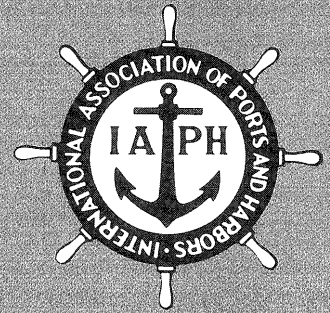


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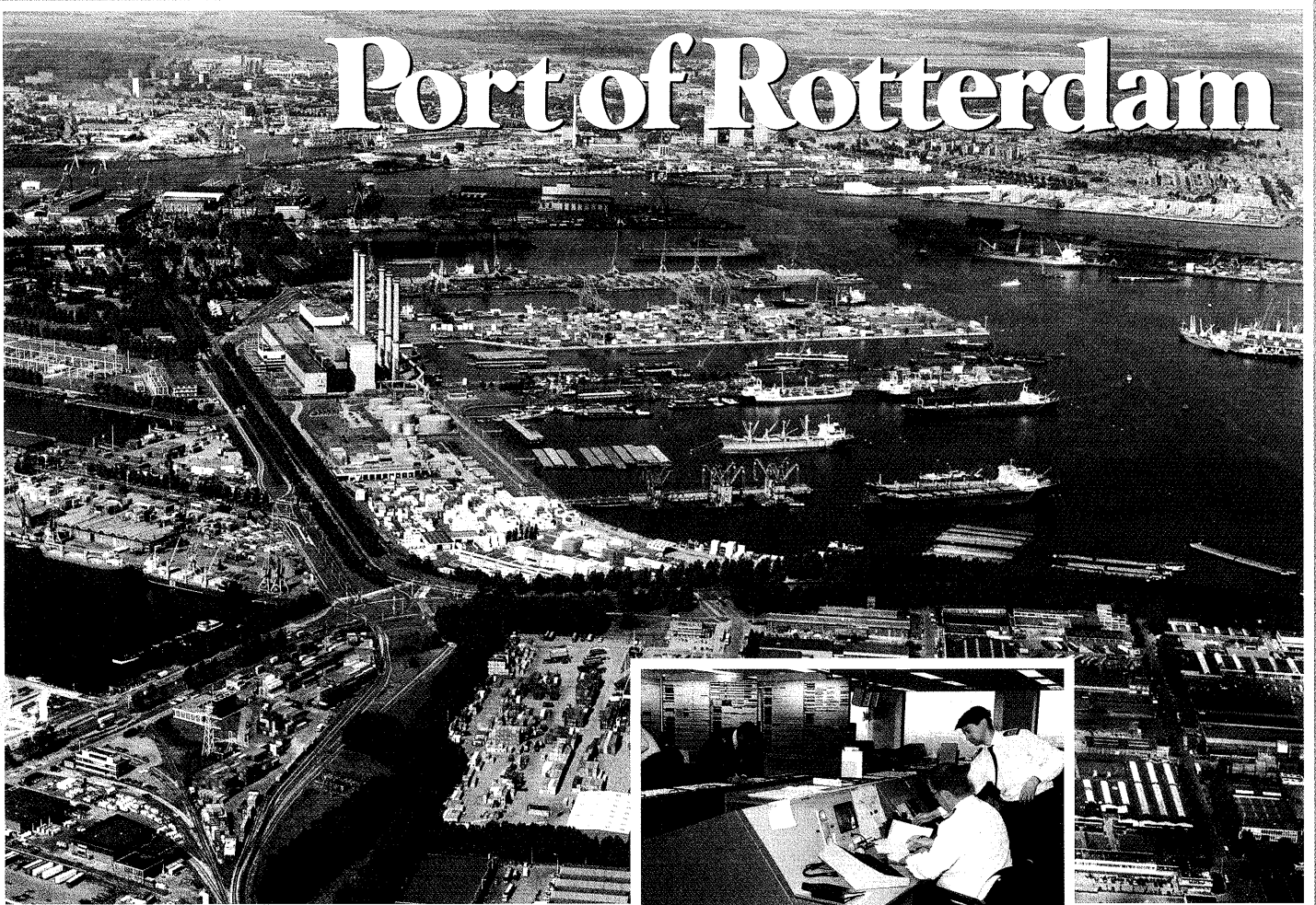
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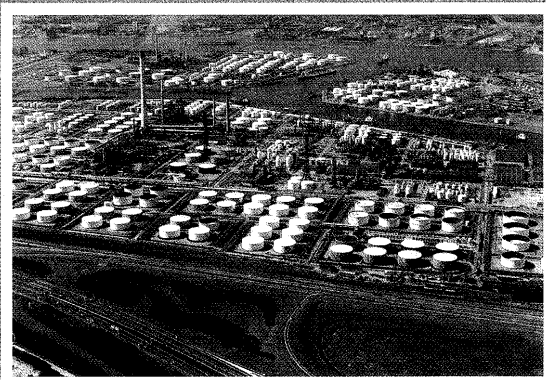
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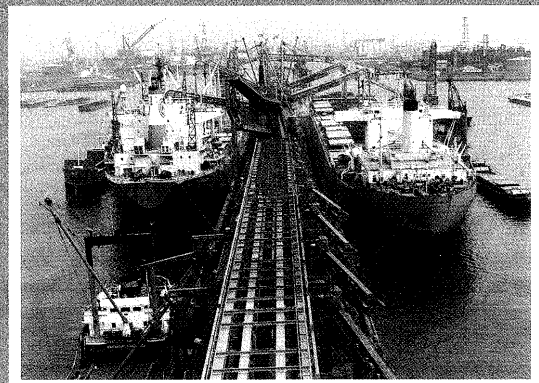


Aerial view on the 'Waalhaven' with
Europointbuilding in the background

Aerial view Botlek-area Petroleumhaven—Shell

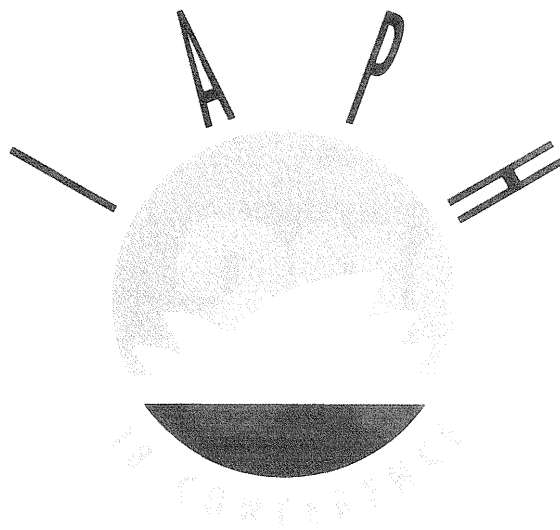


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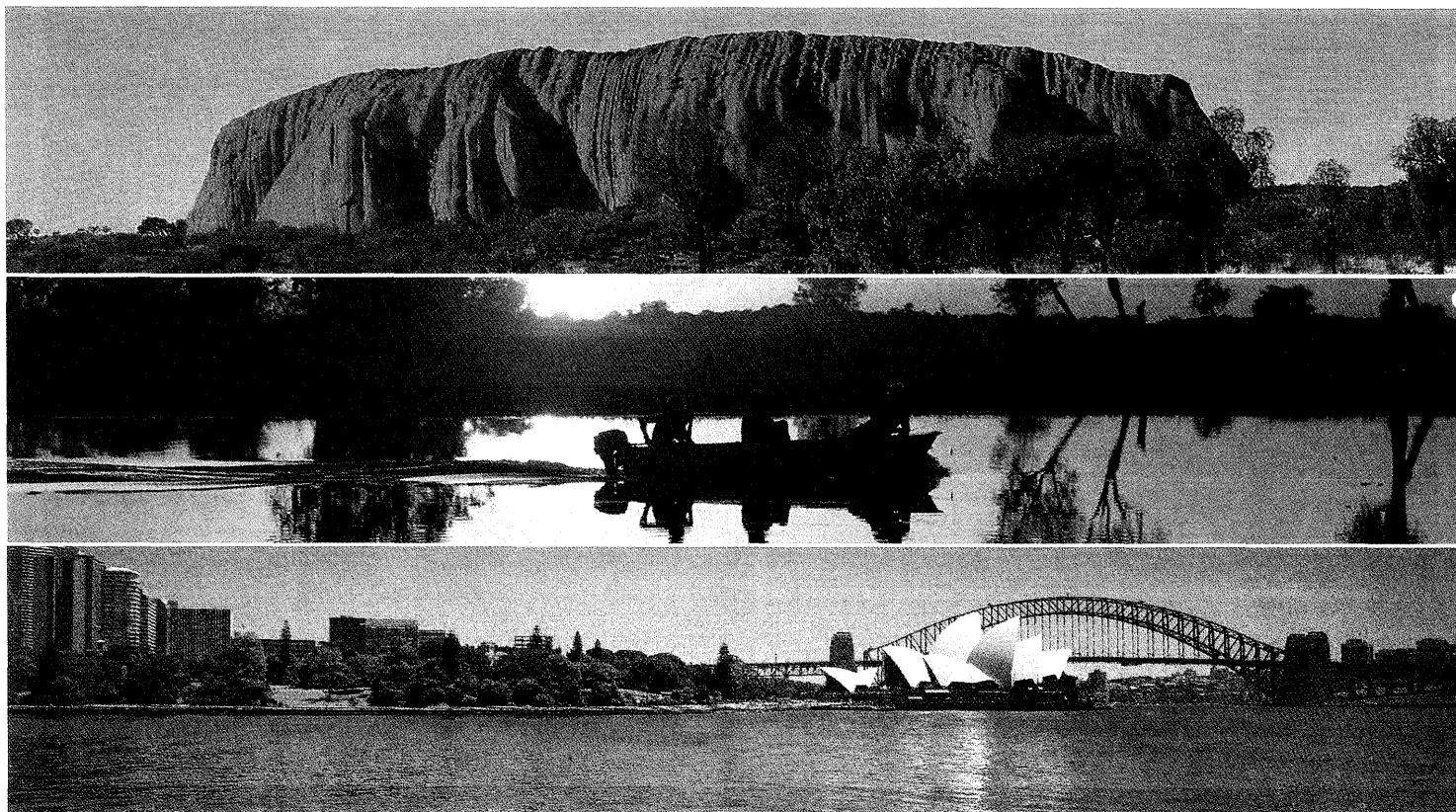


(The photographs by courtesy of Rotterdam Municipal Port Management)

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INTERNATIONAL CONVENTION



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 **QANTAS** THE CONVENTION AIRLINE

Ports & Harbors
December, 1991
Vol. 36
No. 10

Ports Harbors

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Contents

IAPH ANNOUNCEMENTS AND NEWS

3rd VP Smagghe Visits Tokyo Ho • Spanish Conference Proceeding	
Printing • Visitors to Head Office	5
18th World Ports Conference of IAPH	7
The Symbol Mark for the 18th Conference • Conditions for	
Entry to IAPH Essay Contest and Bursary Scheme Announced	8
IAPH Essay Contest 1992/1993	9
Mr. Dybois Liaison for La Ciotat Development • Mr. Dybois	
Honorary Member, Loses Home in Oakland Tragedy	
• IPD Fund: Contribution Report	11
New Appointment • Membership Notes	13

OPEN FORUM

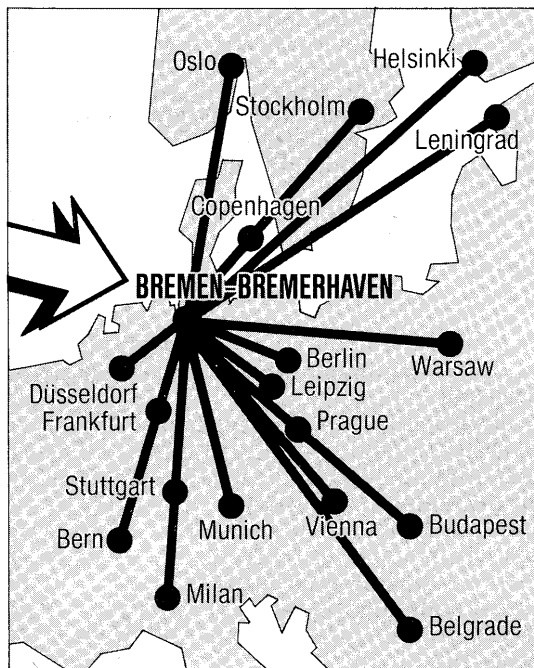
Efficient Intermodalism and the Role of Adequate	
Landside Port Access	12
Rationalisation Cost Effectiveness Best Marketing Tool	15

INTERNATIONAL MARITIME INFORMATION

WORLD PORT NEWS

Strategic Planning Seminar for Managers • Australian	
Ports: Memorandum of Drugs	17
IHE: 28th International Seminar on Port Management	18
March 25-27 SingaPort Conference Concession	
• 13th World Dredging Congress and Exhibition	19
International Safety Guide for Oil Tankers & Terminals,	
Third Edition, Addendum • IMO Secretary	
General Outlines Five-Point Plan	20
The Americas	
Québec Inaugurates New Bulk Terminal	22
A Vision for the North Fraser	24
Mr. Bellefontaine Elected AAPA Chairman-Elect • Vancouver:	
Tanker Risk Analysis Released • Mr. Fulton	
Chairman of Port of Corpus Christi • Georgia	
Ports Authority: Deepening of Savannah	25
Improvement Program to Reshape New Orleans	26
EDI: NY & NJ Linked with Port of Hamburg	27
Wilmington: Forest Products Center Planned •	
Transportation Access Study at Port of Seattle	29
Port of Oakland Plans \$300 Million Expansion •	
Tacoma: Container Shipping Records	29
Africa/Europe	
3 Ports Establish Baltic Ports Organization	30
First Stone Placed in Pacific Basin Quay	31
Lisbon: 1,000% Increase in Ro/Ro Traffic •	
Port of Tarragona to Get Refrigerated Terminal	32
Asia/Oceania	
MSB New South Wales Strategic Overview	32
Gladstone City Center, Marina to Be Linked	33
PSA's Hi-Tech Gate 4 Becomes Operational •	
Waterfront 2001: International Forum in Osaka	35
Post-Panamax Container Crane in Port Klang	36

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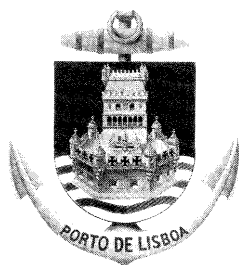
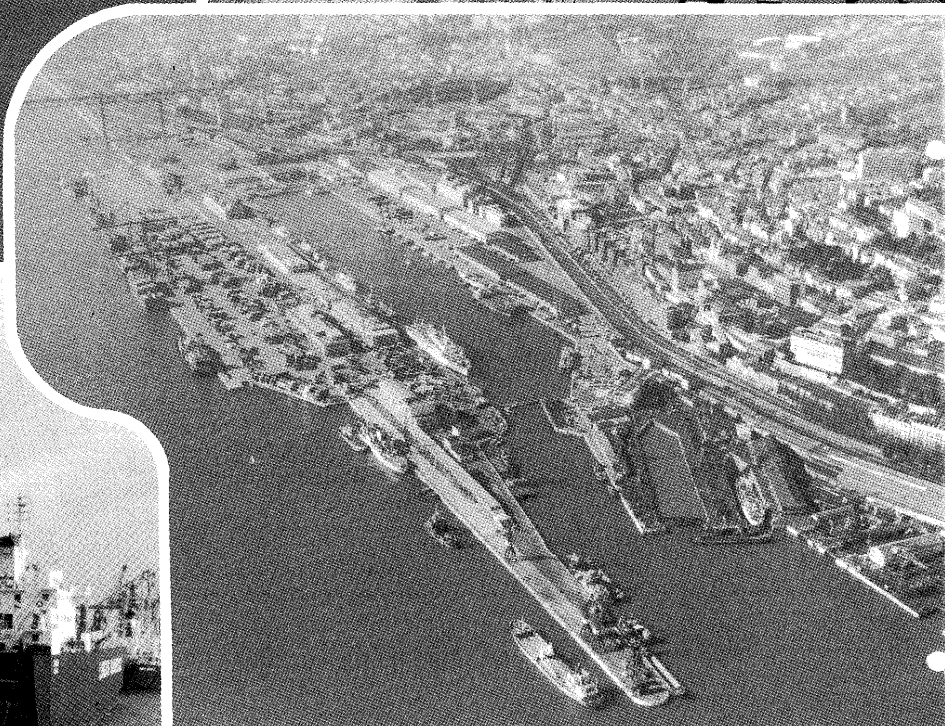
Aether Paul Bertrand

SINGAPORE PORT INSTITUTE

The Singapore Port Institute (SPI), the training arm of the Port of Singapore Authority (PSA), has trained some 3000 personnel from 52 countries through its courses. For 1992, SPI will be offering the following courses for managerial, operations and technical personnel from the port and shipping industries:

COURSE TITLE	DATES	FEES(S\$)
1. Strategic Planning Seminar for Shipping Managers	19 Feb – 28 Feb	\$1 600
2. Diploma In Shipping & Port Management	2 Mar – 25 Jul	\$5 200
3. Management of a Warehousing & Distribution Centre	4 May – 8 May	\$1 100
4. Management of Port Marine Services	4 May – 15 May	\$1 950
5. Port Management & Operations	15 Jun – 26 Jun	\$1 950
6. Management of Container Operations	6 Jul – 17 Jul	\$1 950
7. Management and Maintenance of Port Equipment	13 Jul – 24 Jul	\$1 950
8. Management & Operations of a Break-Bulk Terminal	27 Jul – 7 Aug	\$1 950
9. Oil, Chemical & Gas Tanker Safety	7 Sep – 18 Sep	\$1 950
10. Port Engineering & Development	7 Sep – 18 Sep	\$1 950
11. Marine, Fire & Oil Spill Control	28 Sep – 9 Oct	\$1 950
12. Management of Port Security	5 Oct – 16 Oct	\$1 950
13. Port Finance Management	12 Oct – 16 Oct	\$1 100
14. Container Ship Stowage Planning	9 Nov – 20 Nov	\$1 950
15. An Overview of Hydrographic Surveying	16 Nov – 27 Nov	\$1 950
16. Handling, Storage & Transportation of Dangerous Goods	23 Nov – 4 Dec	\$1 950
17. Practical Pilotage Attachment	(2 weeks duration on request)	\$2 500

For course details and application forms, please contact us at Singapore Port Institute; Telex PSATRG RS28676; Telephone 321-1825; Telefax (65) 278-1167.



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IAPH ANNOUNCEMENTS AND NEWS

3rd VP Smagghe Visits Tokyo HO

On the afternoon of October 17, 1991, Mr. Jean Smagghe, 3rd Vice-President of IAPH and General Manager of the Port of Le Havre, accompanied by Mr. Jean Monnin, the Port of Le Havre's Tokyo Representative, visited the Head Office where he was received by Secretary General Kusaka and his staff.

Mr. Smagghe was briefed by the secretariat members on the latest situation concerning the Association's membership and finances as well as the other aspects of the Association's activities since the two sides were together at the Spanish Conference five months ago.

During the course of their discussions, Mr. Smagghe expressed his concern about ways to assist the French-speaking African members so as to keep them active participants in the work of IAPH, in view of the fact that the Association at the last Conference decided to cut the budget allocation for the French version of "Ports and Harbors" effective from 1992. Mr. Smagghe was afraid that these members will be severely discouraged if the translation service is totally eliminated as they will be rather reluctant to use the English language if they wish to take full interest in the work of IAPH.

To save the situation, Mr. Smagghe has proposed a new arrangement whereby the Port of Le Havre staff will provide the translation service so that the production cost of the French version of the journal can be considerably reduced. The Secretary General agreed to find a solution to the matter after consultation with the key officials of IAPH so that the French version can be revived under the new arrangement.



Mr. Smagghe (left) presents Mr. Kusaka with a painting of old port city of Le Havre.

