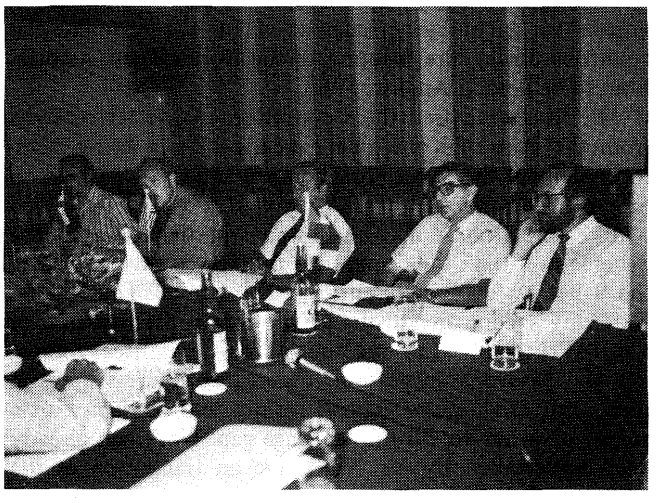
The Committee formally noted and approved the minutes of the above meetings.

2. Changes in the CIPD Membership

Mr. Stuart informed the Committee that since the last meeting in Rotterdam there had been the following changes in the membership of the Committee. Mr. Vickruck, Commissioner, Lake Head Port, Canada, was replaced by Mr. J. Auger, Vice Chairman of the National Harbours Board, Canada. Mr. P.Y. Ten Arve, Head of Third World Assistance Office, Port of Rotterdam, replaced Dr. F.A.F. Scheuerleer who has resigned from his position as Managing Director of the same Port. Mr. J. Mturi, Managing Director, Kenya Ports Authority, replaced his ex colleague Mr. J. Gituma. Finally Mr. Kang Chang Sung was replaced by General Bomb Rhee June as the new Korean representative.

3. Sisterport Scheme

Mr. Stuart referred briefly to the decisions reached on the Sisterport Scheme during the Rotterdam meeting and outlined the steps taken since then for the implementation



of the Scheme, including the finalisation of the questionnaire proposed by Mr. J. Bayada, the distribution of this questionnaire to various ports by IAPH Secretariat and the processing of the responses to the questionnaire and the Scheme in general, by Mr. Ten Avre.

On Mr. Stuart's invitation, Mr. Ten Avre briefed the Committee on the responses both on the concept of the Scheme and the questionnaire. He reported on the state of responses recorded and processed as at June 1980, as follows:

- Over 80 replies were received consisting of an almost equal number of positive and negative responses.
- Positive responses were approximately equally divided between donors and recipients.
- A number of positive responses did not fit into the idea of the Sisterport Scheme and would have to be left in abeyance for the time being.
- Grouping the responses geographically, the Mediterranean countries' response was extensive, while that of Scandinavian and South American countries extremely limited.
- There was no response from a considerable number of ports.

In connection with the proposal to approach non-IAPH Members Mr. Ten Arve informed the Committee that the Chairman of the IAPH Membership Committee had no objection to the participation of non IAPH members in the Scheme.

After discussion of Mr. Ten Arve's report, the Committee expressed its satisfaction on the number of positive responses and decided to refrain from promoting additional participation to the Scheme on a larger scale at present, but instead to proceed with consolidating progress made and on the establishment of Sisterport relationships on the basis of the present responses, supplemented, if possible, by a limited number of additional selected entries. The Committee considered it desirable to secure these additional entries now, for they could make the Sisterport relationships to be established at this stage more successful covering at the same time a wider number of geographical areas of the world. To this effect, the Committee decided that ports like Singapore which have been indicated by various recipients as their donor of preference, should be approached again with a view to participating at this stage. For the promotion of participation of South American countries at present, the Committee decided that the Direccion General de Puertos y Costas, Madrid should be contracted again. Finally Mr. Ullman was asked by the Committee to encourage participation of the Scandinavian countries during the Meeting of the Nordic Ports Association, to be held in August, 1980.

Mr. Stuart advised the Committee of a letter received from the Port of Kobe giving details of steps being taken to implement the Sister Ports concept and views on ways to progress the Scheme.

For the promotion of additional participation to the Scheme in future, the Committee decided to advertize again the Scheme after the present responses had been dealt with. Referring specifically to the promotion of participation of non IAPH members in due course, the Committee, following Mr. Roover's suggestion, decided to address them in their own languages (Spanish mainly and perhaps Portuguese) in order to fill the language gap. Work had already been undertaken by Mr. Ten Arve on translation of the questionnaire.

In response to Mr. Stuart's question whether there had been any progress in bringing donors and recipients together, Mr. Ten Arve informed the Committee that some efforts had been made in that direction but in an informal manner. He added that a number of relationships were indicated in the questionnaires. In this connection Mr. Bayada expressed the view that various factors such as similarity of organization (institutional framework) and size should be taken into account in establishing a Sisterport relationship and that therefore preference of the participants should not be the only criterion. Mr. Coulomb advised the Committee of progress being made by French ports on establishing Sisterport relationships.

Commenting on the Sisterport Scheme, Mr. Mturi drew the Committee's attention to the fact that the Scheme should not duplicate but supplement related efforts by UNCTAD and other organisations.

Finally the Committee went through the individual responses, as summarized in a list distributed by Mr. Ten Arve and decided on the preliminary course of action to be followed in each individual case.

4. Report on the Meeting of the IAPH Executive Committee Held in Gold Coast, Australia, April 21-22, 1980

On Mr. Stuart's request, Mr. Ullman presented to the Committee a summary report on the discussions held and decisions reached at the above meeting.

Mr. Stuart thanked Mr. Ullman for the report and for representing the Committee at the Meeting of the Executive Committee in Gold Coast. The Committee discussed individual aspects of the report and in particular the proposal for allocation of funds from the IAPH Foundation.

5. Bursary Scheme

Mr. Stuart informed the Committee that although the inital response was poor the number of applications for bursaries had been recently increasing. A list of the bursary applications for 1979-1981 was then distributed and briefly commented upon.

During the discussion the point was made that in many cases knowledge of the Scheme did not reach individual ports. To this effect the Committee decided to address, through the IAPH Secretary General, an appropriate letter to them.

Furthermore, the Committee approved of the idea put forward by Mr. Akiyama for the allocation of the IAPH Foundation funds to the Special Technical Assistance Fund, for the promotion of the bursary and other related Schemes. The decision would be conveyed by the Chairman to the Secretary General Emiritus.

6. IAPH Awards Scheme

Mr. George briefed the Committee on the progress made so far with respect to this year's competition, reporting that entries were being received. On Mr. Stuart's proposal, the Committee appointed the following members to form the panel of judges for the 1980 awards:

Mr. C. Mandray
Mr. J. Mturi
Mr. S. Ullman
Mr. J. Bayada
Mr. E. Williamson
Mr. J. Stuart

It was also decided that unless it is absolutely necessary, the panel will not meet to consider the submissions collectively, but would communicate on their assessment of individual entries.

In response to Mr. Williamson's proposal to the Committee to consider the possibility of using bursaries to supplement the Award Scheme, the Committee decided that if this year's winners were suitable for bursaries, Mr. Williamson's proposal would be seriously considered and the port authorities contacted. The proposal would be progressed for future years' competitions.

7. Article on the World Bank

It was noted at the meeting that in pursuance of a decision at Le Havre, an article under the title "The World Bank and Port Development" was published in the "Ports and Harbors" in March 1980.

8. Booklets on Port Topics

Referring to his letter of Mr. Stuart on the above subject, Mr. Williamson explained to the Committee his proposal for the production of booklets on topics of interest

and value to the developing ports. In this connection Mr. Williamson distributed a paper outlining his ideas, a copy of which is attached.

Mr. Williamson's proposals was accepted by the Committee and all indvidual members of the Committee were requested to assist towards the materialization of this proposal.

9. Election of CIPD Vice President

The Committee elected Mr. J. Bayada as its new Vice-President in place of Mr. Kang Chang Sung, the former Korean representative.

10. Next Meeting of CIPD

Unless an earlier meeting is required, the Committee decided to hold its next meeting in Nagoya, Japan in May 1981.

II. Notes by Chairman to IPD Committee Members

1. Appointment of Vice-Chairman

To fill the vacancy which arose on the retirement of Mr. Kang Chang Sung, the election of Mr. Joseph Bayada as Vice-Chairman of the Committee was proposed and agreed. I am looking forward to working closely with him in fulfilling the Committee's objectives.

2. The Sisterports Scheme

It is clear that there is a demand for this concept and attention is now being given to consolidating progress made and encouraging the creation of sisterport relationship from requests for, and offers of, assistance received to date.

3. Allocation of Funds from the IAPH Foundation

A proposal was made at the meeting of the Executive Committee in Brisbane, that funds amounting to about US$40,000 could be made available by the IAPH Foundation to the Special Technical Assistance Fund, to celebrate the 25th Anniversary of IAPH in 1981.

The Committee welcomed this proposal and it is hoped that the proposal will be confirmed at the Nagoya Conference.

4. Booklets on Port Topics

A proposal by Mr. Williamson that UNCTAD could produce in liaison with IAPH a series of booklets for use of port managers, was welcomed and it was agreed that every assistance should be given to this objective. Your attention is drawn to the document hereunder and you are requested to consider whether you can assist by preparing material. If you feel able to assist may I ask that you advise me with details of the subject to be covered. I would then liaise with Mr. Williamson to draw up a list of papers under preparation.

III. A proposal for the preparation of UNCTAD monographs on port management (Project Proposal VI)

1. Proposal

UNCTAD should undertake to produce a series of technical papers for the practical use of port managers in developing countries. Each paper—or monograph—would provide step-by-step guidance on a selected aspect of port management or operation.

Each monograph should:—

- cover a specific activity to be clearly defined at the outset;
- address itself to the manager having responsibility for this activity but who may lack knowledge and experience in the field;
- use a step-by-step approach and be as self-contained as possible;
- be practical, bearing in mind the problems and constraints common in developing countries;
- contain diagrams and photographs etc. as appropriate;
- be between 20-30 pages in length (about 8,000—10,000 words exclusive of diagrams or attachments, such as sample agreements, forms, etc.).

2. Justification

In the ports of industrialized countries, operating systems and personnel development are based on skills acquired through experience, on emulation of other industries and on the innovation which is easily undertaken in advanced industrial environments. These means are lacking in developing countries and work in the ports improves only with much deliberation and a process of trial and error incurring many mistakes. A means is required by which ports of developing countries can acquire skills taken for granted in countries with long industrial histories, or can learn of new developments and how to meet them without resorting to trial and error.

1981 Edition of IAPH Membership Directory completed

The membership Directory 1981 was completed and sent to all members from Tokyo at the beginning of November.

Regular Members and Associate Members of Grade One of Class A, Class B and Class C are entitled to receive 3 copies and other members, one copy per unit.

If members wish to receive additional copies, they are available at US$10 per copy including surface mailing charge.

The distribution of the Membership Directory is limited to its members only.

Mr. H. Haar speaks on Ocean Dumping Convention, in London

The International Association of Ports and Harbors delegation, headed by Mr. Herb Haar of the Port of New Orleans and chairman of AAPA's Ad Hoc Dredging Committee, attended the fifth consultative meeting of the contracting parties to the London Dumping Convention held in London, Sept. 22-25. The convention is the major global treaty governing the ocean dumping of wastes, including dredged materials in ocean waters.

Wearing his AAPA wig under his IAPH hat, Mr. Herb presented a position paper calling the attention of the contracting parties to possible applications of the LDC. These applications could result in an absolute prohibition of ocean dumping of dredged material—even when there may be no feasible or practical alternative means of disposal, and even when the disposal might be safely carried out if special care is taken. This, Mr. Herb pointed out, could threaten world ports with closure with devastating economic impacts upon the flow of international commerce. IAPH urged the contracting parties to consider these possible effects upon port operations. The IAPH also proposed a study on the dredged material issue with a view toward adopting whatever changes are needed in the LDC to assure that there will be no unattended or unnecessary interference with essential port operations.

The concerns expressed by the IAPH delegation at the fifth consultative meeting were well-received. The contracting parties recognized the significance of the technical issues raised by the IAPH—namely the use of "special care" in the ocean dumping of dredged material. The consultative parties directed that these issues be considered by the Ad Hoc Scientific Group of the convention at its next intersessional meeting of April 1981. The contracting parties also agreed to consider administrative/legal issues raised by IAPH as they relate to the application of the convention during the intersessional period and to submit any comments at the sixth consultative meeting of the LDC. It will be held in London in October 1981.

Mr. Herb believes this commitment of the contracting parties to consider these critical issues is a timely recognition of the essential need for the ocean disposal of dredged material if needed dredging operations are to be carried out and if necessary harbor improvements are to be made. (News from AAPA ADVISORY)

The 25th anniversary of IAPH celebrated in Tokyo on November 7, 1980

A get-together to celebrate the 25th anniversary of the founding of IAPH was held at the Head Office in Tokyo on the afternoon of November 7, 1980, the date on which the Association was formally established 25 years ago in Los Angeles (Hollywood-Roosevelt Hotel), USA.

The official celebration of the 25th anniversary is planned to take place at the 12th Conference, next May, at Nagoya, with participation of all the delegates. However, on the foundation day, the Tokyo Secretariat held a small party attended by the resident members of the Executive Committee and Board, Tokyo-based Representatives of IAPH member ports as well as the Foundation officers. Among the guests was Mr. Yoshimura, Director-General of Ports and Harbours Bureau, Ministry of Transport, who is a keynote speaker at Nagoya on the theme "Port's roles in Regional Development". (center in the picture below)

Goodwill messages arrived from Port of Los Angeles where the inaugural conference of the Association was held and also from Port of Oakland, one of the oldest IAPH members in USA, and they were introduced by their representatives in Tokyo at the party. (See pages 24 and 41)

From left, Mr. T. Akiyama, President of the IAPH Foundation, Mr. M. Yoshimura, Director-General, Ports and Harbours Bureau, Ministry of Transport and Dr. Hajime Sato, IAPH Secretary General.

Secretary General Sato (extreme right) delivers an address

Visitors

– On Thursday, October 2, 1980, Port of Hamburg held a press conference (from 4.30 to 6.00 p.m.) and a cocktails (from 6.00 to 8.00 p.m.) at the Imperial Hotel. Both occasions were conducted personally by Mr. Klaus-Dieter Fischer, business manager of Port of Hamburg while Mr. W. Buechs (resident representative in Japan) and Mr. Hideki Miyanohara (representative for Japan) stood by.

– On October 28, 1980, Mr. Rhee, Bomb June, Administrator, Korea Maritime and Port Administration, accompanied by Mr. Choi, Hoon, Director, Ulsan District Maritime & Port Authority, visited the head office and received by Dr. Hajime Sato, Secretary-General, and his staff. Mr. Rhee, in his luncheon address, said that the KMPA as so expressed previously was eager to have a chance of hosting an IAPH Conference in the future, while he was looking forward to attending the forthcoming 12th Conference at Nagoya next May, and further stressed that the KMPA also hoped that the participants to the Nagoya Conference, prior or posterior to the conference, would visit and see the KMPA Ports in Korea.

– On October 20, 1980, Mr. Julio Rodolfo Moctezuma, President, Coordinacion de Proyectors de Desarrollo, Presidencia de la Republica, Mexico and ex-Finance Minister, met R. Kondoh of IAPH, at his Tokyo hotel. Mr. Moctezuma was visiting Japan, as a delegate of Mexican Government for the Mexico-Japan Economic Talks. On October 18, he visited Kiire Port, one of the largest crude oil terminals in Japan, which is located on the southern tip of Kyushu Island.

Membership Notes

New Member

Regular Member

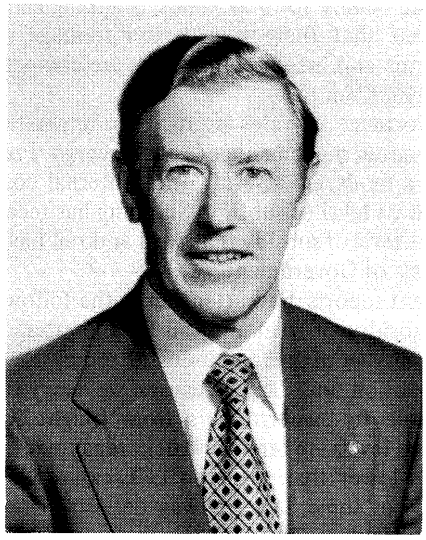
Tuticorin Port Trust
Tuticorin Port Trust, Tuticorin-628 004, Tamil Nadu, India
Office Phone: 21790
Telex: 0444-243
Cable: PORTRUST
(Shri V. Sundaramm I.A.S., Chairman)

Open forum:
Port releases:

AUSTRALIA — ITS FUTURE AS A MARITIME NATION

by: J.M. WALLACE,
President,
The Maritime Services Board of N.S.W.

'It is now time for us to grasp the nettle and become a maritime nation'.
(Federal Minister for Transport, 28 May 1980).



Mr. J.M. Wallace

1. INTRODUCTION

The Australian economy is in the throes of rapid and profound transformation, reflecting changes in the global division of production, as each nation restructures its economy to more efficiently use its human and natural resources and hopefully steer onto a firm growth path. The global fuel situation obviously has a crucial impact on this process, differentially affecting each nation according to its resource base.

In the Australian context it is clear that this process involves a resource-based strategy of recovery, notably coal, iron ore and bauxite, heavily emphasizing exports. Significant sections of Australian manufacturing however, are declining, as labour-intensive industry shifts to lower wage areas in S-E Asia. Indeed the resource export strategy will accentuate the decline as the balance of payments surpluses cause appreciation of the Australian dollar, increasing the world price of our manufactured exports, reducing their competitiveness. This downward trend will be further reinforced by a probable wage push from the mineral sector spreading through the economy.

Clearly then the resource boom will not be without significant costs, and overall benefits and costs will not necessarily be evenly distributed.

It is for this reason that any economically viable "downstream" activities associated with the mineral industry be encouraged. Coal, as a plentiful, cheap energy source is crucial in this regard. The availability of this fuel is encouraging the growth of domestic processing of minerals. Alumina smelting stands out as the prime example of this, due to high levels of electricity needed in this activity (up to 40% of total unit costs).

It is one of the main contentions of this paper that the same logic of extending viable "downstream" activities associated with mineral extraction should be applied to the Australian shipping industry, coastal and international. That is, there should be encouragement of greater Australian participation in the carriage of our mineral exports, as our plentiful supplies of coal as a bunker fuel will encourage coal-fired ships, which is undoubtedly the future trend in ship propulsion. This can be generalised to greater Australian participation in the carriage of all our overseas trades and given the energy efficiency of shipping, relative to road and rail, to greater scope of coastal shipping in selective domestic trades. It should be pointed out that Australia's fuel resources yield this extension of Australian participation in shipping as an economically viable new activity, in which Australia's resources give it a distinct advantage over other nations. This challenge should not be allowed to evaporate.

Regarding the aforementioned arguments, it would be wrong to view such an extension as a superficial move to protect Australian shipping. This view is widespread, possibly as it has long been a plank in the policies of the maritime unions to extend Australian shipping, giving the policy a distinct sectional bias. Notwithstanding this, it is considered in the following argument, that the fuel crisis and all its ramifications, now creates the potential for a truly commercially viable Australian shipping industry.

It is the responsibility of the shipping industry, both unions and employers, to realise this potential. The argument often put forward by the industry that it is disadvantaged relative to road, rail and overseas shipowners by lack of Government subsidies is undoubtedly correct. The impetus for changing this situation however, can only come from within the industry, it must forcefully present its own case, but on sound economic grounds, to prove to Government it is deserving of further assistance.

The major reasons for the present minimal scope of the Australian shipping industry are outlined in the paper, as well as structural changes in the economy and the reasons why these alter and extend the potential scope of shipping - and finally it sets out the major initiatives taken by Government and the industry to strengthen the existing activities and indeed to extend the potential that exists.

2. THE PRESENT STATE OF SHIPPING

(a) Coastal

Coastal shipping has been stagnant for a considerable period, particularly in general cargo movements which have lost out badly to both road and rail.

Certain major reasons for this decline can be established, without overly simplifying the complex question of modal competition.

The technical characteristics of bulk items and shipping determine that most long distance bulk goods are carried by ship, but over medium and short distances rail can compete with shipping mainly for bulk solids. Shipping can gain only to the extent that there is a greater tonnage to shift in absolute terms and insofar as its rates are competitive with rail, it can gain from rail.

