

# Ports & Harbors

October, 1987  
Vol. 32, No.10



The Publisher  
**The International  
Association of  
Ports and Harbors**

**Bremen / Bremerhaven**  
demonstrate their position  
as important seaports in  
the handling of automobiles  
(top), containers (bottom,  
right) and general cargo.



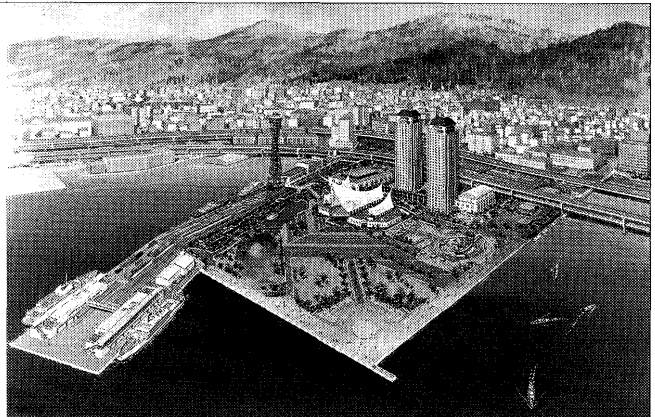
# Kobe Maritime Museum to be opened in April

The Kobe Port debuted in 1868 as an international port. Its 120th anniversary will soon be celebrated. Kobe has grown to be one of the world's major ports through modernization of cargo-handling facilities including containerization and development of pier-facilities for large ships. For further development of the port city of Kobe it is necessary to provide an opportunity for the people to learn more about the port and to understanding the sea and ships.

## AN OUTLINE OF MERIKEN PARK PLAN

Naka Pier and Meriken Pier have always been popular among people as the origin of the modern development of Kobe Port and also as a landing spot for inland tours.

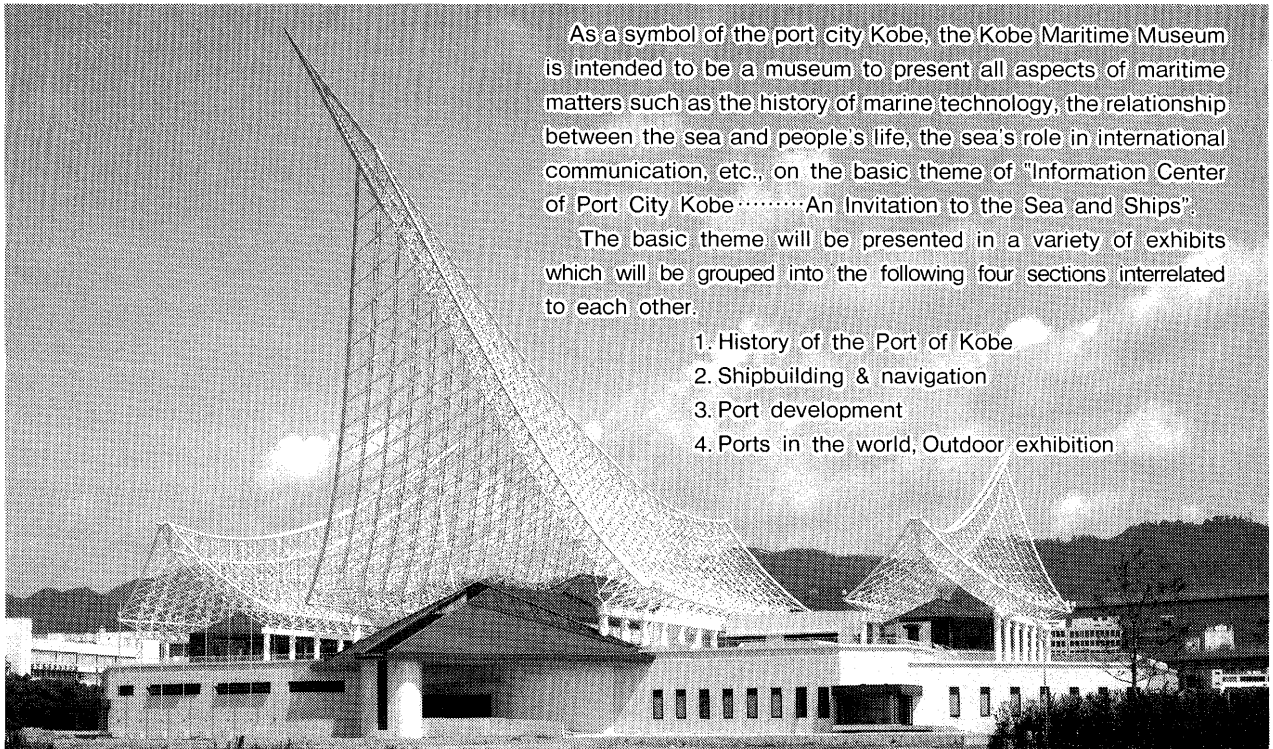
To increase sightseeing opportunities and add resort facilities for the urban people, the "Meriken Park" will be built by reclaiming the surface area between the existing Meriken Pier and the Naka Pier. This "a park on the port" will contain park areas, the Kobe Maritime Museum and other facilities for sightseeing.



As a symbol of the port city Kobe, the Kobe Maritime Museum is intended to be a museum to present all aspects of maritime matters such as the history of marine technology, the relationship between the sea and people's life, the sea's role in international communication, etc., on the basic theme of "Information Center of Port City Kobe.....An Invitation to the Sea and Ships".

The basic theme will be presented in a variety of exhibits which will be grouped into the following four sections interrelated to each other.

1. History of the Port of Kobe
2. Shipbuilding & navigation
3. Port development
4. Ports in the world, Outdoor exhibition



## KOBE PORT PROMOTION ASSN.

5-4, HATOBACHO, CHUOH-KU, KOBE 650, JAPAN. PHONE : 078-391-6751

## IAPH Officers

- President:** Wong Hung Khim,  
Executive Director, Port of Singapore  
Authority, Singapore  
**1st Vice-President:** J.H. McJunkin,  
Executive Director,  
Port of Long Beach,  
U.S.A.  
**2nd Vice-President:** J. Mather,  
Managing Director, Clyde Port  
Authority, U.K.  
**3rd Vice-President:** Cheung Yeun-  
Sei, Administrator, Korea Maritime  
and Port Administration, Korea  
**Conference Vice-President:**  
C.J. Lunetta, Port Director, Port of  
Miami, U.S.A.

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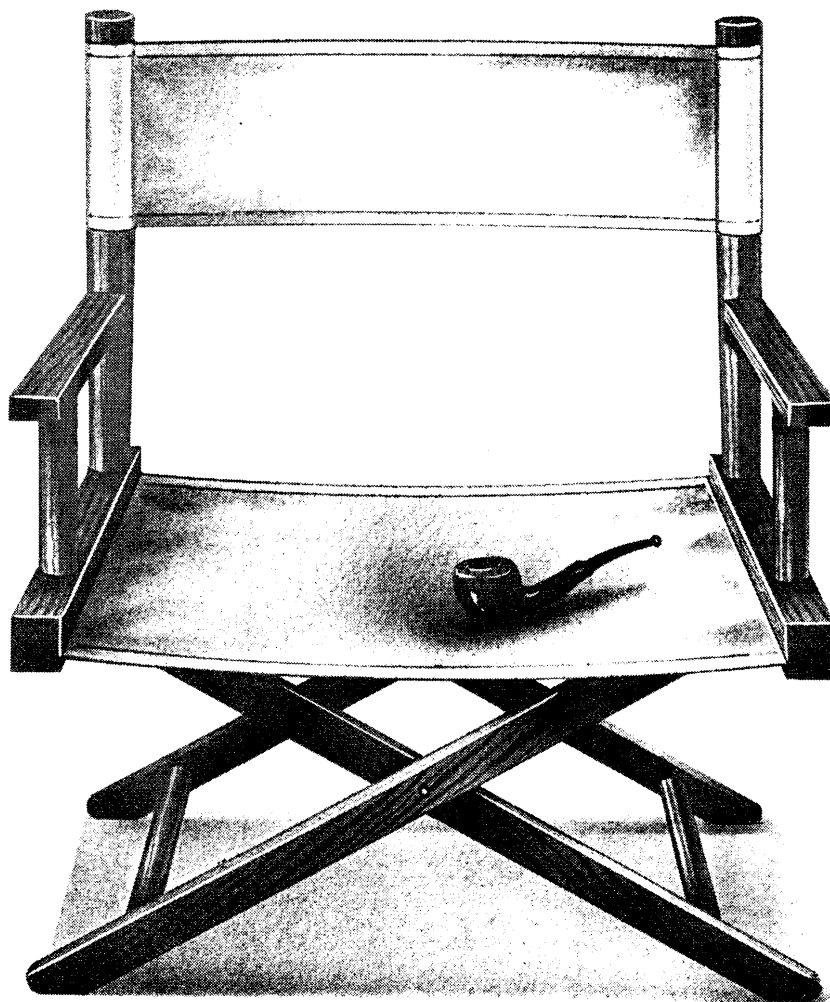
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# 110,296,000t

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We at the Port of Yokohama have rendered excellent services to ships from all over the world with 128 years' tradition and ripe knowledge, since its opening in 1859. And the port has ranked first in Japan about the amount of trade value for many years. We provide the unified arrangement of tugboats, pilots, and line-handling, and have introduced the effective computer system. Furthermore, the port has far fewer entry and exit restrictions. Seeing is believing. We are sure that you will note the Port of Yokohama as soon as you use it once.