Mr. Smagghe was on his way from Osaka, where he had been attending the International Forum "Waterfront 2001" organized by the City of Osaka for three days from October 16, 1991. During his stay in Osaka, Mr. Smagghe reportedly attended the ceremony to commend a group of French architects as prize winners in the design contest for the Le Havre Cultural Hall, which the City of Osaka plans to construct in connection with the introduction of French culture and French wines as part of the Osaka Sister Port Cultural Exchange Center for completion in 1994.

Spanish Conference Proceedings Printing

Printing of the proceedings of the 17th World Ports Conference held in Spain in May this year will be completed in mid-November, 1991. The compilation work has been taken care of by the Head Office secretariat staff, based on the English translation of the verbatim records and tapes supplied by our hosts.

Throughout the period following the May Conference, the Head Office staff has been able to obtain the full support of the Spanish organizers, who have always been willing to respond to the frequent requests for assistance from Tokyo. In particular, we would like to record our thanks for the valuable assistance afforded us by Dr. Juan-Aracil in Madrid, Mr. Costa Munné, Ms. Isabel Genis and Ms. Marta Flo from the Port of Barcelona for their valuable efforts in supplying the documents covering the Opening Ceremony and other sessions held on board the "Eugenio Costa". We are also most grateful to Mr. Fernando Huet, President of the Port of Valencia and his staff, who supplied all the documents recording the functions which took place in Valencia.

Our appreciation also goes to Mr. Rafael Soler, Director, Ports of Baleares at Palma de Mallorca, for his generous cooperation.

It is expected that a copy of the 140-page publication recording the Spanish Conference will be sent to each IAPH members from Tokyo towards the end of November.

Visitors to Head Office

— On October 8, 1991, Mr. N.B. Barkely, Jr., Vice Chairman, Mr. J.M. Cain, Commissioner; Mr. W.A. Slatten, Sr., Commissioner, and Mr. Ron Brinson, President and CEO, Board of Commissioners of the Port of New Orleans, accompanied by Mr. H. Matsumoto, a local representative of the Port of New Orleans, visited the Head Office, where



The Port of New Orleans delegation (seated from left): Messrs. Matsumoto, Brinson, Slatten and Cain. Standing are R. Kondoh (left) and K. Takeda of IAPH.



Mr. Smagghe (second from left) and Mr. Monnin, the Port of Le Havre's Tokyo Representative (extreme right), are pictured with their IAPH friends on October 17.

they were received by Mr. R. Kondoh, Dy. Secretary General. At a press conference held in a Tokyo hotel, members of the delegation outlined the Port's capital improvement program, which involves an investment of \$200 million dollars.

— On 19 October, 1991, **Mr. John B. King**, Chairman, **Port of Melbourne Authority** met Mr. R. Kondoh, Dy. Secretary General in Tokyo to exchange views on the current situations of port development in the area. Mr. King was visiting Osaka to attend a meeting organized by the Port of Osaka for the five ports with which Osaka Port is related through a special affiliation program. Representing the ports in Osaka were the delegates of the ports of Le Havre, Melbourne, San Francisco, Shanghai and Val Paraiso. After attending the "Waterfront 2001 Forum" which took place in Osaka, Mr. King visited the Port of Yokohama on October 21, 1991 for an exchange of views on trade development between the two ports. Melbourne Port is related to Yokohama Port through a trade cooperation port arrangement.

— On September 20, 1991, **Mr. Peter Woosnam** of the **Customs Co-operation Council (CCC)** visited the Head Office and met Mr. R. Kondoh, Dy. Secretary General, to exchange views on the planned CCC Seminar involving those international associations with which CCC is affiliated regarding the memorandum of understanding (MOU) concerning the prevention of the illegal trafficking of drugs.

The Seminar, slated to be held in Brussels for 14 & 15

November 1991, is intended to clarify how to step up the fight against drugs in the various facets of transport of people and cargo. As a result of the 1991 London Summit meeting, CCC has been worked to prepare viable measures against this global threat and to come up with reports to the 1992 Munich Summit meeting. Those transport-oriented institutions invited to the seminar are: the International Chamber of Shipping (ICS), the International Air Transport Association (IATA), The International Association of Ports and Harbors (IAPH), the International Federation of Freight Forwarders Associations (FIATA), the International Express Carrier Conferences (IECC), the International Road Union (IRU), and the Airport Associations Coordinating Council (AACI). IAPH will be represented by Mr. A.J. Smith, IAPH Representative in Europe.

— On October 22, **Mr. Miguel A. Pesquera**, President of the **Port of Santander**, Spain, visited the Head Office for an exchange of views on the current situation concerning port development in Japan. He was leading a 3-man mission from the Port, including **Mr. Luis de la Hoz**, Director, Enyaca, a communications and information systems company in Maliano, Cantabria, Spain; **Mr. Jeronimo**, an architect, and **Mr. Jose Ruiz** of the Port of Santander, to attend an event named "Waterfront 2001 Forum" which was organized in Osaka, Japan from 16 to 18 October.

On October 21, the visitors from Spain visited the Port of Yokohama where they were received by Mr. Koike, Director, MM-21, Port of Yokohama, and Mr. T. Ikeda, Director for MM-21, Urban Planning Bureau of the City, to observe the port facilities as well as the site of the large-scale urban development site known as MM-21. On the following day, they visited the Port of Tokyo and met Mr. H. Sato, Dy. Director General and Chief Engineer, Bureau of Port and Harbour, Tokyo Metropolitan Government to discuss and exchange views on yet another large-scale urban development planned in the reclaimed lands in the port.

— On October 28, 1991, **Mr. F.G. MacKenzie**, Board Chairman, **Mr. J. Halling**, Chief Executive, and **Mr. Doug Hazard**, Director, **Port of Tauranga**, New Zealand, accompanied by **Mr. J.I. Mayson**, Assistant Operations Manager of the Port, visited the Head Office where they met Mr. Hiroshi Kusaka, Secretary General, and his staff. The visitors were also visiting Susaki Port, Kochi Prefecture, located on Shikoku Island, to attend the ceremonies commemorating the establishment of the sister port affiliation arrangement with the Port of Susaki.



At Tokyo Head Office, the Tauranga delegation met the visitors from the Port of Osaka. From left: Messrs. Mayson, MacKenzie, Morita (Osaka), Hazard, Kiyama (Osaka), Kusaka and Kondoh of IAPH.

18th World Ports Conference of IAPH

April 17-23, 1993 in Sydney

**— An Organizing Committee of
Senior Executives Formed —**

The IAPH Conference Vice-President, Mr. Max Moore-Wilton of the Maritime Services Board of NSW, our host for the 1993 Conference in Sydney, has recently informed the Tokyo Head Office of the latest situation in the arrangements which are in progress on the host side. Mr. Moore-Wilton's letter, dated 4 October 1991, follows.

Dear Mr. Kusaka,

We are looking forward with pleasure to the 18th IAPH Conference to be held in Sydney on April 17-23, 1993.

To date our invitation, the selection of venues, the preparations of publicity and other matters have been handled by a small committee of officers assisted by a professional conference organizer and a special advisor (Mr. J.M. Wallace).

I am determined that all due attention is given to the establishment and implementation of a balanced programme including both business and social content to ensure that the high standards you have set for conferences are maintained.

To this end I have set up an Organizing Committee of senior executives, the membership of which is introduced below.

Chairperson:

Mr. Max Moore-Wilton
IAPH Conference Vice-President
Director General of Transport, NSW
and member, Maritime Services Board
of NSW

Executive Secretary:

Mr. John Hayes
Acting Chief Executive
Maritime Services Board of NSW

Members:

Mr. Murray Fox
Managing Director
MSB Sydney Ports Authority

Mr. Geoff Connell
Managing Director
MSB Hunter Ports Authority

Mr. Michael Muston
Managing Director
MSB Illawarra Ports Authority

Mr. Gerry Murphy
Port Co-ordination Manager, MSB

Mr. Bill Pope
Conference Co-ordinator, MSB

Specialist advice will be available from:

Ms. Pauline Beckton
Director
International Convention Management Services

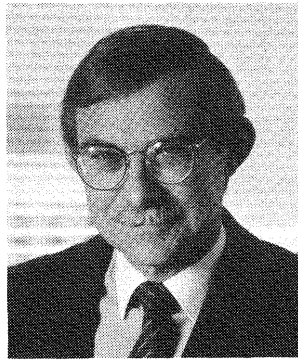
Mr. John Wallace

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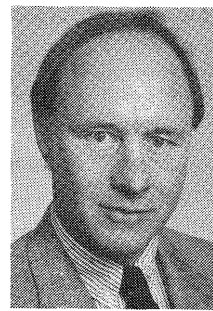
Organizing Committee



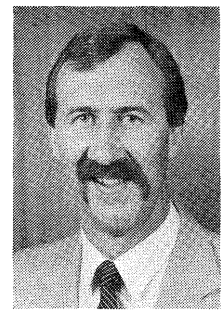
Mr. Max Moore-Wilton



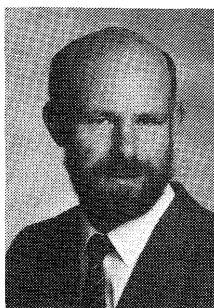
Mr. John Hayes



Mr. Murray Fox



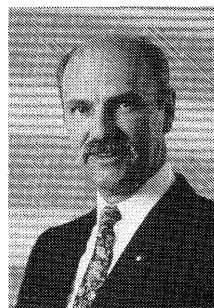
Mr. Geoff Connell



Mr. Michael Muston



Mr. Gerry Murphy



Mr. Bill Pope



Ms. Pauline Beckton



Mr. John Wallace

The Symbol Mark for the 18th Conference



The logo for the 18th IAPH World Ports Conference has been designed to symbolise the importance of the Association in world affairs.

Firstly the circular logo represents the truly international aspect, a reaching around the world, of the membership of IAPH.

The golden color stands for the abundant sunshine found in Australia. Australia is the smallest, driest continent or the world's largest island. Australia has a generally pleasant climate with the area above the Tropic of Capricorn, about 40% of Australia, in the tropical zone. April, the conference time, is in the middle of Autumn, a very pleasant of the year.

The sunshine on ancient lands with young cities and capitals situated on the coastal edge. The sun glistens on beautiful white sandy beaches.

From the vast arid red earth of central Australia, rises Ayers Rock, the largest monolith in the world, nine kilometres (6 miles) in circumference and 335 metres (1,100 feet) high.

Perhaps you would prefer the crystal clear water, the splendour and abundance of colorful aquatic life and the coral of the Great Barrier Reef. Or you could look at a

vast array of unique animals, the kangaroo, the koala, the duck billed beaver tailed platypus or the frilled neck lizard.

The blue reminds us of the ocean stretching across the world used as shipping lanes for world trade and the reason for our Ports. Blue, at the base — Australia is known as the land down under by many from the Northern Hemisphere.

Then the "sails" of the Sydney Opera House, the winning design of a worldwide architectural competition.

Sydney, the home of the Opera House and the location of the 18th World Ports Conference is Australia's oldest and largest city and is bursting with life.

Surrounded by water, Australia is blessed with succulent sea food, a wide variety of fruit and vegetables, rich dairy foods and excellent wines fast gaining acceptance on the tables of connoisseurs around the world.

Australia is home to many nationalities of the world and gives rise to a wide variety of experiences available to the traveller.

We are confident we can satisfy every individual interest that delegates may require in travel before or after the conference. We can arrange a program with sights that will open the eyes, tastes to tantalize the palate and sounds to delight the ears, to make this an enjoyable and memorable time.

However, if this was all, then the conference would fail. We will provide a forum for the exchange of ideas and a look at directions for the future.

We are all aware that we are living in an era of constant change both in the political and economic sense. The Conference theme — "Ports — The Impact of Global Economic Change" will be presented by especially chosen speakers. Input from the technical committees will also allow you to catch a glimpse of what the future may hold and help you to plan and be prepared for those challenging times ahead.

We trust you have already begun plans to be at the IAPH Conference in Sydney in 1993.

Conditions for Entry to IAPH Essay Contest and Bursary Scheme Announced

Mr. Goon Kok Loon, Chairman of the IAPH Committee on International Port Development (Port of Singapore), has recently announced the details of both the IAPH Award Scheme 1992/1993 and the Bursary Scheme for the year 1992.

The Award Scheme is an essay contest held for personnel of developing ports which are IAPH members. It was first introduced by the Association in 1979, and has since served to provide those working for ports in developing countries with a real incentive to step up their research activities and to make their work more productive.

The First Prize (the "Akiyama Prize") Winner will be invited to the forthcoming 18th World Ports Conference which is scheduled for April 17 — 23, 1993 in Sydney, Australia, to receive the top prize medal from the IAPH President in front of all the delegates present at one of the Plenary Sessions.

The past recipients of this top prize have been:

Ms. Daphne Phinopoulos, Cyprus Ports Authority (1979)

Mr. Carlos Canamero, ENAPU, Peru (1981)

Dr. Josip Kirincic, the Port of Rijeka, Yugoslavia (1983)

Mr. D. Nunkoo, Mauritius Marine Authority and

Mr. M. Meletiou, Cyprus Ports Authority (1985)

Mr. Jose Paul, Cochin Port Trust, India (1987)

Mr. K. Dharmalingham, Mauritius Marine Authority (1989)

In the last contest, however, none of the entry papers was selected to receive the "Akiyama Prize" and all the benefits that come with it, although the second, third and consolation prize winners were selected. Thus on the occasion of the Spanish Conference, unlike the preceding five biennial conferences, IAPH was unable to award anybody with the top prize, which consists of a silver medal, US\$1,000 and round trip air fare to Barcelona including hotel accommodation (cabin fees in the case of the 17th Conference) to attend the Conference.

Naturally, all the IAPH officials involved in this project ardently hope that the essay contest 1992 will attract as many qualified papers as possible from the various eligible applicants. For this purpose, a poster has been prepared

and is enclosed with this edition. We request that the poster be displayed at an eye catching location in the respective recipients' organizations.

As for the IAPH Bursary Scheme, the Tokyo Head Office has compiled the results of the survey on the training programs which will be able to receive trainees sponsored under the Scheme and has circulated a report on the details of the conditions and how the applications should be made for final screening by the CIPD Chairman.

The CIPD Chairman jointly with the Secretary General hereby announce the updated consditions for entry to both the Essay Contest 1992/1993 and the Bursary Scheme 1992 through this edition.

Bursary Scheme 1992 Conditions for Entry

1 The object of the Scheme is to provide financial assistance towards the cost of sending selected applicants on approved training course overseas. Typically, such courses are those available in ports or institutes which are members of or affiliated to IAPH.

2 Subject to the availability of funds, 10 bursaries for each year, not exceeding US\$3,500 each, will be awarded to approved applicants from developing ports in any developing countries represented in the membership of IAPH, to cover the course fees or tuition and lodging fees but **explicitly excluding airfares or other forms of primary travelling costs**. If the total amount required for the applicant's training exceeds the above limit, the Chief Executive of the applicant's organization must submit written confirmation to the Secretary General of IAPH stating that the balance shall be borne by the applicant's organization and forwarded to the host port/ organization.

3 Applicants must have been employed in an IAPH member port for at least three years, should not be older than 45 years of age, and must already be employed in a junior or middle management capacity. The application must be accompanied by a written recommendation by the chief executive of the applicant's port confirming his/her full endorsement and support of the application.

4 Applications must accompanied by a letter from the host port or institute confirming willing to provide the required training and specifying the date of commencement and duration of the course.

5 The decision of the Chairman of the Committee on International Port Development will be final. His decision will be communicated to the applicant's organization's Chief Executive, the Chief Executive of the host port/organization in which training is to take place, and the Secretary General of IAPH for him to take the necessary steps to disburse the necessary funds from the Special Fund and to make the appropriate arrangements for the remittance of the fees. The host port/applicant will be required to account for expenditure and to reimburse the Special Fund with any monies not spent out of the bursary award.

6 For the purpose of making this financial assistance available to as many applicants as possible, those who have already been awarded with a bursary from the Association will in principle not be considered. For the same reason, the number of bursaries to be awarded to one member port will not be more than one in any two-year period.

7 After completion of the course, each recipient must submit to the Secretary General of IAPH a report on his/her participation in the training within one month of the end of the course. Such reports will be published in the magazine "Ports and Harbors".

8 The closing date for receipt of applications is **15 January 1992**.

A Suggested Form of Application for the IAPH Bursary Scheme 1992

1 Applications should be addressed to:

Mr. Goon Kok Loon, Deputy Executive Director,
Port of Singapore Authority
Chairman, IAPH Committee on International Port
Development
c/o Secretary General
International Association of Ports and Harbors
(IAPH)
Kotohira Kaikan Building
1-2-8 Toranomon, Minato-ku, Tokyo 105, Japan
Fax: 81-3-3580-0364, Telex: 2222516 IAPH J

2 Form and Items to be included in the application:

I, the undersigned, hereby submit for your consideration my application for an IAPH Bursary together with supporting evidence in accordance with the items stipulated below:

- (1) Full name and date of birth of applicant
- (2) Port Authority
- (3) Present appointment (with the date commenced)
- (4) Educational qualifications (Please also indicate whether you are fluent in English, French or Spanish.)
- (5) Professional/technical qualifications
- (6) Brief personal history
- (7) Previous overseas courses attended, if any
- (8) Course for which application is being made (Specify nature of course, duration, and location of host port/institution.)
- (9) Amount of bursary for which application is being made (Particulars of expenses should be given in US dollars in support of the application.)

Course fees	_____
Accommodation	_____
Other particulars	_____
Total	_____

Note 1: A breakdown of the bursary amount as under item (9) of the Application Form has to be made in accordance with the information offered by the training course organizers and will be compared with the data available at the Secretary General's office.

Note 2: State any other source from which finance for undertaking the course will also be provided and the amount of finance already obtained (e.g. employing port authority, government or international organizations such as UNC-TAD, ILO and IMO.)

AWARD SCHEME

IAPH ESSAY CONTEST 1992/1993

How the quality of port services could be improved?