The importance of rates is crucial in understanding the decline of coastal movements of general cargo. Freight rates charged by a mode are a result of its internal costs and efficiency and its level of subsidy. Shipping has received nowhere near the level of subsidy that road and rail have received from all levels of Government.

Two recent reports draw attention to the following major forms of subsidry of road and rail freight rates: low levels of cost recovery from the road industry to pay for expensive road construction and damage caused by heavy trucks, low rates available to owner/drivers from freight forwarders, often below levels to enable truck repayments and rail freight rates lower than costs on LCL cargo, yielding substantial parts of some State railway deficits (**The Long Distance Road Haulage Industry**, Canberra, A.G.P.S., 1979; p. 76 and **Commission of Enquiry into The N.S.W. Road Freight Industry, Vols. I, II, III**, 1980: 12/2,3,4).

It could also be added, in this regard, that the pricing policies of various container terminal companies (operating at the interface of land/sea transport) have tended to further divert coastal general cargo away from shipping. Indeed there was a Prices Justification Tribunal Enquiry into the rates of Seatainer Terminals Ltd., in 1976/77, after their rates had risen 771% between 1969 and 1976.

Shipping is clearly unfairly treated by the external environment. This scenario may be generalised as such: the distribution of subsidies to each of the modes has resulted in a set of relative **private** prices which differ substantially from the total **social** costs attributable to each mode, encouraging the use of road and rail relative to shipping, despite the relative energy efficiency of shipping. Moreover, as fuel costs rise and the move to coal-fired shipping advances, these subsidies will increasingly retard the adjustment of each mode to its most suitable use and could lead to cumulative misallocation of scarce resources.

Notwithstanding this most cogent of external causes for the decline of coastal movements of general cargo, it must be emphasised that it is above all else the failure of the maritime industry as a whole, both unions and employers, to overcome their internecine disputes and the numerous barriers to a co-ordinated adaptive industry, especially when road and rail have more successfully accomplished this task, that has quite understandably resulted in these other two modes benefitting from Government and industry, at the expense of shipping.

(b) International

Australia is a major trading nation with about 6,000 vessel calls a year, carrying upwards of 200 million tonnes of cargo, a figure which will undoubtedly rise with an expected doubling of iron ore and coal exports over the next decade. Yet Australia is not a maritime nation, carrying less than 3% of this trade.

There are a number of major reasons for this situation but it is believed that such an imbalance has negative implications for the commercial and strategic well-being of Australian exporters and industry generally, which can only be effectively overcome in the long term by developing an overseas fleet to carry Australian trade.

The lack of an overseas fleet is now often explained by economics, but it is historical precedent that has had most effect on this situation. Australia has never been a major maritime nation due to historical ties with Britain, a strong maritime nation, which had most to do with the establishment of the conference system.

However, one major economic aspect is that Australian exporters face a world price which is beyond their control, they are by and large "price takers", in which case if sea freight cost is escalated by using an Australian fleet it could make all the difference between profit and loss.

In terms of short-term costs therefore, clearly the status quo of utilising present shipowners, on the best terms that can be negotiated, is more palatable than a risky venture of building up the Australian fleet, which would undoubtedly entail increased freight costs over a certain period.

In spite of this there are many good economic reasons for building up the Australian fleet. It is the most profound step that can be taken in gaining control of the long-term movement of Australian freight rates, domestic as well as overseas.

This brings us to a discussion of recent changes in the Australian economy, which potentially alter and extend the scope of shipping.

3. RECENT CHANGES IN THE AUSTRALIAN ECONOMY WHICH AFFECT SHIPPING

There are two interrelated changes which potentially can affect the Australian shipping industry: (a) the fuel crisis; and (b) mineral exports.

(a) The Fuel Crisis

This could improve the position of shipping in three ways:—

(i) As oil prices rise, the higher energy efficiency of shipping relative to road and rail, will encourage the greater domestic use of shipping, if transport prices reflect fuel costs adequately. In effect, road will lose out to rail, largely in general cargo carriage as both have similar characteristics of rapid and reliable delivery. Shipping will compete with rail over longer distances, predominantly again for general cargo. In terms of energy efficiency in oil utilisation, shipping is generally more efficient than rail but rail has the advantage of rapid transit times.

(ii) Another factor is, the shift from oil to coal-fired (or some coal-based fuel) propulsion in shipping, which will significantly increase the energy efficiency of shipping compared to rail over the longer term, hence possibly improving shipping's relative share of both general and bulk cargo.

Moreover, the vast scope of ship modifications and new constructions, provides a vast market which Australian industry could partici-

pate in at many levels, if not actual construction.

(iii) Indirectly, the rapid increase in coal, iron ore, alumina and aluminium exports as well as domestic processing of bauxite, provides the need for new ships, which could be Australian owned, manned, repaired or even built.

(b) Mineral Exports

There seems to be little doubt that a major element in Australia's future economic success depends upon energy-based ventures. This factor will necessitate a large increase in Australian overseas bulk exports and could result in a significant increase in Australian participation in the carriage of these exports and all our overseas trade. An increase in Australian participation should be seen as an economically viable "downstream" activity emanating from mineral/energy mining and processing. If Australia has a global advantage in exporting the major fuel of the next few decades, it most certainly has a distinct advantage in exporting it in ships propelled by that fuel, indeed in carrying all our overseas trade in such ships. For this not to be an Australian venture would mean missing a commercial opportunity to further exploit our mineral wealth.

For freight rates therefore, to be as low as possible over the longer term, it is essential that Australian overseas trade be carried increasingly in Australian coal-fired ships.

4. PRESENT INITIATIVES

Shipowners, Governments and Unions are undoubtedly conscious of the need for change and recently some major initiatives have been commenced which will have long-term advantages for Australia. Three of these initiatives are discussed below:–

(a) Ship propulsion fuels

Some locally-based ship owners are gradually moving away from the traditional oil-fired steam or gas turbines to commercial utilisation of the more efficient diesel propulsion and to prototypes of coal or coal-based propulsion units.

The impetus is of course rising fuel costs (up ten times since 1973) and their effect on freight rates. The rates for coal and iron ore, for instance, have doubled and in some cases trebled in the past two years. Fuel is now the biggest component in freight rates, up to 60% in some cases.

The Union Steamship Co. of New Zealand is replacing existing gas turbine engines on two of its fleet to slower speed diesel engines, after associated fuel costs rose from 25% to 45% of total operating costs, 1974-80 (**Australian Financial Review**, 10/3/80).

Shipbuilding contracts for the construction of four coal-fired bulkships to carry bauxite around the coast for Queensland Alumina Ltd. have recently been negotiated by Australian National Line and Bulkships Ltd., at two each.

Howard Smith and R.W. Miller have also commenced negotiations with Asian shipbuilders for the construction of several large coal-fired bulkships to carry coal from Australia to Eastern Asia.

Australia is in a uniquely favourable position to exploit its coal reserves as a bunker fuel for its own fleet. Coastal shipping, especially along the eastern seaboard where steaming coal is plentiful, is bound to benefit.

International shipping will also gradually convert to coal-fired propulsion. Initially short-haul Australian trade with S-E Asia is a good possibility as carriage of sufficient fuel is no great problem. Not only this but rising fuel costs are and will increasingly be a major force on trade patterns, as longer routes become more and more costly. Already it costs twice as much to ship iron ore from the Pilbara to Europe as to Japan. Hence short hauls, capable of maintaining coal-fired ships, will for a period become more attractive than the long hauls under more conventional fuels.

Indeed it is a fortunate coincidence that Australian coal provides not only the greatest trade boost to Australia in the near future, predominantly to Japan, which imports most of its coal and all of its oil, but also encourages this and other regional trades as a bunker fuel.

(b) Shipowners and Maritime Unions Committee

The Federal Minister for Transport on 28 May 1980 announced that both maritime unions and the shipping industry had agreed to enter into negotiations to find mutually satisfactory solutions to problems which have beset the industry for many years.

In this regard both the shipowners and the unions agreed to set up separate committees to independently examine the problems facing the industry as well as to meet in a joint committee under an independent Chairman. Subsequently the Minister announced that Sir John Crawford would be the independent Chairman.

There seems little doubt that if Australia is to contemplate even a minimal role as a maritime nation it will be essential for this joint committee to be successful in solving present day problems.

(c) Maritime Unions

There have already been moves within the industry to extend Australian participation in the carriage of oil imports and coal and iron ore exports.

It would not be unreasonable to state, however, that these moves are at least partially the result of pressure by the six seagoing unions to extend Australian participation in oil import carriage and having achieved a negotiated settlement in oil they are in effect serving notice on the energy export/shipping companies, that they want greater Australian participation in the carriage of these exports.

The outcome of the 8 year campaign by the seagoing unions for a greater share of oil import carriage is to date that Australian tankers will eventually carry 15-20% of the total trade.

Ampol introduced the AMPOL SAREL, H.C. Sleigh/Total/Amoco introduced the WILLIAM DAMPIER, Mobil has determined to introduce a ship called the PACIFIC STAR, there is an understanding between the unions and B.P. and advanced discussions with Shell and Caltex.

These are some of the most powerful companies operating to Australia, an indication of the determination and direction of future union strategy.

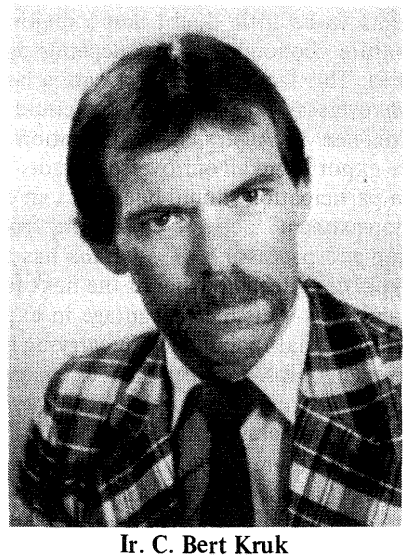
This trend can be seen as complementing the UNCTAD '40:40:20' proposal on liner trades, often quoted as a fair international division of freight carriage. Its essence is that Australia and other overseas trading nations should carry 40% of their overseas trade, 40% carried by their trading partners and 20% by cross-traders. Also this division should be replicated in that part of the ship repair industry dealing with overseas trading vessels.

At present Australia carries about 3% of our overseas trade and performs about 1% of the repairs. Clearly a 40% share, indeed any extension, would have a far-reaching

(Continued on next page bottom)

The impact of new shipping technologies on the handling of non-bulk cargoes in developing ports (1)

By Ir. C. Bert Kruk
Delft, the Netherlands



Ir. C. Bert Kruk

1. Synopsis

The turbulent changes in the international transportation of break bulk cargo (formerly referred to as general cargo) which have taken place over the past years are, in fact, still continuing. Cargo handling techniques have constantly to be adapted to new designs of merchant ships and vice-versa. Most of the ports in the industrialized countries, which is mainly from where these changes originate, manage to keep pace with new developments. They are also able to allocate, albeit at times with difficulty, the funds required for adapting the ports to receive and handle the modern break bulk cargo vessels.

The situation is often completely the reverse in many ports in developing countries, the so-called developing ports. With only limited funds at hand, it is difficult to decide which of the many new shipping techniques to adopt.

This problem may probably best be visualized when comparing conventional break bulk cargo handling with new techniques such as containerization, roll-on/roll-off and barge carrier systems.

This paper describes briefly the developments of these

(Continued from page 19)

impact on the balance of payments, as well as wider positive ramifications.

The 40:40:20 proposal is already ACTU policy and the Federal Minister for Transport has indicated he has been told that this trend is one of the dominant developments in global shipping in the 1980's.

The ship repair unions are developing a concerted campaign to significantly extend Australian participation in this activity and it is to be expected that this campaign will intensify in the near future.

These union campaigns should not be viewed as superficial protection for a declining industry, because given co-operation from both sides they are viable, dynamic and oriented to the long-term national good.

Lastly, the move towards union amalgamations and one industry award for the waterfront has tremendous potential for improved industrial relations if it can be accomplished. This is no easy task with our present structure of craft unions but it is a goal which is essential to achieve.

CONCLUSION

It is evident from the aforegoing that there exists tremendous potential for changes in the Australian 'Shipping Scene' during the 80's. The changes will extend the scope of the shipping industry in both the coastal and overseas operations. Most importantly this potential extension is nationally beneficial and commercially viable subject to shipowners and unions finding mutually satisfactory solution to present day industrial problems.

Further, the industry if it seeks Government assistance to minimise the effect of its disadvantages relative to road, rail and overseas shipowners' subsidies, must prove its case on sound economic grounds, as the Federal Minister for Transport has indicated not unreasonably that "the Government is not prepared to ask the Australian public to subsidise unnecessarily high shipping costs".

It is believed that a case can be made for additional Government assistance to the industry and this, in conjunction with our abundant energy resources, will ensure that progressively more and more Australian flag coal-fired ships are involved in our coastal trade and also ply the sea lanes of the world.

We are a great trading nation, we have the resources and the skills to become a great maritime nation in the 80's.

Mr. C.B. Kruk

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Present address	:	Nobeldreef 83, Maassluis, the Netherlands
Education	:	– Secondary school, 1959 1964: diploma – Delft University of Technology, 1964 - 1971: diploma in Civil Engineering
Present position	:	Lecturer of the first grade in Hydraulic Engineering at the International Institute for Hydraulic and Environmental Engineering (IHE), Delft, the Netherlands
Publications	:	• "Suspended sediment transport of the Nile", published in Alexandria, Egypt, in October 1975 at the Seminar of Nile Delta Sedimentology • Lecture notes of the IHE on Merchant Shipping, volumes 1 and 2, published in 1978.

modern techniques, followed by the boundary conditions for their successful application. From the combination of the development and boundary conditions described, a list of 'recommendations' or conclusions has been derived, in which have been incorporated the views of port planning experts, publications, experiences in the field and the results of discussions with port planners, operators and managers.

2. The major changes in break bulk cargo handling techniques since World War II

Introduction

When the world seaborne trade started to boom after World War II, it soon became clear that the general cargo vessels transporting the cargo at that time could hardly cope with the increased flow of traffic efficiently.

When analyzing a cargo flow from one port to another, it becomes evident that efforts to increase this flow can, in fact, only be made by stepping up the performance in port. In other words, by decreasing the time required to load and/or unload a vessel.

Decreasing the time the ship spends at sea during a voyage would result in higher freight rates, since it would necessitate more powerful (therefore more expensive) engines, which would in turn result in rising fuel costs.

When the port operations themselves were analysed, it appeared that not only was there the problem of congested ports, but also that the methods of cargo handling in port were labour-intensive. This latter point caused particular problems when wages began to rise. New techniques had therefore to be developed, aiming at:

– quicker cargo handling procedures and
– reduction of labour.

In order to appreciate the significant changes which have taken place in the transportation and handling of general cargo, the following sequence of events may be considered.

(1) Unit Load Concept (ULC)

General or break bulk cargo, which consists of any arrangements of boxes, crates, bags, drums, cartons, etc., was formerly transported by the so-called general cargo vessels, of which Fig. 1 is a typical example. The weight and the dimensions of the cargo were limited to the lifting capacity of the shore-based crane or by the derrick of the ship.

Cargo stowage in the holds was carried out manually. Research to decrease ship's time in port (or turnaround time) has led to the introduction of the Unit Load Concept (ULC), of which the pallet and cargo handling techniques such as pre-strapping, pre-slinging and shrink-wrapping and machines like the fork lift truck (FLT) form the basic components.

The basic idea of the ULC is that small, individual, items of cargo be coupled, stacked, or slung together to bigger units. These can be handled easily while requiring less time for handling in the port or on the quay.

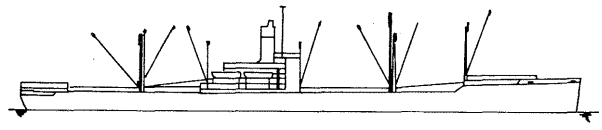


Fig. 1. General cargo ship (Victory Class) - USA

7 250 GRT

length over all	= 134.67 m	draught	= 8.46 m
breadth	= 17.37 m	speed	= 10.00 knots
depth	= 10.62 m	engine	: 2 500 hp

(2) Side loading and multipurpose vessels

The application of ULC techniques led to new designs of ships, such as the side loader and the multipurpose vessel.

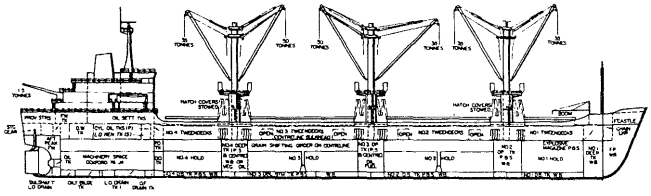
The use of side loading vessels to transport palletized break bulk cargo, reduces the turnaround time considerably. The cargo can be loaded and unloaded quickly, due to the elimination of the so-called lift on/lift off procedure and to the modular shape of the cargo.

On disadvantage of this method is the possible loss of space in the holds. This is caused by the fact that the modular size of the pallets and the dimensions of the holds do not always correspond.

The multipurpose ship is, in principle, a further perfection of the former general cargo vessel. The basic features of this new type of ship are:

– wide hatches
– more easily operated hatch covers
– increased capacity of the ship's lifting equipment
– possibility of carrying heavy units of cargo on deck
– shifting of the wheelhouse superstructure to aft or three quarters aft to ensure less obstructed cargo handling in port.

Fig. 2 is a typical example of a multipurpose ship. The capacities of multipurpose ships range from 10 to 30 000 DWT. Mention is often made in literature to the capacities of container (in TEU) and bulk cargo storage (in m^3). This has also been applied in Fig. 2.



The Motor Ship April, 1980

Fig. 2. Multipurpose vessel 'BADAGRY PALM' - Great Britain

11 750 GRT		speed	=	16.75 knots
16 525 DWT		engine	=	10 800 hp
length over all	= 154.64 m	bale capacity	:	21 292 m^3
breadth	= 22.90 m	grain capacity	:	22 972 m^3
depth	= 12.80 m	container capa-		
draught	= 9.57 m	city	:	600 TEU

(3) Containerization

During the First and the Second World Wars, the army of the United States of America used small wooden and iron boxes, the so-called containers, to ship ammunition from the United States to the various fronts. Other countries, for instance Great Britain, had previously also introduced containers, but never on a large scale.

In the 1950's the container concept was once again introduced in merchant shipping, but this time professionally. It started, in fact, with the introduction of one type of container which was loaded on and off those vessels plying between some ports on the coasts of the United States. Soon, however, the first transatlantic crossings were made to link the USA with Western Europe. This operation also proved to be successful and the so-called Container Revolution started.

The basic unit of containers is the 20 foot container, which has the following dimensions:

l = 6.10 m (= 20 ft)
b = 2.44 m (= 8 ft)
h = 2.44 m (= 8 ft)

All other containers are based on the module of this 20 foot container, of which the volume (÷31.0 m^3) is referred to as: 1 TEU (Twenty Foot Equivalent Unit). Container storage capacities are usually expressed in TEU.

Various types of containers exist, not only for the transportation of break bulk cargo, but also for refrigerated, liquid and, on a small scale, dry bulk cargo. The fact that by using containers heavier units are handled, than in case of 'conventional' break bulk cargo has led to the formulation of a new type of cargo, viz. mass break bulk cargo. As well as containers, other units of break bulk cargo, such as ro-ro units and barge loads, belong to this group.

The introduction and application of the container has called for completely new concepts of ships as well as of cargo handling equipment and transportation techniques, such as the door-to-door concept.

The first ships to carry containers were the modified general cargo vessels already mentioned. Soon after the transatlantic crossings started, the first full or cellular container ships were built.

At present, three different types may be distinguished, viz.:

- The first generation of container ships, which were the original ships,
- The second generation, which has a capacity ranging from 800 - 1500 TEU, and
- The third generation (Fig. 3) with a capacity ranging from 1700 to 3000 TEU.

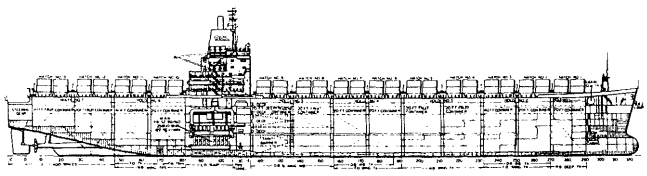
Cargo handling equipment has been adjusted to fulfil the requirements of the container concept. The traditional cargo handling equipment could no longer cope (at the required performance level) with the bigger and heavier units, so special equipment had to be designed. Although more details will be mentioned in the coming chapters, for the sake of good order, the following may now be listed:

Portainer
Shiptainer
Transtainer
Straddle carrier
Container Fork Lift Truck
Side loader

With the introduction of the container in international transportation, the so-called door-to-door concept of transportation of goods became a reality. This system involves the loading of a container at the producer's premises from where it is transported to the consumer without any transfer of commodities during that transportation.