**PORT AND HARBOR BUREAU THE CITY OF YOKOHAMA**  
NO. 2, YAMASHITA-CHO, NAKA-KU, YOKOHAMA 231 JAPAN. PHONE: 045-671-2888



When you know  
all the facts  
about our port...  
We'll both  
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**DID  
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It's a fact, at our port we have more first inbound and last outbound than any other North Atlantic port. This means shipments are received three to four days faster. Not only are we first in rotation, but we also have more frequent sailings. Nearly 100 scheduled steamship lines offer direct service to major ports around the globe. Last year over 6000 vessels called at our port from 370 ports in 120 countries throughout the world. First in rotation, more sailings...faster shipments. These benefits, coupled with a half-billion dollar investment to expand our facilities, and you have a port like no other port in the world.

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# We want to keep steel strong.

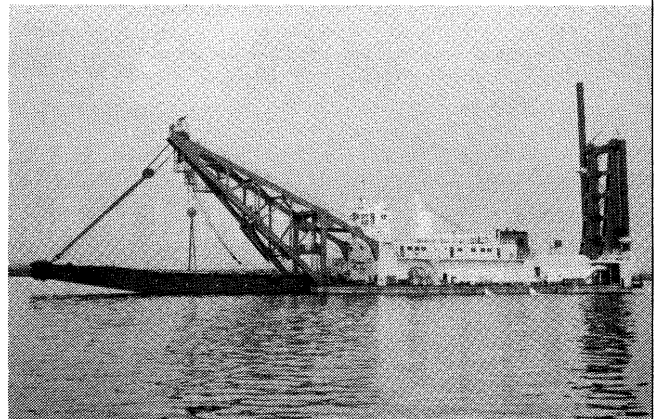
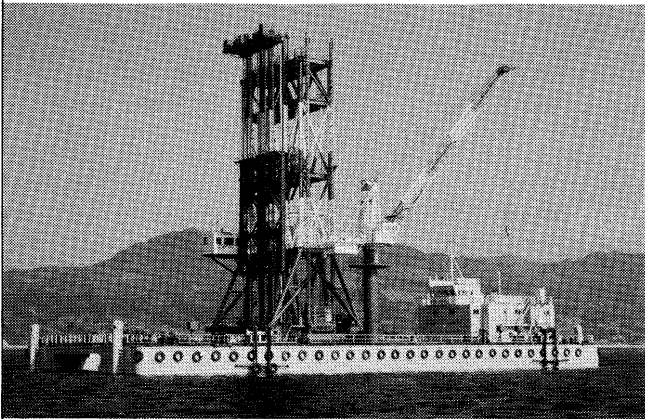
Against the background of global recession  
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can carry steel's great strength and vital services to society  
far into the 21st century and beyond.

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The world's first application of the **Geodrain®**  
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# IAPH ANNOUNCEMENTS AND NEWS

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## IAPH Personnel News

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### **Mr. Wong Heads S'pore Telecom, Remains as President of IAPH**

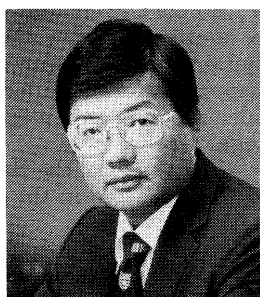
By government appointment, Mr. Wong Hung-Khim was named the chief executive officer of the Telecommunication Authority of Singapore (Telecoms) with effect from 15 July 1987 and has thus relinquished his PSA office as of 1 September 1987, stated Mr. Lim Kim San, Chairman of the Authority, in his letter of 24 July, 1987 addressed to Mr. Hiroshi Kusaka, Secretary General.

In view of Mr. Wong's long association with the PSA and IAPH since 1979, Mr. Lim continued that in view of the honor and pleasure for the PSA and Singapore of having Mr. Wong presiding over an international organization such as IAPH, it was the PSA's hope that Mr. Wong would serve out his full term as IAPH President. Mr. Lim said he had obtained the consent of Mr. Wong in this regard.

Mr. Lim confirmed that there would be no conflict of interest between Mr. Wong's new responsibilities and duties in Telecoms and those of his Presidency in IAPH and added that the PSA would undertake to render all the necessary support and assistance to enable Mr. Wong to carry out his presidential duties and powers effectively.

The provisions contained in Sec. 22 of the By-Laws, which were drafted to deal with this type of situation, read as follows:-

Notwithstanding the other provisions of the By-Laws, if the President, or the First Vice-President, or the Second Vice-President, or the Third Vice President ceases to be a delegate or representative of any Regular Member, such Officer may complete the term of office provided that, in the judgement of the Executive Committee, (a) the Officer had been engaged in port administration or management for at least 5 years, (b) the Officer had been an active participant in IAPH affairs through Committees, Board and Conference proceedings for at least 4 years, (c) the Officer's new or



**Mr. Wong**

changed status does not constitute a conflict of personal and IAPH interests or an impediment to the performance of the Officer's IAPH duties, and (d) the Regular Member with which the Officer had most recently been associated does not object in writing to the completion of the term by the Officer.

This provision was created by the Association at its 14th Conference in 1985 at Hamburg, Germany, for the purpose of minimizing the negative impact to the Association caused by the unexpected departure of officers from port businesses.

Mr. Wong has been serving on the IAPH Board since 1979 and has served on both the Constitution and By-Laws Committee and the Finance Committee. He has been on the Exco since 1980. He was elected the First Vice-President in 1985 at the 14th Conference and was further elected the President at the 15th Conference in 1987 at Seoul. He has attended all the Conferences since 1979, the 11th Conference held in Le Havre/Deauville, France.

Under the circumstances, Mr. Kusaka, Secretary-General, calling on the provisions stipulated in Sec. 22 of the By-Laws as above, asked all the Exco members to support the retention of Mr. Wong as the IAPH President in his letter of July 30, 1987. The Exco members expressed their support and agreed to have Mr. Wong continue as President during the term until the next Conference.

Mr. Wong can still be reached through the Port of Singapore Authority as usual.

### **Mr. Cheung Chosen As Port Council Head, Remains as 3rd VP**

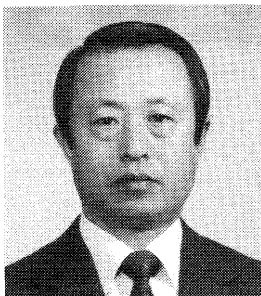
Mr. Cheung Yeun-Sei, the Third Vice-President, left the Korea Maritime & Port Administration as Administrator by government appointment in the latter part of May after the successful completion of the 15th Conference.

Mr. Kyung Shik Cho, the newly appointed Administrator of the Korea Maritime and Port Administration, in his letter of 14 July, 1987, informed Mr. Hiroshi Kusaka, Secretary General, that Mr. Cheung had been made the Chairman of the Korea Shipping and Port Council, a KMPA related advisory body. He added that in view of Mr. Cheung's long-held association with IAPH affairs, it was the hope of the entire membership of Korea

that Mr. Cheung should be allowed to complete his term as the 3rd Vice-President of IAPH. He confirmed that such a situation would enjoy the full support of the KMPA.

Mr. Cheung Yeun-Sei served the Korea Maritime & Port Administration as senior officer from its establishment in 1975. He joined the IAPH Board as Alternate Director in 1980, and as Director in 1984. He was named the Conference Vice-President at the 14th Conference in 1985 and was the Host of the 15th Conference in Seoul. On that occasion he was elected the Third Vice-President. He has attended all the Conferences since the 11th Conference held in France.

Under the circumstances, Mr. Kusaka, Secretary General, calling on the provisions stipulated in Sec. 22 of the By-Laws as in the similar case concerning President Wong, asked all the Exco members to support the retention of Mr. Cheung as the IAPH Third Vice-President in his letter of August 24, 1987. The Exco members expressed their support and agreed to have Mr. Cheung continue taking the office of Third Vice-President of IAPH during the term until the next Conference.