Your answer could win you the Akiyama Prize,

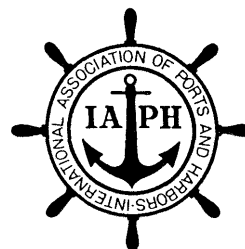
A silver medal and US\$1,000 in cash

plus

**An invitation, including travelling costs
and hotel accommodation to attend
the 18th World Ports Conference of IAPH**

17 - 23 April 1993

at Hilton Hotel, Sydney, Australia



**IAPH invites entries for its 1992/1993 Award Scheme
from those working at all levels
in IAPH member ports/organizations in developing countries.**

Conditions for Entry to the IAPH Award Scheme 1992/1993

1. Suggestions regarding how the quality of port services could be improved should be presented in English, French or Spanish, typewritten, and submitted to the Secretary General, the International Association of Ports and Harbors, Kotohira Kaikan Building, 1-2-8, Toranomon, Minato-ku, Tokyo 105, Japan.
2. The suggestions may cover marine, engineering or port operations services. Tangible benefits resulting from the changes should be quantified, together with the costs (if any) involved.
3. Entries may be made by individuals employed by IAPH member organizations, and should be the original work of the entrant. Those which are the result of official studies or otherwise sponsored projects will not be eligible.
 - 3.1 Entry texts should not exceed 20 pages excluding a reasonable number of appendices containing tables, graphs or drawings.
 - 3.2 The paper size must be A4 (21.0 x 29.7 cm).
 - 3.3 Three (3) copies of the entry paper should be submitted to the IAPH Head Office at the above address.
4. Entries will be judged by a panel of experts appointed by the Chairman of the Committee on International Port Development of IAPH. The panel will give greater merit to papers identifying and evaluating specific improvements than to entries covering a wide range of improvements in general terms.
5. The First Prize for the winning entry will consist of:
 - 5.1 The Akiyama Prize (a silver medal plus US\$1,000 or the equivalent in local currency); and
 - 5.2 An invitation, including travelling costs and hotel accommodation, to attend the 18th World Ports Conference of IAPH, to be held from 17 to 23 April 1993, in Sydney, Australia.
6. In addition to the First Prize, Second, Third and Fourth Prizes of US\$500, US\$400, US\$300 will be awarded to the next best entries.
7. Additional prizes of US\$100 each will be awarded to any other entries judged by the panel to be of a sufficiently high standard.
8. A summary of winning entry may be eligible for publication in the "Ports and Harbors" magazine.
9. At the decision of the panel, a bursary may be awarded to any one prize winner (subject to agreement of the employer).
10. The closing date for receipt of entries is **1st September, 1992.**

The IPD Fund: Contribution Report

Contributions to the Special Fund For the Term of 1990 to 1991 (As of Nov. 11, 1991)

Contributors	Amount
Paid:	(US\$)
Associated British Ports, U.K.	3,000
Nagoya Port Authority, Japan	2,748
UPACCIM, France*	1,989
Port of Copenhagen Authority, Denmark	1,000
South Carolina State Ports Authority, U.S.A.	1,000
Vancouver Port Corporation, Canada	1,000
Puerto Autonomo de Valencia, Spain	1,000
Port Authority of New York & New Jersey, U.S.A.	1,000
Niigata Prefecture, Japan	610
Osaka Prefecture, Japan	585
Kobe Port Development Corp., Japan	584
Osaka Port Terminal Development Corp., Japan	584
Nagoya Container Berth Co. Ltd., Japan	554
Penta-Ocean Construction Co., Ltd., Japan	502
Marine Department, Hong Kong	500
Port Authority of Jebel Ali, U.A.E.	500
Port of Montreal, Canada	500
Port Rashid Authority, U.A.E.	500
Stockton Port District, U.S.A.	500
Port of Tauranga, New Zealand	500
Port Autonome de Dakar, Senegal	480
The Japanese Shipowners' Association, Japan	438
Japan Port & Harbor Association, Japan	400
Public Port Corporation II, Indonesia	300
Toyama Prefecture, Japan	291
Japan Cargo Handling Mechanization Assoc., Japan	280
Fraser River Harbour Commission, Canada	250
Port of Melbourne Authority, Australia	250
Port of Palm Beach, U.S.A.	250
Port of Quebec, Canada	250
Saeki Kensetsu Kogoy Co. Ltd., Japan	250
Ghana Ports & Harbours Authority, Ghana	250
Pacific Consultants International, Japan	238
Bintul Port Authority, Malaysia	200
Gambia Ports Authority, the Gambia	200
Nanaimo Harbour Commission, Canada	200
Port of Redwood City, U.S.A.	200
Mauritius Marine Authority, Mauritius	200
Public Port Corporation I, Indonesia	150
Port Authority of the Cayman Islands, West Indies	100
Port Authority of Thailand, Thailand	100
Total	US\$24,433
Pledged:	
Empresa Nacional de Puertos S.A., Peru	100
Total	US\$100
Grand Total	US\$24,533

* Union of Autonomous Ports & Industrial & Maritime Chamber of Commerce (the Association of French ports) on behalf of the Ports of Le Havre, Bordeaux, Dunkerque, Marseille, Nantes-St. Nazaire, Paris and Rouen

18th World Ports—

(Continued from Page 7)

Managing Director
John M Wallace and Associates
Honorary Member, IAPH

The Maritime Services Board looks forward to working with you and drawing on your vast experience to make the 1993 Conference memorable and productive.

Max Moore-Wilton

At the same time, our conference host has introduced the symbol mark of the Sydney Conference as reproduced below and on C2 (inside front cover) page of this edition.

Mr. Rooney, Honorary Member, Loses Home in Oakland Tragedy

According to the AAPA Advisory (October 28, 1991), several former and present Port of Oakland employees were among those who lost their homes in the forest fire that swept portions of the city a few weeks ago. They included Mr. Kerwin Rooney, retired Port Attorney and present AAPA General Counsel. Mr. Rooney served as Chairman of the IAPH Legal Counselors until the Houston Conference in 1977, where IAPH elected him as an Honorary Member. Our sympathy and thoughts go to Mr. Rooney and his family members as well as to others at the Port affected by this tragic turn of events.



Mr. J. Kerwin Rooney

Mr. Dubois Liaison for La Ciotat Development

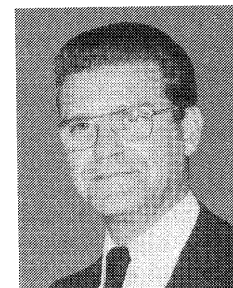
The industrial site in La Ciotat, located near Marseilles, has been experiencing for several months numerous debates as regards the future of its ship repair facilities.

Mr. Jacques Dubois has just been appointed as the sole negotiator by the French Government to submit proposals, in liaison with all the relevant decision-makers, for the re-industrialization of the site in La Ciotat.

His great knowledge of the shipping trade and his experience of development and planning should enable him to work out the basic framework that will allow implementation the trends defined by the Prime Minister in order to create industrial employment in La Ciotat.

Mr. Dubois, "Ingenieur General des Ponts des Chaussée" and former General Manager of the Port of Le Havre Authority, currently holds the position of coordinator

(Continued on Page 13)



Mr. J. Dubois

OPEN FORUM

Efficient Intermodalism and the Role of Adequate Landside Port Access

by

Robert E. Martinez, Ph.D.
Deputy Maritime Administrator
Maritime Administration
U.S. Department of Transportation

and

Andrew R. Reed, M.A.
Office of Port and Intermodal Development
Maritime Administration
U.S. Department of Transportation

One of the major competitive advantages held by the United States compared to its major trading partners is the strength and flexibility of its transportation infrastructure. A strong transportation infrastructure contributes enormously to low-cost production—and consumption—of goods and services. A market-based transportation infrastructure is by definition responsive to market changes, and more likely to stay abreast of innovation and enhancements. In this discussion, I address one relatively small, but critical, component of a healthy transportation infrastructure which is too easily overlooked, port access.

An important goal of the President's National Transportation Policy, developed under Secretary Samuel Skinner's leadership, is enhancement of intermodal connections at port and airports.¹ Efficient landside access to ports is an extremely important aspect of the infrastructure required for the emerging international intermodal transportation system.

Over the last year and a half, the Maritime Administration (MARAD), joined by four other Department of Transportation (DOT) agencies (the Federal Highway Administration, the Federal Railroad Administration, the Research and Special Programs Administration, and the Urban Mass Transportation Administration) has been studying the issue of landside transportation access to ports. MARAD asked the National Research Council (NRC) to form a blue ribbon panel to assess the severity of the problem. With support also from the American Association of Port Authorities (AAPA), and technical assistance from the American Association of State Highway and Transportation Officials (AASHTO), the four DOT agencies joined in assisting the efforts of the blue ribbon panel which operates under the auspices of the NRC's Transportation Research Board (TRB). Although the study has not been completed,

the TRB has released an interim report on impediments to landside access to U.S. ports, which reflects a number of the major concerns my agency, MARAD, has related to port access.²

Related to the TRB effort, the American Association of Port Authorities conducted a survey of U.S. ports to ascertain their concerns about port access and the types of solutions that were being undertaken. Similarly, MARAD did more extensive survey work at ten major ports throughout the United States.³

At the same time, we have become increasingly interested in the port access issues in other countries, and have communicated with the United Nations Conference on Trade and Development and the International Association of Ports and Harbors (IAPH).

The Deputy Secretary General of IAPH wrote us about our port access initiative. He said:

"... we see a strong similarity of views and concerns between your [port access] study and the IAPH's recent survey on port perceptions. In particular reference to the city-port relationships alone, we believe the situations contain surprisingly wide-spread common elements on a worldwide basis. It is an impression that those items of problem areas have a strikingly strong similarity or common factors felt by very many ports all over the world. To be very frank with you, I was amazed by the extent of similarity of problems involved."⁴

This paper captures some of the findings of the TRB and MARAD work on port access, and discusses our sense about port access issues overseas.

Ports have always been important to the vitality of a country. Many cities developed around their ports. As a result, some of the most historic and scenic properties and important industries are located adjacent to ports. Limited land for development of maritime cargo activities, and competition from other non-maritime groups for the development of these resources are some of the challenges facing our ports. Approximately 84 percent of the U.S. ports surveyed reported that they have witnessed increased competition for available land.

The primary components competing for land to service maritime cargo are the existing rail lines, highways, and water depth. However, there are other factors. For example, retail shops, office buildings, and condos can be located anywhere, but many of them are attracted to waterfronts, increasing the pressure for available land. Over 60 percent of the ports in the survey confirmed that there has been a growth in non-cargo activities in the vicinity of port facilities during the last decade. Non-cargo activity on the waterfront affects land prices. Fifty-five percent of the ports reporting such growth indicated a substantial increase in the value of port property.

Port authorities themselves are not immune to this trend of non-cargo activities in port areas. Many believe that the income from these activities may exceed revenue from

maritime cargo activities. In fact, many U.S. port could be described as heavily involved in real estate development.

As public entities, ports are often responsible for other activities besides cargo handling. Economic development has led one major port to locate a warehouse outlet at the primary access ramp to an interstate highway. This has attracted commercial traffic into the port industrial zone and thereby created an access bottleneck.

During MARAD's port visits, we heard community groups complain about cargo trucks from ports going through their neighborhoods. Such a contentious climate for port-related access problems is not really surprising. Ports often exert decreasing influence on their own development due to very understandable, political realities. The TRB noted that increasing proportions of cargoes move through ports headed for distant inland destinations, while the port-related "industry," broadly understood, employs fewer and fewer individuals in all respects related to cargo handling, as work is increasingly mechanized. At the same time, ever-growing amounts of cargoes are being imported and exported in the United States, and necessarily moving through port areas, resulting in increasing traffic congestion and noise.⁵ Hence, local communities, while bearing the inconveniences, may not be the greatest economic beneficiaries of ports, with fewer individuals in the community earning their livelihoods directly from ports. In short, ports don't vote.

Community groups in New Orleans have already convinced the City Council to prohibit truck cargo on five of the six major trucking routes from some of its major river terminals. Another example is in Charleston, South Carolina. The Port built an access road for Wando Terminal about 10 years ago, linking it to a major highway. An upper middle class neighborhood subsequently grew in the region and requires use of the port-constructed road. Now residents complain about the cargo trucks!

The importance of protecting coastal land for cargo activities is gathering support throughout the country. As some of you may know, the Walt Disney Company is considering a theme park development right in the middle of a harbor that handles 1.6 million containers a year at the Port of Long Beach. We understand that the California Coastal Commission's executive director came out against the development by saying that "filling the coastal waters in an industrial port area for non-port dependent uses such as amusement part rides, restaurants, shops, etc., should not be allowed."⁶

Boston and San Francisco Bay area have programs for conserving coastal land for cargo activities. The Port of Boston's maritime activities are currently protected from alternative land use development by Boston's Maritime Economic Reserve Zone and Massachusetts' Port Area Zone regulation. Under this doctrine, ports are viewed as non-replaceable resources which deserve to be protected and preserved. San Francisco Bay ports are likewise protected by land use regulations administered by the Bay Conservation and Development Commission.

From a different perspective, significantly, liner shipping companies in the U.S. trades are finding that cargo related costs (handling, freight station operation, delivery, as well as traditional port expenses) now account for major share of total revenues. Data available from U.S. flag operators for 1990 show total vessel related expenses (including crew, fuel, maintenance and capital costs) averaged less than 30 cents per revenue dollar, while cargo expenses averaged almost 60 cents per revenue dollar. Thus it should be clear to these companies that they have a vital interest in making port access more efficient. The traditional concept of moving cargo from New York to Rotterdam, for example, on "ship A" is no longer an accurate depiction of the role played by shipping companies. Today's efficient shipping companies

Mr. Dubois Liaison—

(Continued from Page 11)

of the Maritime Inspection of Maritime Services in the "Provence-Aples-Côte d'Azur" region. As many IAPH members might recall, Mr. Dubois was the Chairman of the 11th Conference of IAPH which was hosted by the Port of Le Havre in Deauville/Le Havre in 1979 and he is an Honorary Member of IAPH. (News release dated October 29, 1991 received from the Port of Le Havre.)

New Appointment

Mr. Nonaka of Kawasaki to Serve on Ship Sub-Committee, COPSSEC

Mr. Nobuyuki Nonaka, Director General, Port and Harbor Bureau, City of Kawasaki, Japan, has been appointed to serve on the Ship Sub-Committee, COPSSEC (Committee on Port & Ship Safety, Environment and Construction). His appointment was officialized by Mr. Jean Smagghe, the COPSSEC Chairman and 3rd Vice-President of IAPH on behalf of President Mather during Mr. Smagghe's visit to the Head Office on October 17, 1991.

Membership Notes:

New Member

Temporary Member

Tampa Port Authority (U.S.A.)

Address: P.O. Box 2192, Tampa, FL 33601
Mailing Addressee: Mr. Joseph L. Valenti
Port Director
Tel: 813-248-1924
Fax: 813-247-2352

Changes

Sea Ports Corporation [Regular] (Sudan)

Chairman: Mohamed A/Gadir Omer
General Manager: Mohamed Tahir Aila
Deputy General Manager: Hamza Mohamed Osman
Port Consultant: Capt. Kamil Abd E/Rahman

Turkish State Railways [Regular] (Turkey)

General Director: Mr. Tekin Cinar
Director of Ports Department: Mr. Unkur Grses
Assistant Director of Ports Department: Mr. Hasan G. Igen
Marketing Manager: Mr. Remzi Sivaslioglu

provide a full intermodal network of service, taking goods from a point far inland in the U.S. to delivery far inland in Europe, or elsewhere. As such, the efficiency of intermodal transfers — where ports are critical — is essential to providing low-cost service.

In its review of the port access situation in the U.S., the TRB noted that port productivity has increased almost exponentially due to new technologies, such as larger ships, growing containerization (including now of some neo-bulk and bulk commodities), and the widescale use of double-stack trains (which reduce the cost of shipping containers by 25 percent to 40 percent). But these newfound intermodal efficiencies are only as strong as their weakest link—which often are growing bottlenecks on the landside.

“For some seaports the weakest link in the logistics chain is their back door, where congested roads or inadequate rail linkages to marine terminals, and sometimes both, result in inefficient delays and higher transportation costs.”⁷

The TRB report recommends that Congress should:

- Make routes linking ports with major highways eligible for Federal aid;
- Ensure that eligible projects are given priority in Metropolitan Planning Organizations (MPOs) and state capital improvement plans; and,
- Ensure that the freight transportation system is provided for because of its importance to national competitiveness and security.⁸

Phase I of the TRB study focused on general cargo movements through container ports. The analysis is based on empirical evidence that captures deepwater ports constituting 90 percent of all container shipments in and out of the United States. Phase II of the study, which was approved by the National Research Council panel authorizing the project just this week, will focus on shallow and deep draft bulk ports.

In summary, the TRB report says that ports must now be concerned with the landside approaches to their properties and Congress should establish mechanisms for providing assistance.

This opens up involvement by a whole new plethora of planning, zoning, air quality, and similar regulatory agencies. In this climate, local and state cooperation is essential to obtaining better access to ports, eliminating congestion, and reducing the associated costs. Many of the problems will only be solved if the economic multiplier effects of adequate port access are recognized by political actors and the public. Short of that recognition, competing constituencies may stymie progress. Private and public sector parties must work together. For example, railroads constitute a private sector party, but they must be involved. Their planning for future growth has a major impact on port access.

Amelioration of port access bottlenecks is very timely in the United States. The Bush Administration is currently actively pursuing reauthorization of surface transportation legislation, driven by the expiration on September 30, 1991, of the existing DOT highway, transit and highway safety authorization.

The Bush Administration’s “Surface Transportation Assistance Act of 1991” (STAA) has set the tone to support improved intermodal connections and increased local deci-

sion-making in utilizing Federal funds. The preamble to Section 102 of the Act concerned with the proposed “National Highway System” (NHS) sets the goal of improved connectivity by serving ports, airports, and international border crossings. The Administration’s STAA supports an NHS of 150,000 miles of principal arterial routes, with provision for up to a 10 percent increase in total mileage if necessary. This NHS would incorporate the Interstate system, which is almost completed, and which constitutes 43,000 miles. The Federal funding share for NHS projects would be 75 percent.

From the port access side, designation of the remainder of eligible roadways (in addition to the Interstates) for inclusion within the NHS would be developed over the course of two years in close consultation with the states. As such, if states deemed port access roadways as priority projects, they conceivably could receive significant Federal funding.

In total, there are three surface transportation bills being considered by the U.S. Congress. Fortunately, the other two competing bills also would provide greater latitude for state and local governments in how they allocate federal funds for intermodal connections. All three bills would also allow for a National Highway System that includes highway access to ports.

Enactment of the Administration’s STAA will place a new imperative on our port organizations. They must open and maintain a dialogue with the Metropolitan Planning Organizations (MPOs) and state departments of transportation to address their needs for improvements to expedite cargo movements, reduce landside congestion in and around ports.

Overseas, we see similar challenges for ports. Cargo can move through several competing ports as is the case in the United States. Ports like Keelung and Kaohsiung vie with ports like Pusan and Hong Kong as major transshipment ports. Ocean carriers are interested in ports with efficient landside operations, including truck and rail access.

We have heard of several port access projects underway throughout the world as more and more ports are looking landside for competitive advantages. Rotterdam has plans to build three distribution centers by the year 1995 to consolidate cargo by European and non-European areas. U.S. ports in Virginia and North Carolina also have cargo consolidation centers (Front Royal and Charlotte). We are monitoring their development to determine the extent to which they enhance the intermodal system.

Rotterdam also is undertaking two projects to improve its port access for both rail and trucking. Two tunnels are planned to facilitate rail and truck access. The road tunnel under the Noord near Alblasterdam will be a major link in the A15 motorway that connects Rotterdam with the German hinterland and mainland Europe. The Willems Railway Tunnel will replace railroad bridges over two waterways.⁹ Likewise in the United States, four ports (Los Angeles/Long Beach, New York/New Jersey, Boston, and New Orleans) are considering dedicated freight corridors to facilitate ease of port access. The most notable is the Alameda Transportation Corridor in southern California (Los Angeles/Long Beach) that would consolidate rail and truck traffic into a single 24-mile transportation corridor.

Dublin is considering the feasibility of constructing a major Port Access and Eastern Relief Route linking the port to the national road network. The Port of Dublin’s “Five Year Development Plan” says that:

"The main beneficiary of the new route would be Dublin City itself, relieving the city centre of heavy goods vehicles which put environmental pressures on a street network unsuited to such traffic. Significant benefit would also accrue to Dublin Port in that a level of access compatible with modern commercial requirements for shipping transport would be provided. A reduction in the access costs of our exports to mainland Europe, an important government objective, would also ensue."¹⁰

During these proceedings, we have discussed Taiwan's plans to undertake a \$300 billion economic development program over the next six years. It is significant that one-third of that amount is for transportation projects, a recognition, undoubtedly, of the economic multiplier effects of a strong transportation infrastructure.

Transportation spending for ports is included in that fund, as is the \$393 million fifth container terminal for Kaoshiung and a new deepwater harbor for the country that is estimated to cost \$11.9 billion.¹¹

It is further noteworthy that part of the Taiwan development program is dedicated to the construction of a new eastern and western highway for Keelung Harbor. This new highway will provide enhanced connections to the freeway system.

The Taiwan Minister of Communications, Mr. Clement C.P. Chang, typified U.S. opinion on the importance of maintaining the transportation infrastructure when he stated, in September, 1990:

"A modern nation cannot develop properly without a strong transportation system that has been built up and continuously improved through use of the latest advancements in technology and with a thorough understanding of the demands of society. It must, in addition, maintain a balance between quantity and quality. Such a transportation system requires the formulation of forwardlooking integrated policies designed to satisfy the needs of the people, enhance their quality of life, and lay a firm foundation for national development."¹²

¹ U.S. Department of Transportation, "Moving America: New Directions, New Opportunities," *A Statement of National Transportation Policy Strategies for Action*, Washington, D.C., February 1990.