Door-to-door transport is also identified as Full Container Load (FCL). This is to distinguish containers which arrive at a terminal loaded with cargo destined for one consignee (or consumer) only.

In many cases, however, container loads are less than one FCL and are called Less than Container Load (LCL). The Container Freight Station (CFS) is the place where full container loads are assembled or dissembled.



The Motor Ship November, 1979

Fig. 3. Third generation container vessel 'TABLE BAY' –Great Britain

58 889 GRT		draught	= 10.97 m
47 197 DWT		speed	= 23.00 knots
length over all	= 258.50 m	engine	= 2x25 680 hp
breadth	= 32.31 m	container capacity: 2 436 TEU	

(4) Roll on/Roll off concept

Although in previous centuries more or less similar types of ships were in existence, it was only during World War II that the so-called ro-ro concept was applied successfully for the first time.

The ro-ro concept could best be described as follows. Ro-ro stands for the method of cargo handling by which cargo is not lifted on and off board, as in the case of the multipurpose and full container ships for instance, but moved on and off the ship horizontally, on its own or on temporary wheels, via the ramp, a hinged door being lowered onto the quay. Fig. 4 represents a ro-ro vessel equipped with a stern ramp, the type mostly used. Some

ferries (ro-ro vessels that carry passengers, private automobiles and wheeled cargo on the shorter hauls) are equipped with bow ramp and some even with bow and stern ramps.

The congestion of various Middle East and African ports in the 1970's showed the profitability of this type of ship even while on longer hauls. This was mainly caused by the fact that loading and unloading procedures of the ro-ro ship are independent of port facilities, such as cranes. This meant that ro-ro ships could be served in the congested ports immediately, whereas container, and also conventional ships, usually had to wait for the availability of quay cranes. At present (1979) although there are fewer serious congestion problems, ro-ro ships are still being used for long hauls.

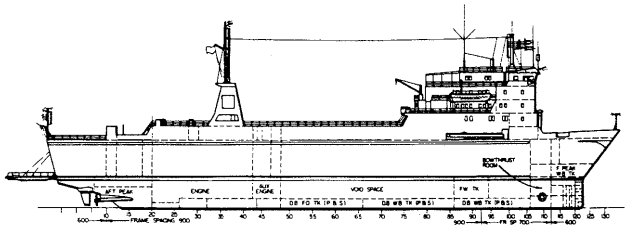
The main reasons behind this are:

- the vessel is independent of cargo handling equipment in port
- the high speed of the vessel and of cargo handling procedures in port enable so-called 'crash-orders' and
- the ship is able to transport voluminous, wheeled, cargoes such as road building and agricultural vehicles, coaches and assembly parts of industrial plants, etc.
- in case of fluctuating import and/or export, the ship may be very useful when contracted on an 'ad-hoc' basis.

Whether this situation will remain, or even increase, is impossible to predict at this moment.

The first types of ro-ro vessels had either bow or stern ramps or both, but later more sophisticated designs were equipped with quarter ramps and, recently, also with so-called slewing ramps. This last type may have a length of up to 50 m and is sufficiently wide and strong to withstand two-way traffic of heavy units of cargo.

Quarter and slewing ramps make the vessel even more independent of ports, because special ro-ro berth facilities such as pontoons and/or bridges may no longer be required.



The Motor Ship May, 1980

Fig. 4. Ro-ro vessel 'TRANSDENIZ' - Turkey

		draught	=	5.51 m
2 400 GRT		speed	=	15.10 knots
3 295 DWT		engine	:	2x2 000 hp
length over all	= 113.40 m	40 ft trailer capa-		
breadth	= 19.20 m	city	:	74
depth	= 13.55 m	container capacity	:	318 TEU

(5) Barge carrying vessel systems

A further development (scale-wise) of the container may be found in the barge carrying vessel (BCV) systems. The basic concept of the BCV is as follows. The mother ship arrives in the port area, where she loads and unloads a certain number of barges and leaves the port again. These operations do not have to be executed alongside a berth, since the barges are floating. The only requirement for barge handling procedures is a relatively large area of water protected from waves higher than about a meter. The additional advantages of these systems are the almost complete independence of port facilities and the relatively easy further transportation from the port to the consignee in the hinterland and vice-versa by means of inland waterways.

The system of barge carrying ships has, until now, not experienced the same tempestuous development, as for instance, containerization. The main reasons for this probably result from the basic conditions for successful barge operations, as will be outlined in the following chapter.

The two major types of barge-carrying vessels that have been developed are the Seabee and the Lash ships.

The Seabee vessel carries 38 barges with a capacity of 850 DWT each. Besides barges, containers can also be transported, either directly placed into a slot or as barge load. The barges are loaded and unloaded by means of a hydraulically operated platform at the U-shaped stern of the vessel.

The Lash vessel is characterized by the following data. The capacity of the vessel ranges from 70 - 85 barges and each barge has a capacity of 380 DWT. In this system the barges are handled by the huge travelling gantry crane of the ship.

A third system, the Bacat (Barge Catamaran), also exists, but has never been successful.

Recently (1978) the USSR started operations with two barge carrying vessels whose barges have even bigger capacities than those of Seabee and Lash, viz.: 26 barges each of 1070 DWT capacity.

Other systems, such as the Baco and the Capricorn are being developed, the main differences being the method of operation and the size and capacities of the barges.

(6) Present state of merchant shipping (1979)

Considering all the described developments and recent reports on merchant shipping, the following may be stated to characterize the present (and possibly future) state of merchant shipping, as far as break bulk cargo is concerned.

1. The multipurpose ship is becoming increasingly multipurpose: she is able to transport almost any type of cargo ranging from conventional general cargo to unit loads, containers, wheeled cargo (via ramp constructions) and even liquid bulk cargo.
2. The full container ships have conquered their specific share of the market and a further increase of container vessels is expected to take place in the next decade, although at a lower pace than in the 1970's.
3. Ro-ro vessels have shown their usefulness under certain conditions. Experts expect this type of vessels to keep their share of world maritime transportation, even though the congested situations, during which they perform most usefully, have ceased to exist in many places.
4. Barge carrying systems have, until now, not been used on a very large scale and it is quite difficult to predict whether this is going to change in the future.
5. Some other specialized ships, such as heavy lift carriers, have also been developed, but their share of the world merchant fleet in number and tonnage is small. They will therefore not be further considered.
6. To indicate the relation of the types of vessels described above to the total world merchant fleet and to the total world general cargo fleet, Table 1 has

been drawn up, which shows the situation in June 1978.

Table 1 - 1

Distribution of all types of merchant ships (⩾100 BRT)
Situation: June 1979
Source: Lloyd's Register of Shipping - Statistical Tables

Type of ship	Number of ships	%	Tonnage (BRT)	%
	1979	1979	1979	1979
All ships	39 671	100	393 047 369	100
General cargo ships (single deck)	10 811	27.3	18 776 542	4.8
General cargo ships (multi-deck)	11 596	29.2	61 440 974	15.6
Full container ships	594	1.5	9 995 812	2.6
Lighter carriers	27	0.1	686 552	0.2
Ro-ro ships	524	1.3	3 047 970	0.8
Live stock carriers	83	0.2	311 394	0.1
Crude oil carriers	6 950	17.5	174 213 276	44.3
Liquified gas carriers	580	1.5	6 676 456	1.7
Chemical tankers	596	1.5	2 078 842	0.5
Miscellaneous tankers	120	0.3	246 596	0.1
OBO & OCO carriers	430	1.1	26 496 001	6.7
Dry bulk carriers	4 208	10.6	81 827 260	20.8
Ferrier & cruisers	3 152	7.9	7 249 694	1.8

(Refer to page 16)

Table 1 - 2

Distribution of all break bulk and mass break bulk ships (⩾100 BRT)
Situations: June 1978 & June 1979
Source: Lloyd's Register of Shipping - Statistical Tables

Type of ship	Number of ships	%	Tonnage (BRT)	%
	1979	1979	1979	1979
All ships	23 635	100	94 259 444	100
General cargo ships (single deck)	10 811	45.7	18 776 542	19.9
General cargo ships (multi-deck)	11 596	49.1	61 440 974	65.2
Full container ships	594	2.5	9 995 812	10.6
Lighter carriers	27	0.1	686 552	0.7
Ro-ro ships	524	2.2	3 047 970	3.3
Live stock carriers	83	0.4	311 394	0.3

– To be concluded in the next issue –

Message from Port of Los Angeles

Dear Dr. Sato:

The Twenty-Fifth Anniversary of the founding of the Association of Ports and Harbors on November 7, 1980, is a most important occasion to the Port of Los Angeles and all member ports. At the Port of Los Angeles we remember with pleasure our involvement in the formation of IAPH and participation in its growth and contribution to world port development and progress.

As we look forward to participation in the conference in Nagoya in 1981, I send on behalf of my fellow commissioners and the staff, sincere congratulations on the Twenty-Fifth Birthday of IAPH and good wishes for continued success in the future.

Sincerely yours,

June Mori, President
Los Angeles Board of Harbor Commissioners

International maritime information: World port news:

Review of Maritime Transport, 1979 by UNCTAD secretariat (Extracts)

THE DEVELOPMENT OF INTERNATIONAL SEABORNE TRADE

In 1978 the total tonnage of seaborne trade remained essentially the same as in 1977, increasing by only 0.1 per cent. However, there were variations in the growth in different cargo sectors: tanker cargoes decreased by 2.2 per cent while dry cargoes rose by 2.7 per cent, mainly as a result of an increase of 3.4 per cent in the tonnage of the main dry bulk commodities. The bulk sector accounted for roughly 80 per cent of world trade (of which 53.3 per cent consisted of tanker cargoes, 19.2 per cent of the major bulk items, and about 7 per cent of the minor bulk items). The remaining 20 per cent consisted basically of cargo carried in the liner sector together with a small percentage of tramp and specialized cargoes for which detailed figures are not available. Table 1 gives details of seaborne trade from 1965 to 1978 (the last year for which complete data are available).

Preliminary figures for 1979 indicate that the total tonnage of world seaborne trade increased by 5 per cent; tanker cargoes increased by around 4 per cent and dry cargoes by about 6 per cent. This increase is attributable to short-term changes in the different cargo sectors rather than to changes in the growth of the world economy. According to preliminary estimates the GDP of OECD countries grew by 3.3 per cent in 1979 (3.9 per cent in 1978), that of developing countries by 5.3 per cent (5.2 in 1978), while the national income of socialist countries increased by about 2 per cent (5.2 in 1978).

Within the tanker sector the variations are mainly attributable to changes in the tonnages imported by the United States of America. In 1978 the tonnage imported decreased following a 4 per cent increase in United States domestic production, and as a result of the existence of stockpiles, but imports rose again in 1979 following an 0.5 per cent decline in domestic production and depletion of stockpiles. Part of the increase in 1979 was also attributable to other petroleum importing countries which were replenishing stockpiles depleted in 1978.

In the dry cargo sector the changes were largely due to the stagnation of the steel industry in 1978, especially in Japan, and its subsequent recovery in 1979, though in 1978 increased grain shipments resulted in an over-all increase in the volume of dry cargoes. In 1979 world steel production increased by around 4 per cent, and that of the world's largest iron ore importer, Japan, by 9.4 per cent. This stimulated an increase in world seaborne trade of iron ore by 8.6 per cent and of coal by 10.2 per cent. Part of this increase also resulted from replenishment of stocks depleted in the preceding year. In addition the tonnage of dry cargoes increased as a result of record levels of grain imports.

Table 2 gives the distribution of seaborne cargoes by countries of loading and unloading from 1965 to 1977 (the last year for which complete data are available). In 1977, developing countries loaded 59.5 per cent of total world cargoes (60.1 per cent in 1976), developed market-economy countries loaded 33.4 per cent (33.2 per cent) and socialist countries 7.1 per cent (6.7 per cent). On the import side the developed market-economy countries unloaded 76.5 per cent (77.2 per cent in 1976), the developing countries 18.2 per cent (17.5 per cent) and the socialist countries 5.3 per cent the same as in 1976.

In 1980 the over-all world economic growth is expected to show an insignificant increase. The growth of real GNP of OECD countries is predicted to be only around 1 per cent, national income is planned to grow at 4.1 per cent in socialist countries of Eastern Europe, and GDP of develop-

Table 1. Development of international seaborne trade, 1965, 1970 and 1975-1978 (goods loaded)

Tanker cargo			Dry cargo				Total (all goods)	
			Total		Of which: main bulk commodities			
Year	Millions of tons	Percentage increase/ decrease over previous year	Millions of tons	Percentage increase/ decrease over previous year	Millions of tons	Percentage increase/ decrease over previous year	Millions of tons	Percentage increase/ decrease over previous year
1965	862	9	812	13	327	6	1 674	11
1970	1 440	13	1 165	13	488	16	2 605	13
1975	1 644	−10	1 428	−3	635	−5	3 072	−4
1976	1 843	12	1 523	6.7	646	2	3 366	9.6
1977	1 891	2.6	1 577	3.5	645	−0.2	3 468	3.0
1978	1 850	−2.2	1 620	2.7	667	3.4	3 470	0.1

Table 2. World seaborne trade in 1965, 1970, 1976, 1977 and 1978 by types of cargo and shares of groups of countries (Millions of tons and percentages of world total)

Country group	Year	Goods loaded				Goods unloaded			
		Petroleum		Dry cargo	Total all goods	Petroleum		Dry cargo	Total all goods
		Crude	Products			Crude	Products		
1	2	3	4	5	6	7	8	9	10
		(Trade in millions of tons)							
World	1965	622	240	812	1 674	622	222	832	1 676
	1970	1 110	330	1 165	2 605	1 101	302	1 127	2 530
	1976	1 555	289	1 522	3 366	1 522	312	1 518	3 352
	1977	1 599	293	1 576	3 468	1 585	321	1 536	3 442
	1978	← 1 850 →		1 620	3 470	← 1 831 →		1 609	3 440
		(Percentage share of each category of goods in total)							
World total	1965	37.2	14.3	48.5	100.0	37.1	15.2	49.7	100.0
	1970	42.6	12.7	44.7	100.0	43.5	11.9	44.6	100.0
	1976	46.2	8.6	45.2	100.0	45.4	9.3	45.3	100.0
	1977	46.1	8.5	45.4	100.0	46.1	9.3	44.6	100.0
	1978	← 53.3 →		46.7	100.0	← 53.2 →		46.8	100.0
		(Percentage share of trade by groups of countries)							
Developed market-economy countries	1965	0.1	23.3	55.9	31.3	78.9	79.0	76.5	78.1
	1970	2.0	27.1	60.0	31.1	80.4	79.6	79.5	79.9
	1976	5.4	29.8	62.3	33.2	80.4	78.5	73.6	77.2
	1977	5.3	30.2	62.5	33.4	80.7	79.1	71.7	76.5
Socialist countries of Eastern Europe and Asia	1965	4.6	8.9	8.2	6.9	0.4	1.0	5.9	3.1
	1970	3.4	8.0	8.1	6.1	1.7	1.1	5.8	3.5
	1976	4.5	13.8	7.5	6.7	2.8	2.6	8.4	5.3
	1977	5.0	16.5	7.4	7.1	3.1	2.5	8.1	5.3

ing countries is predicted to grow at 5.9 per cent, but the purchasing power of exports of non-oil-exporting developing countries is predicted to increase by only 1 per cent. The levelling off of economic growth, especially of the industrialized countries, coupled with expected increased efforts at oil conservation caused by high oil prices, is likely to reduce the volume of the seaborne trade in oil. However, uncertainties about future oil supplies may increase the demand for oil stockpiles in the main consuming areas and this may prevent a large decline in the oil trade.

In the dry cargo sector, growth of seaborne trade in 1980 is likely to be restrained by limited growth of world industrial production and other international developments. Growth of industrial production in OECD countries is expected to be as low as 0.75 per cent, and steel production is likely to stagnate or even decline during the year. This will in turn reduce the growth of seaborne trade in iron ore and coal. However, while coal trade has traditionally been linked to steel production levels, its use in power generation as a substitute for oil has been increasing and for this reason seaborne trade in coal may actually increase at least by around the same rate of growth as in 1979.

In the grain trade, the demand for imports in some of the major customary and new importing countries was expected to lead to a substantial increase of at least 10 per cent in grain shipments in 1980. However, recent international political developments may reduce significantly the tonnage which will actually be shipped, but the extent of the reduction cannot be determined at present. The growth of general cargo and minor dry bulk cargoes is likely to be less than the estimated 5.8 per cent growth attained in 1979.

PORT DEVELOPMENTS

Demand for port services

The volume of goods loaded provides a measure of demand for port services. As noted in Chapter I, the seaborne tonnage of goods loaded in 1979 remained essentially unchanged from 1978. However, while tonnage of tanker cargo declined, dry cargo tonnage increased by 2.7 per cent, of which dry bulk cargo increased by 3.4 per cent. Since dry cargo generates greater demand for port facilities and employment, these tonnage changes represented an over-all increase in the demand for port services.

During 1978 container traffic continued to increase in the trades of the developing countries. The container trade entails specialization or at least conversion of break-bulk quays to multi-purpose terminals. Such modifications need finance and expertise. Handling must be reorganized, labour converted and trained, equipment specialized, quay-walls strengthened and often channels and deep water quays further dredged to satisfy the needs of cellular vessels. This modification of the demand structure to the detriment of non-unitized break-bulk cargoes imposes an adaptation of the supply of port services, especially in the newly introduced container trade routes such as those to West Africa and the Caribbean.

Table 3 presents the container traffic figures in TEU of 34 selected ports in developing countries. The number of TEU handled by these 34 developing country ports increased by 31 per cent over the previous year, whereas the world total increased by 17.6 per cent. This difference underlines the expansion of the container increased by 17.6 per cent. This difference underlines the expansion of the container trade in the developing regions.

Growth has been unevenly distributed. Newly introduced ports such as Bandar Khomeini, Cotonou, and Tema show clearly high growth rates. The South American and the South Pacific regions account for substantial container traffic increases. The major Asian ports of Hong Kong, Singapore, Busan, Manila, Bangkok and Port Kelang continue to remain in the forefront. Growth, however, is greatest in the Middle East, where substantial new facilities have recently been commissioned as indicated by the growth rates in Table 3. As a result, several ports in the Middle East have increased their prominence among the world's container ports: the port of Jeddah, which was the world's 27th most important port in terms of container traffic in 1977, became the 22nd most important; Damman improved its ranking from 83rd to 41st; Dubai from 82nd to 49th; Shuwaikh from 80th to 63rd; and Sharjah from 104th to 95th.