**Mr. Cheung**

## Mr. Samuels Agrees To Serve on EXCO

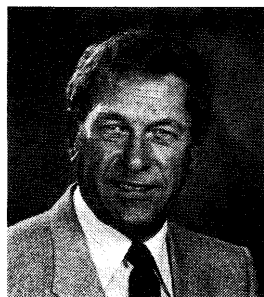
Mr. Colin Jordan, General Manager, the Port of Melbourne Authority, Australia, has left the Authority and consequently severed his ties with IAPH. He thus ceases to be an Elective Member of the Exco of IAPH and has stepped down from all the offices he held in IAPH.

Under the guidance of President Wong, Mr. N.G. Samuels, Chairman, the Port of Geelong Authority, was subsequently asked for his cooperation in rendering his services to IAPH for the term vacated by Mr. Jordan.

Mr. Samuels kindly indicated that he would be prepared to succeed Mr. Jordan and agreed to serve on the Exco. He further assured us of his continued cooperation and support.

Mr. Samuels has been involved in the Association's affairs both in his capacity as a member of the Board of Directors since 1985 and as a participant of the Conferences in Vancouver (1983), Hamburg (1985) and Seoul (1987). Moreover, he observed the Exco meeting at Auckland in 1986.

In conformity with the provisions contained in Sec. 15 of the By-Laws of the Association, under the recommendation and endorsement of the President, a meeting of the Board of Directors by correspondence on September 30, 1987 was called to consider the agenda for electing Mr. Samuels to the Executive Committee



**Mr. Samuels**

for the term until the next Conference at Miami in April 1989.

The result will be reported in the next issue of the journal.

## Ms. Davis to Be Named Legal Counselor

As a result of the recent retirement from the port by Mr. J.L. Wells, Chief Dy. Executive Director, Port of Los Angeles, a vacancy has been generated in the office of Legal Counselors of this Association.

In the circumstances, Mr. P.J. Falvey, Chairman of the IAPH Legal Counselors, suggested that Ms. Algenita Scott Davis, Counsel to the Port of Houston Authority, U.S.A., be named to succeed to the office. Ms. Davis, according to Mr. Falvey, is interested in port legal matters and has had experience of them both in her capacity as Counsel for the Port of Houston Authority and as a member of the Legal Affairs Committee of the American Association of Port Authorities (AAPA).

Under the endorsement given by the President, and in conformity with the provisions of Sec. 12 of the By-Laws of the Association, a Board meeting by correspondence was called on September 30, 1987 to consider the agenda for appointing Ms. Davis as an IAPH Legal Counselor.

The result of the Board meeting by correspondence will be reported in the next issue of the journal.



**Ms. Davis**

## Cooperation Asked Re Tonnage Survey

In response to a biennial survey on the tonnage handled which the Secretary General circulated to all Regular Members on June 30, 1987, 136 out of 228 members completed their reports by September 15, 1987, the deadline set for receipt of the information.

The request has been made to assess the 1988/1989 dues for all Regular Members whose annual dues are based on the tonnage handled at the relevant facilities. As stated in the survey form, the term "tonnage handled" shall be deemed to mean the cargo tonnage in metric tons which passed in and out of the member's port or ports' boundaries, whether ocean-going, coastwise, or by lake, river or canal. Such tonnage shall be calculated on the weighted formula of 100% for general cargo and 20% for dry and liquid bulk cargo.

The Secretary General urges all the Regular Members who have not yet responded to the survey to return the completed form as soon as possible so that the Tokyo Head Office will be able to calculate the annual dues for all the members appropriately when it issues the invoices for next year at the end of this year.

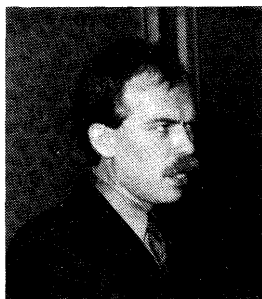
If any members do not possess the entry form, a fresh copy of the form is available from the Tokyo Head Office upon request.



# IAPH Bursary Scheme 1987-1989 Announced

Mr. C. Bert Kruk, Chairman of the IAPH Committee on International Port Development (Director, Technical and Managerial Port Assistance Office (TEMPO), Port of Rotterdam), has recently announced the details of the Bursary Scheme for the period leading up to the forthcoming 16th Conference in Miami in 1989.

The Scheme is considered by the Association to be a most valuable means of expressing IAPH's support of the efforts of developing ports to train their personnel in modern management and operation techniques. It is therefore with great pleasure that we announce in this issue the details of the IAPH Bursary Scheme and its conditions for entry.



Mr. Kruk

## Bursary Recipients

Mr. C.B. Kruk, Chairman of the IAPH Committee on International Port Development (Port of Rotterdam), has approved the bursary for the following three individuals to attend the UNCTAD/IPER Seminar on Port Economics and Pricing held in Le Havre from 1 to 11 September 1987.

Mr. Getachew Mirke, Marine Transport Authority, Ethiopia

Mr. Bo Jow Yung, Bintulu Port Authority, Malaysia

Mr. Ram Pratap, Ports Authority of Fiji, Fiji

As announced in the previous issue of this journal,

the Seminar was jointly organized by UNCTAD and IPER (Institute Portuaire d'Enseignement et de Recherche).

It is made a condition that all bursary recipients submit their reports on the course they have taken for later publication in the journal of IAPH. Accordingly, the reports produced by the recipients will be included in this journal as appropriate.

## Contribution to CIPD Fund:

Following the announcement of the receipt of a contribution to the CIPD Fund from the Thunder Bay Harbour Commission, Canada, we are pleased to announce the newly made donations in this issue as follows:

Nanaimo Harbours Commission, Canada  
(Regular Member)

US\$200

As of August 31, 1987, the amount contributed totalled US\$69,504. IAPH Head Office always welcomes new donations from members for the Special Port Development Technical Assistance Fund as useful resources for the training of personnel who work for IAPH member ports in developing countries.

## IADC Contribution to Dredging Task Force Fund

With thanks, this is to note that the amount of \$2,500 was contributed to the IAPH's Dredging Task Force account on July 31 by the International Association of Dredging Companies (IADC). Mr. J.A. Mulock Houwer, the General Manager, at the request of the IAPH Dredging Task Force Chairman, Mr. Herbert R. Haar, Jr. (Deputy Executive Port Director, Port of New Orleans), and in accordance with the previously agreed arrangement, was transferred on August 24 to the Dredging Fund of the American Association of Port Authorities (AAPA) as a part of the AAPA's activities related to the London Dumping Convention.

## Visitors to Head Office

On 3 August, 1987, Mr. J. Egbert Prins, General Director, Delft Hydraulics Laboratory, visited the Head Office and was received by Mr. Hiroshi Kusaka, Secretary General, and his staff.

Mr. Prins was visiting Japan as a guest speaker of a symposium on waterfront development organized by the Kumamoto prefectural government on 7 August at the town of Misumi in commemoration of the centenary of the establishment of the Port of Misumi, which was designed and constructed by a Dutch civil engineer named Rouwenhorst Mulder. The hundred year old port facilities, which had been used until recent times, still boost their original stone structures and are now being preserved as a historical monument.

On August 14, 1987, Mr. Katsuya Yokoyama, former Deputy Secretary General of IAPH, visited the Head Office and was welcomed by Secretary General Kusaka and his former colleagues at the Head Office.

Mr. Yokoyama served as IAPH Deputy Secretary General for the period between 1972 and 1975 under two Secretaries General, first Mr. Toru Akiyama and then Dr. Hajime Sato. Of Mr. Yokoyama's numerous con-



L to R:

Front row: Mr. H. Kusaka and Mr. K. Yokoyama

Back row: Mr. R. Kondoh and Ms. K. Takeda

tributions to the development of IAPH, the sterling efforts he made in preparing and running the Association's 9th Conference held in Singapore in 1975 are still fresh in the memories of many IAPH members.

After his retirement from IAPH, Mr. Yokoyama, who was originally from Mitsui O.S.K. Lines, was named Far East Representative, Port of Los Angeles in 1976 and worked in the Port's Tokyo Office, which he left in 1984 for health reason.

Nevertheless, he has recently returned to port business and now works as Deputy Representative for the Ports of Bremen and Bremerhaven under Mr. Shigemi Tsuyama, the ports' Japan Representative.

During the course of conversation with the Head Office staff Mr. Yokoyama expressed his hope to strive to do good business in his new position based upon his 40 years' experience in the shipping and port industries.