² Transportation Research Board (TRB), National Research Council, "Interim Report: Impediments to Landside Access to U.S. General Cargo Ports," Washington, D.C., July 1991.

³ Maritime Administration, U.S. Department of Transportation, "Survey on Landside Transportation Access to U.S. Ports," Washington, D.C., May 1991.

⁴ Rinnosuke Kondoh, Deputy Secretary General, International Association of Ports and Harbors, Tokyo, in letters to John Pisani, Director, Office of Port and Intermodal Development, Maritime Administration, July 17 and August 2, 1991.

⁵ TRB, *op. cit.*, S.2.

⁶ Peter Douglas, as quoted by Bill Mongelluzzo, "Disney Suffers Setback on Long Beach Plan," *The Journal of Commerce*, June 10, 1991.

⁷ TRB, *op. cit.*, S.1.

⁸ TRB, *op. cit.*, S.2-S.3.

⁹ Lodder, Leeann, "World's Ports Plan for 21st Century's Cargo," *The Journal of Commerce*, March 4, 1991.

¹⁰ Dublin Port, "Five-Year Development Plan Leading to 1993 and Beyond, Update 1991," Dublin, 16.

¹¹ Description of the projects is in the ROC Ministry of Communications, "The Prospects for Transportation and Communications in the Year 2000, Republic of China," Taipei, September 1990, 48-51.

¹² *Ibid.*, 2.

Rationalisation: Cost Effectiveness Best Marketing Tool

**Address by Mr. Conor Doyle
on the occasion of his
re-election as chairman,
Cork Harbour Commissioners
21 October, 1991.**

I wish to record my sincere appreciation of your decision to re-elect me for a second term as Chairman of Cork Harbour Commissioners. As this is the first meeting of the new board, I am delighted to welcome back quite a number of Commissioners who served the Port of Cork so well during the lifetime of the old board. I am particularly pleased to welcome the new members including, for the first time, representatives of Cork County Council, with whom I look forward to a harmonious and productive working relationship, for long the hallmark of successive and successful Harbour Boards in Cork.

During the past year the Commissioners undertook two major development projects which will do much to shape the future of the port. I refer to the extension and upgrading of the Tivoli Container Terminal and the extension of the deepwater berthage at Ringaskiddy. The total investment was approximately £10 million half of which was funded directly by the Commissioners and the other half by the E.C. Structural Funds. A second container crane was commissioned at the Tivoli Container Terminal on 1 May and this enables the port to handle two container vessels simultaneously. In addition, the availability of four rubber tyred gantries, the last of which will be operational within a few weeks, will ensure speedy handling of road and rail collections and deliveries independent of ships' operations. This variety of equipment together with flexible and productive work practices, is a major advantage over competing ports which sometimes rely on one crane to perform all tasks, including ship, road and rail operations.

The quality and cost effectiveness of the Container Terminal have been recognised by container lines, five of whom nowadays offer an aggregate of seven sailings per week to mainland European destinations. Perhaps more important is the fact that, due to increased competition in recent years, door to door container rates between the South of Ireland and the continent have reduced by about 40%. This is a measurement of the vital contribution which the Port of Cork makes to both the regional and national economy. While total container traffic between Ireland and the continent declined somewhat last year due to the current recession, the Port of Cork continued to increase its market

share. It is worth noting that, largely due to prudent management of their affairs over a number of years, the Commissioners were in a position to fund their share of the Container Terminal investment — a problem which some ports are finding difficult to overcome at present.

The extension of the Ringaskiddy deepwater berthage which is already the largest public port facility in Ireland will enable us to handle two large bulk carriers. The deepwater berthage plays a significant role in controlling the cost of agricultural inputs at a time when the farming sector is experiencing major problems. The investment in private facilities at Ringaskiddy by the I.A.W.S. Group and the recent decision of Stokestown Port Services to build new storage capacity, are further evidence of the confidence of the private sector in the Port of Cork. Work on the extended Deepwater Terminal is due for completion in the Spring of 1992.

Earlier this year, the Commissioners placed a £700,000 contract for the strengthening and refurbishment of the South Deepwater Quay, the foundations of which were seriously undermined over the past 110 years of its life. The Commissioners had to bear the entire cost of this work from their own resources. Unfortunately a similar problem has manifested itself at the Cobh Deepwater Quay which is similar in age and design to the South Deepwater Quay. Here, the estimated cost of the remedial work is £750,000 but, unlike the South Deepwater Quay where in 1990 there were 1,100 shipping movements and cargo throughput of 750,000 tonnes, the Cobh Deepwater Quay does not enjoy a high degree of utilisation and annual goods rates revenue is in the order of £4,500. However, due to its importance to Cobh and its immediate surrounds as a result of economic activity generated by fishing and cruise liner traffic, the Commissioners are prepared to undertake the refurbishment if 50% of the cost can be provided by outside sources. It is the Commissioners' view that it is essential for the fragile Irish fishing industry that government support be provided so that trawler owners are not forced to incur unnecessary additional costs.

As already mentioned, the Tivoli Container Terminal and Ringaskiddy Deepwater Terminal projects qualified for subvention from E.C. Structural Funds. The Irish government is at present promoting the concept of extending the use of these Funds to cover the provision of mobile assets i.e. lo-lo and ro-ro vessels to be used to transport Irish exports to Europe. While there is a body of opinion that contends that the most equitable use of these Funds would be in the development of improved infrastructure such as port facilities, the Commissioners are supportive of the government initiative provided there is no violation of the E.C.'s regulations regarding distortion of trade. For some years the Commissioners have been concerned at the apparent government bias towards east coast and southeast coast ports. Ireland is an island nation entirely dependent on trading with the outside world. Within the country, there are but three container ports i.e. Cork, Dublin and Waterford and two roll-on roll-off ports i.e. Cork and Rosslare which provide direct services to continental Europe, the country's principal export market. In fact, the Port of Cork is the only Irish port which offers direct lo-lo and ro-ro services to mainland Europe. It is essential that exporters and shipping lines have a choice of ports and recent industrial relations problems at one port and delays and disruption of services due to exposure to weather at another port, highlighted the necessity

for alternatives. The Port of Cork welcomes all initiatives which will assist ports and port users. However, we insist that we must get a fair proportion of any such assistance.

When I was first elected your Chairman last year, I emphasised that cost effectiveness was the best possible marketing tool. For some years past, the Commissioners have kept rates increases well below the rate of inflation and, in addition, we have participated with port users, port stevedores and SIPTU, who represent dock labour, in the successful negotiation of two phases of docks rationalisation. Notwithstanding this, however, port charges in certain key areas remain uncompetitive and there are demands from major users that this uncompetitiveness be tackled. We therefore urge that, under the aegis of the Cork Cargo Handling Regulatory Company, negotiations will shortly commence on the third phase of docks rationalisation. Successful conclusion of these negotiations will enable the port to recover traffic, particularly in the dry bulk category, which has been lost to competing ports. There is little doubt that Cork's superior facilities and geographical location allied to competitive charges, will lead to further increases in traffic and create additional employment in the port area.

Ireland's greatest problem is undoubtedly unemployment. Last October I called on government to give additional power to the Ringaskiddy Freeport to enable it to compete successfully with other ports. To date this appeal has fallen on deaf ears. With January, 1993 and the enlarged European market a little over a year away, it is imperative that this country uses every means at its disposal to help us to maximise the benefits from our participation in the world's largest consumer market. The irony is that the granting of additional powers and incentives to the Freeport will be at zero cost to the exchequer and will *guarantee* the provision of new jobs. I exhort all Cork politicians, particularly members of the government parties, to join with me in making urgent representation to government. This region needs the jobs.

Any review of the past year would not be complete without reference to a successful car ferry season which saw passenger carryings by the three lines which use the Port of Cork, Swansea Cork Ferries, Brittany Ferries and Irish Ferries increase by 12%. In particular I must single out Swansea Cork Ferries and their shareholders, Cork Corporation, Cork County Council and Kerry County Council for the outstanding success in increasing their passenger numbers by over 27%. The Councils demonstrated refreshing initiative in launching a service in 1987 against all the odds. Today their success reverberates throughout the Cork/Kerry region and it enabled our tourist sector to enjoy a highly successful 1991 season when other regions, more dependent on the depressed U.S. market, have suffered badly. I was very pleased that the company has renewed its charter for next year and we wish them continued success in the future.

Undoubtedly the most exciting and popular event of the past twelve months was the superb spectacle of the Cutty Sark Tall Ships in Cork in July. Elsewhere, I have complimented the organising committee under Chairman Ted Crosbie, on their outstanding achievements. I have little doubt that the publicity generated for both the city and the port will yield tangible returns in the years ahead.

Gentlemen, please forgive me if the traditional year end review has gone on a little long. Thank you for your forbearance and I look forward to fruitful participation by all the Board over the next year.

International Maritime Information

WORLD PORT NEWS

Strategic Planning Seminar for Managers

OBJECTIVE

The objective of the seminar is to provide participants with an in-depth understanding of the concepts, principles and techniques of strategic planning and decision-making to enhance the performance of shipping companies. The seminar incorporates a simulation game entitled "STRATSHIP". The simulation game gives participants an insight into the complexities and trade-offs involved in strategic decisions and serves to reinforce the principles and techniques imparted through the seminar.

FOR WHOM:

Executives and managers of shipping companies.

SEMINAR OUTLINE

- Environmental analysis
- Structural analysis
- Generic industry strategies
- Strategic decisions
- Competitive advantage
- Implementing strategy
- Simulation game — STRATSHIP

SEMINAR LEADERS

Mr David W Warner: Mr Warner is the Economic Affairs Officer of UNCTAD's shipping division. He holds a B.Sc from Cornell University, and an MBA from University of Miami. He is currently pursuing a Ph.D. in University College, Wales. Mr Warner has extensive working and consulting experience in maritime transportation.

Mr Bala K Subramaniam: Mr Subramaniam is the Principal Advisor, sectoral support in UNCTAD. He holds degrees in naval architecture and marine engineering from the University of Michigan and a Master degree in shipping management from the Massachusetts Institute of Technology (MIT). Mr. Subramaniam has extensive working and consulting experience in the shipping industry.

ADMINISTRATIVE DETAILS:

Date
19 Feb — 28 Feb 1992
Time
9:00am — 5:00pm
Fee
S\$1,600 per participant
Venue
Singapore Port Institute
2 Maritime Square
Singapore 0409

Closing Date of Application

15 Dec 1991

Registration

The completed application form (as reproduced below) must be accompanied by a check or bank draft for the amount of fee made payable to the "Port of Singapore Authority" and submitted to reach SPI before 15 Dec 1991.

Refund of Fee

If notice of withdrawal is given 3 weeks before the commencement date of the seminar, a refund amounting to 80% of the fee will be made. However, no refund will be made if notice of withdrawal is given after the stipulated period.

Cancellation

The Authority reserves the right to cancel or postpone the seminar if necessary.

Enquiries

For more information, please contact:
Singapore Port Institute

Telex: RS28676
Telefax: (65) 2740721 (Overseas)
3211416 (Local)

Telephone: 3211825 or 3211826

APPLICATION FORM

STRATEGIC PLANNING SEMIAR FOR SHIPPING MANAGERS

Name: _____

NRIC No. ____ Date of Brith: _____

Address: _____

Educational Qualification: _____

Name & Address of Company: _____

Office Telephone No: _____

Company Sponsored: Yes/No*

If yes:

Signature of Authorising Officer from Sponsoring Company: _____

Name of Signatory: _____

Company's Stamp: _____

**Delete where inapplicable*

Australian Ports: Memorandum on Drugs

According to information that the IAPH Head Office has recently received from the Association of Australian Port and Marine Authorities (AAPMA), it is expected that a Memorandum of Understanding between the Australian Customs Service and the AAPMA representing Australian Port and Marine Authorities will be signed at a ceremony set for 21 November 1991.

In this connection, Mr. Peter M. Brown, Executive Director of the AAPMA, has been in touch with Mr. F. Suykens, General Manger of the Port of Antwerp, who serves as IAPH Liaison Officer with the CCC. In his letter dated 29 October 1991, Mr. Brown says, "Associated with the Memorandum are Guidelines proposed by the Australian Customs Service, some aspects of which are not acceptable to Port Authorities. We believe it is essential to reconcile the objectives of Customs with those of achieving maximum efficiency in port operations which, of course, must remain the principal objective of Port Authorities."

The proposed Memorandum follows:

Memorandum of Understanding

between the Australian Customs Service (Customs) and the Association of Australian Port and Marine Authorities (AAPMA)

RECOGNISING that offences against Customs laws, particularly importation of illicit drugs, are prejudicial to the economic and social interests of Australia and to the interests of all parties involved in legitimate trade, and that such offences may involve the use of a variety of transport modes and handling facilities,

NOTING that community concerns about drug trafficking necessitates the constant review of surveillance and control activities by Customs,

AWARE that increased controls could result in additional expense and delays to port operators and port users engaged in legitimate trade, ***but also cognisant of the need to minimise such costs by co-operative effort,**

BELIEVING that increased co-operation between port operators and Customs could significantly assist in combating Customs offences, in particular the importation of illicit drugs,

BELIEVING ALSO that such co-operation would be of benefit to all parties in legitimate trade including port operators and their users and customers,

THE AUSTRALIAN CUSTOMS SERVICE AND THE ASSOCIATION OF AUSTRALIAN PORT AND MARINE AUTHORITIES have agreed as follows:

- (i) to strengthen further the co-operation between the two organisations,
- (ii) to examine and develop together ways in which co-operation and consultation between port and Customs could be improved with a view to combating Customs offences, in particular the importation of illicit drugs,
- (iii) to seek to ensure a better understanding by port operators of Customs' tasks and problems and vice versa, thereby facilitating a productive exchange of information between the two

parties,

- (iv) to consider practical ways in which port operators, their personnel and their agents might assist Customs in the detection of Customs offences, in particular those relating to illicit drugs.

Done at Sydney on 21 November 1991

F. I. Kelly
Comptroller-General
Australian Customs Service

P. M. Brown
Executive Director
Association of Australian
Port and Marine Authorities
**Amendment by AAPMA*

IHE: 28th Int'l Seminar On Port Management

The International Seminar on Port Management provides port administrators and officials from all over the world with new information and know-how on port management. The seminars have been enormously successful, as proven by the programme twenty-seven year history and by the increasing number of applicants.

Twenty-seven previous seminars and tailor-made courses have brought together more than 800 port officials from almost 100 countries. Almost every year the contents of the seminar is updated according to the latest developments in ports in Europe as well as abroad. Special attention is drawn to subjects which are of paramount importance in a particular year. This year's theme is Intermodal Transport and Logistics.

The seminar is organized by the International Institute for Hydraulic and Environmental Engineering (IHE) in Delft in close cooperation with the Port Authorities of Amsterdam and Rotterdam. The Directorate General for International Cooperation of the Netherlands Ministry of Foreign Affairs provides its valuable support.

In general the International Institute for Hydraulic and Environmental Engineering also offers one-year post-graduate programmes and an M.Sc. programme for civil and environmental engineers, including port and coastal engineers. It is obvious that the same curriculum cannot be covered in six-

week seminar as the above-mentioned regular course. Therefore the seminar programme does not include constructional and hydraulic aspects but is confined to a thorough treatment of the organization and management of ports.

The seminar programme comprises regular study visits to the ports of Amsterdam, Rotterdam and occasionally other Dutch ports are visited too. These cities are located only short distances from the Institute in Delft. As part of the programme a study tour will be made to ports in Belgium and the Federal Republic of Germany.

May 7 — June 18, 1992

The programme will begin on Tuesday, May 7 and conclude on Friday, June 18, 1992. All participants are expected to follow the entire programme to receive a certificate of attendance. Therefore, those participants who have other business to attend to in The Netherlands, or elsewhere in Europe, are expected to arrive prior to the beginning of the course or stay on after its completion.

Programme

The seminar will be conducted in the form of lectures, discussions and seminars by participants, alternated by day trips or half-day visits to the ports of Amsterdam, Rotterdam and other ports in The Netherlands. There will be sufficient opportunity to study the ports' organization and various port operations. The study tour to Belgium and the Federal Republic of Germany will provide a special opportunity for comparison of the organization of various harbours. In Delft considerable time will be devoted to exercises in the organization of cargo handling, labour relations and traffic management.

Topics of the Seminar

Theme: Intermodal Transport and Logistics

1. Transportation

- Logistics and quantification of transport processes
- Distribution centres
- Integration of the transport chain from producer to consumer
- Functions of road, rail, pipeline, inland water, air and sea transport
- Merchant shipping
- Interests of the shipowner and

- of the shipper
- Future outlook

2. Patterns of port organization

- Functions of a port authority
- Relation to other public bodies and industry
- Political context
- Internal structures
- Differences in neighbouring European countries

3. Port finance

- Financial autonomy
- Ownership of facilities
- Sources of revenue and of loan capital
- Pricing of port services
- Port accounting and statistics

4. Reception of the ships

- Automation of traffic control
- Tasks of the harbour-master
- Traffic management
- Pilotage and navigation aids

5. Various port operations

- Marketing and public relations
- Conservancy of the fairway and dredging
- Port security, access to the port area
- Control of cargo losses
- Fire prevention and fire fighting
- Environmental aspects
- Legal Liabilities of various parties engaged in port operations

6. Dock labour

- Manpower planning
- Forecasting of requirements and availability of workers
- Training and career planning
- Systems of payment and relations with organized labour

7. Systems approach to solving port problems

- Introduction
- Port management defines objectives
- Review of port operations
- Injection of port policy
- Environment as a constraint
- Project phasing and case studies

8. Cargoes

- Automation of cargo handling
- Classical general cargo
- Mass break-bulk cargo
- Bulk cargo and liquids

- Requirements and equipment for handling
- Cargo unitization, warehousing and storage
- Handling of dangerous goods

9. Operations of terminals

- Planning, management and operation of terminals
- Productivity indicators and their measurement
- Improving productivity
- Exercise in resource management

Application and Admission

The seminar is open to port officials and other qualified candidates who in their daily activities are confronted with problems of port management.

Candidates should have a university degree, although in special cases experience can replace a university background. No simple formula can be given for the criteria of admission and for this reason applications will be individually considered.

Candidates should fill in the enclosed application form as completely and clearly as possible.

Candidates are required to submit a letter of recommendation from their employer.

The application form should be mailed to the Registrar. In order to promote close contact between the lecturers and participants and to stimulate discussions, the number of participants will be limited to 35.

Language

Since the seminar will be held in English, a good working knowledge of this language is prerequisite.

Fees and Other Costs

The participant's fee is Dfl.5000, which includes the tuition fee, travel cost for all study tours and lodging for study tours outside The Netherlands.

Participants will pay for their accommodation during their stay in The Netherlands. IHE will, upon request, make hotel reservations.

The participant's fee should be paid on or before the day of registration. Those preferring to pay in advance are requested to have the participation fee paid to the NUFFIC-IHE, Delft account at the ABN Bank Delft, account number 51.68.20.923.

For further information, please contact:

International Institute for Hydraulic and Environmental Engineering

P.O. Box 3015

2601 DA Delft

The Netherlands

Tel.: +31-15-788021/3404

Cable: interwater

Telex: 38099 ihe nl

Fax: +31-15-122921

Director: Prof.ir. W.A. segeren

25-27 March SingaPort Conference Concession

IAPH members will be entitled to the following discounts from the registration fees when they sign up for the SingaPort '92 conference:

Registration fees:

SS\$950.00 — per delegate for the whole conference (Day 1 to 3)

SS\$800.00 — per delegate per module (Day 1 and 2 or Day 1 and 3)

- A 20% discount if registered (with payment) before 25 January 1992.