Adequacy of Port Services

An indicator of congestion used in earlier Reviews is the average of waiting times before berthing for general cargo ships, as reported for a number of ports intermittently subject to congestion. Figures for the first four months of each year since 1971 show the following progression:

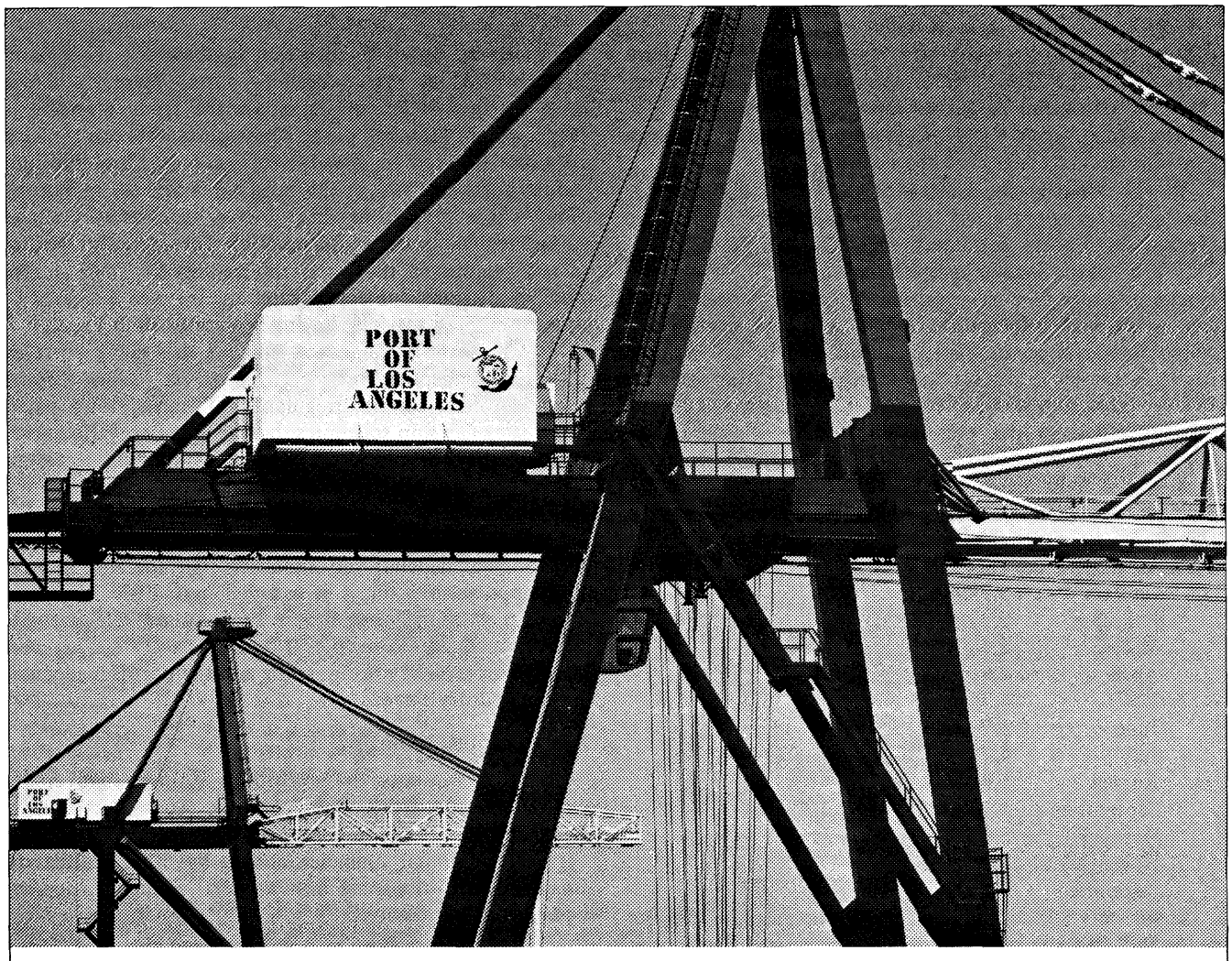
Year	1971	1972	1973	1974	1975	1976	1977	1978	1979
Average of waiting days per ship	2.2	2.3	4.0	4.8	14.5	39.5	22.0	6.8	5.4

These figures are not representative of world-wide conditions, but they show how conditions have developed in

Table 3. Container traffic in selected ports of developing countries, 1978

Country or territory	Port	Container traffic 1977 in TEU	Container traffic 1978 in TEU	Per cent change 1978 over 1977
Hong Kong	Hong Kong	1 258 782	1 226 256	– 3
Singapore	Singapore	373 510	539 379	+ 44
Rep. of Korea	Busan	454 862	506 556	+ 11
Saudi Arabia	Jeddah	219 128	340 537	+ 55
Philippines	Manila	169 174	209 976	+ 24
Saudi Arabia	Dammam	55 264	158 445	+187
Nigeria	Lagos/Apapa	86 672	143 964	+ 66
Jamaica	Kingston	82 933	143 297	+ 73
United Arab Emirates (UAE)	Dubai (Port Rashid)	55 438	136 046	+145
Thailand	Bangkok	72 873	120 169	+ 65
Malaysia	Port Kelang	82 273	98 913	+ 20
Kuwait	Shuwaikh	59 374	91 246	+ 61
Iran	Bandar Khomeini	–	68 604	–
Brazil	Santos	45 566	59 090	+ 30
Honduras	Puerto Cotes	47 545	55 986	+ 18
UAE	Sharjah (PK)	35 665	54 205	+ 52
Morocco	Casablanca	45 000	52 000	+ 16
Rep. of Korea	Inchon	43 612	47 562	+ 9
Indonesia	Tanjung Priok	29 003	43 054	+ 48
Bahrain	Mina Sulman	–	38 953	–
Trinidad	Port of Spain	28 112	36 384	+ 29
Bahamas	Nassau	29 032	33 652	+ 16
Malaysia	Penang	18 037	23 998	+ 33
Cameroon (United Rep.)	Douala	17 173	21 584	+ 26
Papua New Guinea	Lae	–	19 521	–
Brazil	Rio de Janeiro	–	19 363	–
India	Bombay	8 027	13 599	+ 69
Chile	Valparaiso	7 038	13 214	+ 88
Papua New Guinea	Port Moresby	–	12 533	–
Jordan	Aqaba	7 066	11 587	+ 64
Iran	Bandar Abbas	4 092	8 830	+116
Kenya	Mombasa	4 303	8 643	+101
Benin	Cotonou	–	5 865	–
Ghana	Tema	1 445	5 017	+247
TOTAL		3 340 999	4 368 023	+ 31
Percentage share of world total container (TEU) traffic handling		14.5%	16.5%	

(Continued on page 28)



We're investing $1 million a week to stay No. 1 in the West.

Between now and 1982 Port of Los Angeles will invest $250 million to keep a firm grip on its position as the cargo capital of the West.

Thirty-two major projects will be undertaken to improve services and expand land resources.

The main channel will be deepened from 35 ft. to 45 ft. and widened to help provide smooth handling and safe navigation for the world's largest ships. The 16 million cubic yards of material dredged up from the bottom will be used with landfill and backland development to create 1000 additional acres of land in the Port's Outer Harbor and double its shiphandling capability.

Part of this increase will come from the new Seaside Container Terminal complex now being developed. With a 5000 ft. all-concrete wharf, six cranes and 135 acres of backland, it easily handles six containerships at berth and will be one of the largest and most efficient terminals in the world.

Whether the investment creates new services or improves existing ones, the Port's modern cargo handling methods — including 14 giant container cranes with total estimated lift capacity of 360 containers/hour — will reduce ship turnaround time.

PORT OF LOS ANGELES

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regions which have been most severely affected by port congestion. The latest figures show that the position has stabilized after the period of acute widespread port congestion which began in 1974; however, this stability involves a greater level of congestion than before.

It was noted in the Review of 1978, that the information about affected ports was increasing, there being an average 28 reports per month in 1971 and 54 in 1978. This has been further emphasized in 1979, when the average number of ports reported monthly has risen to 67. The additional information seems to come from ports which were not previously congested, which may reduce, from an over-all viewpoint, any improvement from 1978 to 1979 suggested in the Table above. Clearly, there is potential for much serious congestion if there should be an upturn in trade in regions served by these ports.

Monthly ship delay figures for the whole of 1979 indicate that later in the year the conditions tended to deteriorate. The same indicator calculated on a monthly basis throughout the year is as follows:

January	:	5.9 days
February	:	5.2 "
March	:	5.7 "
April	:	4.8 "
May	:	4.3 "
June	:	3.7 "
July	:	4.7 "
August	:	5.4 "
September	:	5.7 "
October	:	6.9 "
November	:	7.3 "
December	:	7.8 "

Some variation results from the erratic nature of reports published, but the deterioration in the second half of the year is clear.

A little more explanation of trends can be derived from a regional analysis of congestion reports. Figures are shown in Table 4 for 1978 and 1979. Ports most affected by congestion in 1979, as in 1978, lie in the Mediterranean. Although the average delay has fallen between 1978 and 1979, the number of reports has increased, so the problem seems to have spread. The situation in the ports covered in Africa other than the Mediterranean has improved markedly, whereas it has deteriorated marginally in the remainder of Western Asia. The other significant change has been an increase in the number of reports from Southern and Eastern Asia: this results particularly from acute congestion which has affected most ports of the Indian sub-continent, from Karachi to Chittagong; a number of these ports have been subject to congestion for some time but this has more recently spread to virtually all the deep-water ports.

Table 4. Congestion reports by region—changes over the year

Region	Average number of ports reported on each month		Average of waiting times per ship (day)	
	1978	1979	1978	1979
Mediterranean	6	10	9.7	8.5
Africa other than Mediterranean	23	23	8.6	4.0
Western Asia other than Mediterranean	14	14	2.9	4.0
Southern and Eastern Asia	8	13	6.4	7.0
South and Central America and Caribbean	5	6	3.6	3.7

A separate indication of the existence of congestion is the imposition of congestion surcharge by liner companies. During 1979, the attention of the UNCTAD secretariat was drawn to the levy of congestion surcharges in 59 separate ports as well as three ranges of ports—where a common feature, such as labour unrest or the ready diversion of cargo, would affect all ports. These ports were not identical to those referred to already; for instance 12 of the individual ports and two of the ranges of ports lay in Europe, from where reports of ship waiting were rarely available to be included in the earlier analysis. Therefore ship waiting is not limited to the ports referred to in Table 4. The number of ports subject to surcharge reports increased by nine from 1978 to 1979, having been only 50 in 1978.

The reports of congestion indicate that many ports are providing inadequate service to the trades passing through them. Given a certain irregularity of traffic flows—partly from irregular ship schedules, but also due to variations in the quantity and nature of cargoes moving—a certain amount of ship waiting is unavoidable. However, when this waiting becomes extensive, it cannot be economic. But potentially, the problem is much more serious; a country's development depends very much on its trade and, in order that opportunities may be grasped and difficulties overcome, it is crucial that a port can respond effectively to sudden increases in traffic. Where ports are already congested, this is clearly not possible and the port is inadequate for the country's needs.

Port development finance

Table 5 presents the evolution of loans and credits granted by the World Bank and the Asian Development Bank for port development over the decade 1970-1979. Figures for similar financial lending by other multilateral financial institutions and on a bilateral country-to-country basis are not obtainable.

Table 5. Summary of port financing, 1970-1979
(in 1,000 dollars in current and 1970 purchasing value terms)

Year	World Bank	Asian Development Bank	Nominal yearly total	Yearly total in 1970 purchasing value
1970	25 200	14 410	39 610	39 610
1971	68 600	8 350	76 950	68 890
1972	84 700	11 050	95 750	82 829
1973	123 750	60 840	184 590	129 901
1974	226 300	15 100	241 400	137 315
1975	0	4 500	4 500	2 538
1976	102 900	48 700	151 600	80 042
1977	248 900	30 070	278 970	131 342
1978	67 500	28 100	95 600	40 287
1979	92 500	150	92 650	35 634
TOTAL	1 040 350	221 270	1 261 620	748 388

In nominal value, financing of port development increased through most of the decade but fell off in the final years.

The situation appears rather different if the nominal value figures of yearly loans are expressed in 1970 dollar purchasing value terms. Yearly loans have been corrected (col. 5, Table 5) to take into account both world inflation and the fluctuations of the principal trading currency over the decade. The decline in the real purchasing value of port financing in 1978 and 1979 seems surprising in the light of both the increase in demand for developing country port facilities and the high cost of modern handling equipment.

The total amount of loans and credits granted for port

development by the World Bank and the Asian Development Bank over the decade amounted to $1.26 billion in nominal value, which corresponded to $748 million in terms of United States dollars of 1970 purchasing power.

Tables 6, 7 and 8 present a detailed list of finance, in nominal value, provided by the World Bank, the Asian Development Bank and the Caribbean Development Bank respectively, over the period 1970-1979 to developing countries. Where possible, the components of the finance involved are indicated in four different categories.

Table 6. Financial institution: WORLD BANK Loans and credits to developing countries (Period: 1970 - 1979 inclusive)

YEAR	COUNTRY (in chronological order)	LOAN L or CREDIT C (Third Window TW)	AMOUNT $ '000	TOTAL PROJECT AMOUNT $ '000	Involving CW	HE	CS	TA	LOCATION
1975	–	–	–	–					
1976	Honduras	L	3 000	6 700	x	x	x		2nd port Puerto Cortes and Henecan/San Lorenzo
	Nicaragua	L	5 000	27 600	x		x	x	2nd port of Corinto II.
	Democratic Yemen	C	3 200	17 600		x		x	Aden port rehabilitation
	Somalia	C	5 200	6 500	x				Mogadiscio port extension
	Mauritania	C	8 000	27 600	x		x	x	Nouadhibou port
	Egypt	L	45 000	151 000	x		x	x	Alexandria port
	Ecuador	L	33 500	83 600	x	x	x	x	2nd Guayaquil port
			102 900						
1977	Guatemala	NA	2 300	3 000	x	x	x		Ports
	Cameroon	C	10 000	120 200	x		x		Douala II
	Cameroon	L	15 000						
	Indonesia	L	32 000	79 300	x	x	x	x	Tanjung Priok port
	Mauritius	TWL	3 600	7 400	x	x	x	x	Port (supplement)
	Burma	C	10 000	16 200		x	x	x	2nd port
	Honduras	TWL	5 000						
	Honduras	L	7 000	29 900	x	x	x	x	Puerto Castilla and San Lorenzo
	Honduras	C	5 000						
	Republic of Korea	L	67 000	111 900	x	x	x	x	2nd port Busan
	Senegal	TWL	6 000	24 000	x		x	x	Dakar port II
	Algeria	L	80 000	352 400	x		x	x	Jijel port
	Yemen	C	6 000	27 900	x	x	x	x	Hodeida and Mocha ports
			248 900						
1978	Sudan		22 000	64 000	x	x		x	Port Sudan
	Cyprus		8 500	29 500	x	x		x	2nd ports
	Papua N.G.		3 500	10 500	x		x	x	2nd ports
	Haiti		4 000	20 500	x		x		Ports (and transport)
	Malaysia		13 000	26 000	x	x	x	x	2nd Sabah ports
	Benin		11 000	46 100	x			x	Cotonou port
	Somalia		5 500	NA	x				Ports IV Mogadiscio
			67 500						
1979	Tunisia	L	42 500	74 990	x	x		x	La Goulette and Sfax ports Ports III
	Uruguay	L	50 000	101 200	x	x	x	x	Montevideo port
			92 500						

Table 7. Financial institution: ASIAN DEVELOPMENT BANK Loans to developing countries (Period: 1970 - 1979 (June))

YEAR	COUNTRY (in chron. order)	LOAN AMOUNT $ '000	Involving Infra-struct.	Involving Tech. Assist.	LOCATION
1975	Indonesia	4 450	x	x	Belawan & Surabaya ports
	Regional	50		x	Seminar port planning and management
		4 500			
1976	Pakistan	48 600	x		Port Qasim I & II
	Solomon Is.	50		x	Honisara port development
	Thailand	50		x	Songkhla & Phuket ports
		48 700			
1977	Burma	250		x	Outports study
	Fiji	90		x	Suva port development
	Indonesia	17 500	x		Fourth port
	Indonesia	150		x	Surabaya port phase II
	Malaysia	10 000	x		2nd Penang port expansion
	Solomon Is.	2 030	x		Honiara port development
	Solomon Is.	50		x	Port tariff and accounting management study
		30 070			
1978	Indonesia	26 300	x		Fifth port
	Indonesia	150		x	Belawan port phase II
	Korea (Republic of)	150		x	Second Inchon port
	Thailand	1 500	x		Songkhla & Phuket ports development
		28 100			
1979	Papua N.G.	150		x	Lae Port development

Table 8. Financial institution: CARIBBEAN DEVELOPMENT BANK Loans to developing countries (Period: 1970 - 1979 (June))

YEAR	COUNTRY (in chron. order)	LOAN AMOUNT $ '000	Involving Infrastruct.	Involving Tech. Assist.
1970-1979 (June)	(Belize	9 873	x	
	(Cayman Is.	3 249	x	
	(Dominica	5 311	x	
	(St. Lucia	2 254	x	
	(St. Kitts/Nevis/Anguilla	5 634	x	x
	(Jamaica	635	x	
	(Montserrat	228	x	
	TOTAL	27 184		

Brazilian ports & waterways news in brief

- Engineer Otto Entres, specializing in harbour works, has sent a document to the Presidency of the Republic, where he defends the construction of a large port in Araranguá (State of Santa Catarina) for the exportation of coal from Santa Catarina.
- A number of dredging works and navigation aid services shall take place, in order to enable the Port of Porto Alegre to receive again vessels of larger deadweight.
- 300 kilometers more of waterways of the system formed by the River Tietê and its affluents are to be delivered before mid 1980 to the population of the State of São Paulo.
- Portobrás is going to invest this year 18.6 billion cruzeiros, mainly in works at terminals connected to the export corridors. The Tax for Improvement of the Ports is going to collect this year 11 billion cruzeiros.

- The Port of Belém is the ninth in Brazil to install a Council of Users, where the interested parties shall discuss the problems related to services performed by the port.
- The call for bids has been announced for the works of enlargement of the Port of Recife. The main part is the construction of a quay of over 1,000 m for the installation of a terminal for fertilizers and general cargo.
- The Navy's Agency for Hydrography and Navigation (DHN) is studying the conditions of navigability of the River Pará, from its estuary up to Vila do Conde, where a terminal for the exportation of aluminum is to be installed.

Duke Point signing makes Nanaimo B.C.'s biggest lumber products exporter

The $20.5 million bill for the Duke Point Port is to be shared almost equally between the province of B.C., the federal government and the Nanaimo Harbour Commission. The province has donated the 67 acre site, valued at $7.5 million, the federal government contributed $6 million and the NHC's share is $7 million which it will raise through the revenue generated through the Port of Nanaimo together with loans.

Construction will begin soon after the awarding of contracts, and final completion is expected by Fall 1982.

The Duke Point Port, which will be run by the NHC together with their current facility in the Inner Nanaimo Harbour, will be a first stage comprising one deep-sea wharf, one floating barge terminal for Roll-On, Roll-Off vessels, and 15 acres of blacktopped assembly wharf area.

Future stages, include a second deep-sea wharf, a second barge berth a further 240,000 square feet of warehousing, and more blacktopping. The NHC has also built into its plans the potential for expansion of the first berth to accommodate two vessels.

The first user for the port will be the new Doman sawmill already built at Duke Point.

Provincial Economic Development Minister Don Phillips, who was a signatory to the contract, said afterwards that the port agreement means "Nanaimo will now go ahead to fit the role which was always intended as the industrial centre of Vancouver Island."

Phillips predicted the port would create an estimated 6,400 jobs in the city, an increase of 25 per cent in the local work force.

NHC chairman Don Rawlins, who has pushed for the port ever since he assumed office two years ago, was a very happy man following the announcement.

At a press conference in Nanaimo after the signing, he and visiting federal Transport Minister Jean-Luc Pepin both made mention of the boost the new port will mean to the local economy.

"We've been pushing for this port in one form or another for eight years now," Rawlins said, "and it's a source of pride for all the Commission members to have our plans finally resolved so well."

National Port Week, 1980 designated

By the President of the United States of America; A Proclamation

Our Nation's seaports and river ports, operated by local and State authorities, are indispensable to our national prosperity and international commerce.

Historically, waterborne commerce has been a key element in the development and growth of most of the Nation's major population and commercial centers. Today public and privately owned marine terminals, valued at about $54 billion, are expected to handle almost two billion short tons of foreign and domestic oceanborne cargo in 1980.

In addition to the economic benefits provided by our ports, they play a leading role in logistical support of our military forces. Our port system has been and will continue to be vital in maintaining our national security.

The Congress has by House Joint Resolution 551 requested the President to designate the seven calendar days beginning October 5, 1980, as National Port Week.