# Conditions for Entry To Bursary Scheme

1. The object of the Scheme is to provide financial assistance towards the cost of sending selected applicants on approved training courses 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. 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 Chairman of the Committee 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 50 years of age, and must already be employed in a junior or middle management capacity. After being completed, the application form should be sent to the Chairman of the Committee on International Port Development. The form is to include a statement confirming the suitability of the applicant for the course he or she wishes to attend and indicating the benefit both the port and applicant seek to achieve from the course. The statement should also indicate the applicant's potential for future promotion.
4. The application form must be accompanied by a letter from the host port organization confirming its willingness to provide the required training and specifying the date of commencement and duration of the course.
5. The Bursary Scheme will be open, subject to the availability of funds, throughout the period indicated above. The decision of the Chairman of the Committee on International Port Development will be final. His decision will be communicated to the applicant, his or her organization's Chief Executive, the Chief Executive of the host port/organization in which the training is to take place, and the Secretary-General of IAPH for him to take the appropriate 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.
7. After completion of the course, successful applicants must prepare a brief report indicating how they propose to apply the training to their present employment. The report, which must be sent to the Chairman of the Committee on International Port Development within one month of the end of the course, will be published in the magazine "Ports and Harbors". Successful applicants will also be required to obtain and forward with their own report a letter from the ports/organizations where they have re-

ceived their training, giving their opinions of how they have performed on the course and the benefits they have derived from it.

## A Suggested Form of Application To the IAPH Bursary Scheme 1987 — 1989

(Items Required to be Included)

To:  
Mr. C. Bert Kruk, Director  
Chairman, IAPH Committee on International Port Development  
Director, Technical and Managerial Port Assistance Office (TEMPO)  
Port of Rotterdam  
P.O. Box 6622, 3002 AP Rotterdam, The Netherlands  
Telex: 23077 EUROT NL  
Fax: 31-10-477-8240

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. Name of Applicant (Full name)  
Date of birth
2. Port Authority
3. Present appointment  
Date appointed
4. Educational qualifications (Please also indicate whether you are fluent in English, French or Spanish.)
5. Professional/technical qualifications
6. Career history
7. Previous overseas courses attended
8. Course for which application is being made (Specify nature of Course, duration, and location of host port/institution)
9. Applicant's reasons for selecting above course
- \*10. Amount of Bursary for which application is being made (Particulars of expenses should be given in U.S. dollars in support of the application.)

Travel costs	_____
Course fees	_____
Accommodation	_____
Others, with particulars	_____
Total	_____

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, international organizations such as UNCTAD, ILO, IMO, etc.)

Date

Applicant's Signature

List of attachments

\*: A breakdown of the bursary amount as under Item 10 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 Chairman's office.

# OPEN FORUM

## The Panama Canal:

### Viable Waterway for the Next Century?

By Ambler H. Moss, Jr.

University of Miami  
(Former U.S. Ambassador to Panama)

*Acknowledgement by the IAPH Secretariat: The article is reproduced from the "Marine Policy Reports" publication (Vol. 9, No. 4, May 1987) of the Center for the Study of Marine Policy, College of Marine Studies, University of Delaware. This office expresses its thanks to the Center for the permission to publish accorded to the IAPH journal.*

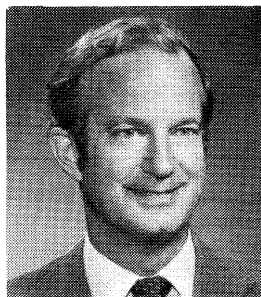
This year will mark the eighth anniversary of the entry into force of the Panama Canal Treaties of 1977, which were approved by the United States Senate and ratified by the President in 1978.

The new treaties changed for all time the organizational structure and control of the waterway, which had been under sole U.S. operation since its opening on 15 August 1914. The heroic saga of the construction of the Panama Canal during the early part of this century, overcoming the challenges of tropical diseases and unique engineering problems, has long captured the imagination of mariners and landlubbers alike. Anyone interested in this fascinating story should read David McCullough's book, *The Path Between the Seas* (N.Y. Simon and Schuster, 1977), for an excellent readable account.

#### The Panama Canal Treaties

Politics as well as engineering naturally comes into play when one country constructs a canal in the territory of another. From the negotiation of the original bilateral canal treaty of 1903, forced upon Panama by a stronger "big brother", there was a string of incidents and tensions between Panama and the United States that led to adjustments of the treaty in 1936 and 1955. After riots in January 1964, in which Panamanian and U.S. citizens were killed, President Lyndon B. Johnson began negotiations leading to a wholly different regime for the canal. Due to a variety of circumstances, the negotiations were long, stretching through the Johnson, Richard Nixon and Gerald Ford administrations and culminating with the signing of new treaties in the Jimmy Carter administration on 7 September 1977.

The two treaties signed on that date, the Panama Canal Treaty and the Treaty concerning the permanent Neutrality and Operation of the Panama Canal ("the Neutrality Treaty"), contain a complex scheme that determines U.S. rights and obligations concerning the canal and also allow the use of military bases by the United States until 2000.



Mr. Moss, Jr.

Thereafter, a regime of neutrality applies to the canal, but provides the United States with certain rights to act in its defense. The Panama Canal's operation, however, passes entirely under Panamanian stewardship in 2000 and, under the terms of the Neutrality Treaty, no foreign troops are to be stationed on Panamanian territory after that year.

Several questions present themselves when one considers the future of the Panama Canal through the 1990s and on into the next century.

1. How well is the canal functioning and how well can it be expected to function under the Panama Canal Treaty?
2. Will the canal remain competitive, efficient, and modern with respect to alternative modes of transportation?
3. How might future political events in Panama and Central America affect the canal's future?

#### The Panama Canal Commission

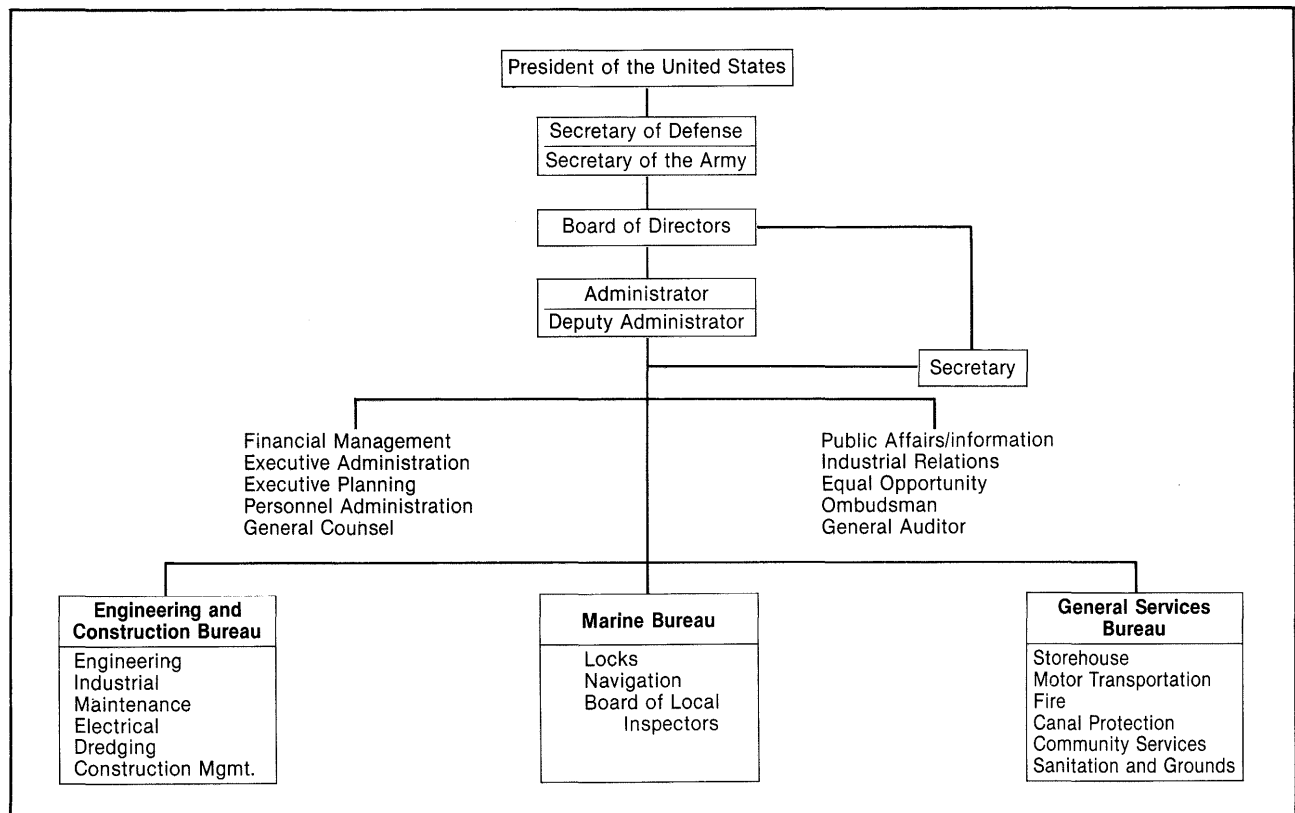
The Panama Canal Commission, the operator of the canal, is an agency of the Executive Branch of the United States Government, established by the Panama Canal Act of 1979 (93 Stat. 452; 22 U.S.C. 3601 et seq.), enacted 27 September 1979, just three days prior to the entry into force of the new treaties. The commission is under the authority of the Secretary of the Army. It is supervised by a nine-member Board of Directors. Until the expiration of the treaty in 2000, five board members are nationals of the United States and four are Panamanians.