- A 10% discount if registered after 25 January 1992.

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13th World Dredging Congress and Exhibition

Dredging for Development

Obero Towers Hotel

Bombay, India

7 — 10 April 1992

The congress is organised by EADA on behalf of WODA which incorporates:

The Western Dredging Association WEDA.

The Central Dredging Association CEDA.

The Eastern Dredging Association EADA.

The aim of the congress is to bring together engineers, scholars and other people associated with dredging from

throughout the world. It will provide opportunities for the exchange of information on technical and scientific advances and applications during the congress sessions on less formal occasions. Full details of technical visits will be sent to delegates prior to the congress.

Bombay, the chosen venue is a major Indian port, and India provides ample illustration that dredging is vital to the development of a coastal and inland waterway infrastructure. What is true for India is equally valid for other regions. Ports that have flourished for many generations have often grown beyond the originally anticipated dimensions or changed in function.

The Organising Secretary, XIIIth World Dredging Congress, P.O. Box 3168 2601 DD Delft, The Netherlands (Fax 31+15-787104) (Telephone 31+15-783145)

IMO Secretary General Outlines Five-Point Plan

If IMO does not take action to solve the problems facing shipping today others will step in and impose their solutions on the industry, the Secretary-General, Mr. William A. O'Neil, warned delegates to the Maritime Safety Committee at the opening of the 59th session.

He said: "Since last November, even further tragic losses and disasters have occurred which have caused large numbers of deaths and great anguish and grief to the families involved. These have caused a further undermining of the confidence and trust placed in this Organization as the global authority responsible for maritime safety. IMO cannot continue on the basis of 'business as usual' in the face of this continuing loss of life, ships and property at sea along with the pollution which so often results."

Mr. O'Neil said that unilateral application of national requirements is contrary to the interests of IMO and international shipping. But international regulations must reflect the highest practicable standards.

In the light of our recent experience, he said that there is compelling need for IMO to adopt without delay extraordinary measures in five areas:

1. To improve the survivability of existing ro-ro passenger ferries. They

New Publications

International Safety Guide for Oil Tankers & Terminals

Third Edition

International Chamber of Shipping
Oil Companies International Marine Forum
International Association of Ports and Harbors

ADDENDUM - MAY 1991

Explanatory Note

This addendum contains revisions to the Third Edition of the International Safety Guide for Oil Tankers & Terminals (ISGOTT) published in 1988. The amendments will be incorporated in a revised Third Edition of the publication in 1991.

The main amendment is the inclusion of a new Chapter 23 concerning the flammability hazards associated with the handling, storage and carriage of

residual fuel oils which has been introduced following industry examination of the properties of residual fuel oils and analysis of ullage space atmospheres of tanks containing them.

Other amendments have been made in order to promote the uniform application of precautions against electrostatic hazards when ullaging, dipping and sampling all cargoes when the tank atmosphere is not either inerted or non-flammable.

REVISIONS

Page	Section	Amendment
VII	contents	Add details of new Chapter 23 as follows: "CHAPTER 23 THE FLAMMABILITY HAZARDS ASSOCIATED WITH THE HANDLING, STORAGE AND CARRIAGE OF RESIDUAL FUEL OILS 23.1 Nature of Hazard 23.2 Flashpoint and Headspace Flammability Measurement 23.3 Precautionary Measures"
10	2.13.6	Add the following sentence to the end of the existing text: "For this reason, ullaging, dipping and sampling procedures must follow the recommendations given in Chapter 7, Tables 7-1 and 7.2."
43	7.2.5	Add a new section 7.2.5 as follows: "7.2.5 Non-Static Accumulator Oils When ullaging, dipping and sampling a non-static accumulator oil carried in a non-gas free environment, the dangers from other sources of static electricity should be minimised by following the precautions referred to in Tables 7-1 and 7-2. (See also Chapter 23 regarding residual fuel oils)."
45	7.4.2	Delete sentence at end of section commencing "However,

		a clean oil....." and ending "..... greater than 50 picoSiemens/metre."	are known to be vulnerable and we must act quickly to assure that these ships do not suddenly capsize on intake of water.
46	Table 7-1	<p>In section of the table entitled "Whether static precautions necessary," entries under "Non-Gas Fee" column referring to Non-Accumulator oils, both "Non-Volatile" and "Volatile" to be amended to "Yes.*"</p> <p>The following footnote is to be inserted beneath the table:</p> <p>"*for ullaging, dipping and sampling only"</p>	<p>2. To make it a condition of any grandfather clause that the level of safety in the ship concerned is raised to the highest practical equivalent to that required of new ships.</p> <p>3. To adopt new design and construction requirements for tankers which will more effectively prevent cargo spillage.</p>
47	Table 7-2	<p>In the third column of the table entitled "Flow of static accumulator liquids" amend the text referring to exceptions permitted as follows:</p> <ul style="list-style-type: none"> ● delete "(a)" and retain text "Sounding pipe is used" ● delete: <p>"or</p> <p>(b) cargo is known to contain sufficient anti-static additive (section 7.4.2)".</p>	<p>4. To develop a comprehensive strategy to reduce the number of maritime accidents caused by operational error. Recognizing the growing shortage of skilled and experienced personnel, our efforts should concentrate not only on better trained and motivated management and crews for the future but primarily on upgrading and better motivating existing personnel.</p>
69	9.10.2	<p>Insert new paragraph after existing 2nd paragraph of section 9.10.2:</p> <p>"It is recommended that, if inert gas systems are fitted, cargo tanks are maintained in an inert condition whenever there is a possibility that the ullage space atmosphere could be within the flammable range. (See also Chapter 23 regarding the carriage of residual fuel oils.)"</p>	<p>5. To secure the wider and more uniform application and enforcement of IMO Conventions.</p>
143	19.3.4	Delete phrase "unless it is certain that the conductivity is above 50 picoSiemens/metre" at end of 2nd sentence.	<p>Mr. O'Neil said that the International Convention for the Safety of Life at Sea, 1974 (SOLAS), has been accepted by 111 States. The fleets of these States represent 97% of world tonnage. One could reasonably expect that with the few exceptions of fleets of non-parties, the levels of safety in all fleets should be more or less the same.</p>
146	19.5.4	Re-number as "19.5.5"	<p>"However, underwriters' statistics show a startling variation in the loss ratios of fleets, the worst being 114 times that of the best in fleets of 2 million tons or more," Mr. O'Neil said.</p>
146	19.5.5	Re-number as "19.5.6"	<p>The Committee has requested 1,239 reports on investigations into serious casualties since July 1978, Mr. O'Neil said, yet only 701 had been received up to 15 February of this year. Some have been outstanding over many years.</p>
146		<p>Insert new section 19.5.4 as follows:</p> <p>"19.5.4 Non-Static Accumulator Oils"</p> <p>The possibility exists of a flammable atmosphere being present above non-static accumulator oil in a non-inerted or non-gas free environment and therefore the precautions summarized in Chapter 7, Tables 7-1 and 7-2, should be followed. (See also Chapter 23)."</p>	<p>The Secretary-General said that 320 ships are reported as being sub-standard as a result of inspections carried out in 14 port States. Over 90% of these reports were submitted by European countries. The deficiencies reported involve ships of 52 countries. More than 50% of the ships reported as sub-standard are registered under open registries.</p>
163		<p>Insert a new Chapter 23 as follows:</p> <p style="text-align: center;"><i>Chapter 23</i></p> <p style="text-align: center;"><i>The Flammability Hazards Associated with the Handling, Storage and Carriage of Residual Fuel Oils</i></p> <p>This Chapter deals with the flammability hazards associated with residual</p>	<p>Mr. O'Neil said: "Whilst shipowners have the right to register where they please, open registries should not be allowed to compete on the basis of lower</p>

safety standards."

If IMO conventions are to be effective they must be applied and enforced in a uniform and fair manner, Mr. O'Neil said. This was a fundamental concept of resolution A.500 which was adopted in 1981 and provided that "time is needed for maritime administrations to formulate national rules and regulations for effective implementation of IMO conventions and for the maritime industry to comply with them."

Mr. O'Neil told delegates: "For any convention to be effective each and every Contracting Government must apply and enforce all of its provisions. It cannot be acceptable to IMO that some Contracting Governments apply conventions strictly whilst others through ineffective administration, inadequate survey work or any other reason, permit standards to deteriorate to levels which repeatedly necessitate intervention by port States."

He urged the Committee to give high priority to the development of a procedure for monitoring the application and enforcement of IMO safety conventions by States party to them. The credibility of the MSC and IMO as the global authority for maritime safety is at stake. Identification of the specific problems involved will also allow better co-ordination of technical assistance to strengthen the capabilities of the flag States concerned and help them achieve the goal of self-sufficiency.

A further area requiring immediate attention is the continuing loss of ships carrying bulk cargoes, many of which have disappeared without trace and with the loss of their entire crews. Mr. O'Neil said that he understood that the Members of the International Association of Classification Societies (IACS) were exchanging information and would assist IMO in all ways possible.

(IMO News)

The Americas

Québec Inaugurates New Bulk Terminal

The Port of Québec Corporation and St. Lawrence Stevedoring, a division of the Québec Stevedoring Company, inaugurated a new \$15 million solid bulk terminal at Beauport on October 16th. The facility, which was built to

fuel oils and provides information on flashpoint and vapour composition measurement together with recommended precautionary procedures to be adopted when handling, storing or carrying residual fuel oils.

It should be noted that this Chapter refers only to residual fuel oils and not distillate fuels.

23.1 NATURE OF HAZARD

Residual fuel oils are capable of producing light hydrocarbons in the tank headspace such that the vapour composition may be near to or within the flammable range. This can occur even when the storage temperature is well below the measured flashpoint. This is not normally a function of the origin or manufacturing process of the fuel, although fuels containing cracked residues may show a greater tendency to generate light hydrocarbons.

Although light hydrocarbons may be present in the headspaces of residual fuel oil tanks, the risk associated with them is small unless the atmosphere is within the flammable range and an ignition source is present. In such a case an incident could result. It is therefore recommended that residual fuel oil headspaces are regarded as being potentially flammable.

23.2 FLASHPOINT AND HEADSPACE FLAMMABILITY MEASUREMENT

23.2.1 Flashpoint

Fuel oils are classified for their safety in storage, handling and transportation by reference to their closed cup flashpoint. However, information on the relationship between the calculated flammability of headspace composition and the measured flashpoint of the residual fuel oil has shown that there is no fixed correlation. A flammable atmosphere can therefore be produced in a tank headspace even when a residual fuel oil is stored at temperature below its flashpoint.

23.2.2. Headspace Flammability

Traditionally, gas detectors such as explosimeters have been used to check that enclosed spaces are gas free and they are entirely suited to this purpose. They have also been used to measure the "flammability" of headspaces in terms of percentage of the lower flammability limit (LFL).

Such detectors rely on a calibration carried out normally on a single hydrocarbon, such as methane, which may have LFL characteristics that are far removed from the hydrocarbons actually present in the headspace. When using an explosimeter to assess the degree of hazard in non-inerted residual fuel oil tank headspaces, it is recommended that the instrument is calibrated with a pentane/air or hexane/air mixture. This will result in a more conservative estimate of the flammability but the readings should still not be regarded as providing a precise measurement of the vapour space condition.

When taking measurements, the manufacturer's opening instructions for the instrument should be closely followed and the instrument's calibration should be frequently checked as oxidation catalyst detector (pellisters) are likely to be susceptible to poisoning when exposed to residual fuel oil vapours.

In view of the problems associated with obtaining accurate measurements of the flammability of residual fuel tank headspaces using readily available portable equipment, the measured % LFL only broadly ranks fuels in terms of relative hazard. Care should therefore be exercised in interpretation of the figures obtained by such gas detectors.

23.3 PRECAUTIONARY MEASURES

23.3.1 Storage and Handling Temperatures

When carried as fuel, temperatures of the residual fuel oil in the fuel system should conform to relevant codes of practice at all times and excessive local heating should be avoided.

23.3.2 Filling and Venting

When tanks are being filled, tank headspace gas will be displaced through vent pipes. Particular care should be taken to ensure that flame screens/traps are in good condition and that there are no ignition sources in the area immediately surrounding the venting system.

When filling empty or near empty tanks, it should be ensured that the heating coils are shut down and cool. Fuel oil contacting hot, exposed heating coils could possibly lead to a flammable atmosphere being rapidly generated.

23.3.3 Headspace Classification

All residual fuel oil tank headspaces should be classified as "hazardous" and suitable precautions taken. Electrical equipment within the space must meet the appropriate safety standards.

23.3.4 Hazard Reduction

The flammability of the headspace of residual fuel oil tanks should be monitored regularly. Should a measured value in excess of recommended levels be detected, e.g. IMO Resolution A.565(14) states a level in excess of 50% LFL, action should be taken to reduce the vapour concentration by purging the headspace with low pressure air. Gases should be vented to a safe area with no ignition sources in the vicinity of the outlet. On completion of venting, gas concentrations within the tank should continue to be monitored and further venting undertaken if necessary.

When residual fuel oil is carried as cargo on board tankers fitted with inert gas, it is recommended that the inert gas is utilised and that the headspace is maintained in an inert condition.

23.3.5 Ullaging and Sampling

All operations should be conducted such as to take due care to avoid the hazards associated with static electrical charges (see Section 7.2).

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bring overall annual handling capacity to six million tons, will increase productivity and reduce dust emissions.

The honour of officially starting the new conveyor system and handling equipment went to Mr. Duke Le-compte, General Manager, Great Lakes Steamship Division, Bethlehem Steel Corporation, a major client of the terminal. "This occasion brings to fruition several years of effort and we look forward to an ongoing, mutually

beneficial relationship with the port authority and Québec Stevedoring," he stated.

The facility will enable the port to fully capitalize on its deep water advantage, with dockside depths ranging to 15.5 meters, compared to 10.6 meters on the St. Lawrence upstream. "Our capability to handle vessels of 150,000 dwt and more makes Québec City the natural transshipment point between deep draft ocean shipping and river

barges," said Mr. Ross Gaudreault, President and Chief Executive Officer of the port corporation.

With its 1,000-meter-long conveyor network, the terminal will facilitate the movement of cargos such as iron ore, coal, copper and manganese from dockside to storage areas. Direct ship to ship transfers will also be possible, eliminating stacking and reclaiming operations when vessel schedules can be synchronized. The entire system, which includes a new shiploader, is designed to handle 2,500 tons of iron ore per hour.

The project involves an operational concept inspired by self-unloader technology. The unloading operations from ship to shore will be totally independent of the conveyor system speed, allowing greater flexibility and reducing downtime. This is accomplished as the tunnel housing the main conveyor is fed by gravity. Bulk material may therefore be stockpiled over the receiving hoppers without waiting for the equipment to clear the dockside area as the operation progresses.

"We are confident that this new terminal will be instrumental in our bid to increase the Port of Québec's market share in the international transshipment industry," added Mr. Gaudreault. "With the coming upturn in economic activity in Canada and United States, iron ore shipments should return to normal levels. There are also new prospects in other market sectors."

Billed by some economists as the "fuel of the future," low sulfur American coal could become a major export commodity on the St. Lawrence. A growing energy deficit in western Europe, combined with the opening of the eastern countries to a market economy, are factors which will favour international sales of U.S. coal. The St. Lawrence is the only transportation system capable of offering U.S. exporters carrying capacity, advantageous transshipment time and economy of scale. "The Port of Québec's handling and storage capacity place us in a favourable position to participate in this trade", Mr. Gaudreault told guests at the bulk terminal inauguration ceremony.

From an environmental standpoint, it is estimated that the new facility will cut dust emissions by 50%, as

compared with previous handling methods. The conveyors will replace most of the wheel-loaders and trucks which were the main cause of dust pollution when used to move materials on the terminal site.

A Vision for the North Fraser

The North Arm of the Fraser is a river of change. Steeped in the traditional uses of fishing and log transportation, its shores still contain elements of the lumber and construction industry.

But it is changing. Residential and commercial developments are replacing industries in a slow march along the north banks of the North Fraser from Vancouver to New Westminster.

It remains a significant economic player in the Lower Mainland, with industries located along the North Fraser accounting for over \$1.1 billion in gross revenues and direct employment of over 5,800 persons years.

The North Fraser Harbour Commission was established in 1913 to safeguard the traffic and development along the North Arm of the Fraser. Today, facing burgeoning growth along the river, the Commission has developed a new strategic plan to anticipate future changes. It is a simple plan based on the foundation of all-encompassing mission statement.

The rationale for the strategic planning exercise was to first look back to the past and to the present to prepare for the future. The key step in this was for the Commission to undertake its first economic impact statement. This was done to establish the real economic value of the North Fraser and its businesses to the surrounding communities of Richmond, Vancouver and Burnaby.

Coupled with its commitment to anticipating the economic future of the North Arm is its equally strong commitment to the ecological health of the river. It made its first formidable step in this area with the establishment of the Environmental Management Plan in 1988, which already has gained it international recognition.

The Commission has chosen to be an active participant in the future of the North Arm of the Fraser River. The Economic Impact Assessment and

The Economic Impact Assessment and Strategic Plan outlined in this newsletter are a firm confirmation of that commitment.

Strong Foundation

The foundation of the North Fraser rests on its economic impact. With over \$1.1 billion in annual gross revenues, nearly 60% of the total output impact is attributable to forestry-related manufacturing. Sawmills alone account for 40% of the total economic impact—the remainder being attributed to plywood plants, panelboard and paperboard plants, etc.

Iron and steel, fish processing, administrative support, ready-mix ag-

gregate, trucking and retail services comprise the other principal industries on the river.

Direct and total employment is estimated at 5,871 and 17,544 person-years respectively. The employment multiplier of 2.99 means that for every one job on the river, nearly two additional jobs within the B.C. economy result from the indirect/induced multiplier linkages.

Total government revenues from river-related jobs are estimated at \$302 million — 62% of which is comprised of personal taxes, with indirect taxes accounting for 23%, corporate taxes for 8% and royalties for 7%.

Overall, approximately 80% of the

The North Fraser: Impact on Employment & Provincial GDP

(Impact of Direct industries within NFHC jurisdiction)

Industry Classification	Direct Employment Impact (Person Years) (1989)	Direct GDP Impact (\$ Millions) (1989)	Total Employment Impact*	Total GDP Impact** Within BC (All Industries)*
Sawmills & Planing Mills	1,707	\$107.7	6,660	\$385.7
Plywood, Panelboard, Paperboard & Wholesale Wood Products	1,024	104.5	2,930	218.2
Iron, Steel & Related	365	33.9	1,119	72.7
Fish Processing & Fish Products	324	15.2	1,516	71.4
Administrative Support	648	40.9	1,325	74.8
Ready-Mix, Aggregate	238	16.7	894	50.2
Trucking	488	38.5	971	63.4
Restaurant, Accommodation & Retail	543	31.9	1,019	38.2
Other Industries	534	31.9	1,110	61.4
TOTAL	5,871	\$403.3	17,544	\$1,036.0

* (Includes Marine Towing industry which had a total Employment impact of 560 person years in 1989.)

** (Includes Marine Towing industry which had a total GDP impact of \$34.9 million in 1989.)

economic impacts referred to above derive from organizations which require water access and exhibit dependency on the river in terms of their location.

Economic Impact

The NFHC's economic impact assessment was undertaken by Deloitte and Touche from a B.C. perspective because many of the North Fraser industries have linkages with primary industries throughout the province.

Input-output analysis was used to assess the economic significance to B.C. of industries on the North Arm of the Fraser River. This analysis provided estimates of the direct and "multiplier" impacts on the provincial economy.

The multiplier impacts included the indirect impact of industries supplying goods and services (inputs) to direct industries on the river—and the "induced" impact associated with the consumer responding of wage incomes of the direct and indirect workforce.