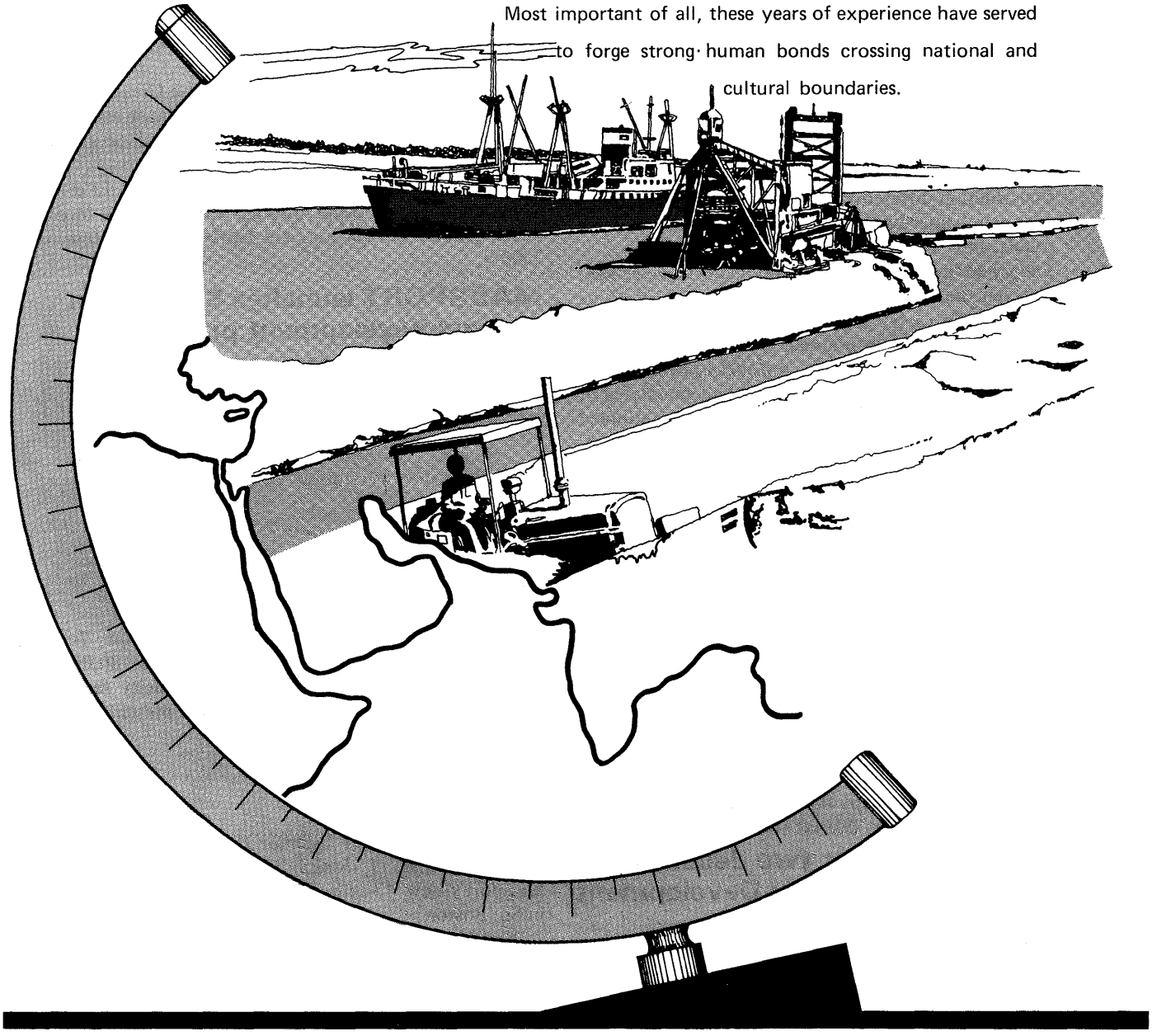
NOW, THEREFORE, I, JIMMY CARTER, President of the United States of America, in order to remind Americans of the importance of the port industry of the United States to our national life, do hereby designate the seven calendar days beginning October 5, 1980, as National Port Week. I invite the Governors of the several States, the chief officials of local governments, and the people of the United States to observe such week with appropriate ceremonies and activities.

IN WITNESS WHEREOF, I have hereunto set my hand this third day of October in the year of our Lord nineteen hundred and eighty, and of the Independence of the United States of America the two hundred and fifth.

JIMMY CARTER

Creating is our business.

We add human ingenuity to nature and create new land, make and maintain waterways and harbors all for the benefit of mankind. In the Near and Middle East, we have successfully cooperated and worked together with local technicians in numerous large and small-scale projects since 1961, such as widening and deepening the Suez Canal, so we are thoroughly familiar with the area and work involved. Most important of all, these years of experience have served to forge strong human bonds crossing national and cultural boundaries.



We help countries to build their future.

PENTA-OCEAN CONSTRUCTION CO.,LTD
五洋建設

Head Office: 2-8, Koraku 2-chome, Bunkyo-ku, Tokyo 112, Japan Telephone: (03) 816-7111 Cable Address: OCEANCONST TOKYO
Telex: 2723054 OCEAN J Overseas Office: Singapore, Iraq, Qatar, Egypt.

MARAD 1979

MARAD 1979, the annual report of the U.S. Maritime Administration for fiscal year 1979, released just recently, provides an informative review of the agency's activities and U.S. maritime policies and programs in general. It describes the general status of the U.S. merchant marine and the national maritime industry, and details MarAd's shipbuilding, ship operations, research, training, and other related activity. During FY 1979, the following significant developments were reported:

- The privately-owned, oceangoing U.S. merchant fleet reached a record carrying capacity of 20 million deadweight tons;
- Fifty-six new merchant vessels totaling 2.9 million dwt and valued at $3.4 billion were under construction or on order at U.S. shipyards;
- Twenty new merchant vessels were delivered by American shipyards, including the 390,770 dwt U.S.T. Atlantic, the largest ship ever built in the U.S.,
- Construction-differential subsidy was granted for 14 new merchant vessels and the reconstruction of three others, and
- Talks were initiated on a bilateral maritime agreement between the U.S. and the Peoples Republic of China in May 1979.

Regarding port and intermodal development, MarAd continued to coordinate national, regional, state and local efforts to support the U.S. port industry, and completed or continued work on various port studies. It also continued its port and intermodal equipment and facilities program. Furthermore, working through its regional offices, MarAd served as technical consultant on port projects administered by the Economic Development Administration. EDA grants and loans for port-related projects, according to the report, have exceeded $288 million since 1965. Studies completed or underway during FY 1979 were the national port assessment, U.S. port development expenditure survey, the public port liability insurance study, local port economic impact methodology, regional input-output port impact prototype, and the national trade/vessel data analysis report. It also worked in cooperation with other federal agencies in the development of a marketing program for the Great Lakes.

MARAD 1979 is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Stock number: 003-007-00102-9. Price: $4.75.

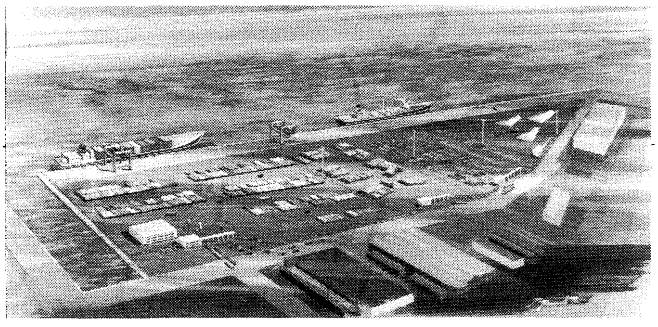
Seaway results after two decades: Saint Lawrence Seaway Development Corporation

"The Seaway" in the strictest sense is that part of the international water route which extends from Montreal to Lake Erie. In a broader sense, "the Seaway" is the waterway from the Upper Midwest to the ocean. It is jointly operated by the Seaway Corporation and the St. Lawrence Seaway Authority of Canada—a partnership that President Jimmy Carter in 1979 termed "a model of bi-national cooperation." When opened, this vital waterway linked the Great Lakes with the Atlantic Ocean to form a 2,300-mile navigation system for worldwide commerce.

The following highlight some of the notable results of the Seaways's first two decades:

- Total cargo volume shipped through the Montreal-Lake Ontario section since its opening amounts to over 800 million metric tons.
- Annual tonnage moved through the same section during that period has tripled, averaging over 55 million metric tons in recent years.
- The navigation season of the Seaway since 1959 has been extended about four weeks by the Seaway entities.
- The U.S. portion of the Seaway has proved to be a good financial investment. Through 1979, the Seaway Corporation returned to the Treasury over $60 million in construction debt and interest payments. This was accomplished after meeting all Corporation operating and capital improvement expenses, and without additional appropriations from the Federal Treasury.
- Many of the major harbors on the Great Lakes were transformed into international seaports as a result of the opening of the Seaway, and many have since undergone substantial expansion.
- Annual direct income benefits to Great Lakes ports from commerce moving through the Seaway's Montreal-Lake Ontario section now are estimated to be close to $2 billion.

MASSPORT launches $80 million seaport development project



Once fully operational, the Massport Marine Terminal (model shown above) will be able to handle 80,000 containers per year, increasing container capacity facilities in the Port of Boston 50 percent beyond its present level.

Massport Executive Director David W. Davis was joined by Congressman J. Joseph Moakley to officially launch Massport's new 47-acre, $80 million containerport project in So. Boston.

The Massport Marine Terminal, as it will be called, will be built over a ten-year period and, when fully completed, will handle 80,000 containers each year, more than doubling container capacity in the Port of Boston.

Davis called the project "the cornerstone for the rebirth of the Port of Boston," and said, "it will create 2,000 jobs and pump $10 million annually into the regional economy."

The Port of Boston, the nation's oldest working port, is now the fifth busiest port on the North Atlantic and the eighteenth busiest port in the U.S. Last year, the Port of Boston handled over one million tons of general cargo—from automobiles and lumber to raw materials for manu-

"De-Hum" Drums

Definitely not "hum-drum" were these 14,734 drums of insecticide recently moved through the Port of Charleston. Containing some 810,370 gallons of insecticide, the Boots Hercules barrels weighed 4,547 tons, easily the largest volume of chemicals ever handled here in a single shipment. H.R. Powell, the South Carolina State Ports Authority's North Charleston Terminal manager, (right) shows the palletized cargo to Donald B. Petraitis, Operations manager for Boots Hercules.

facturing industries—whose value is in excess of $2 billion.

The Massport Marine Terminal is the first major seaport development project in the Port of Boston in a decade.

The first phase of the project, which will cost in excess of $25 million, involves constructing a 3,800 ft. long dike, and filling 37 acres of water with 1,700,000 cubic yards of fill. During the time required for the land to settle and consolidate, it will be used for the open storage of automobiles, lumber, steel, and similar commodities.

The second phase of the project involves the progressive conversion of the site to a container facility and will cost more than $50 million.

Massport, which moved a record amount of cargo through its facilities this past year, is also completing work on a $15M expansion of its Castle Island Container Terminal in So. Boston, a $10M upgrading of its Moran Container facility, and is embarking on phase two of its $12.6M modernization project for the Boston Fish Pier.

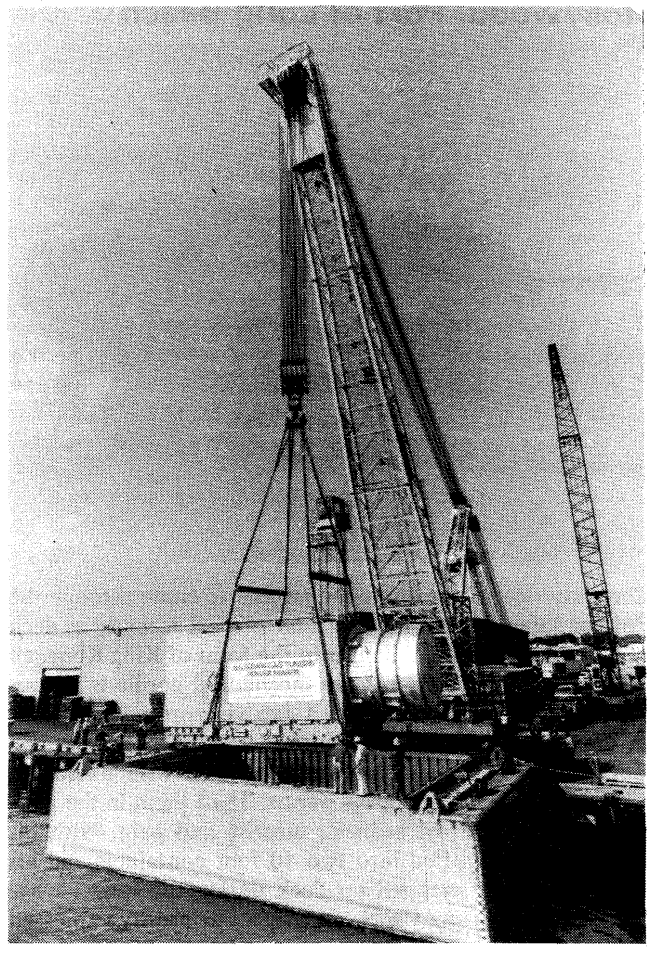
Massport trade program goes national

The Massachusetts Port Authority's Small Business Export Program is about to be adopted nationally as the primary model for promoting overseas sales for small U.S. companies.

Implementation of the program became imminent when the U.S. Senate recently passed the legislation, and sent it to the White House where President Carter is expected to sign it into law.

The legislation, which was filed by Congressman J. Joseph Moakley of Boston and Senator Gaylord Nelson of Wisconsin, creates a small business international marketing program patterned after Massport's successful program in ten regions of the country to stimulate export trade for small business.

Operation Powerhouse



One good "powerhouse" deserves another, so the Port of Charleston's 400-ton derrick, affectionately known as "The Monster", gives a 105,600-kilowatt General Electric turbine a big lift into its waiting ocean barge. Built in Greenville, S.C., the power unit is the largest of its kind ever exported from the United States. It can produce enough power to light up a city of 100,000 inhabitants. Weighing more than 210 tons, the turbine is 15 feet wide, 34 feet long and stands nearly 21 feet high.

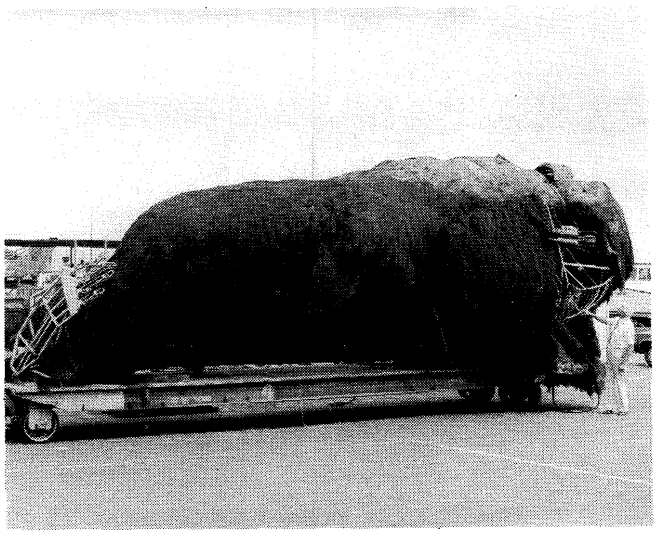
Massport Executive Director David W. Davis said that Massport launched the unique Small Business Export Program in 1977 after a review of its existing trade promotion efforts and based upon discussions with the Smaller Business Association of New England (SBANE).

Under the Massport program, thirty-one New England companies have participated in five trade missions which have produced actual export sales of $5 million for New England companies.

State Ports Authority appeals county tax assessor's decision

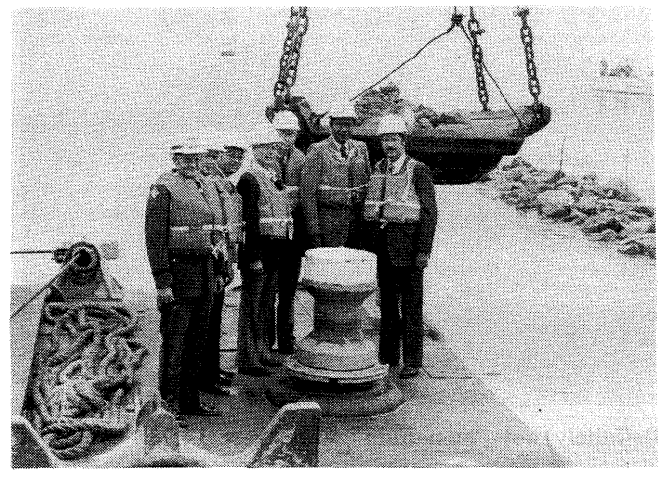
The South Carolina State Ports Authority and other state agencies have been affected by a state statute which makes any state property not used exclusively for the public purposes subject to tax. The Charleston county tax

King Kong heading home to Hollywood: Port of Long Beach



Certainly one of the strangest cargoes to come through the Port of Long Beach in a long time arrived recently as deck cargo aboard the MS Villanger in the form of King Kong, all 40 feet of him. The 6-1/2 ton mechanical gorilla is returning home to Hollywood from a two year promotional tour in Brazil, according to the film producer Dino de Laurentis. Constructed of duraluminum and covered with horsehair, King Kong has 75 animation points, 35 of them in the face, and can express joy, sadness, surprise and pain. With his arms and feet stuffed into two 40 foot containers and his body and head strapped on deck during the long voyage through the Panama Canal, we suspect he mostly expressed pain.

Construction ends 16 years of planning



Placement of the first rocks for a dike in the Outer Harbor of the Port of Los Angeles on October 6, 1980, marked the beginning of work on the harbor's long-awaited Main Channel Deepening Project. On hand to inspect the construction site are (from left) Col. Gwynn Teague, District Engineer for the Los Angeles District, U.S. Army Corps of Engineers; Sen. Robert Beverly; Los Angeles Harbor Commission President Jun Mori; Congressman Glenn M. Anderson; Irvin Garms, President of Potashnick Construction Co.; Mayor Tom Bradley and Assemblyman Gerald Felando. Actual dredging for the 30-month joint project between the Port and the Corps will begin early next year with an electric dredge now enroute from the Cape Girardeau, Mo. headquarters for the Potashnick firm. The dike will enclose a 190-acre landfill to be created by the over 14 million yards of materials dredged from the harbor bottom.

assessor in each instance has been required, therefore, to appraise and assess state properties which, in his determination, are not used for public purposes. The question raised by the SPA does not concern the evaluation of these properties, but the basic question of exemption.

The current appeal by the SPA is an administrative procedure. Other possibilities for relief being considered by various state agencies include appeal through the State Circuit or State Supreme Court.

High bridge being constructed over Houston Ship Channel

If the Astrodome could float, it would surely draw at least eight or nine feet of water, meaning it could easily pass under the Houston Ship Channel Toll Bridge now under construction about 10 miles downstream from the Port of Houston Turning Basin.

While it is unlikely that the Astrodome will ever be floated down the Channel, the example gives an idea of the magnitude of the job of providing a fourth Channel-crossing structure to move traffic in the booming waterfront industrial area.

Construction of the bridge began in May 1979.

Now almost two-thirds completed, the bridge is within its $102 million budget and on schedule for opening in January, 1982, said John W. Wight, Engineer-in-Charge for Howard Needles Tammen & Bergendoff of Kansas City, the consulting engineers with overall supervisory responsibility for the project.

The two-mile-long bridge will be part of Beltway 8, an outer loop that will eventually encircle Houston at a distance of approximately 12 miles from downtown. The concrete bridge will connect Interstate Highway 10 on the north side of the Channel and State Highway 225, some 4.2 miles away on the south side.

It has been named the Jesse H. Jones Memorial Bridge in honor of the late Houston philanthropist, business and civic leader. Mr. Jones once owned property at the site of the bridge. He was one of the early advocates of dredging Buffalo Bayou to make Houston a seaport and he was Chairman of the first City Harbor Board.

Length of the main span of the bridge will be 750 feet and horizontal clearance between the piers will exceed 700 feet. That makes it a record span in North America and the third longest in the world of its type, a cast-in-place, segmentally constructed box girder.

National Port Week 1980 observed in Port of NY & NJ with a comprehensive discussion

The Port Week program was held on October 8, at the New York City Passenger Ship Terminal, under the joint auspices of the Port Authority, the City of New York, and the New York-New Jersey Port Promotion Association.

Peter C. Goldmark, Jr., Executive Director of the Port Authority, moderated the discussion, with participants from five public and private agencies summarizing progress in the past year on port organization, energy logistics in the Port, navigation and channel improvements, dredging, and waterfront cleanup.

Alongside the pier where the program was being held, a number of varied harbor craft, from police and fire boats to tugs, and U.S. Coast Guard buoy tenders and cutters to an Army Engineers' drift collector, were on display at Berths 3 and 4. The Sandy Hook Pilots were represented by a pilot boat in the exhibit, whose theme was "Our Port at Work;" and the New York Dock Railway, by a rail carfloat and tug. Witte Heavy Lift's 500-ton capacity floating derrick, "Century," completed the wide range of service vessels required for safe and efficient operation of the Port.

National Port Week is set aside each year to emphasize the contributions of the nation's ports to the U.S. economy. This year, for the first time, Congress in passing the resolution making this week National Port Week, also ordered the Secretary of Commerce to report each year on the state and health of the nation's ports.

"About four years ago, the Maritime Administration asked the Port Authority to measure the economic effect of the nation's ports on the national economy," Port Authority Executive Director Peter Goldmark noted. "Pleased with the first step, Marad asked the Port Authority to prepare a similar instrument to measure the economic impact of any one port on its own region," he added. "The guinea pig, naturally, was the Port of New York and New Jersey, and its economic impact study is almost finished."