The Administrator of the Panama Canal Commission, its chief executive officer, is to be a U.S. citizen and his deputy a Panamanian until 1990. Then a Panamanian will be chief executive officer and a U.S. citizen will be his deputy. For the organization of the Panama Canal Commission, see Figure 1.

Preference for the hiring of Panamanians to operate the canal was built into the treaty. It has led to a steady increase in Panamanian employment, up 8.6% since 1979 to a total of more than 82% of the isthmian work force in 1986. A point of friction with Panama in the U.S. implementing legislation (the Panama Canal Act of 1979-P.L. 96-70) had been the creation of two wage systems for "old" and "new" employees and for positions traditionally hard to fill, but these differences were finally eliminated in September 1985.

#### Revenues and Traffic

All payments to Panama derive from toll revenues. The largest portion, however, is variable, amounting to around \$50 million annually, and is based on the amount of traffic flowing through the waterway. Unlike previous treaty arrangements, therefore, Panama has a direct interest in the efficiency of the canal and in its competitiveness. In



**Figure 1. Panama Canal Commission**

addition to the foregoing payments, an added "bonus" to Panama in the treaty was provision for an extra "contingency payment" to Panama of up to \$10 million per year representing the excess of revenues over expenditures, after proper reserves have been made. The canal finances are in sound shape this year, and Panama may receive around \$4 million from the contingency provision.

Predicting traffic flows is exceedingly difficult, being so dependent upon world economic conditions. During the first three years under the treaty, from 1980 to 1982, total ship transits and tonnage reached new highs. The world recession and the operation of an oil pipeline across Panama, however, diminished the traffic, requiring a 9.8% toll rate increase in 1983. Toll revenues rose again during 1984 and 1985 and reached a level of \$322,734 thousand in 1986.

Continuity of management has been an important factor in the success of the Panama Canal Treaty. Dennis P. McAuliffe, who was formerly Commander-in-Chief, U.S. Southern Command, has been Administrator of the Panama Canal Commission since 1979. His Deputy Fernando Manfredo, held cabinet positions in the Torrijos government and is respected by U.S. and Panamanian workers equally. Mr. Manfredo has expressed his concerns on many occasions as to the steps that Panama must take to prepare itself properly to run this large enterprise in the year 2000.

### **Economic Competitiveness of the Canal**

Although security considerations were extremely important in the decision by the United States to build the Panama Canal, they weigh less heavily today. During the last round of treaty negotiations, the Joint Chief of Staff termed the waterway an important asset but would not go so far as to term it a vital asset. It has not been used heavily by U.S. naval vessels in peacetime; in 1985 there were only 15 transits of U.S. vessels out of a grand total of 12,766

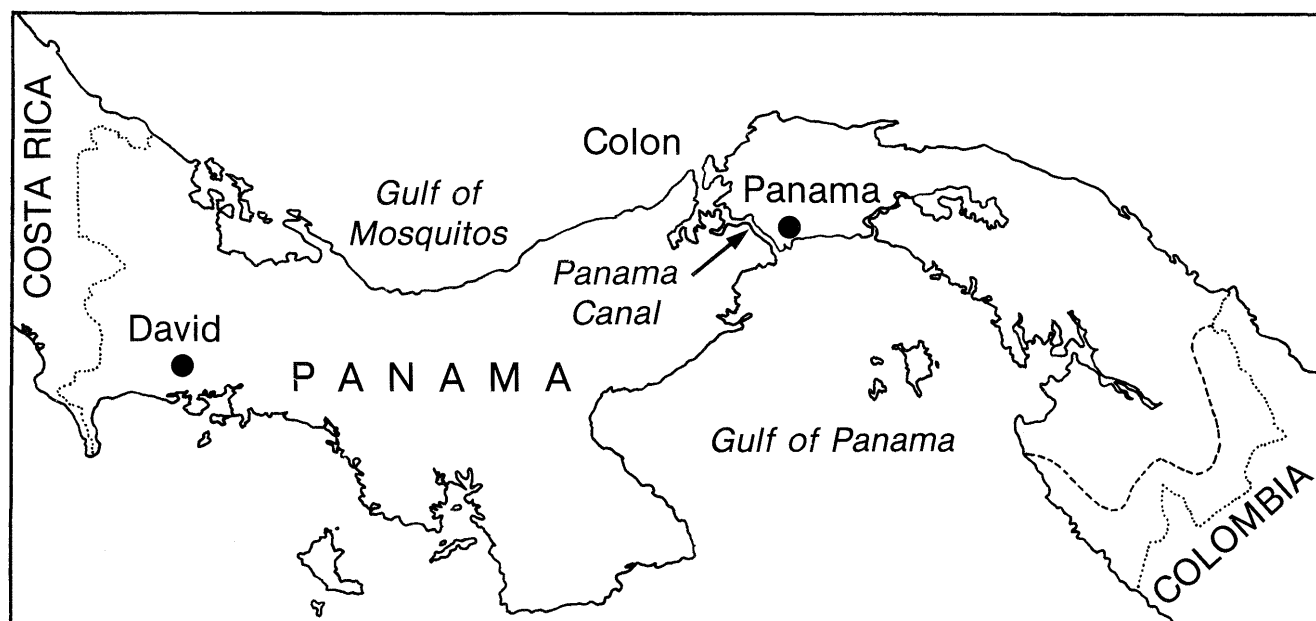
transits. Because of its vulnerability to missile attack, the canal would likely not be available in time of war. As its operation relies upon the gravity-fed flow of fresh water from the artificially-created Gatun Lake, a perforation and drainage of the water supply would put the canal out of action, refilling the lake could take up to three years.

Technological changes worldwide in marine and land transportation have affected the economic competitiveness of the canal, which is reflected in the sensitivity of traffic to toll increases. Bulk goods petroleum products, grains, coal, ores, nitrates, and so forth make up about 60% of the total cargo. Containerized shipments, however, in many cases can move across the United States at rates similar to shipment through the canal.

A toll sensitivity study performed by the Stanford Research Institute in 1976 formed the basis of the financial arrangements with Panama under the Panama Canal Treaty. After entering negotiations with large expectations, the Panamanian representatives came to accept the desirability of limiting any new toll increases resulting from the treaty to around 33%. A new sensitivity study was performed for the Panama Canal Commission by Temple, Barker & Sloane, Inc. in 1986, looking at the period 1984-2010. The main conclusion was similar to that of the earlier study: that canal traffic is sensitive to costs and that sensitivity increases over time, "reflecting greater cost competitiveness of diversion of alternatives".

The canal's finances have been sound under the conditions imposed by the Panama Canal Treaty and the Panama Canal Act of 1979. Under these instruments, the commission must recover from tolls and other revenues all the costs of operating and maintaining the canal. These include interest, depreciation, capital for plant replacement, expansion and improvements. Such revenues, principally tolls, also provide for payments for annuities and for public services to the Republic of Panama. Although such a financial regime serves





*Figure 2.* The Panama Canal is a 51 mile long lock-type canal running through the Republic of Panama which connects the Atlantic and Pacific Oceans. The minimum width of the navigable channel is 500 feet. Navigable channel depth varies according to the amount of water available in reservoirs. The normal range of permissible transit draft is from 38 feet to 39 feet 6 inches of tropical fresh water. Locks on both ends of the canal raise and lower ships in three stages to and from the Gatun Lake, in the canal's center. Traffic can flow simultaneously in both directions. It has operated since 1914 virtually without interruption, and through fiscal year 1986 had transited more than 83% of the oceangoing commercial class. (Source: Panama Canal Commission)

the present canal well, even registering a slight profit, it does not address the need to upgrade the competitiveness of the canal for the future.

The latest traffic sensitivity report points out that the canal, although an aging asset, can increase its competitiveness through major improvement projects. A project that has been under study is the widening of the Gaillard (Culebra) Cut, estimated to cost some \$400 million. Its chief advantage would be reduce transit costs to shippers by reducing vessels' transit time in canal waters.

Financing such a project is not likely to be accomplished as in the past, through U.S. government funding, as the investment could not be recovered before the year 2000. If it goes forward, therefore, Panamanian responsibility for the post-2000 phase will be required. This is a decision which the United States Government must face, and a financial study is now in progress.