The impacts assessed included: industry output, Gross Domestic Product, employment and government revenues. *(The Working River)*

Mr. Bellefontaine Elected AAPA Chairman-Elect

Mr. David Bellefontaine, President & Chief Executive Officer, Halifax Port Corporation, has been elected Chairman-Elect, Canadian Delegation, of the American Association of Port Authorities (AAPA), at its recent annual meeting held in Cleveland, Ohio. Mr. Bellefontaine has been a Board Member of AAPA for the past six years.

The Halifax Port Corporation is hosting the AAPA's 82nd Annual convention in Halifax in September 1993.

Port of Montreal Forms Cruise Committee

The Port of Montreal has formed a committee with its various partners in the transport and tourism industry to promote cruise shipping in Montreal.

Among those on the Cruise Shipping Committee with the port are representatives of the Quebec Tourism Department, Montreal Airports, the Montreal Economic Development and Initiative Commission, the Old Port

of Montreal Corp., la Corporation des célébrations du 350e anniversaire de Montréal, the Hotel Association of Greater Montreal, the Greater Montreal Convention and Tourism Bureau and the Montreal Tourist Information Bureau.

This year some 40,000 people are expected to sail to and from the port over the course of some 40 cruise ship calls.

One of the committee's first tasks is to undertake a study this summer to determine the economic impact of cruise shipping on the city. *(Portinfo)*

Vancouver: Tanker Risk Analysis Released

The first comprehensive study of tanker traffic in the Port of Vancouver was released this summer by the Vancouver Port Corporation (VPC).

The 700-page study entitled "A Risk Analysis of Tanker Traffic Movements within the Port of Vancouver" was commissioned by the Port Corporation a year ago, in response to a growing concern about tanker traffic in the harbour.

This independent study, prepared by Sandwell Inc. in cooperation with Seaconsult Marine Research and Bennett Environmental consultants, presents a thorough examination of environmental, human safety and operational risks involved with the transport of bulk liquids, such as petroleum and chemicals in the Port of Vancouver.

VPC Port Manager and C.E.O., Captain Norman Stark, underlined that this was the first definitive risk analysis of tanker traffic in the Port of Vancouver. Other studies have examined national and coastal tanker traffic, such as the federally-commissioned "Protecting Our Water: Public Review Panel on Tanker Safety and Marine Spills Response Capability" prepared by Mr. David Brander-Smith and "On Oil Transportation and Oil Spills" by Mr. David Anderson for the B.C. government.

"VPC is aware of public concern regarding tanker traffic and the need for factual data on volumes, types of cargo and measures in place to ensure safe and environmentally sound transport of commodities," Captain Stark explained as part of the rationale

for commissioning this study.

Specific probability calculations of risk and response are thoroughly outlined in the major study. A detailed, realistic, hands-on impression of specific spill scenarios is provided and a close-up of the evolution of the spill is evaluated under specific wind, current and water temperature conditions. The scenarios also estimate environmental and commercial impacts.

Emphasized in the study is the important role VPC shares with agencies such as the Canadian Coast Guard, the Council of Marine Carriers and the Ministry of Environment in ensuring a programme of transport that zeros in on safety and environmental issues.

Over the summer months, the Port of Vancouver has invited written comments from all sectors expressing interest in the study. In the fall, VPC will present a number of 'open house' forums to review both the study and the input received from the general public, municipalities, regulatory agencies, industry, labour and special interest groups. The public will be invited to comment on these combined findings prior to the Port's final policy recommendations.

"A Risk Analysis of Tanker Traffic Movements Within the Port of Vancouver" offers an excellent data base to assess future planning for petroleum and other liquid bulk cargoes handled in the Port of Vancouver.

(Port News)

Mr. Fulton Chairman Of Port of Corpus Christi

Mr. Joe R. Fulton has been elected chairman of the Port Commission of the Port of Corpus Christi Authority.

Mr. Fulton, 57, was first appointed to the Commission by the Corpus Christi City Council in 1985. He served as its vice chairman from July, 1986 until September 11, 1991, when he was elected by fellow Port Commissioners to the chairmanship. He succeeds the late James C. Storm, longtime Port of Corpus Christi chairman, who died in June.

Georgia Ports Authority: Deepening of Savannah

The Georgia Ports Authority has applied to the U.S. Army Corps of

Engineers to permit deepening of the 22-mile Savannah River channel from 38 to 42 feet beginning in late 1992.

The move expedites the governmental process that would allow the \$43 million channel deepening to be completed by late 1993 when the next generation of deep draft containerships will begin calling the Port of Savannah.

"We have taken this measure to accommodate existing customers' new ships and to keep the port competitive so that it can attract new steamship lines," said GPA Executive Director George J. Nichols.

Without acceleration by the GPA, the Corps' deepening project would not begin before mid-1993 and would take two years to finish.

"Deepening a shipping channel is analogous to lengthening and strengthening an international airport's runways to accommodate the newest jumbo jets," Mr. Nichols added.

The growth of existing containerized ocean carriers calling GPA's Savannah terminals helped boost container volume 9.1 percent to 440,923 TEUs and container tonnage 6.1 percent to 3,405,801 tons during the fiscal year ending June 30, 1991. In addition, GPA attracted nine new lines and services during the same period.

Mr. Nichols noted that speeding up the Savannah channel deepening project is vital for the GPA to maintain its competitive edge against ports such as Charleston and Miami which already have channel deepening projects underway.

GPA's channel deepening permit application to the Corps incorporates all of the environmental and cultural resource protection included in the Corps' final feasibility report. At a channel deepening public hearing on May 21, the Corps announced its plans to remove tide gates from operation and to fill in New Cut which had increased salinity upstream in the Savannah River, a measure that was backed by GPA and state and federal wildlife agencies.

The Corps' final feasibility report on channel deepening was published on July 31 and is now at the Washington review level and federal authorization of the Corps' deepening project is anticipated in late 1992. GPA's Section 404 environmental permit application could be approved by the Corps in late

1991 paving the way for state bonding authority.

On an accelerated basis, the deepening project would be financed through general obligation bonds issued by the Georgia General Assembly and then reimbursed up to 75 percent by the federal government. The remaining share would be paid through the state's local sponsorship.

The Port of Savannah annually generates approximately \$189 million of state and local tax revenue, \$200 million in federal customs revenue as well as 58,000 jobs throughout the state.

Improvement Program to Reshape New Orleans

Construction has begun on a five-year, \$200 million capital improvement program that will reshape the Port of New Orleans. The program gives special attention to the needs of breakbulk, neobulk and containerized cargo.

New River Terminals

High on the list of improvements is a \$141.8 million plan to create three super terminals from the wharves on the Mississippi River. Two of the terminals—Nashville-Napoleon and Louisiana Avenue—will be multipurpose terminals handling a broad range of cargo. The third, the Harmony Street-First Street Terminal, will be developed to meet the special needs of steel and neobulk freight.

The \$47 million Nashville/Napoleon Multipurpose Terminal is already under construction. When complete, it will tie two of the busiest wharves in the Port together. Together, the wharves handle 35 percent of all the cargo transiting Port river facilities.

With 2,759 feet of water frontage, and a 756,000 sq.ft. transit shed, the Nashville Avenue Wharf is one of the largest wharves in the United States. The Napoleon Avenue wharves have a total of 2,861 feet of waterfront, and three transit sheds sheltering 445,116 sq.ft.

Besides the Nashville Avenue and Napoleon Avenue wharves, the new terminal will include the space once occupied by the Public Grain Elevator, a New Orleans landmark since 1917. The \$1.5 million demolition of the elevator was begun in 1990. With 7.2

million bushels of storage in its silos, the Public Grain elevator was once the largest export elevator in the world.

Longest Wharf

In its place, the Nashville B complex will rise. The removal of the elevator opens 37 acres of additional space, giving the new terminal more than 52 acres of marshaling yard.

On the waterfront, an \$886,000 project to demolish the old grain elevator wharf is nearing completion. In its place, a new 3,170-foot heavy-duty dock will connect the Nashville Avenue and Napoleon Avenue wharves. Like the Nashville Avenue facility next door, the new dock will have two railroad tracks running between 50-foot gauge crane rails. At the rear, depressed tracks will accommodate breakbulk and project cargo moving by rail.

Atop the new wharf, a 212,000 sq.ft. transit shed is planned. That will bring the total space under cover at the new terminal to 1,423,116 sq.ft.

As part of the project, a 767-foot wharf extension will be added to the Milan Street Wharf. That, along with the new dock connecting the Nashville and Napoleon Avenue wharves, will create an unbroken wharf stretching from the Henry Clay Avenue Wharf to the Milan Street Wharf, a distance of more than two miles. That will make it one of the longest continuous wharves in the world.

The Louisiana Avenue Terminal construction will entail developing another 11 acres of marshaling area.

At the Harmony Street/First Street Neobulk-Steel Terminal construction is scheduled for an \$846,750 connecting wharf to bridge the gap between the Louisiana and Harmony Street wharves. A railcar staging area is slated to be developed at the Washington Avenue wharf once the transit shed is removed. The new staging area will allow for the rapid replacement of railcars during direct discharge operations between rail and ocean carriers.

Building New Capacity

On the Industrial Canal, \$35 million in improvements will be made including the construction of a \$14 million wharf at Berth 2 of the France Road Container Terminal Complex. The new dock will extend the 830-foot wharf at Berth 1 by 700 feet. The 50-foot gauge crane

rails on Berth 1 will connect with similar rails on Berth 2.

In addition to the new wharf, a \$7 million flood control project is in progress at the complex. When completed, it will provide additional flood protection to the terminals.

Finally, a \$178,000 Strategic Rail Study is being done by a coalition of consultants—the national transportation practice of Ernst & Young and Transmode Consultants Inc.

Other New Advantages

Port construction isn't the only way facilities at the Port improve. Ceres Terminals Inc., for example, recently installed a 30-ton container crane at the Jourdan Road Terminal. The terminal, which also serves roll-on/roll-off traffic, is on the Mississippi River-Gulf Outlet near the Industrial Canal.

Recently, Polish Ocean Lines began calling at the terminal, and Baltic Shipping Co. announced that it would be increasing its service under the new U.S.-Soviet maritime agreement. The crane is the sixth of its kind in the Port.

A new overpass under construction on Jourdan Road will also enhance the terminal when it is completed. Built for the soon-to-open one-million-square-foot Pic 'N' Save distribution center, the overpass will also eliminate long waits at a busy railroad crossing. When it is completed, trucks will move delay-free between Interstate 10 and the Jourdan Road Terminal.

Whether it is on the Mississippi River or on the Industrial Canal, the Port of New Orleans is working hard to retain its title as "America's most intermodal port."

(1991 Annual Directory)

EDI: NY & NJ Linked With Port of Hamburg

The Port Authority of New York and New Jersey and a major marine terminal operator in the Port of Hamburg, Germany, have successfully linked their Electronic Data Exchange (EDI) systems to create an international interchange of oceanborne cargo information. The announcement was made by Ms. Lillian C. Liburdi, Port Department Director for the Port Authority and Mr. Peter Dietrich, Chairman of Hamburger Hafen und Lagerhaus Aktiengesellschaft

(HHLA), the Hamburg Port Warehouse Corporation.

"The dream of a continuous electronic interchange of cargo information spanning the Atlantic Ocean has now become a reality," said Ms. Liburdi. "It's been only two short years since the Automated Cargo Expediting System (ACES) began serving the New York-New Jersey Port community, and it is now able to accept information from carriers and shippers in Europe."

The link between the New York-New Jersey Port's ACES system and the Port of Hamburg's DAKOSY system was tested this summer. Rohde and Liesenfeld, a German freight forwarder with headquarters in Hamburg, was able to collate its oceanborne cargo information and transfer it in one package to and from Europe and its offices in New York, Chicago, Houston and Los Angeles.

Mr. Christian Harders, Director of Organization for Rohde and Liesenfeld, stated, "The information linkage of ACES and DAKOSY results in considerable savings of time and cost for us. This remarkable and reliable network spans the Atlantic in a matter of minutes, 24 hours a day, 7 days a week."

The success of the link was described recently at a forum in Hamburg, sponsored by HHLA. Mr. Volkhardt Erdelbrock, Director of the DAKOSY system for the Port of Hamburg, and Mr. Larry Sposi, Manager of ACES for the Port Authority of New York and New Jersey, explained the systems and linkage to representatives of major German steamship lines terminal operators, agents, freight forwarders and rail lines.

Other northern European ports, which also serve clients using the New York-New Jersey Port and have electronic data interchange systems compatible with ACES, have expressed interest in future linkages. The ports of Le Havre in France, Rotterdam in the Netherlands, and Bremen in Germany have entered into agreements to establish test linkages with ACES through the General Electric Information Services (GEIS) network.

GEIS is the EDI network provider for the ACES system under a contract with the Port Authority whereby the system is made available to all steamship lines, freight forwarders/custom house brokers, marine terminal oper-

ators, motor carriers and railroads doing business with any port in the United States. It enables the maritime industry's existing mainframe computers in large organizations, as well as the personal computers in smaller firms, to exchange day-to-day business information in standardized messages.

Approximately 60 organizations of the New York/New Jersey Port District have joined the ACES system, including most of the major steamship lines calling at the New York-New Jersey Port, all marine terminal operators in the Port, and 35 customhouse brokers or freight forwarders.

Some of the most appealing features of the ACES system include the low cost of initial membership and low transaction charges. The initiation fee is only \$550 plus a one-time charge of \$150 per electronic mailbox. Only the sender pays the transaction charges, which amount to 25 cents per 1,000 characters.

The ACES system, following the standards of the American National Standards Institute (ANSI X12), interchanges standardized export/import documents or transaction sets involved in the movement of oceanborne cargo.

Direct Conrail Access to Auto Marine Terminal

Construction has begun on a new \$1.5 million rail link that will connect the Port Authority Auto Marine Terminal, on the Jersey City-Bayonne border in New Jersey, with all locations served by Conrail in North America, it was announced by Conrail and the Port Authority of New York and New Jersey.

"Direct Conrail access to the Auto Marine Terminal is an important link for the automotive industry, not only for the importing of foreign automobiles but for the exporting of all types of American-made vehicles," said Ms. Lillian Liburdi, Director of the Port Authority's Port Department. "It is another example of this Port's competitive advantage through its exceptional national and international distribution capability," Ms. Liburdi added.

The Auto Marine Terminal, opened in 1989, is the latest addition to an extensive array of auto-handling facilities in the Port. Located on Upper New York Bay, it has 900 feet of

berthing space and 145 acres of upland area for receiving foreign autos from manufacturers and preparing them for distribution to dealers.

"A comprehensive study made by Conrail and the Port Authority showed that a rail link would result in benefits to existing and future tenants of the facility. Cost savings, reduced handling and quicker access to and from North American market points are all expected when the rail link becomes operational later this year," said Mr. John Nikolai, Manager of Vehicle Marketing for the Port Department.

The principal tenants at the Auto Marine Terminal are BMW of North America, Inc. and Northeast Auto Marine Terminal (NEAT), an independent processor for imported and exported automobiles, whose accounts include Mazda and Hyundai.

The Port Authority also has over 200 acres available at the Port Newark/Elizabeth seaport for the handling and processing of import or export automobiles. The additional areas and the space the processors occupy helps auto manufacturers and processors accommodate periodic inventory overflow when necessary.

The New York-New Jersey Port handled more than 340,000 automobiles in 1990 and has gained several new automotive accounts during the past year. General Motors has selected this Port for all its auto exports to Europe. Ferrari has designated the seaport as the exclusive point of entry for its sports cars. Volvo has reduced its ports of entry into North America, consolidating the previous ten ports into four, including the Port of New York-New Jersey.

Wilmington: Forest Products Center Planned

"Plans to build a 103,000-square-foot dedicated forest products center at the North Carolina State Ports Authority's Wilmington Terminal reinforce our commitment to excel in handling forest products cargo," said N.C. State Ports Authority Executive Director James J. Scott, Jr. At their September meeting, the N.C. State Ports Authority Board of Directors authorized funds to begin design of the new facility.

The preliminary design calls for an on-dock, open span structure with no

interior columns, high intensity industrial lighting enhanced by sky lights and wall lights, and wide cargo bays. Stacking height inside the facility will be nearly 22 feet high. The floor will be sealed with light pigment to detect dirt and will have a load capacity adequate for stacking woodpulp three high.

"Specifications for our new forest products center were developed through in depth discussions with all of our forest products customers," said N.C. State Ports Authority Director of Business Development Robert G. Jacobi. "We talked with the shippers, freight forwarders, truckers, railroad, stevedores, shipping lines and receivers."

The new forest products center will be constructed next to the existing 245,000-square-foot forest products facility which has experienced significant growth in tonnage handled over the past two years.

For example, woodpulp is the leading export out of Wilmington and accounts for 40 percent of the total export tonnage. A record 553,000 tons moved in fiscal Year 1991, up 14 percent over FY 1990 and 57 percent over FY 1989.

"Since Fiscal Year 1987, woodpulp exports have grown at an average annual rate of 18 percent," said Mr. Jacobi, "and the greatest growth took place within the past two years at a time when export prices for pulp were dropping to all time lows."

"The forest products industry, itself, is forecasting an average annual growth rate of about five percent," he continued. "Our customer base has grown from 4 major customers in 1987 to 10 in 1991, so growth in our forest product tonnage should increase proportionally."

Transportation Access Study at Port of Seattle

The Port of Seattle Commission has approved the selection of the Transpo Group to conduct a Port Container Facility Access Study, as an initial step to implementing the Port's Container Terminal Development Plan. The Commission's action included approval of an interagency agreement with METRO to include consideration of rail capacity issues as a part of the overall access study.

"This comprehensive study of road and rail access to the Port's terminals will serve the region well by looking at methods which will improve overall transportation into the 21st Century," said Mr. Frank Clark, senior director, Marine Division.

Mr. Clark said that the Port has excellent rail and road connections to the interior U.S., and that the near-port access routes and corridors provide good service. "In the future, as we see more cargo coming across our docks, we need to be prepared to move it to various destinations as efficiently and quickly, and with as little impact as possible to all of the other drivers on the road."

"Working to improve transportation access for the entire region is a top priority for the Port over the next 20 years," he said.

The contract calls for the Transpo Group to do a comprehensive assessment of existing access to Port container terminals and intermodal rail facilities. Additionally, the consultants will evaluate service characteristics of all road and rail lines connecting the Port's container terminals directly to the main-line railroads and freeways, and of the railroads and freeways serving the greater Port region.

The study also calls for assessment of future transportation conditions as they relate to the Port's Container Terminal Development Plan, which could increase container terminal capacity by 235 acres within the next 10 years. The Transpo Group will also recommend alternative ways to mitigate congestion areas, which will impact traffic flow to and from Port container facilities.

Mr. Clark said the Port had held several meetings with representatives of local government jurisdictions to identify relevant transportation issues. The City of Seattle, Metro, King County, Puget Sound Council of Governments, the Washington State Department of Transportation, as well as representatives from shipping agents, steamship lines, terminal operators, railroad operators, and trucking lines gave the Port valuable input as to the scope of issues the study should cover.

"These types of transportation issues are extremely complex, and will become more important as the region continues to grow. They won't get resolved unless

we proceed down a cooperative path," Mr. Clark said.

The study will cost \$332,500, with METRO contributing \$25,000 towards the assessment of the future rail track capacity required to handle freight and passenger trains.

"We are pleased to be a participant in this study, because we share a common goal with the Port of increasing rail capacity in the south corridor between Seattle and Tacoma," said Mr. Art Skolnik, south corridor manager for Metro's Regional Transit Project. "The need to address future transportation issues is now," he said. The project, which begins immediately, is scheduled to be completed by June 1992.

The Port of Seattle is an economic catalyst to the entire Puget Sound Region. It develops and manages commerce through the Seattle harbor, Sea-Tac Airport, warehousing and distribution centers, Shilshole Bay Marina, and Fishermen's Terminal. The Port impacts over 80,000 jobs in the region, and handles over \$30 billion a year in two-way trade.