Mr. Goldmark also told several hundred trade, civic and maritime executives who were invited to participate in the observance in the nation's premier port that the Port's foreign oceanborne general cargo trade for the first six months of 1980 stood at 7.6 million tons. "3.5 million tons of that volume were exports, an increase of more than 20 percent," he said. "General cargo imports fell to 4.1 million tons. Both the rise in exports and fall in imports are in accord with the national pattern."

The Port Authority Executive Director said that with the deliberate reduction in oil imports, the Port's bulk cargo for the first six months of 1980 dropped some 8 percent to 18.6 million tons.

Linda Seale, the new Commissioner of Ports and Terminals for the City of New York, reported on her agency's activities in the full-time effort to advance the port for New York City and the region.

"The City of New York has embarked upon a program of port revitalization," Ms. Seale said. "For the first time in years the City's port agency, the Department of Ports and Terminals, will live up to its name. Maritime affairs and port development will occupy their rightful positions as the most important aspect of a reconstituted agency."

Ms. Seale described Mayor Koch's reorganization plan for port activities as "a reorganization designed to promote the interests of the port industry. Its key elements include:

(1) a beefed-up Department of Ports and Terminals.
(2) establishment of an Office of Rail Freight Services to report to the Deputy Mayor for Economic Development.
(3) establishment in the Department of Transportation of an office whose sole responsibility will be to improve truck transportation problems.
(4) these three agencies—the commissioners and their staffs—to meet regularly to guarantee that the movement of cargo into, out of and within the City is done as quickly and efficiently as possible.

Saying that the agenda of the Department of Ports and Terminals goes beyond organizational changes, Ms. Seale listed the following major developments among the critical projects and programs proposed or under way:

(1) Expansion of the Howland Hook Marine Terminal to 500 acres.
(2) Development of a warehousing–foreign trade zone complex at Howland Hook. This project will be done in conjunction with the Port Authority and when combined with the terminal expansion will make Howland Hook into a full-service marine terminal.
(3) At Northeast Terminal the Department expects to make considerable progress in resolving the problems that have prevented completion of the terminal.
(4) The successful completion of the first phase of the Red Hook Terminal. This development is funded by the City and State of New York and is managed by the Port Authority.

"We have come to realize that the City works if the Port works; the City survives if the Port survives," Ms. Seale asserted. "I know that a revitalized Department of Ports and Terminals will be the working partner the maritime industry needs and deserves."

The President of the Towboat and Harbor Carriers Association, Daniel B. Curll III, spoke on the logistics of moving energy through the port, a specially of the towing industry which he represents.

Mr. Curll said: "The barge and towing industry exists because it is efficient at moving bulk commodities. One gallon of fuel can move a ton of cargo 514 miles by barge, whereas by railroad, a gallon of fuel would move that cargo only 202 miles. By truck the same cargo would move a meager 59 miles."

He noted that the New York Harbor tug fleet consists of over 200 tugs, 300 dry cargo barges, 150 tank barges and 15 small coastal tankers. He said that the typical ship used

to deliver petroleum to the New York area—a 60 to 80,000 dead weight ton vessel, drawing around 40 feet—often off-loads a part of its cargo into barges at locations out in the harbor before proceeding to berth at a terminal. This lightering operation is where the barge and towboat industry first becomes involved in the region's petroleum transport.

"The ocean-going tankers, usually after this lightering operation, proceed to about 35 petroleum terminals in the harbor areas for what is the beginning of the distribution process to smaller terminals which dot the waterfront," Mr. Curll noted. "How lucky we are to have a water network providing a safe, reliable and congestion-free method of distributing these products."

The towboat industry executive concluded that the ability of tugs and barges to operate in relatively shallow areas is a key to the efficiency of this distribution method. "Maintenance of channels at the authorized depth is important if the cost of electricity and petroleum products to the people of this region is to be kept down," Mr. Curll said. "The difference of a single inch of draft for a tank barge can mean a difference of 275 barrels or 11,500 gallons of oil."

Captain William R. Peterson, President of the United New York Sandy Hook Pilots' Benevolent Association, discussed the navigation improvements under way in the Port, and channel programs still needed to keep New York competitive.

Captain Peterson said that the Army Corps of Engineers has just completed an important study report calling for deepening the existing navigation channels in the Kill Van Kull and Newark Bay to 44 feet, including a number of widenings at narrow points. "This channel improvement is required to accommodate larger and deeper tankers and general cargo ships," he said. "In addition, if the Corps of Engineers finds that deepening of the channel to the Howland Hook Marine Terminal on Staten Island is justified on the basis of studies now under way, this will create another major trade asset for the Port."

Captain Peterson also a project, which began in July, that still requires the vigilance of the entire Marine industry. He was referring to the Coast Guard's removal of the central portion of the unused Central Railroad of New Jersey lift bridge across lower Newark Bay.

"By providing a clean and unobstructed 600-foot-wide navigation channel, the demolition work now under way will make it easy for some 50,000 vessels that transit the Newark Bay area each year to navigate safely." Captain Peterson concluded, "I urge you to support the Coast Guard's efforts to carry out this work without delay, and see to it that Congress provides the necessary funds."

Herbert Buehler, former New Jersey State Senator, and the Chairman of "Save Our Port," discussed what he called "the triumphs and trials" of dredged materials disposal in the New Jersey-New York Port. He noted that a year ago the entire National Port Week program was dedicated to the critical problem of the disposal of dredged material. The prime culprit, he noted, was PCB's, polychlorinated biphenyls, termed harmful, and often present in the sediments at levels unacceptable to the various environmental agencies, which therefore opposed ocean disposal of the material.

"The program coalesced a subsequent resounding community appeal from the Port of New York and New Jersey not to ignore the importance of the port to the region in protecting it from environmental risks, many of which we feel have not been convincingly attributed to ocean disposal of dredged material," Senator Buehler declared. "Fortunately, after many months of delay, permits were granted, terminals dredged, and ships came and went," he added. "But not the basic problem. It is still with us."

Senator Buehler believes that while we have come a long way, the underlying issues remain. "Unless we are to see ocean disposal as upheld as the preferred, if, indeed, not the only available procedure, better alternatives will have to be developed and soon," he said. Pointing out that the progressive and accumulative uptake of contaminents present in some dredged material—bioaccumulation—is by no means a proven fact, Senator Buehler noted that this concept is a key factor in granting or denying dredging permits.

"The Federal agencies that review dredging permit applications still have to 'get their act together'," he said, "to work from a common script of environmental criteria, and to be constrained from receiving time extensions for reviews that are the rule rather than the exception."

"Waterfront Cleanup: A Long Road Ahead," was the topic discussed by Anthony J. Tozzoli, Director of the Port Department of the Port Authority. Mr. Tozzoli said that the ultimate target of the Waterfront Cleanup or Drift project in the Port of New York and New Jersey is the removal of 2,230 sunken vessels and 100 piers, and the repair of 160 usable waterfront structures.

In 1976, the project was authorized by Congress with the Federal Government paying two-thirds of the removal work and local interests sharing the rest. Repairs receive no Federal funds. Actual removal work is done by the U.S. Army Corps of Engineers, Mr. Tozzoli explained, in conformance with a Corps' plan for a reach that makes economic and engineering sense.

"The current showcase of the project is Liberty State Park in Jersey City," Mr. Tozzoli said. "State and local officials in New Jersey have transformed an upland and shorefront wasteland into the Port's newest and most exciting waterfront recreation and natural resource area. Complete cleanup of the park shoreline is likely this Fall," he continued, "and planning is already under way to progress the project toward North Bergen and to get it under way in Elizabeth."

Mr. Tozzoli added that in New York City, cleanup work is scheduled to commence later that month along Manhattan's East River waterfront, while planning is under way for a future start on the upper New York Bay shorefront of Staten Island.

"The Drift Project is unique to the Port of New York and New Jersey and stands as our most likely hope and recourse for wiping out waterfront blight," Mr. Tozzoli concluded. "But it demands a widespread and perservering commitment from the Port community to expand participation, resolve issues, and obtain funding. A good deal has been done in the first four years of the project. Let us strive for an even better showing in the next four."

"Save Our Port": Port of New York and New Jersey

Representatives of "Save Our Port!" met recently with members of the New York and New Jersey Congressional delegation in Washington, D.C. to discuss an issue of critical importance to the future of the Port of New York and New Jersey—the need to eliminate the PCB "hot spots" in the Hudson River.

A representative of Senator Daniel P. Moynihan discussed the Senator's amendment to the Clean Water Act which would provide federal funds for the State of New York to undertake this important project. Co-sponsored by Senators Jacob Javits and Harrison A. Williams, the amendment would permit use of up to $30 million previously earmarked for New York State waste water treatment facilities to be used for the State's program to control PCB's.

The amended Clean Water Act has passed in the Senate, and is now being considered in the House without the Moynihan amendment. Should the House version be passed, it would then go to a House-Senate Conference for resolution.

"The build up of PCB's in the Hudson River presents a very real threat to the economic vitality of this region", "Save Our Port!" Chairman Herbert Buehler declared. "Last winter the Port of New York and New Jersey was on the verge of cancelling future calls by passenger liners and other ocean shipping because Port operators at various marine terminals were denied necessary permits for dredging silted berths."

The PCB (polychlorinated biphenyls) problem originated from upper Hudson River deposits made years ago. These deposits are currently flowing downstream in increasing amounts, and the U.S. Environmental Protection Agency warns that in two to three years their buildup will reach toxic levels which could force the suspension of necessary dredging.

"Funds are needed to carry out this project," Mr. Buehler added. "Without this federal aid, the New York State program is likely to be doomed, and with it, the development and maintenance of the Port of New York and New Jersey. The support of the New York/New Jersey Congressional delegation is needed to insure that Senator Moynihan's amendment is passed by the entire Congress so that the necessary work can begin," he concluded.

"Save Our Port!" is a bi-state coalition of business, labor, industry and government organizations vitally concerned with resolving the dredging issues that burden our great Port.

Port Authority of NY & NJ promotes bulk cargo shipments—Port Newark Bulk Cargo Center

A 34-acre site in the Port Newark Bulk Cargo Center will be redeveloped to increase bulk cargo shipments and strengthen the port's competitive position, Port Authority Chairman Alan Sagner announced recently.

The Port Authority Board of Commissioners authorized the $1,250,000 project which will require removal of a transit shed and reconstruction of a wharf fender system to accommodate bulk cargo vessels.

The 75-acre Bulk Cargo Center consists of six berths and upland areas located on the south side of Port Newark Channel. These berths are used for bulk cargo operations amounting to 500,000 tons annually. The 1,500 foot fender system will be reconstructed on Berths 8, 10 and 12. Including Berths 14, 16 and 18, a total of 3,200 lineal feet of berth is used for this operation.

The Port Authority has been promoting bulk cargo shipments in the bi-state port to utilize surplus berth facilities previously used for break-bulk general cargo handling. Bulk cargoes which are handled at the facility include soda ash, salt and coal.

The project which will begin in November is expected to be completed by mid-1981.

New Howland Hook Foreign Trade Zone to be developed: City of NY, Port Authority of NY & NJ

Mayor Edward I. Koch and Port Authority Chairman Alan Sagner recently announced a plan for the development of a multi-million dollar Foreign Trade Zone and distribution center at Howland Hook, Staten Island. The plan to be advanced jointly by the City of New York and the Port Authority will make the existing Howland Hook Marine Terminal a full-service facility.

The Commissioners of the Port Authority authorized their Executive Director to enter into an agreement with the City to lease approximately 100 acres at Howland Hook for the construction and operation of the Foreign Trade Zone/distribution center, under the sponsorship of the City.

As currently anticipated under the plan, the Port Authority would construct approximately 300,000 square feet of Foreign Trade Zone/distribution facilities at the Staten Island seaport at an estimated project cost of $10 million. The City would provide the necessary infrastructure, including land clearing and stabilization, roadways, railroad tracks and utilities at an additional $11 million cost.

The entire $12 million first phase is presently expected to be completed at the close of 1982.

In addition, the Port Authority would join in the City's application to the Foreign Trade Zones Board to establish the Howland Hook Foreign Trade Zone.

Under the tentative plans approved recently the Howland Hook Center would ultimately encompass some 900,000 square feet of building space, and related ancillary structures, to be built in three phases.

At such time as the two additional phases of 300,000 square feet of building space each are provided, the City will have a right to buy back the Port Authority's investment in the development.

Escorts for export, Ford's world car goes to Japan

Left to right: Tom Litven, Trans-American Steamship Agency; Bob Crandall, Port of Oakland, Joseph Honan, Trans-America; Captain Folke Reich, Owner's Representative, RO-LO Pacific Line; Mr. S. Kuwata, Port of Oakland Director, Far East; and Mike Savod, Ford Motor Company.

The first shipment of 1981 Ford cars to Japan was exported Monday, September 22 from the Port of Oakland.

The shipment, composed of 123 Ford and Lincoln-Mercury products, included 26 new front-wheel drive Ford Escort sedans built in New Jersey and destined for Yokohama, Japan.

The cars will make the 18-day voyage aboard the RO-LO Pacific Line's S.S. Bellman, a 10,600 ton vessel which handles containerized and bulk liquid cargoes in addition to drive-on/drive-off shipments such as the Escorts.

According to Ford spokesman Richard Dewey, the shipment of Escorts is designed to test public reaction to an American built economy vehicle. "The Escort is competitive to anything offered by the Japanese here in its class," said Dewey, "achieving EPA estimated mileage figures of 30 mpg in city driving, 44 mpg on the highway".

Dewey added that, while larger Ford luxury and sports models will continue to account for the bulk of Ford sales in Japan, "Ford products are respected in the Japanese marketplace, and we expect a favorable reception for the Escort and the Lynx". The Lynx is the Lincoln-Mercury variant of the Escort.

Officials of the Port of Oakland, Ford, RO-LO Pacific Line and Trans-American Steamship Agency, general agents for RO-LO Pacific, met at the Port's Berth 10, 11 & 12 terminal for a brief bon voyage ceremony as the new Ford cars were driven aboard ship.

Embarcadero Marina Park honored: Port of San Diego

Bayfront Embarcadero Marina Park, the Port's recently dedicated 22-acre recreational area, was recognized at the California Coastal Commission's Design Awards 1980 program for "combining excellence in design and planning with coastal protection measures."

At a ceremony held in Fort Mason, San Francisco, Coastal Commission Chairman Lenard Grote presented a certificate of commendation to Port Commission Chairman Bernice Leyton and Port planning director Frederick Trull. The award was given for the $2.5 million park in the category of "access and recreation" for "providing public access along the shoreline and for providing a broad mix of recreational opportunities."

"The past Board of Port Commissioners envisioned an exciting, people-oriented waterfront," said Chairman Leyton. "An underutilized and degraded part of the waterfront has now been transformed into a beautiful park."

The park, adding more than a mile of shoreline to the bayfront for public use between Seaport Village and the Tenth Avenue Marine Terminal, features sheltered picnic tables, a kiosk, basketball courts, an exercise par course and a 300-foot public fishing pier. Jogging and cycling paths wind through both peninsulas, landscaped with over 400 trees including coral trees and palms.

Key shipping facilitators; "Sea of Red Tape Comes of Age": Marine Exchange of the San Francisco Bay Region

At recent San Francisco meetings included Marine Exchange president Ted L. Rausch, president of Ted L. Rausch Co.; Arthur E. Baylis, executive director of the National Committee on International Trade Documentation; Leonard A. Back, NCITD director, and vice president, Citibank, N.A., New York, and Gary S. Taylor, corporate director, documentation systemwide, American President Lines, Oakland.

Theme was "Sea of Red Tape Comes of Age", commemorating the 21st anniversary of the 1959 San Francisco publication of a study and recommendations on streamlining international trade and shipping paperwork plaguing U.S. waterborne commerce. Estimates of the cost of documentary and procedural excesses—had there not been two-decades-plus "red tape cutting"—range up to $10 billion annually as a "tax" on U.S. exports and imports.

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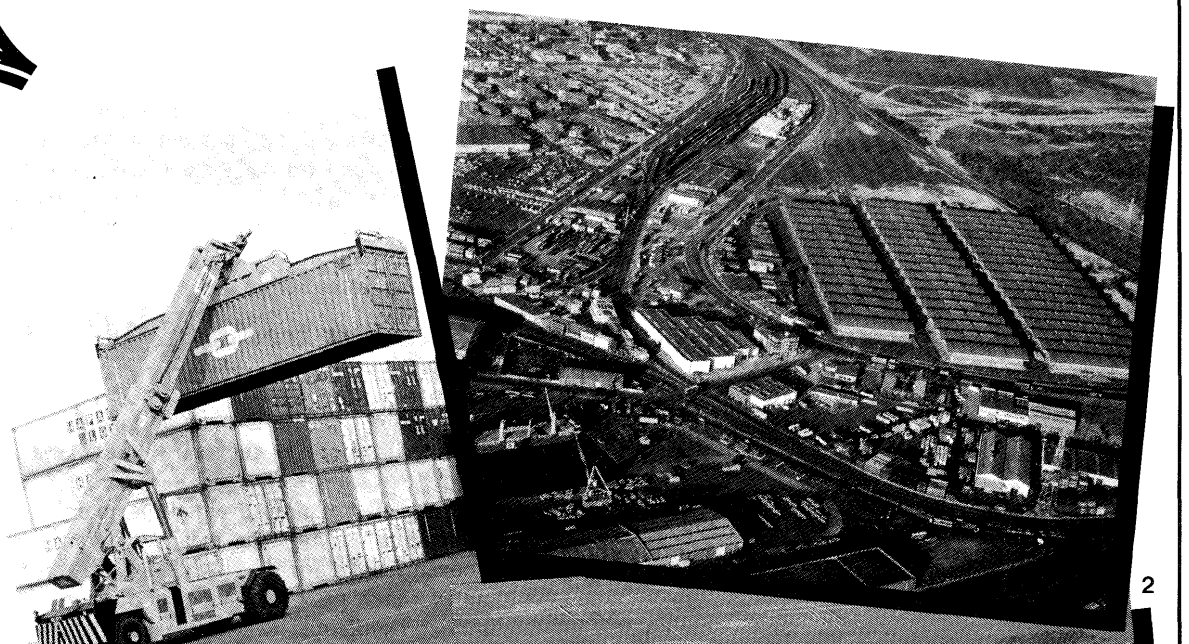

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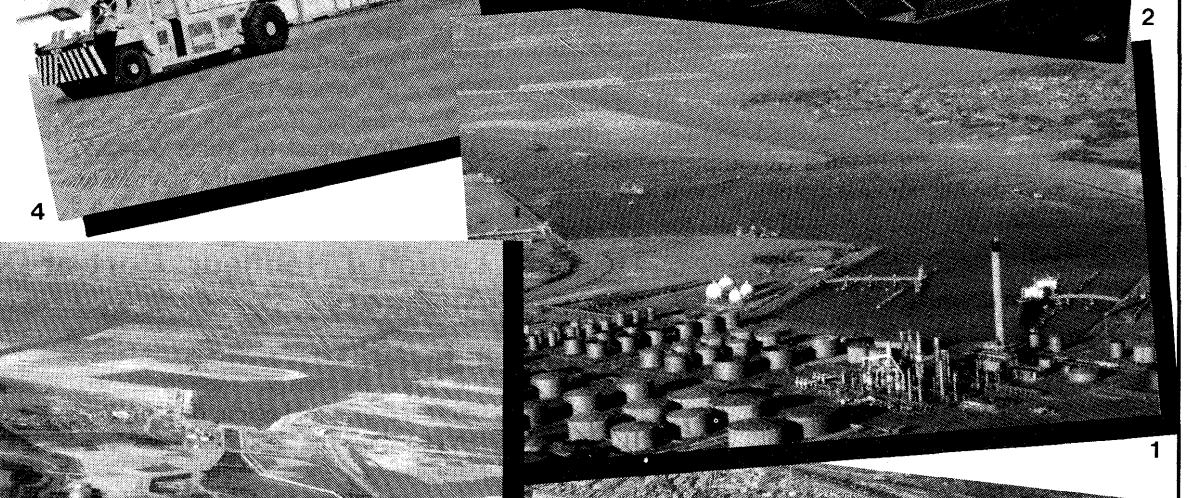

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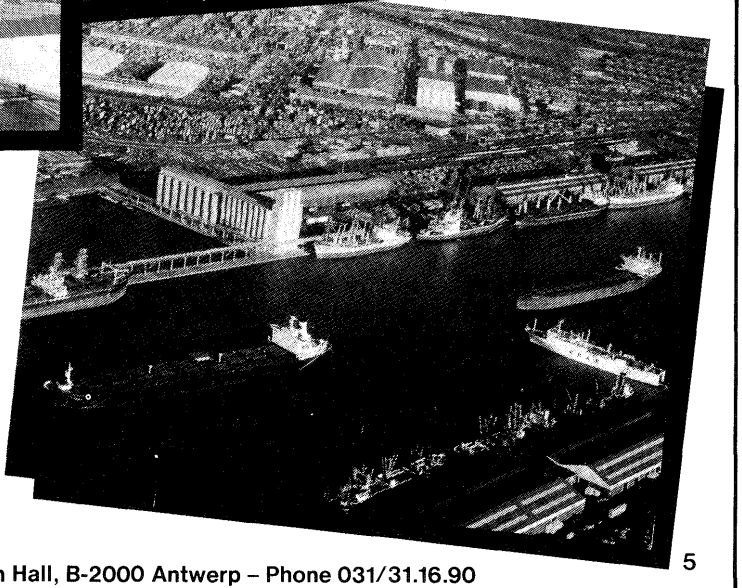

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Expansion of Port of Antwerp on the left Scheldt

The Ministerial Committee for the Budget has approved of the construction of the first phase of the 4th Harbour Dock at the left Scheldt bank.