### The Alternative Studies Commission

A potentially more elaborate set of plans for the future may result from the work of the Panama Canal Alternatives Study Commission, which has been undertaken by the governments of the United States, Panama, and Japan. The study, with an initial funding of \$20 million, is the outgrowth of Article XII of the Panama Canal Treaty, which stipulated that both the United States and Panama study the feasibility of constructing a sea-level canal. Expanded to include Japan and perhaps eventually other shipping nations, the mandate of the commission is to study all alternatives making use of Panama's geography, whether a sea-level canal, an expanded lock canal, or systems of pipelines and rail connections in addition to or instead of an improved canal. Obviously the realization of the plans will extend well beyond the year 2000 and will require a

new phase of multinational cooperation.

The cold fact remains that the question of financing improvement to enhance the canal's competitiveness must be resolved within the next few years. The Temple, Barker & Sloane study points out that merely raising the tolls is not an answer for the future because of increasing competitiveness of other modes of transportation (or cargo diversion) as time goes on. The study estimates that "cargo can be expected to decline by a percentage equivalent to about one-fourth the percentage cost increase, revenues would increase by a percentage of about two-thirds of the percentage cost increase, and laden transits would decrease by a percentage of about one-fifth of the percentage cost increase." *Table 1* shows the impact of transit cost increases of 25%, 50%, and 100% for the years 1984, 1995, and 2010.

Likewise the assumption of the tripartite study underway (U.S. — Panama — Japan) is that some alternative must be recommended to meet increased traffic demands. The Japanese, in particular, with their great fleet of large bulk carriers, are aware of the deficiencies of the present canal, whose transit is limited to up to the 60,000 ton range. As shown in *Table 2*, principal cargoes carried through the canal are, by far, bulk commodities.

### Isthmian Politics

During most of the present decade, the troubles in Central America, principally in El Salvador and Nicaragua, have dominated the headlines and have commanded a good deal of the attention of the Ronald Reagan Administration to its Latin American policy. During the long period of negotiation of the Panama Canal Treaties, however, especially during most of the 1970s, Washington put Central American affairs in a low priority. The United States Southern Command (SOUTHCOM) in Panama, for example, declined in importance, which was reflected in the

**Table 1**  
**Effects of Canal Transit Cost Increases on Cargo, Revenue and Laden Transits**  
**FY 1984—FY 1995—FY 2010**

	Transit Cost Increase						
	0%	25%	Var.	50%	Var.	100%	Var.
<b>FY 1984</b>							
Cargo Tonnage (thousands)	140,471	132,017	−6.0%	122,728	−12.6%	109,692	−21.9%
Revenue (thousands)	\$339,584	\$403,014	18.7%	\$453,151	33.4%	\$550,441	62.1%
Laden Transits	9,328	8,821	−5.4%	8,244	−11.6%	7,471	−19.9%
Daily Average	25.6	24.2	−5.4%	22.6	−11.6%	20.5	−19.9%
<b>FY 1995</b>							
Cargo Tonnage (thousands)	185,838	173,731	−6.5%	159,347	−14.3%	139,265	−25.1%
Revenue (thousands)	\$449,039	\$530,485	18.1%	\$590,670	31.5%	\$705,793	57.2%
Laden Transits	9,106	8,602	−5.5%	8,008	−12.1%	7,246	−20.4%
Daily Average	24.9	23.6	−5.5%	21.9	−12.1%	19.9	−20.4%
<b>FY 2010</b>							
Cargo Tonnage (thousands)	233,134	217,854	−6.6%	199,045	−14.6%	174,319	−25.2%
Revenue (thousands)	\$561,762	\$664,041	18.2%	\$737,625	31.3%	\$884,153	57.4%
Laden Transits	9,152	8,593	−6.1%	7,976	−12.8%	7,261	−20.7%
Daily Average	25.1	23.5	−6.1%	21.8	−12.8%	19.9	−20.7%

Source: TBS Sensitivity Analysis of Panama Canal Trade, 1984-2010.

fact that the post of Commander-in-Chief had been downgraded from four-star to three-star rank. Late in 1978 these conditions changed markedly, with the rise of insurgencies in El Salvador and Nicaragua, and especially with the Sandinista victory in July 1979.

The Panamanian Defense Forces (PDF) have demonstrated in a number of ways that they are concerned over the buildup of the Sandinista army with Cuban and Soviet support. Attitudes within the PDF toward the United States, however, had already changed markedly for the better since the 1977 treaties entered into force. Panamanian participation in joint exercises and other forms of cooperation have taken the relationship a long way from the mutual standoff that characterized the years immediately prior to 1977. The only partial reversal of this trend has taken place during the past 12-14 months as a result of attacks in the press and in the Congress of the United States against Panama because of alleged drug-trafficking through the country and a reversal of democratization of the government. Nevertheless, the important element here is that a tradition of cooperation is being established which can impact favorably on the future.

Until recent years, Panamanians generally saw potential instability in Central America and neighboring South America as being the result of internal dynamics, that is, the breakup of oligarchic and sometimes repressive structures, as in El Salvador and Nicaragua, or the aftermath of internal divisions, as in Colombia. These situations also resulted from economic or "North — South" problems such as the debt crisis, chronically depressed markets for commodities, lack of capital for development, and lack of technology transfer. The results are the failure of economies and the progressive impoverishment of peoples, as in Peru. Without changing this basis perspective, a larger number of Panamanians today, including those within the PDF, would be willing to acknowledge an "East — West" com-

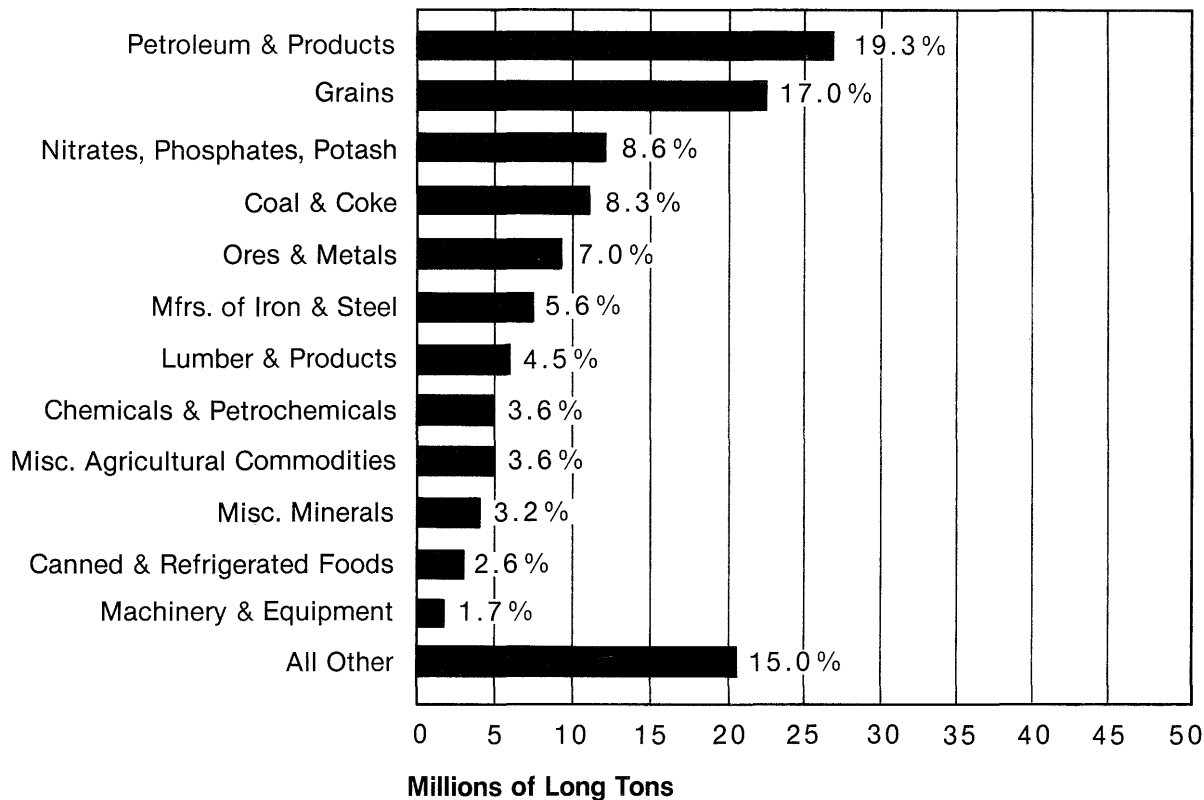
ponent to the problem. The Soviet-Cuban dimension is now seen as part of the dynamics and is not just dismissed as U.S. paranoia.