Port of Oakland Plans \$300 Million Expansion

The Oakland Board of Port Commissioners has approved a \$124.5 million capital budget for the fiscal year that began July 1, 1991, and a five-year capital improvement program costing \$330.5 million through 1996.

This will mark the first time the Port has had a formal capital budget, in addition to its operating budget. The money to pay for projects planned for construction over the next five years will be financed from Port revenues, from grants by state and federal agencies, and from \$110 million in new bond issues.

The capital program envisages generating a surplus that will permit the Port to make more planned payments to the City of Oakland for delayed repayment of city bond issues that benefited the Port. The cash flow projection forecasts providing for a \$5.2 million payment each year from fiscal 1992 through fiscal year 1996. The final payment to the city would be in fiscal 1997.

Executive Director Charles R. Roberts said a prime management goal will be to reduce operating expenses

over the next five years so that the ratio of expenses to revenues will be about 50 percent by 1996. It will be 55.4 percent in fiscal 1992. Over the five-year period the Aviation Division forecasts expenditures of \$83.4 million, with about \$70 million of that amount funded through FAA grants and revenues from the recently authorized passenger facility charge program.

Among the major projects are two new air cargo facilities, expanded baggage carousels in Terminal 1, and expansion and improvement of the airport parking lots.

The Maritime Division will be spending another \$22 million to repair earthquake damage over the next two years; some \$38 million as the Port's share of the program to dredge Oakland channels from 35 to 42 feet; and a new container terminal at Berth 30 will be built and financed primarily by Mitsui O.S.K. Lines (MOL) in partnership with the Port. The Port's share of the cost will be about \$11.5 million. MOL will spend about \$60 million on the project.

The Port's Commercial Real Estate Division will be making additional improvement at Jack London Square; repairing and rebuilding the former Port headquarters building at 66 Jack London Square (\$8.8 million), and building a new marina in the Jack London Square area at a cost of \$14.6 million, funded by State Department of Boating and Waterways loans.

The Real Estate Division also included in its capital budget construction of a \$16 million Amtrak station at Jack London Square. Eighty percent of the cost will be paid by CalTrans, the state road and rail agency. (*Port Progress*)

Tonnage Up 10% At Port of Oakland

Strong demand for U.S. exports, a surge of imports to domestic retailers and stellar results by key transpacific carriers drove tonnage up nearly 10 percent at the Port of Oakland in the first eight months ending August 31. And loaded containers handled, a key index of the traffic that is 90 percent of the port's maritime business, rose 7 percent.

Total revenue tons moved for the interval was 9,780,816, an increase of 865,250 from 1990, port officials said. Total loaded containers handled was

equivalent to 565,646 20-foot units, or 36,971 more boxes than last year.

Driving Oakland's export gains were shipments of fruits and vegetables, nuts, red meat and poultry, plastics, chemicals, resins, cereal grains and metals. Leading imports were road vehicles, auto parts, coffee and paper products.

The upward trend makes Oakland officials especially happy because container traffic at most other West Coast gateways has been flat so far this year. The Port of Los Angeles recently predicted unchanged results for 1991, while Long Beach actually reported a 3 percent decline in container liftings for the first half of this year.

Other factors favoring Oakland, officials say, include double digit tonnage growth by some of the port's biggest customers, including American President Lines, Sea-Land, Maersk and the Tripartite Group, as well as high load factors on stacktrain services serving the port via the Santa Fe, Southern Pacific and Union Pacific railroads.

The first two quarters also saw the return to service of repaired and modernized portions of the Seventh Street Container Terminal, which was severely damaged by the October, 1989 earthquake.

About 60 percent of Oakland's foreign trade is with the four Asian nations of Japan, Korea, Taiwan and Hong Kong. Europe accounts for 16 percent, Southeast Asia for 14 percent, China for 3 percent, and Australia and New Zealand for 4 percent.

Tacoma: Container Shipping Records

The Port of Tacoma achieved two container shipping records during the month of August. The latest figures established new highs for both total containers handled and containers loaded in the Port's rail yards.

The Port handled 101,969 TEUs, a monthly total which allowed Tacoma to break the 100,000-TEU mark for the first time in its shipping history.

"The recent performance by our shipping lines and a steady increase in trade with the Pacific Rim and Alaska make it look like we'll have one of our best container years yet," said Mr. John McCarthy, president of the Port of Tacoma Commission.

The previous monthly record was 90,617 TEUs. In addition, Tacoma's

container shipping in August 1991 rose 26 percent above the 81,023 TEUs handled during August 1990.

Although container volumes earlier this year were affected by a recession in the international economy, the August figures have boosted Tacoma's annual volumes to levels above those of a year ago. For the first eight months of 1991, the Port is 3 percent ahead of its 1990 container volumes.

The new high in container shipping also allowed the Port's intermodal rail yards to set records for container handling.

In the Port's on-dock North Intermodal Yard, workers used straddle carriers to lift 16,343 containers onto and off of rail cars during August. Their load rate represents an impressive 20 percent increase over the previous monthly high of 13,579 lifts.

Combined with the recent record performance in the Port's South Intermodal Yard, the Port's two intermodal rail yards lifted 27,010 containers onto or off of rail cars during August. That rate represents 30 percent more lifts than recorded during the same month a year ago. In July, the South Intermodal Yard also established a new record high at 10,986 lifts.

"Having our intermodal rail yards adjacent to our shipping terminals is paying off as we see these increases in activity," said Mr. John Terpstra, executive director of the Port of Tacoma. "Our plan for the future is to make sure we continue to accommodate this kind of growth with projects like the recent expansion of our North Intermodal Yard."

A number of factors contributed to the increase in Tacoma's container shipping. The Taiwan-based Evergreen Line, which began operating at the Port of Tacoma in July, has shown strong growth in container volumes.

In addition, the Alaska shipping schedule offered by Sea-Land Service experienced strong business, with 10 ships calling on Tacoma during August. Together with Totem Ocean Trailer Express, Tacoma's other large Alaska carrier, the Port's Alaska business is 5 percent ahead of last year's levels.

Other contributing factors were a successful joint shipping service between Sea-Land and Maersk Line, and steady growth in Sea-Land's Pacific Express Service to Hawaii and Taiwan. Another major joint service involves

"K" Line and Mitsui O.S.K. Lines, with Hyundai chartering space on "K" Line vessels. This service has direct access to the Port's on-dock North Intermodal Yard.

A final growth factor came with the unloading of containerized military equipment being returned from this year's Operation Desert Storm in Saudi Arabia and Iraq. One military container shipment accounted for about 1,400 TEUs. Other military vehicles and heavy equipment were shipped to Tacoma aboard roll-on/roll-off and breakbulk ships.

With the posting of August container shipping figures, Port of Tacoma officials are confident that container volumes for 1991 will exceed this year's earlier projections of 951,301 TEUs. In 1990, the Port handled 937,691 TEUs.

"We appear well on our way to another healthy year of growth in container shipping," said Mr. Terpstra. "The growth of Evergreen Line and the success of joint services being offered by Tacoma carriers has eased the impacts of any recession in the international economy."

Africa/Europe

3 Ports Establish Baltic Ports Organization

The Ports of Tallinn, Rostock and Copenhagen have established a new port organization, under the name of BPO — Baltic Ports Organization.

The aim of the organization is first of all to increase the transfer of cargo

and passengers between the ports of the Baltic Sea.

Owing to the present insufficient infrastructure prevailing in Eastern Europe rail and road traffic will not be able to expand for many years, but through the ports an advanced transport system can be constructed to the benefit of the ports and not least the countries in question.

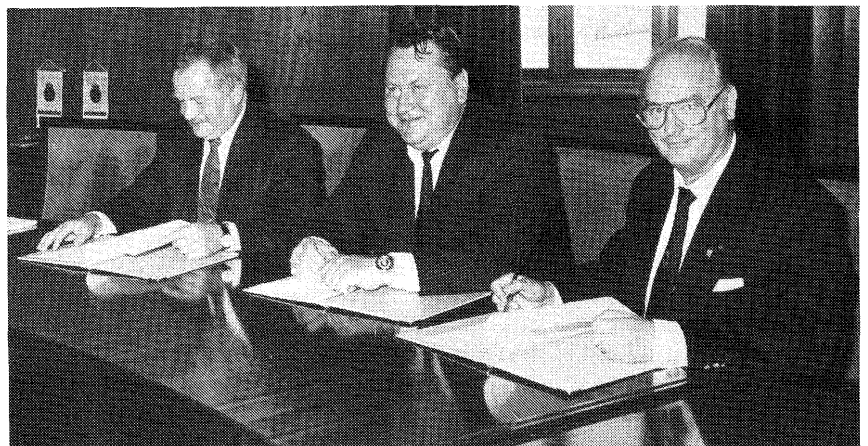
Scope of Activities

A large number of ports in the Baltic Sea will be recommended to seek memberships in the organization, which in addition to development in cargo- and passenger traffic will include objects as exchange of "know-how", education of personnel and discussions of mutual problems such as pollution and environmental matters.

At the Founding General Meeting in the Port of Copenhagen, the General Director of the Port of Tallinn, Mr. Peeter Palu, and the member of the Board of Directors of the Port of Rostock, Mr. Peter Weise, and the Managing Directors of the Port of Copenhagen, Mr. Erik Schäfer signed the by-laws for the BPO.

Elected Chairman of BPO is General Director Peeter Palu, Port of Tallinn. Deputy Chairmen are member of the Board of Directors, Mr. Peter Weise, Seehafen Rostock, and Managing Director Erick Schäfer, Port of Copenhagen. Other board members are: Mr. Carl Veng, Port of Copenhagen, Mr. Harald Morgenstern, Seehafen Rostock. As General Secretary, Marketing Manager Per C. Schmidt, Port of Copenhagen, was chosen.

As a service the Port of Copenhagen will take care of the secretarial function during the first two years, without costs.



From left: Mr. Peter Weise, Mr. Peeter Palu, and Mr. Erik Schäfer

First Stone Placed in Pacific Basin Quay

Mr. Jean-Yves Le Drian, The Secretary of State of the Sea, officially launched the second stage of the New Rapid Turnaround Container Port on September 17, when he placed the first stone of the quay of the future Pacific Basin in the company of Mr. Laurent Fabius, the President of the National Assembly and a Regional Representative, as well as many other notables.

During the summer of 1990, 1,100 meters of quays for the reception of large container ships were already put into operation in the tidal basin, not far from the entrance to the port.

In addition to this first phase, it was necessary to continue investments, due to the current trend to heavy container traffic which has led ship owners to demand faster, more efficient port service, favouring tidal basin facilities. Moreover, many orders for large container ships have recently been placed by large shipping companies, or are presently being filled. As tidal basin facilities now available should reach a saturation point by the end of 1992, it was necessary to begin a new expansion phase in the Rapid Turnaround Port by 1991, to be operational by 1993.

Thus, the Le Havre Port Community is launching a pluriannual extension project with an estimated overall cost of approximately 1,400 million francs. The project is the development of the Pacific Basin, the first phase of which consists of dredging a dock with a depth of -13.5 meters, and a length of 450 meters, at the eastern extremity of the Asia Quay, and constructing a first 450-meter quay on the southwest bank, to be equipped with two gantry cranes.

This extension comes under the State/Upper Normandy contract negotiated under the authority of the Regional Prefect, and agreements signed with port operations for the financing of equipment and general development. The total cost of this first phase has been evaluated at 420 million francs, with 225 million to be paid by the State and the Port Authority, 60 million by collectivities and 135 million francs by operators.

Later phases of the Pacific Basin development will concern extending the dock, lengthening the first quay to 775 meters and constructing a second,

675-meter quay on the other bank of the Pacific Basin, to the northwest, plus the acquisition of 7 more gantry cranes.

After having presided over a meeting with various people in positions of responsibility in the Le Havre Port Community, and meeting union representatives, Mr. Le Drian said he was pleased to make in Le Havre his first official visit to a French port: "I believe in Le Havre, and I have come to tell you so."

The Chairman of the Port of Le Havre Board of Directors, Mr. Hubert Raoul-Duval, called attention to the fact that the Port could not develop without a network of High-quality roads and particularly emphasized to the Minister that unless the projected new motorways to link Le Havre to the Nord and the South are finished on time, Le Havre will not be ready for the Single European Market in 1993, nor for the Cross-Channel Tunnel, nor for the opening of Eastern Europe.

The Secretary of State took advantage of his visit to Le Havre to outline his national port policy, which can be resumed in three principles.

First principle: to have a global approach to port activity, with passage in the port seen as part of a door-to-door transport service. "In these conditions, I intend to treat each element in the chain, including handling, in a global and coherent way, not by itself, with priority given to the quality and efficiency of the service provided to users."

Second principle: to favour the initiative of each port community: "Each port community must increase its initiative even more and determine, by negotiation on a local level, the organisational elements which is considered to be most adapted to its development."

Third principle: To give responsibility to economic actors and social partners. "Since the organization and service provided have become at least as decisive as general facilities, it seems to me important to give more responsibility than ever to members of the port chain... There again, the Le Havre Community must in this way take its destiny in its own hands."

Mr. Le Drian also indicated that he was preparing to propose a comprehensive strategy to the government, which would be precise and concrete.

As to the developments which have been made in Le Havre container traffic, he specified:

"With the launching of the second phase of the Rapid Turnaround Port, we are continuing the policy put into action 5 years ago, made up of new endeavors concerning both investment and competitiveness..."

"Thus, my ministerial department will participate financially, with respect to the date of beginning operations: a first credit of 24 million francs has been cleared for 1991, the remainder will come during the 1992 and 1993 fiscal years".

"The Le Havre motorway connections must also be improved; as for the future A 29 Motorway from Le Havre to Amiens, works will start soon and I will personally see, with Paul Quiles, who is responsible for transportation, that this route is opened as soon as possible."

"As for rail transport, we must continue to make improvements, and I have recently spoken of this to the President of the S.N.C.F." (the French National Railway).

In conclusion, the Minister stated that Le Havre had all the advantages necessary to become a major industrial-port pole of the new Europe of 1993 with all that that implicates in terms of jobs, for the betterment of the external trade and industrial activities of our country. "But, nothing can be done without an effort to improve the competitiveness which is vital in the present context of lively competition with large foreign ports".

Port of Lisbon: Containers — What Future?

"Containers and container handling. What future?" was the topic of a national meeting on the Automatic identification of containers and Electronic Data Transfer held in the auditorium of the Port of Lisbon Authority at the Alcantara Passenger Dock. During the meeting there was discussion of the new methods of distribution and the answers provided by the new technology in the control of containers.

The automatic identification of containers can be achieved through low cost investments and provides high performances, because it is aimed at a system of normalization through the use of ISO standards.

Portugal forms part of the scheme

through the Institute for Port Work. By means of the automatic identification of containers one can increase the quality of the customer service and reduce the risks of loss whose costs are normally very high.

The experts are unanimous in considering that the future lies in the possibility of linking up AEI information to the EDI systems.

The absence of normalization and sufficiently suitable telecommunications infrastructures are the main obstacles to the application of generalized EDI system in transport.

Lisbon: 1,000% Increase In Ro/Ro Traffic

The Port of Lisbon continues to be extremely busy. Between January and July this year, there was an increase in the number of vessels that called the port — thus maintaining it in the 5th group of port in Europe — with a gross tonnage which has increase by more than half a million gross tons since 1990; in 7 months, the total surpassed 21 million gross tons.

This proves by itself the vitality of the Port of Lisbon, but there are others which are even more spectacular, and serve to show the direction of the flows favoured by the market economy: in these seven months, the rate of growth in container traffic was 11% in the number of TEUs, a percentage which is higher than that reported by the main container ports of the world. Thanks to its exceptional natural conditions, the figures show that the Port of Lisbon can easily become the western gateway to Europe.

The Port of Lisbon, which was the first in Portugal to handle more than two million tons of container cargo per year (the figure for 1988), in just over six months, this year, it has already reached a total of 1.3 million tons.

On the other hand, one should refer to the spectacular boom noted in the use of the new "Flamingo" Ro-Ro terminal, which was opened on the forward quay at Alcantara during the first commemorations of the Port of Lisbon Day in 1989. As compared with the same period in 1990, between January and July 1991, this reported an upswing of about 1,240% in the number of vehicles handled (amounting to over 30,000) and 1,086% in the

corresponding weight.

This remarkable increase confirms that this new terminal was built in due time. The updating of the port infrastructures, was so far quite correct.

Port of Tarragona to Get Refrigerated Terminal

The Port of Tarragona will be equipped with a refrigerated terminal, which will be situated in a warehouse that exists in the Rioja quay.

Three cold-storage rooms with a total capacity of 8,600 cubic metres will be installed. It is hoped that work will be initiated in the next three months and will be finished at the beginning of the following year.

It is intended with the construction of this terminal to reduce costs in a short time and thus consolidate the fruit traffic that exists at the moment: kiwis and apples. In the long term it is hoped that traffic that is presently using other ports in North Europe will be gained.

The firm managing this new terminal is formed by freezer companies, stevedores companies, some members of the workers committee of the State Society Estarraco in representations of all the dockers and the Port Authority itself.

Asia/Oceania

First to Use Fremantle Intermodal Service

The Fremantle Port Authority has announced that Ansell International, a subsidiary of Pacific Dunlop, will be the first major Australian company to use a new intermodal landbridging service to operate through the port.

The service allows goods being shipped from South-East Asia to be off-loaded in Fremantle for distribution by rail to the rest of Australia.

Ansell's Distribution and Sales Manager Michael Hepp said this would result in an estimated saving of 12-14 days on the sea freight time.

"Perth will become our distribution point for goods arriving from South-East Asia bound for the Eastern States," Mr. Hepp said.

Ansell international has four major factories in South-East Asia supplying

product to Australia and the rest of the world.

Goods dispatched from these factories take only 14-16 days to reach Ansell's Melbourne Central Warehouse instead of 26-30 days needed by the traditional method.

"The savings in transit time will allow us to respond quicker to customer orders," Mr. Hepp said.

Consequently, the company will be able to respond to customer demand with a time saving of nearly two weeks.

A major Western Australian distributor, Fife Distribution Services (FDS), will be the intermodal operator, handling all transport of goods from the wharf in South-East Asia to the warehouse in Melbourne.

Ansell has worked closely with Fife Distribution Services and the Fremantle Port Authority in developing the system over the past 14 months and will use the service to distribute its wide range of medical, industrial and consumer products.

Fife Distribution Service has been instrumental in utilising the available facilities in the Port of Fremantle to take up an immediate intermodal opportunity.

The Fremantle Port Authority believes this service will be the first of many to operate through the Port, offering importers the following advantages:

- the availability of standby stock in Perth for urgent orders anywhere in Australia;
- the ability to reduce inventory levels;
- the opportunity to restrict cash outgoings with a resultant interest saving;
- a tighter control on supply and demand. (*Fremantle Port News*)

MSB New South Wales Strategic Overview

The Maritime Services Board (MSB) was established in 1936 as an authority of the NSW Government responsible for administering maritime matters within its jurisdiction.

Reconstitution of the MSB under the Marine Administration Act 1989 established new primary business arms of the MSB in the form of the four subsidiary Authorities namely:

MSB Hunter Ports Authority — re-

sponsible for the port of Newcastle

MSB Illawarra Ports Authority — responsible for Port Kembla

MSB Sydney Ports Authority — responsible for Sydney Harbour and Botany Bay

MSB Waterways Authority — responsible for the waterways of NSW

This opened the way of change and has enabled the MSB to increase its responsiveness to user needs and provide a significant impetus to the overall process of micro-economic reform on the waterfront.

The process of change continues and further steps in the rationalisation of the organisation will occur. The goal of these further changes is to progress port reform by continuing improvements in efficiency and management performance throughout the MSB.