It concerns a 1.073 m stretch of quaywall with a cost price of 827 million BF.

The Fourth Harbour Dock, which will totalize 5 km of quay length will be equipped for the combined transhipment of general and dry bulk cargoes.

"Westerlund", a company specialized in the handling of forest products such as wood-pulp, multiplex, timber and paper rolls will occupy 700 of the 1.073 m of quay wall to be equipped and hopes to realize a cargo turnover of 1 million tons a year at this spot.

News in brief: Port of Liverpool

- **Top jobs swop**

In a top job swop Mersey Docks and Harbour Company Chairman Sir Arthur Peterson has exchanged places with National Ports Council Chairman Sir John Page.

The former Dock Company Chairman and Chief Executive—took up his post as part-time Chairman in Liverpool at the same time that Sir Arthur was settling in at N.P.C. headquarters in London. The appointments were announced by Transport Minister Mr. Norman Fowler.

Shortly afterwards it was announced that the Managing Director and Chief Executive of the Company, Mr. James Fitzpatrick, had been appointed a Government director on the Company's board. Mr. Fitzpatrick, who is currently a director elected by the shareholders of the Company, replaces Mr. Malise Nicolson who recently resigned.

- **Helping keep the lorries loaded**

Liverpool is the first UK port to put its weight behind a new phone-in scheme aimed at finding return loads for lorries.

Mersey Docks and Harbour Company representatives have had talks with North Western British Road Service officials on ways to make the Datafreight computerised system a success.

From October 1st, Liverpool Docks will be linked into the nationwide system through a terminal at Great Howard Street.

Haulage firms who subscribe to the new system will be able to tell their nearest B.R.S. centre by telephone that they are bound for Liverpool Docks and are looking for a return load.

The information is then fed into the computer which it is hoped will have up to 150 return loads available in Liverpool at any one time on any one day.

"Research has shown that lorries of more than 3 tons gross weight are empty for 30% of all the miles they travel", said B.R.S. Liverpool Terminal Manager Andrew Callaghan.

"There are a lot of reasons why that happens but even if we reduce it by 3% we will save the haulage firms 10 million gallons of wasted diesel fuel."

- **High productivity acquires surcharge cuts**

Top productivity in the Port of Liverpool has been given further recognition with a decision by the India Pakistan Bangladesh Conference to cut their 12½ per cent surcharge to five per cent.

The reduction on both east and westbound cargo follows moves by the I.P.B's sister Ceylon, UK, Eire Conference.

The Port of Liverpool has maintained a protracted campaigh against the surcharge which they argue was imposed years ago because of congestion in the Port and is now totally out of date.

The I.P.B. Conference reduced its surcharge for cargo in both directions to 12½ per cent at the end of 1978.

In February this year, the Ceylon, UK and Eire Shipping Conference halved its westbound penalty on Liverpool Cargo from ten to five per cent. The eastbound surcharge had been reduced from 17½ per cent to five per cent more than 12 months before.

Container traffic up 41%: Port of Dunkerque Authority

Container traffic has shown significant upturn and for the first 8 months of the year figures stand at 467,368 tons. Up 41% over last year.

This marked improvement is mainly due to the ever increasing use of that means of transport. Furthermore conventional ships which call regularly at Dunkerque carry an ever-increasing number of containers. The cross channel service Dunkerque Felixstowe has already transported 25% boxes more than in 1979.

Total figures for traffic stand at 28,863,113 tons from January to August of which 5,442,519 tons for outgoing traffic. Overall increase of 8% on 1979.

Mr. Jean Lefol, Chevalier of the Legion d'Honneur: Port of Dunkerque Authority

Mr. Jean Lefol, Chairman of the board of directors of the Port Authority, was presented with the cross of Chevalier of the Legion d'Honneur by Mr. Paul Bastard, President of the International Association of Ports and Harbors.

Talking about the recipient's carreer within the France-Dunkerque Shipbuilding Yards and his activities as Chairman of the Port Authority, Mr. Bastard who was only recently Ports Director at the French Ministry of Transports, pointed out that this was a very special anniversary as Mr. Lefol was elected Chairman of the Port Authority in 1975.

6.1 million tons by the Seine in 1979: Port of Le Havre

Statistics based on the returns made by boatmen using the Tancarville Lock at the eastern end of the industrial zone show that the number of boats passing through rose from 11,447 in 1978 to 12,681 in 1979, an increase of 10.8%. Traffic on the river rose by 24.6% overall in 1979, due mainly to the increase in petroleum products (up by 360,730t inwards and 271,899t outwards) and in coal going up river to power stations in the Paris area (511,099t).

Total inward traffic, i.e. that coming down the Seine to Le Havre, rose by no less than 31.6%, from 1,240,316t in 1978 to 1,632,129t in 1979. Petroleum products, machine-

ry, vehicles and manufactured goods all showed considerable increases.

Outward tonnage, going up-river from Le Havre, amounted to 4,492,857t in 1979 against 676,963t in 1978, a rise of 22.2%, with marked increases in fertilizers and agricultural produce.

The hinterland served by the river was about the same as in previous years.

Trade forecasts for the VIIIth Plan: Port of Rouen Authority

The Board of Directors of the Port of Rouen Authority have taken note of a study aiming to examine the likely trends in trade in the Port of Rouen in the period covered by the VIIIth Plan. Bearing in mind that the Port of Rouen's trade has a range of about twenty different categories, all developing in their own way, two hypothetical studies were made, one «high» one «low», following the trends for the different categories. It transpired from all this that the Port of Rouen's overall trade should grow at an annual rate of from 3% to 6.9%, and by 1985 the total tonnage should range from the modest estimate of 22.6 million tons to the more optimistic 29.2 tons.

At the low estimate, 1985 trade would be catering for 8.35 million tons of liquid bulk, 10.36 tons of solid bulk and 3.86t. of general cargo (1M. tonnes probably containerised). On the more optimistic level, the liquid bulk will reach 10.07 M.t., solid bulk 13.86 and general cargo 5.25 M. tonnes, (1.33 M.t. containerised.)

These estimates should help clarify the Port's investment plans and financial trends.

Seaports compete for complete markets: Oswald Brinkmann

In future seaport competition will concentrate ever less on marginal growth and far more on winning complete markets–declared Bremen Senator for Ports, Shipping and Traffic, Oswald Brinkmann, to the Federal Association of Forwarders and Warehousemen. For reasons of traffic economy one either has the complete market, or nothing. Competition is thus particularly severe for those markets of high economic performance. This leads to the right time having to be chosen for the Bremen/Bremerhaven port-group investment; being of even greater importance than was previously the case–with the period available for necessary reaction of the port, to goods and traffic structure changes, becoming ever more restricted. Added to this is the very close observation required as to changes occurring in the demands of port clients, so that the quality and quantity of service-range can be improved accordingly. Due to the commanding position of the ports, relative to the economic strength of Bremen and Bremerhaven–the ports here being responsible for 23 percent of the gross total product–these requirements are constantly being met with on the Weser. Some DM 580 millions will be invested in this port group between 1980 and 1983.

(Refer to page 16)

Cargo volume again up by 10% in first half-year: Port of Hamburg

The Port of Hamburg registered an increase in cargo volume of 10 per cent in the first six months of 1980. This reflects the generally favourable business climate in West Germany. The overall volume of cargo handled totalled 33 million tons compared with 30 million in the same period last year.

A large proportion of this increase was accounted for by grain, oil fruit and oil seed–so-called suction cargo. 6.7 million tons were discharged and loaded in the first half of 1980–2.6 million tons more than in the previous year.

The general cargo sector also registered satisfactory growth. Here, the cargo volume rose to 9.2 million tons compared with 8.8 million last year. The growth rate was higher with incoming cargo (4.4 million tons) than with outgoing cargo (4.8 million tons).

The general and bagged cargo sector was marked more strongly by structural changes in transport techniques. Increasing containerisation is affecting conventional handling methods. 376,461 containers (TEU) with an overall weight of 3.4 million tons (305,701 TEU with 2.8 million tons in same period last year) passed through Port of Hamburg terminals. This represents an increase of 23.1 per cent in number and 24.3 per cent in weight.

With coal, ores and potash–socalled grabbable cargo–the growth curve has levelled out after the spectacular rises in past years. The result of the previous year was surpassed by 0.9 per cent, 7.4 million tons being attained.

With crude oil, mineral oil products and other liquid cargoes it was not possible to attain the 1979 level: 9.7 million tons were loaded and discharged–a fall of 1.4 per cent.

Despite these good half-year results, Hamburg operators are guarded in their opinion about future growth. According to national and international business forecasts, it cannot be assumed that such growth rates will continue in the future. A realistic appreciation of the situation leads to the conclusion that, as competition continues to increase, a levelling out of economic growth is more likely to be expected. This is bound to affect ports, even if account is taken of the fact that industry generally strives to expand foreign trade more strongly in times of economic recession.

Message from Port of Oakland

Dear Dr. Sato:

Congratulations on the 25th Anniversary of the International Association of Ports and Harbors. It is largely through your efforts that the Association has progressed to the point of where it is now the Leading International Port Organization. The importance of this organization has become apparent to all of us who are connected with port organizations. Through this spirit of cooperation that exists between nations of the world we have seen the development of a network of ports that are now serving the growing needs of international trade.

The members of our board of port commissioners join with me in extending our best wishes to you and the IAPH staff on this 25th Anniversary.

Sincerely,

Walter A. Abernathy
Executive Director
Port of Oakland

News from Port of Gothenburg

1. Appointments

Mr. Tage Nyström, chairman of the Gothenburg Harbour Board, has been appointed chairman of Svenska Hamnförbundet (the Swedish Harbours' Association).

Mr. Tage Nyström

2. Port limited company?

The Gothenburg Harbour board has decided that an investigation shall be made regarding the conditions precedent for and the possible advantages of forming a limited company to take over the activities of the port authority, which is now being administered by the local government.

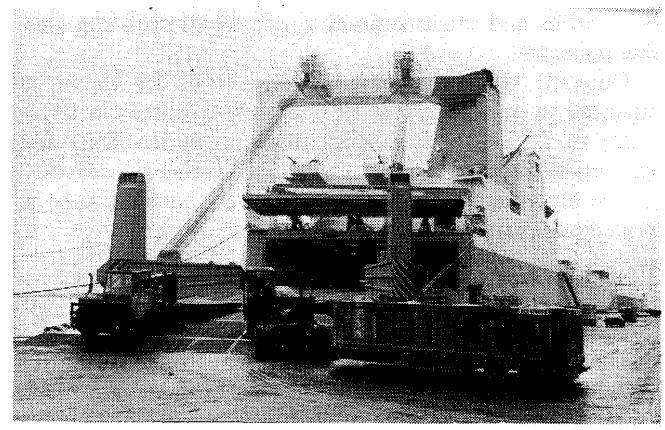
One of the putative reasons for a change is that it is believed that there are certain advantages in co-ordinating the activities at the port by forming a group of the Port and the Gothenburg Stevedoring Co., Ltd.

3. Ro/ro record

At the Älvsborg terminal in Gothenburg's Skandia harbour, the Gothenburg Stevedoring Company recently reached a record-breaking figure for ro/ro-handling. During a 19-hour visit by Transatlantic's 28 000 tdw ro/ro-ship M.S. "Elgaren", 505 tons of parcel goods passed the ship's ramp per hour. 2 707 tons were unloaded and 6 809 tons came on board, giving a total of 9 599 tons for the 19 hours the ship stayed at Älvsborg.

4. Blasting rock caves makes a bed for new harbour

A new harbour is planned to be constructed by the Port of Gothenburg at the mouth of the river Göta between the Arendal shipyard and the port's Tor oil terminal. Most of this area is now a bay with shallow water, and the plan to construct the new harbour is related to the proposed blasting out of large rock caves at the island of Risholmen. These will be used for the storing of some 650 000 m^3 of crude oil for the Swedish BP Company and the state-owned Svenska Petroleum AB. Risholmen lies close to the planned harbour, and an agreement has been made that the rock material blasted out should be used for the filling up of the bay. It is estimated that no less than 1 200 000 m^3 of stone material will be made available in this manner for the building of the new harbour. The costs for the port will only be those connected with arranging facilities for the receiving of the material. This is calculated to cost 2.1 m. Kronor. Before the stone material can be dumped in the bay some relatively extensive dredging must take place. This is calculated to cost about 6 m. Kronor [£ 0.6 m]. A new coal harbour in the port has been discussed for some time and it is possible that the new harbour will be used for a growing coal import to Sweden. Alternatively, it will be used for other purposes when the port's general cargo harbours need replacement.



A total of 9,599 tons of general cargo was rolled onto and off Transatlantic's "Elgaren" in 19 hours when the vessel made one of its regular calls recently at Gothenburg's Älvsborg Terminal. The 505 ton-per-hour rate is a record for this type of cargo handling as far as the Gothenburg Stevedoring Co. Ltd. is concerned.

Port turn-over recovering: Port of Gothenburg

Port of Gothenburg cargo volumes still show evidence of the Swedish dock-workers strikes in May-June. By August 31st dry cargo import were 4 and dry cargo exports 16 per cent below the corresponding figures for 1979.

This is a smaller deficit, though, than that of the seven-month period of January-July.

It is almost impossible to tell what effect the strike had [or will have] on the port. Much of the cargo that could not use the port during the strike was handled in Gothenburg afterwards; a rare summer rush was experienced in the port.

Port of Gothenburg Jan-Aug figures [tons];

Imports, oil	6 249 000	[−3%]
Imports, dry cargo	1 935 000	[+4%]
Exports, oil	889 000	[+166%]
Exports, dry cargo	2 332 000	[−16%]
Domestic	3 067 000	[−6]
Total	14 472 000	[−2%]

[Numbers within brackets are changes compared with the January-August period 1979].

ADB assistance to port projects (from ADB News Release)

- **ADB approves Technical Assistance to Philippines for Manila Grain Terminal Project**

Efforts of the Philippine Government to improve the present grain handling methods in the Port of Manila–the largest of the 19 major ports in the country–will be assisted by the Asian Development Bank through a technical assistance grant.

Under the technical assistance, a feasibility study will be undertaken to determine the need for a grain terminal in Manila and the commodities that could be handled at the terminal.

The study will look into the managerial and institutional requirements, as well as the financial and economic viability of the Manila Grain Terminal Project. The study will also examine the ecological and social effects, including the effects on employment, and make proposals for minimizing any adverse effects.

The Project is expected to substantially reduce the turnaround time for wheat and soyabean meal carriers. This reduction in time will result in freight rate savings which will help stabilize the market prices for those grains. If investigations prove that other commodities other than wheat and soyabean meal could also be handled at the terminal, for example bagged rice, some relief of the congestion in the South Harbor could likewise be expected.

Other main anticipated benefits from the Project include the reduction of spillage during unloading and an increase of buffer stock capacity.

- **ADB approves $54-M Loan to Republic of Korea for 2nd Incheon Port Development Project**

Incheon Port primarily serves the Seoul-Incheon Area (SIA) and Kyonggi Province. SIA, which includes the Seoul Metropolitan region, is the country's main industrial center, accounting for 44 per cent of the Gross National Product and 47 per cent of industrial value added in 1976.

The traffic through the Port has grown rapidly since the opening of the non-tidal Inner Harbor in 1974 and is expected to continue to grow. Inspite of the exceptionally high cargo handling productivity, the existing facilities are reaching maximum occupancy and, as a result, ships' waiting and service times are increasing as well as the costly lighterage operation. Therefore, additional port capacity is required to enable the Port to handle the forecast traffic efficiently and economically.

The Project, which is the first phase of an 11-year (1980-90) three-phase development of Incheon Port recommended in a recently-completed Bank-financed feasibility study, will increase the annual cargo handling capacity of the Inner Harbor by more than 3.6 million tons by the end of 1983, the anticipated date of completion of the Project. This would enable the Port to handle the projected growth of general cargo through 1987, and that of dry bulk and scrap metal cargo through 1991.

The total cost of the Project is estimated at $103 million, of which the $54 million to be financed by the Bank loan is the foreign exchange component. The loan, at an interest rate of 8.1 per cent, will be repaid over 24 years, including a grace period of four years.

- **$20 Million in Loans to Papua New Guinea for Lae Port Project**

Expanded and improved facilities will be provided at Lae–Papua New Guinea's largest port–under loans totalling $20 million approved by the Asian Development Bank today.

The financing consists of a loan of $12 million from the Bank's ordinary capital resources and a concessional loan of $8 million from the Asian Development Fund (ADF). The loan from ADF is for 40 years and carries a service charge of 1 per cent per annum.

Bank finance will cover the foreign exchange component of the Lae Port Project–the total cost of which is estimated at $30.1 million.

Lae Port handles 37 per cent of the seaborne trade through all the ports managed by the Papua New Guinea Harbours Board and directly serves a hinterland where 45 per cent of the nation's three million people live. The development of the port is of national significance and has been given high priority by the Government.

By providing expanded and improved facilities the Project will cater for the expected traffic growth in Lae Port through the 1980s. Existing facilities are exposed to rough weather and are inadequate to handle the increasing traffic, particularly containerized traffic. The Project will improve service and turnaround times of vessels calling at Lae Port, thus avoiding possible rises in freight rates resulting from increasing congestion.

Standard gauge national link for Port of Adelaide

Signing of an agreement between the State and Federal Governments has brought standard gauge connection of the Port of Adelaide to the national rail network one step closer. It is currently linked by bogie exchange.

Australian National Railways' $68 million project will provide substantial benefits to South Australia and the nation. Furthermore, it should provide a welcome impetus to the Port of Adelaide.

When completed, the system will shorten transit times between Adelaide and Western Australia, Northern Territory and New South Wales by over a day, facilitating development of resources in the far north of South Australia and in the Northern Territory. It will give both ANR and SA a keener competitive edge with which to generate new business, especially with direct connection to and from the Port of Adelaide container terminal and other shipping berths.

ANR expects the new standard gauge project to be partially operative within two years.

Wharf re-construction—Port of Adelaide

Two wharf projects estimated to cost $750 000 are underway at the Port of Adelaide to provide improved facilities and faster turn-around of bigger ships now using the port.

At Outer Harbor a $497 000 plan to reconstruct No. 3 berth is proceeding and, in the Inner Harbor, $261 000 is being spent to enlarge the swinging basin opposite No. 3 dock.

Coal! Will it be Brisbane's volume trade of the future?

The Port of Brisbane Authority has agreed to two proposals by private enterprise groups to establish interim bulk, export coal handling facilities on wharves in the Hamilton Reach of the Brisbane River.

The coal export issue is one which has been under examination for some time and attracted submissions from several quarters. As a question of principle, the Authority raised no objections to the proposition that coal be exported across the Hamilton Reach wharves.

It also recognised that coal (from the Ipswich district, and later the massive, undeveloped reserves on the Darling Downs) represented a growth trade of almost unlimited possibilities. Only small experimental export coal shipments have passed through the port in recent years. The parties currently interested in the trade are Bulk Handling and General Services Pty Ltd. and Maritime Wharves Pty Ltd., both Brisbane-based stevedoring companies.

They are negotiating with mining companies in the Ipswich district.

Concurrently, the Authority is carrying out a feasibility study into the export of large tonnages of coal through the Fisherman Islands.