### A Return to Military Dictatorship?

A central issue, which has come up in recent years, principally in the U.S. press and Congress, relates to the future of Panama itself as a "reliable partner" of the United States. From the U.S. perspective, the internal political picture became unclear in late September 1985, when President Nicolas Ardito Barletta was forced to resign, largely by the PDF, and was replaced by his Vice-President, Eric Arturo Delvalle. Barletta, who holds a Ph.D. in economics from the University of Chicago and had been Vice-President of the World Bank for six years, enjoyed great esteem in the United States, including that of his former economics professor, Secretary of State George Shultz. The ouster of Barletta, his supporters maintain, was due to his promise to conduct an independent investigation of the brutal assassination of Hugo Spadafora, a political enemy of the PDF commander, General Manuel Antonio Noriega. After the ouster, a veritable flood of information emerged in stories in the U.S. press and in several Congressional hearings about alleged misdoings by Noriega and the PDF: drug-running, money-laundering, running arms to the Colombian M-19 guerrillas, and exporting U.S. products and technology illegally to Cuba and other communist countries.

Even the normally cautious Chairman of the House Foreign Affairs Committee, Dante Fascell, stated on 11 December 1985 that Barletta's removal was "a step back for democracy," one which represented "a cause for reflection on the nature of U.S. policy toward (Panama), and on the need to search for ways to encourage effective democracy and respect for human rights in Panama." On the other hand, the foreign service professionals in the U.S. Departments of State and Defense, while acknowledging that there

**Table 2**  
**Principal Commodity Groups**  
**Transiting the Canal**  
**Oceangoing Commercial Cargo FY 1985**  
**Percent of Total Cargo**



are problems, have taken a more pragmatic view.

Although the PDF are the real arbiters of power, Panama is not a repressive police state. Cooperation on the canal is good, and SOUTHCOM experiences no difficulties on the use of our bases. The drug problem remains unclear, but the United States has experienced good cooperation in obtaining permission, very quickly, to stop Panamanian-registered ships on the high seas and has been able to work with local authorities in destroying marijuana crops. As recently as July 1986, the Drug Enforcement Administration (DEA) sent Panamanian authorities one more letter in a series of commendations by the DEA for their cooperation. The possible use of Panama's banking sector, which includes some 120 international banks, for money-laundering operations, is the subject of ongoing bilateral negotiations.

### The Panamanian Economy

Uneasiness in Washington over internal events in Panama has been deepened by another fact: to most observers everywhere, Panama's most serious problem is its economy. As in other Latin American countries affected by economic and financial crisis, there can be an ultimate high political cost of expanding debt and no growth over a period of years. In Panama the problem can be worse than in other countries because of its relatively high standard of living and positive social indicators, which give rise to large expectations on the part of the younger generation.

The World Bank calls unemployment the "gravest economic and social problem currently facing Panama's policy-makers". The bank states that a 7.5% annual rise in gross domestic product is required merely to avoid further unemployment, but it estimates that growth will not attain more than 4.5% over the next five years, even under optimum conditions, which are not present. Meanwhile, young unemployed high school graduates jam into the overcrowded national university or accept one of the hundreds of scholarship offered annually by the Soviet Union and its allies.

In order to generate a positive growth rate sufficient to meet the challenge of preserving internal stability, a number of elements are needed. Among these are significant internal structural changes to create an export-led, private-sector growth process; debt relief, the promotion of foreign investment, and the confidence of Panamanians in their own future. The factor of "confidence" is important. It can best be sought by moving again along the road to constitutionality and democracy.

### Policy Choices for the United States

There is no reason to assume that Panama's geographical location will be less important to trade and international security in the year 2000 than in 1987. The isthmus has been a significant worldwide transit point since Spanish colonial days. Simon Bolivar, in his "letter from Jamaica" stated: "This magnificent position between the two seas can become, in time, the emporium of the universe." Neither the future growth and nature of world trade patterns, the

changes in technology in the transportation industry, nor the outcome of the present Central American conflict should change that assumption for the future.

What are realistic policy parameters for the future to protect the interests of the United States and other users in the Canal?

1. Separate the Panama Canal relationship from all other issues.

The Panama Canal Treaty and Neutrality Treaty are not dependent upon the character of the government in power in Panama. The treaties establish a long-term joint venture, designed to be responsive to both countries' needs. Thus, the present relationship as well as future bilateral or multilateral canal arrangements should not be linked to any other bilateral or regional issues.

2. Push forward with creative planning for future improvements.

Innovative plans and their financing should no longer depend upon a decision by the United States alone. The results of the study that has been undertaken by the United States, Panama, and Japan will be of broad interest and include interests of the world shipping community. It is unrealistic to assume that the U.S. Congress would agree to be the sole investor in new projects in a canal over which it no longer had control. Perhaps a consortium of user nations acting through an international organization might offer an attractive alternative. Such a scheme was used in the recent past to fund improvements to the Suez Canal.

The tripartite study is not likely to recommend construction of a sea-level canal because of the prohibitive cost. Enlargement of the present canal and the addition of other facilities such as a rail link for container shipping, a coal slurry pipeline, or another oil pipeline, however, could be among the recommendations. The costs of such improvements could rise into the billions.

3. Show more concern for the Panamanian economy.

The results of poor economic performance in Panama could be explosion of a social time bomb whose fuse is already burning. This could be the greatest of all potential threats to U.S. interests. Urgent measures are needed and the United States must play some role in them: restructuring of debt to lower debt service payments, continued bilateral and multilateral economic assistance, reduction of public-sector expenditures; and transition of the present service-based economy to an export-oriented economy.

The issue of evolution towards a democratic government cannot be separated from economic recovery because it bears heavily on the "confidence factor" of foreign and domestic investors. The problem is how to build democratic institutions while curbing the power of the military. Public scoldings from the U.S. press and Congress undoubtedly have made the problem worse. If the United States writes off Panama as a military dictatorship, it only encourages movement in that direction.

Nor should the United States seek to polarize Panama in the East-West struggle. Panama's tradition has been to seek a neutral or non-aligned image, which is a political antidote to the overwhelming U.S. presence there. Panama is a founding member of the Contadora process, to which it has a deep commitment. It is the means by which Panama tries to work towards stabilization in the Central American region without its own internal politics becoming polarized.

In the long run, however, Panama's greatest chance for stability lies in a successful economy. The United States and every other nation that uses the Panama Canal should focus on that fact.

# Trends and Future Developments in PSA (Part II)

By Ng Chee Keong

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Port of Singapore Authority

*This is the second part of the paper "Trends and Future Developments in PSA" by the author. The first part was published in the September issue of Ports & Harbors.*

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## DEMAND FACTORS

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Nationalism, excess capacity and the changing shipping pattern have put tremendous pressure on Asian ports to influence and increase demand for their facilities. Port promotion, customer calls and incentive packages are now very much part of the activities of Asian ports. There is a greater sense of competition. Port authorities are increasingly aware of the need to understand the characteristics and pattern of demand for port facilities and services so as to cater to the peculiarities of shipping lines, shipping routes and market segments. The following major trends will affect the demand for terminal facilities in Singapore:

### 1) Limited size of domestic market

In view of the relatively small manufacturing sector (compared to Hong Kong and Taiwan), Singapore is a small cargo generating country. New factories are unlikely to produce voluminous types of cargo. Singapore is more interested in manufacturing concerns producing technology-based and high-value products. Growth in the domestic sector will also be constrained by the population, purchasing power and the direction of economic growth (more in the service sector).

Future growth in cargo traffic will have to come from the more demand elastic transshipment and re-export trade. The transshipment trade is vulnerable to market conditions. PSA will therefore have to focus its attention on the re-export trade again. Government efforts to lower operating costs in Singapore, better incentives and more aggressive marketing programmes will see the establishment of more MNCs using Singapore as a consolidation, warehouse and distribution centre.

The "cargo city" concept promoted by the Trade Development Board will be of help. A "cargo city" is defined as a comprehensive trading and warehousing and distribution centre where all the facilities and services associated with the import, storage and export of cargo are available. There is more to it than mere storage and forwarding activities. We will encourage higher value-added operations such as grading, packing, sampling, blending, labelling, auctioning and commodity exchanges. This will enlarge PSA's captive cargo base.

### 2) Changing shipping pattern

In the bulk trade, direct shipping from exporting countries to destinations will continue to be the trend. It is likely to be the reverse in container shipping. To maintain a certain minimum level of reliability and regularity, the large container vessels on long hauls can only call on a few major



ports. With larger vessels, a few shipping lines have started round-the-world services calling at selected "load centre" ports. A large proportion of containers will have to be relayed or reshipped. Such operations need to be supported by a network of feeder services. The "load centre" ports must be clearly efficient, well-equipped, strategically located and cost-competitive. PSA aims to maintain its position as one of these major ports of call.

Container shipping will continue to grow in popularity as more ports invest in container handling facilities. We expect some 70% of the general cargo traffic in South East Asia to be carried by container vessels. Conventional shipping, which will be confined largely to coastal operations and certain specialised trades, will lend a supportive role to feeder operations.