The three part strategy with which the MSB is pursuing this goal is essentially as announced by the Government when the MSB originally embarked on its reform program:

1. Privatised port development and cargo handling operations by encouraging private sector ownership and investment.
2. Corporatise the commercial and regulatory operations of the MSB in each port.
3. Retain central control and co-ordination of those activities concerned with resource allocation, finance and policy formulation, concentrating on ports and waterways but no longer on marine matters.

Resulting from these strategic directions, the following will become increasingly evident:

- clearer definition and grouping of functions and responsibilities with focus on core activities.
- further moves towards autonomy for the subsidiary Port Authorities including transfer of responsibility for strategic assets to the port management subsidiaries.
- expansion of the MSB Waterways Authority to provide a full range of regulatory and commercial services to waterways users.
- reduction in the size of Head Office.
- streamlining of the MSB's support services by incorporating their substantive functions within other parts of the organisation.
- transfer of responsibility for the State's minor trading ports from the subsidiary Authorities to the MSB Head Office, to allow the MSB Hunter and Illawarra Ports Authorities to devote total attention to their respective principal ports.

In addition, the marine authority role of the MSB will transfer to the Department of Transport which will then be responsible for the formulation of marine policy and regulations. However, administration of marine policy and regulations will continue to be a matter for the relevant operating arms of the MSB.

One of the Department's principal tasks will be to finalise the review and rationalisation of all NSW marine legislation currently in force.

Any changes will be included in the proposed new Marine Bill which will complement the Marine Administration Act 1989 and the Marine Port

Charges Act 1989, and effectively complete the overhaul and update of all major legislation relating to the MSB. Many of the targets identified in the first MSB's Corporate Plan covering the period 1990-1993 have been achieved, and faster than expected. Accordingly, this updated Plan defines an accelerated reform program.

In summary, the significant change in emphasis of this year's Plan is the focus on enabling the subsidiaries to function more effectively as autonomous business units within the MSB framework.

Tangible and significant outcomes envisaged from this 1991-94 Corporate Plan include:

- a reduction in external debt to around \$150M
- a 30% reduction in real operating costs
- further staff productivity increases of around 20% in real terms, reflecting further staff reductions to around 1,000 people
- a complete review and rationalisation of all legislation governing the MSB's marine responsibilities, involving the separation of policy formulation from the administrative role
- increased encouragement for the efficient use of NSW ports through completion of the port pricing reform process commenced in 1990.

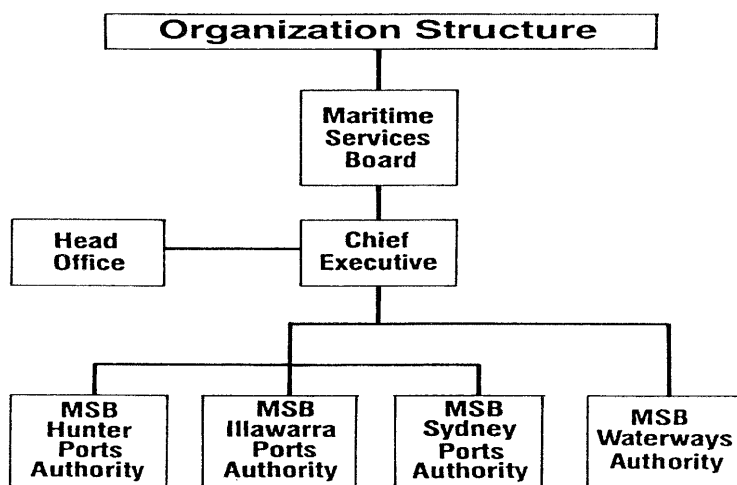
As required by the Marine Administration Act 1989, this Plan will be reviewed and updated by the MSB for the next financial year.

Gladstone City Center, Marina to Be Linked

Gladstone City is fast becoming renowned not only for its growth-favoured port, but as a fast growing favourite stopover for tourists. The community therefore warmly welcomed the announcement that the Marina is soon to be connected with the city centre by a bridge over Auckland Inlet.

The bridge and its Marina-side access will be funded by the Port Authority and upon completion in August, 1992, the bridge will be operated and maintained by the Gladstone City Council.

The bridge design will be low level with an automatic lift opening mechanism which will allow sailing passage up Auckland Inlet waterway. Posi-



tioning of the bridge site is midway between Central and Pilot Wharves, with road connection to the existing Marina facilities through land set aside for future recreational use.

With continuous development taking place within the Marina, the new access will contribute to increased use of facilities, especially for the future staging of Gladstone Harbour Festivals and as the termination of the Brisbane to Gladstone Yacht Race.

Another Marina development which is now near completion is the Fishermen's Base Wharf. The wharf provides mooring and service facilities for 22 trawlers and fishing vessels. They will have access to fuel, fresh water, electricity and be able to carry out light maintenance and repair work.

Land will be available for lease with power and water already connected for commercial enterprises wishing to develop adjacent to the wharf facilities.

(Port-Talk)

Pilot Is Like Doctor In Riverine Port

By Capt. Sanjib Sen
Director (Marine)
Calcutta Port Trust

(Reproduced from 'Indian Ports Vol. XXIII No. 3')

The pilotage of any vessel in the riverine port is somewhat different from

that of a normal sea port. In a riverine port, the port may be located well up the river and the ships visiting the port have to transit a much longer distance than it would be necessary in a normal sea port. Furthermore, the hazards of piloting a ship in riverine conditions are totally different from that of a normal sea port. In sea ports the pilotage distance to the harbour may be only a few miles after the vessel arrives off the port, whereas, in a riverine port this may be totally different and before the pilot can approach the port, he may have to take pilotage charge for a very long distance and in difficult conditions.

In a riverine port like Calcutta, after the vessel's arrival at Sandheads which is located 40 miles away from the nearest land the vessel has to transit through the outer and inner estuary of the river and subsequently through the mainriver channel up the river before it can reach the port. The total distance is about 120 miles. The River has tidal fluctuations and two way currents, shifting sands and the channel keeps on changing from time to time, necessitating a constant surveillance of the channel. Calcutta is situated on the East Bank of River Hooghly almost 125 miles away from the sea. Navigation on the River Hooghly has always had a notorious reputation and is considered one of the most hazardous pilotage waters in international shipping circles. It is also considered one of the most

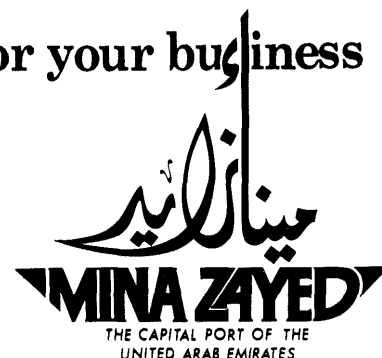
difficult navigable waterway because of the navigational hazards and constraints due to presence of sand bars, sharp bends, bore tides coupled with strong currents which also vary with the seasons.

It should not be forgotten that navigational problems are inherent in all channels and this can only be overcome through proper experience and adequate knowledge of the prevalent local conditions. The problems need to be accepted and overcome as best as possible and more so in the tidal conditions where there is no alternative to experience. A pilot before he is allowed to take up pilotage duties of the river Hooghly, is given a very long training. He also has to pass a number of examinations both under the Mercantile Marine Department as well as departmental, to ensure sound knowledge of the local conditions besides ensuring safety of other ships and port properties. The Calcutta Port Trust has various schemes for recruitment of pilots, however, in the past, the main source was from T.S. 'Dufferin' and subsequently T.S. 'Rajendra'. With the non-availability of adequate cadets from T.S. 'Rajendra', training methods had to be evolved for candidates recruited from the sea and the training schemes were duly modified. However, of late it has become increasingly difficult to attract people in the services of ports because of the vast disparity in pay-scales vis-a-vis those in the sea

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services. For a vessel for its inward passage to the port of Calcutta, it takes approximately 10-12 hours with a normal speed of 10-12 knots, whereas an outward vessel may take anything between 12 to 40 hours, since it has encounters 2-3 flood tides before she can clear the river as also for adequate water to cross the various sand bars. The inward vessels usually take advantage of the flood tide and cross the bars when there is a maximum height available but then because of tidal conditions, sometimes, it may be necessary to cross a bar about 1-2 hours before high water depending upon what is the Governing bar in the river. Normally for transiting to Calcutta, ships encounter about 14 sand bars. These bars have to be regularly surveyed and sounded by the port authorities and the pilots have to be kept informed of the day to day fluctuations of the water depths available over W/T or V.H.F. to ensure that he does not get into problems while piloting his vessel. There have been instances when in a single day a bar has shoaled as much as 3 to 4 feet and one always has to be careful of such unpredictable incidents. These problems are usually not encountered in sea ports where channels are generally much more steady, except for effects of littoral drift, they do respond to capital dredging and the depths are fairly steady compared to riverine ports. The sand bars in a riverine port have to be regularly monitored by surveys, dredged and the channel has to be demarcated by buoys, lights, etc., which is a full time job in a long channel. The allowable draft on any particular day to the port is determined by the availability of depth over the governing bar i.e., depth at chart datum plus rise of tide. From this is deduced the requisite underkeel clearance to give the permissible draft. As the tidal rise varies from day to day, reaching the highest a day after new and full moons, the drafts also vary being maximum during the spring tides. As the speed of the tidal ingress does not permit the full utilisation of the height of the range of tides, in order to derive the maximum benefit of the tide, inward bound vessel is to be properly timed to achieve the maximum draft with the least underkeel clearance. Reduction in the speed of the vessel which can occur due to a number of

reasons such as breakdown of machinery, adverse weather conditions, obstructions, etc., can make the work of the pilot particularly difficult and hazardous it could also result in the ship getting neaped and even worse getting aground. The job becomes even more difficult because a ship with the tide behind her in a constricted channel cannot always turn round and more often than not there are no suitable anchorages where a ship can anchor even in the case of an emergency, which makes the problems even more grave. Even when a vessel wants to snub around, the channel is sometimes not wide enough to do that. In addition, adequate floatation may not be available in the channel at low tide.

In a Channel 125 miles long, it is not possible to have tugs escorting vessels like long in a normal sea port when the vessel approaches the pilotage area. As such, ships in the river have to depend on their own power, machinery and anchors while transiting the river passage. The tides on the river Hooghly are always not fair along the channels and at places across the bars. These cross tides have to be encountered and ships carefully navigated. In spite of all this, Calcutta does boast of an enviable safety record and the accident rates on the river have been comparatively low. This can be attributed to the training methods adopted so far in the training of the pilots on the River Hooghly and the long experience a pilot has to have before he is given charge of the ships. Induction into the Pilot Service at an early age does help in developing the skills so necessary for piloting in difficult riverine channel. Although a pilot's skill in the sea port is no way undermined and there are many good pilots elsewhere, but generally for piloting vessels in a riverine ports, it does require some extra skills and this fact cannot be ignored.

To conclude, no matter whether it is in a sea port or a riverine port the pilot is like a doctor and he has to feel the pulse of every ship, which behave differently in different conditions and be alert at all times. The weather conditions, wind, tide, all have different aspects and to be able to judge these and bring and berth a ship with all the safety is of prime importance a job well done is also of great satisfaction to any pilot and this is what that matters most.

PSA's Hi-Tech Gate 4 Becomes Operational

By Ng Yuh Lin

Tanjong Pagar Terminal
Port of Singapore Authority

PSA's newest gate, Gate 4, became fully operational 1 Aug 91. With seven in-lanes and seven out-lanes, the new gate will serve Brani Terminal as well as Tanjong Pagar Terminal and Keppel Terminal.

Both the aesthetic and practical aspects of the gate were considered in the design stage. With the latest high-tech equipment to enhance service levels, the gate also provides a pleasant and productive working environment for PSA staff manning it. This includes:

- (1) a common cabin located above ground to service all lanes;
- (2) two flexi-lanes which could be used either as in-lanes or out-lanes depending on the flow of traffic;
- (3) barriers and traffic lights to regulate traffic flow;
- (4) a dynamic weighbridge where prime movers and trailers need not stop to be weighed;
- (5) computers with touch-screen monitors to allow faster access and update of information by PSA staff; and
- (6) ergonomically designed consoles to help staff man the gate efficiently and effectively.

Traffic Assistants Andrew Goh, Chew Chye Hock and Thangaveloo who were deployed to man the new gate, all agreed that the new cabin and consoles provide a better working environment and the common cabin design allows staff to assist one another whenever the need arises.

Lanes 1 (In) and 14 (Out) of Gate 4 will be in operation for 24 hours a day. The operating hours of the other lanes are:

Mon to Sat	: 0700 hr to 2300 hr
Sun	: 0700 hr to 1500 hr
Public Holidays	: Closed

(PSA Port View)

Post-Panamax Container Crane in Port Klang

The first post-Panamax container crane ordered by Kelang Container Terminal was unloaded at berth No.

10, North Port, Port Klang on the morning of 28 September 1991. The 960-tonne crane arrived in fully-erected state from the port of Augusta, Italy on board the Super Servant 3, a special heavy-lift carrier operated by Dutch company Wijsmuller Transport B.V.

The 139-metre vessel steamed into port on 20 September and was brought alongside on the early morning of 23 September to permit pre-discharge preparations both on board as well as on the wharf deck. Preparation for the ship-to-shore transfer was undertaken by local sub-contractors working for the carrier and the crane supplier.

The carrying vessel was swung to the Mediterranean mooring position in preparation for the rolling-down operation by 3.15 p.m. on 25 September. Interfacing link-beams had to be installed to facilitate winching down of the crane onto temporary rails laid on the wharf. The winching down operation commenced shortly before 8.00 a.m. on 28 September and the entire crane structure came free of the carrying vessel within half an hour.

The crane is now under the charge of technical personnel of the crane supplier for commissioning procedures

and tests before being handed over to KCT.

The Super Servant 3 departed Port Klang on 29 September 1991. The vessel is under the command of Capt. R. C. K. Harms. The technical team from Wijsmuller is headed by Mr. Alex Rodenburg while Mr. Antonio Lagostena led the team from the crane supplier.

KCT's Crane No. 6

Principal particulars/dimension

Outreach	: 44.3 m
Operational outreach	: 40.2 m
Lifting height above quay	: 32.6 m
Lifting height below quay	: 15.8 m
Backreach	: 11.0 m
Wheel span	: 15.2 m
Clearance between legs	: 16.0 m
Clearance under portal	: 12.2 m
Overall length	: 27.7 m

Speeds

Main hoist with load	: 50 m/min
Main hoist without load	: 120 m/min
Trolley travelling	: 180 m/min
Gantry travelling	: 45 m/min
Boom hoist	: 10 min

Waterfront 2001: Int'l Forum in Osaka

"Waterfront 2001" was the title of

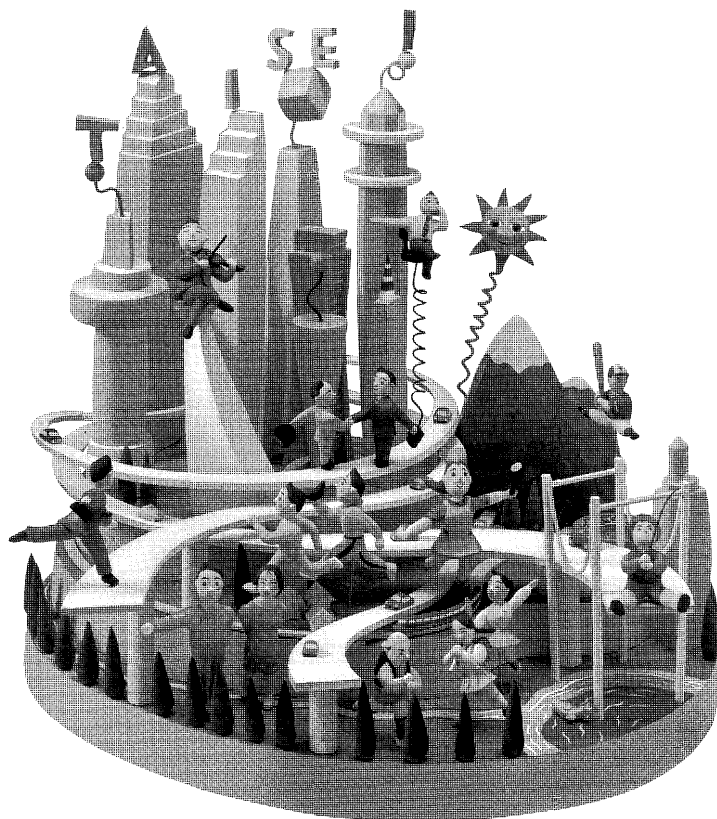
a forum organized by Osaka City for three days from 16 to 18 October 1991, with the theme "Creation of an Urban Culture Flourishing in Waterfront Areas".

Those plans presented and discussed at the forum were: Battery Park City, New York; London Docklands Development; Waterfront 2001 — Marina City, Singapore; Coastal Development Project and Port Privatization, Shanghai; Waterfront Subcenter Development Project — Teleport Town, Tokyo; Harbourfront Official Plan, Toronto; Harbour Park — Municipal Harbour Plan, Boston; Minato Mirai 21 Project, Yokohama. Also introduced by the experts were those plans at the ports of Baltimore, Sydney, Honolulu, Otaru, San Francisco, Venice, Amsterdam and Bangkok.

It was attended by some 1,000 people from various local public, academic, commercial and business sectors, on top of the lecturers and panelists inclusive of the representatives of ports such as Le Havre, Melbourne, San Francisco, Shanghai, Val Paraiso, and other cities and ports.

(Report by R Kondoh, IAPH)

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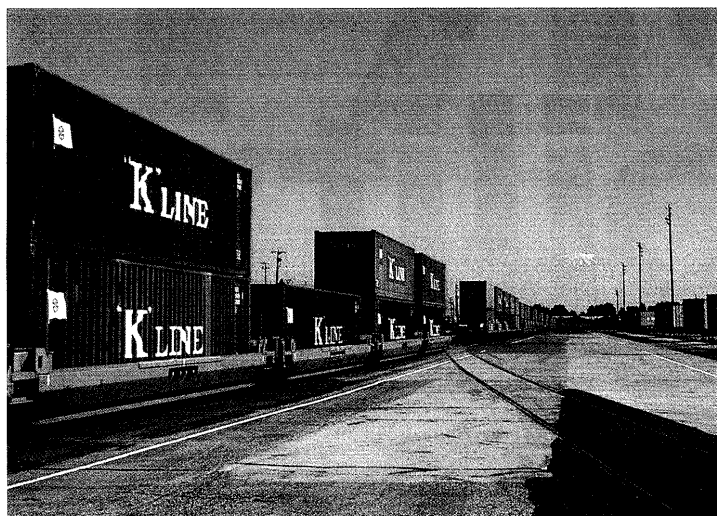
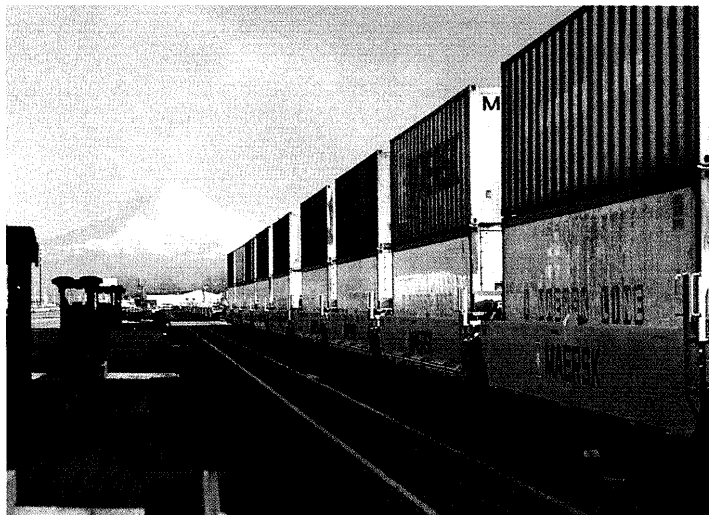
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