The area being looked at is downstream of the present container/ro-ro facilities. Some soil and foundation tests have been completed.

However, it would be another three years at least before such a facility could be operational.

The Authority believes in the need for the highest possible environmental standards to cover the Hamilton operation and ultimately, the Fisherman Islands' location.

Among those standards will be the safeguards of enclosed conveyor systems and stringent "moisture controls" over the stockpiles.

These criteria will ensure that coal dust will not be a problem.

The Hamilton operation can be expected to be operational in another six months.

World Maritime Day

World Maritime Day was marked in the **Port of Melbourne** on Friday 26 September with a display of fire fighting, rescue operations and oil pollution combat equipment.

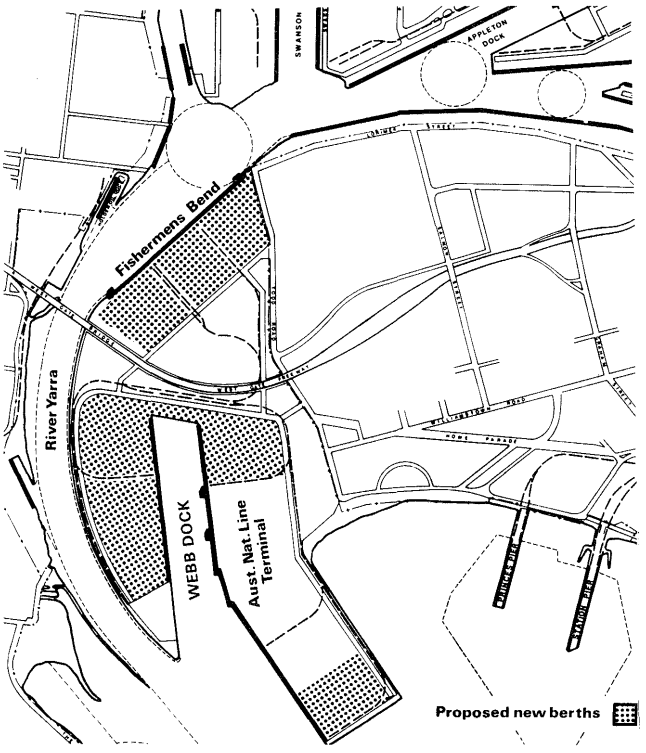
Promoted by the Inter-Governmental Consultative Organisation, the theme of the day was "Maritime Training for Safer Shipping and Cleaner Oceans". Many ports throughout the world held similar promotions on the same day.

Co-ordination of World Maritime Day was arranged through the International Association of Ports and Harbors.

Features of the Port of Melbourne display included a firefighting demonstration in Victoria Dock and a rescue operation staged by Port Emergency Service divers.

All ships in the Port were dressed for the day as was *Polly Woodside,* the central feature of the National Trust's historic display at the former Duke and Orrs dry dock.

Port of Melbourne Authority releases revised Forward Development Plan



Port of Melbourne forward development plan—plan of Webb Dock—Fishermens Bend Area.

The Port of Melbourne Authority recently released its revised Forward Development Plan for the Port which provides for the construction of additional berths and facilities to handle anticipated trade through the Port well into the next century.

The plan includes the construction of 5 additional overseas container berths at Webb Dock over the next 20 years.

An additional three container berths are planned to be located on land at Fishermens Bend. Assuming the growth in trade maintains its current rate it is anticipated these berths will not be required before the year 2000.

Releasing details of the plan the Port Authority said it incorporated major changes to previous development plans. These are the limiting of reclamation into Hobsons Bay to that required for the construction of berth 6 Webb Dock; the realignment of Webb Dock to allow the building of the three overseas berths on the west side of the Dock and reconstruction of the Australian National Line's coastal roll-on roll-off berths on the east side.

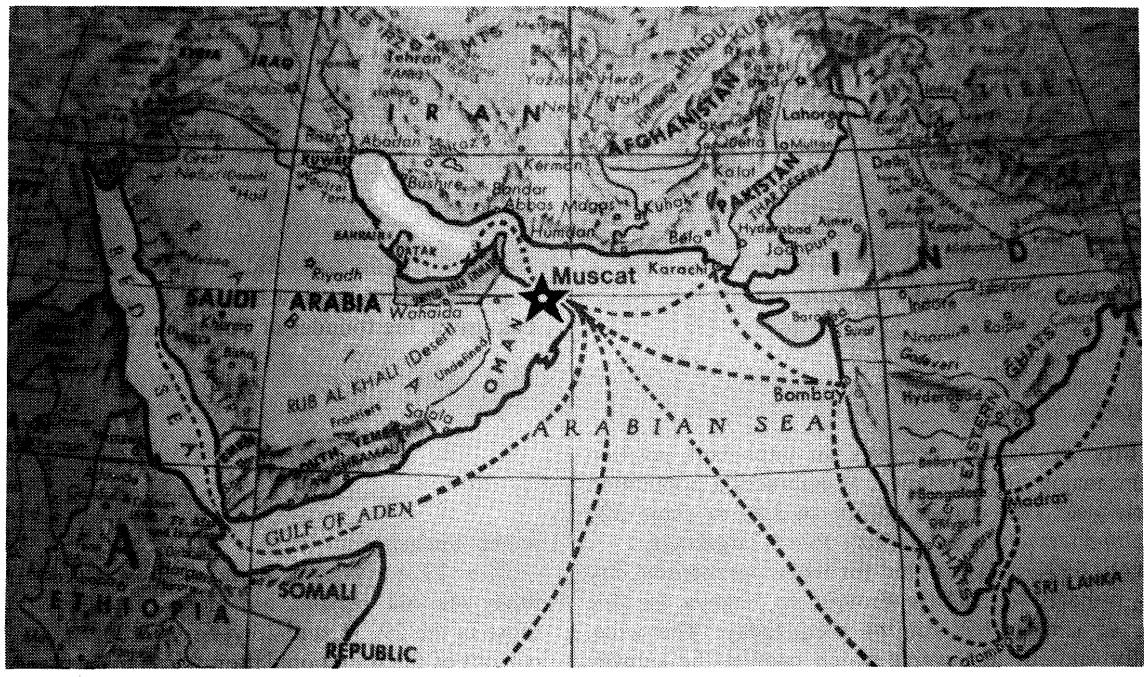
Reclamation of land from Hobsons Bay for the construction of 6 Webb Dock is anticipated to commence within the next few years subject to environmental assessment.

Provisions for internal rail facilities in the Webb Dock and Fishermens Bend complexes has been incorporated in the plan in anticipation of a future rail link being provided to the existing railway network.

The plan also incorporates provision of public access areas at the southern end of the Webb Dock reclamation and along the east bank of the Yarra River downstream from West Gate Bridge.

GATEWAY TO THE GULF

AND AT THE CROSSROADS BETWEEN EAST AND WEST



PORT QABOOS - MUSCAT

Port Qaboos, with nine deep water berths and three coaster berths, is your natural gateway to the Gulf.

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The port has modern cargo handling facilities including container-ro/ro, cranage upto 150 tons capacity, large covered and open storage areas and excellent transhipment service by land and sea.

The construction of a container terminal equipped with two highly sophisticated 35T gantry cranes is well ahead of its scheduled completion date of November 1981.

For information & tariff, please write to:

The General Manager

Port Services Corporation Ltd. P.O. Box 133, MUSCAT Sultanate of Oman

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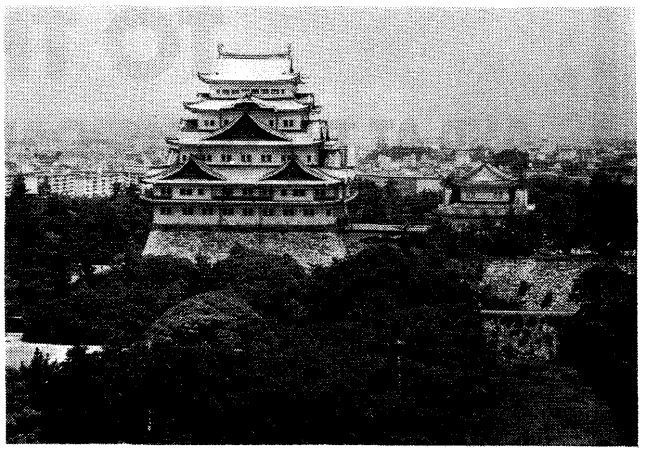
Nagoya —— A Castle City

Downtown Nagoya: 200 million population city.



Nagoya Castle which was built by great Shogun, Ieyasu Tokugawa, the founder of Tokugawa Shogunate.

Profile of City of Nagoya

The City of Nagoya occupies an important position among the major cities of Japan. It embraces a population of a little over two million within an area of some 327 square kilometers and is the nation's fourth largest city.

The City of Nagoya is noted for its comprehensive city planning projects which have brought to Nagoya the fine network of streets that can be seen today. The wide, beautifully laid-out boulevards which parallel the subway transit system, along with new underground shopping arcades, are among the most striking results of this planning.

Nagoya is situated in a large and fertile plain. Great resources, hydroelectric power and highly developed traffic systems on both land and sea serve to increase the economic potential of the city. Keeping step with the rapid development of such mammoth industrial sectors as iron-steel and the petrochemical complexes in the Ise Bay district, Nagoya City as the nucleus of the Chubu Region has come to arouse more attention than ever before, both at home and abroad. The city may well be said to be making great strides towards becoming a genuine metropolis of culture and industry.

As symbolized in the statue of youth standing in front of Nagoya Central Station, Nagoya is a young, growing city full of aspirations for the future.

Population

The population of Nagoya is 2,078,800 (April, 1980). The postwar population surge has been a key factor in Nagoya's emergence as one of Japan's dynamic urban centers.

Viewed from the standpoint of dynamics, even though there have been a great number of young graduates coming into Nagoya from all over Japan, including Kyushu, recently there has been a large scale emigration from Nagoya City itself to the suburbs and surrounding areas. This has led to the so-called "doughnut phenomena." Since the rate of population increase as a whole tends to be stagnant, the population of the city, reflecting this trend, is likely to remain unchanged.

The 1978 Nagoya population statistics reveal that thirty-year-old persons are most numerous, followed by those in the 29, 31, and 28 year-old brackets. In 1978, 47.7 percent of the total population was employed.

The latest census (October 1, 1975) showed that daytime population outnumbered the nighttime figure by 287,830. The balance consisted of working people and students who commuted to and from Nagoya.

Location

The City of Nagoya lies in the southern extremity of the Nobi Plain, in the center of Japan. The Japan Alps lie to the north and the Pacific Ocean and Ise Bay are on the south. It is located between 136°47'41" and 137°03'50" E. longitude and between 35°02'10" and 35°15'26" N. latitude.

Tokyo is about 400 kilometers northeast of Nagoya, and Kyoto and Osaka are about 200 kilometers southwest.

Climate

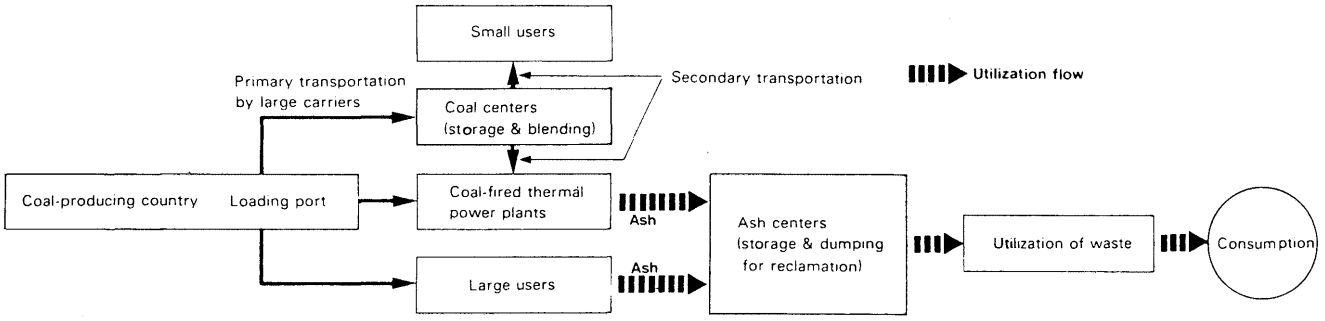
Nagoya has a rather harsh climate compared to that of other major cities on the Pacific Coast of Japan. In winter the temperature sometimes falls to as low as 5°C below zero, and in summer it often climbs to over 36°C. This is due to the fact that although Nagoya faces Ise Bay, it is not favored by the Japan Current, a warm Pacific Ocean current which flows east of Taiwan and northeast past Japan. Nagoya is located too far inland to benefit from the warming effects of the current.

In spring and fall the climate is mild. Though the temperature differs slightly from year to year, the average temperature through the year is about 15°C (59°F).

Annual precipitation . . . . . 1,104 mm
Hours of sunshine . . . . . 2,223 hrs.
Average humidity 65%

(Continued on next page bottom)

Recent technological developments in bulk cargo handling systems



Coal distribution flowchart

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In Japan, bulk material handling has been refined into a highly automated, labor-saving, flexible system to make the most of limited space available, putting the iron and steel industry in the foremost place in the world.

Industrial sites and residential areas in Japan are located close to one another because of space limitations, which in turn has served as a major spur to the development of pollution control technologies as represented by dust prevention and noise suppression.

These achievements are going to be implemented in the handling of coal which has made a comeback to relieve the tight energy situation in the world.

How to handle the bulk flow from excavation of coal to diversified utilization processes and to the final ash disposal–between countries, from one place to another in a country, and between processes–is a new theme of the bulk cargo handling technology.

Nagoya Castle

Among various place of interest in Nagoya, Nagoya Castle is considered to be the most attractive and beloved one which is located at the center of Nagoya.

Nagoya Castle was built between the years 1610 - 1612 by Ieyasu Tokugawa, founder of the Tokugawa Shogunate, for his 9th son, Yoshinao, first lord of Owari Province, an area which included Nagoya and the western half of Aichi Prefecture.

However, at the time of the great fire raid in May 1945, both the castle and the palace were reduced to ashes. Fortunately, some of the irreplaceable art treasures adorning the two buildings escaped destruction.

On October 1, 1959, Nagoya Castle was rebuilt in its original form, this time as a modern ferroconcrete structure. Restoration of the castle buildings cost 600 million yen.

How did the iron and steel industry improve the bulk cargo handling efficiency

Japan's iron and steel industry has made a remarkable growth with no natural resources available in the country, serving as a key industry for economic and industrial development in Japan. One of the important factors which helped its growth is the bulk cargo handling technology.

In order to import volumes of materials from abroad and store them in limited spaces, the bulk cargo handling systems were rationalized to a high degree of automation and labor-saving, and the layouts of yards and bulk cargo handling machinery of high flexibility were developed to answer the growing needs for bulk cargo handling.

In the field of transportation, large ore bulk carriers were introduced for the economy of long hauls. In addition, large ore/oil carriers were run for tripartite trade to increase the overall transportation efficiency.

As regards the ore carriers, large-size hatches facilitating unloading work and cargo holds provided with openings for the passage of bottom-scraping bulldozers were employed by large bulk carriers to improve the cargo unloading efficiency.

To reduce the idling time of large carriers at ports, high-efficiency high-reliability unloaders were developed, including one with a lifting capacity of 80 tons, which ranks among the largest in the world. Careful engineering considerations were given to improve the bulk cargo handling efficiency.

Not only the increase of speed and power output but also the bucket locus control, releasing point control, sway damping, acceleration and deceleration control and all that have so far depended on skilled operators are now in a program package of a computer in a cargo handling machine.

As regards material handling operations at the yard which are required to store, blend and reclaim volumes and varieties of feedstocks in a limited space, boom type stackers, reclaimers and stacker-reclaimers with a high degree of freedom of operation were developed.

But the high degree of freedom of operation called for higher operating techniques and stricter safety assurance engineering, impeding progress in the automation of yard operations.

In cooperation with one of the leading iron & steel companies in Japan, IHI developed a fully automatic boom type reclaimer, which was combined with the existing fully automatic stacker for full automation of yard operations.

This machine solved the problems of start-up access to pile and pile-to-machine or machine-to-machine collision which had been the most difficult in the automatic operation of the boom type machine.

Just as with unloaders, operational technologies which had depended on skilled operators were programmed for automation by a micro-computer, and the machine with the microcomputer for unmanned operation was controlled by a host computer managing the entire yard operations.

The development of this machine has automated the most delicate part in yard handling operations. This engineering breakthrough has contributed much toward total automatization of operations of the iron and steel works.

Development of pollution control technology

In Japan, industrial complex sites and residential areas are close to one another and environmental standards are very strict. These conditions have prompted the progress of dust prevention, noise suppression and other various pollution control technologies in Japan.

Dust suppression

Dust control is classified into two methods: one is prevention at the source, and the other is isolation of the source from the environment. The method of prevention at the source is classified into the wet process in which dust is scrubbed with water spray and the dry process in which dust is vacuumcleaned.

At present, a perfect dry process is available, and has already been in use for sealed conveyor systems. In the dry process, water spray is combined, with injection of a surface active agent for the purpose of improving the affinity of dust to water thus improving the dust collecting efficiency. The spray process has been employed the most for its simplicity.

The latest spray system employs a drain system and a purifier to protect water from secondary pollution due to the discharge of spray water and at the same time to recycle the spray water.

On the other hand, isolation at the source is carried out in a manner to confine dust by surrounding the source with related process facilities. In this method, it is necessary to discuss the overall plant layout in the stage of planning.

At present, a unique system is available, which, when give wind directions, wind velocities, dust size and plant layout, can simulate the dispersion of dust to plow back the simulated results to the plant layout engineering.

Noise suppression

There are various methods to suppress noise at the source; rubber-lined hoppers, low-noise carrier rollers for belt conveyors, centralized and totally shielded drive systems are a few of many countermeasures to be taken at the source.

It is also practiced to optimize the arrangement of noise sources to reduce noise. For example, noise control design is carried out in the stage of plant layout planning by making use of a simulator capable of computing the sound pressure distribution.

The sound pressure level currently required to be met in accordance with the environmental standards in Japan in 55 dB(A). This requirement has been satisfied successfully at a distance of 55 to 100 meters from the source, though the value varies depending on the plant layout.

In pursuit of new coal handling systems

A spiraling increase in oil prices has turned more of the industrialists' competitive efforts to expand coal-fired power plants. It is expected that ten years from now, Japan would be importing 50 million tons or more of fuel coal annually. In other words, we must be ready to treat coal in bulk and without pollution.

To cope with this need, IHI has already completed prototype engineering for pollution-free indoor and outdoor coal storage systems and continuous unloading system. To make these systems really safe and reliabile, IHI has been endeavoring to push forward basic researches and studies on dust dispersion, spontaneous combustion, dust explosion and arching phenomena, etc.

The bulk handling of coal is not only a matter of local coal-fired thermal power plants and coal yards, but includes complicated problems involving coal centers, ash disposal centers and primary and secondary transportation, all to be solved on a national scale. Fully realizing the significance of the matter, IHI has been playing a part in studying and solving these problems.

10 new straddle carriers soon: Kelang Port Authority

The Port Authority will purchase 10 units of straddle carriers costing $7.1 million as part of a replacement programme.

Of the 10 units ordered by the Authority, Valmet of Finland, will supply 3 units while the balance 7 will be supplied by T.C.M. of Japan.

A Valmet straddle carrier costs approximately $930,000. It has a lifting capacity of 35 tons and is equipped with a telescopic spreader. A significant feature of the Valmet is that it has a dual command cabin for drivers. This means that there are 2 control systems on opposite sides in the driver's cabin and the driver can use either one by just turning the seat.

The T.C.M. with a lifting capacity of 30 tons, costs about $700,000 and is equipped with a mother-daughter spreader. A mother-daughter spreader is one where the 20 ft. spreader is superimposed into the 40 ft. spreader. This enables the straddle carrier to handle both 20 ft. and 40 ft. containers without the need to change the spreader.

Both models are eight wheelers, have air conditioned cabin for drivers and are fitted with V.H.F. sets.

The Mechanical Engineer for the container Department, Encik Panjalingam said, "The new straddle carriers will be assembled in the port area by the manufacturers' engineers who will also provide training for our personnel.

"In the meanwhile, engineers and staff from our maintenance department are being trained in Finland and Japan in maintenance techniques", he added.

The port will have a total of 21 straddle carriers by the end of the year. From the original fleet of 16 straddle carriers, 5 will be phased out this year and the remaining 11 will be leased out for maintenance by private contractors.

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