### **3) Increasing competitiveness among ports**

In the scramble to be one of the major ports of call, many Asian ports have invested heavily in container handling facilities. In the Transpacific trade, Singapore will face keen competition from Hong Kong and Kaohsiung, both of which have large domestic bases. Both are in the midst of ambitious expansion programmes. PSA must improve on the services offered by these major ports. For the Indian Subcontinent market, Colombo is more strategically located. The Sri Lankan port, however, has been handicapped by political unrest. Most Asian ports will experience excess terminal capacity and will be more accommodating to shipping lines.

### **4) Better bargaining power of shipping lines vis-a-vis port authorities**

The changing shipping pattern and easy availability of competitive terminal facilities have increased the bargaining power of shipping lines vis-a-vis port authorities. Shipping lines have more alternatives in routing cargo in view of the higher proportion of transshipment containers carried. For the shipping lines to improve service to shippers and have a better control of costs, the trend is towards greater involvement in land-based operations. Sea-Land and APL have merged with railway companies.

Many of the major lines have expressed interest in participating in terminal operations. Faced with the threat of diversion of traffic, port authorities may have to adapt to the uniqueness and peculiarities in the operation and styles of individual shipping lines. The present PSA common-user policy will be re-examined and modified. There will be greater flexibility in PSA's modus operandi and the application of rules and tariffs. More "personalised" services can be expected.

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## **CONTAINER, CONVENTIONAL AND BULK SHIPPING IN SINGAPORE**

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The trends discussed above will have repercussions on shipping in Singapore. PSA's plans must take cognizance of these factors. Container operations will continue to be PSA's growth area, partly at the expense of conventional shipping. The bulk trade will stagnate.

### **1) Container shipping**

Some 70% of Singapore's general cargo trade is already containerised. We expect the container penetration rate to be 80% within the next five years. As feeder operations become more entrenched, there will be a higher volume of transshipment containers.

The more intensive use of computers and machines in container operations will lead to greater economies of scale.

PSA's future expansion programme will be confined mainly to container terminal facilities. The Tanjong Pagar Terminal has a capacity of about 3 million TEUs. We will have to start the construction of the Brani Terminal at the start of the next decade.

### **2) Conventional shipping**

General cargo which cannot be containerised, eg iron & steel products and timber, will continue to be carried by conventional vessels. Trade with some of the coastal and riverine ports which do not have container handling facilities will remain in the break-bulk form for some time to come. Conventional liner traffic will convert to container operations. Singapore will be less competitive in this labour-intensive operation. Growth in the conventional trade will be difficult, although there may be some spin-off from container shipping. Cargo may be unstuffed in Singapore for distribution to smaller ports in conventional vessels and vice versa.

### **3) Bulk shipping**

Trade in bulk cargo is likely to stagnate in the region of 4 million tonnes a year. Imports such as cement, grains, sugar, copper slag and scrap iron are limited by the domestic market. Previously, the volume of bulk cargo transhipped yearly averaged a million tonnes. The transshipment of bulk cargo such as grains and palm oil has dwindled substantially as a result of the depressed commodity market and the improvement of handling facilities of importing countries. There may still be the occasional consignments coming our way. PSA may have to work "hand in glove" with local contractors to bid for handling contracts. Singapore is still extremely competitive in terminal handling, storage, bagging and drumming operations. We are well-placed to play a role in the transshipment of bulk cargo, but such trade will be transitory and ad hoc.

## **CONCLUSION**

Singapore has the comparative advantage in the handling of containers. Our growth areas for container handling will be the Indian Subcontinent, China and Australia/New Zealand markets. PSA will have to position itself to serve these markets in the light of the trends discussed earlier. To be competitive, ports will have to be more flexible in management style so as to adapt to changing market conditions. PSA's common-user policy will be relaxed. There will be more participation by shipping lines and private companies in terminal operations, which will be highly computerised and mechanised. PSA will continue to stress on high productivity and good service levels to match the shipping community's expectation of faster and better services at competitive rates. Port promotion and customer relations will be given added emphasis.

## **Security Must Be Improved On Board Ships and at Ports**

**By Eric Ellen, Director**

### **ICC International Maritime Bureau**

Some years ago I was able to travel to the United States and compare security at the various ports with security in the United Kingdom. I was also able to see at first hand the establishment of the port police forces at Liverpool and Felixstowe and to witness the demise of the British Transport

Police at Southampton and other ports owned by Associated British Ports.

These experiences left me with the distinct impression that all is not well with the ports of the world and that sooner or later someone will have to account for the lack of a well thought-out policy for the policing of ports throughout the world.

In fact the International Maritime Organisation's (IMO) proposals for improved security at ports and harbours may well provide the catalyst for calling in question the failure by industry to provide a blueprint for basic policing and security.

Some of the IMO recommendations are basic and are fairly easy to implement but others, although worthy in themselves, will be almost impossible to achieve given the manner by which ports and harbours are currently policed. Unlike the aviation industry which has developed a well-structured national system by which information can be passed to airlines and airports, there is no system in the maritime industry. Because the aviation industry is comparatively modern and geared to high technology and fast communications, and is normally government owned, a formula exists whereby information on any change in the threat can be passed rapidly round the world.

The IMO advocates the setting up of a similar focal point system, but does not say how this can be achieved. The IMO cannot and does not wish to do so. It is certainly able to act as a focal point for historical information and is demonstrating this by collating incidents of piracy, but it is not an organisation geared, manned or mandated to run a sensitive operational centre.

The International Association of Ports and Harbors (IAPH) is an organisation representing most of the ports and harbours of the world with its Secretariat in Tokyo. The Association has no operational units and therefore could not undertake the role of an information gathering and dissemination centre.

Being at a loss to find another international and independent organisation which could possibly undertake this role, one is forced to the conclusion that the dissemination of information has to be carried out on a government-to-government basis. Indeed this well may be the procedure at present.

*Who then will receive and act upon this information?* Particular problems begin to arise when one considers the varying law enforcement agencies and private security organisations which police ports throughout the world. These agencies range from national police forces through private police forces, private security organisations to a one man and a dog situation. How then are governments to pass information freely, which will be the basis of an alert situation, to those whose actions are not directly accountable to government, and whose loyalties may well rest with the private organisation by whom they are employed?

Faithfully to follow the IMO guidelines, governments will have to get together and by agreement ensure that at every port in the world there is a recognised law enforcement unit willing and able to respond to a terrorist threat. This could, of course, mean a duplication of security measures at some places but I am of the opinion that it makes sense to have this facility available, regardless of the terrorist threat.

It may be only a small beginning but would be a considerable bonus in those places where for economic reasons a private security force is in existence. The alternative to this is the setting up of an organisation similar to International Air Transport Association (IATA). Whilst for many reasons this would be preferable I am not sure, given the freedom enjoyed by the shipping industry, that the

industry would readily agree to such a move.

There is another problem, and that is *Who is going to pay the costs incurred as a result of the IMO recommendations*. Ports will stand back and say government and governments will step even further back and tell ports and harbours it is their responsibility. Ship operators will say ports should pay and ports that ships will have to meet the costs.

I am not sure that the costs will be that high. Given a police chief or security manager with flair and ability and a little assistance from management, much can be achieved within the normal expenditure of a port or harbour. I have seen port security turned from inadequate to demonstrably good by a collective effort led by an enthused chief.

However, ports and harbours security have an extremely low level of technical equipment available to them and given that we are in a technological age it is bordering on the scandalous that it has been neglected in this way.

*Who is to blame for this?* Is it the ports who in most cases have divested themselves of any responsibility for security and by default have failed miserably to encourage a budget for this purpose? Or is it the lack of imagination by the manufacturers who have failed to identify the potential sales in an industry which is still labour intensive and crying out for technical aids? Whoever is at fault the opportunity now presents itself for ports to become more involved in modern technology.

My organisation is to introduce two positive measures calculated to assist law enforcement in the improvement of security at ports and harbours.

The first is the establishment of a Cargo Loss Reporting System. Losses from all over the world will be fed into the system and law enforcement officers who wish to trace the ownership of stolen, lost or unclaimed cargo which come into their possession may avail themselves of this facility. Secondly the Bureau is to run a series of courses designed specifically to meet the needs of the IMO recommendations on security at ports and harbours.

In conclusion, whilst I am of the opinion that there is a clearly identifiable need for a common approach to the security of ports and harbours and certainly a need for more consistency in the manning of these facilities, the IMO recommendations will not prove too burdensome to introduce. They may, however, give ports and harbours a unique opportunity to ensure that their facilities enjoy the type of policing and security commensurate with the needs of today.

## Gentrifying the Waterfront

By F. Shane Foreman

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*"The changing dynamics of both ports and cities have resulted in a reappraisal of the port and its role in the urban community."*

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### Evolution

Historically, the development of Canadian ports and the urban centers which grew up around them are closely linked. The natural harbour provided the geographic location for initial community settlement while, over time, transportation and trade contributed to urban and industrial growth.

The port and the city were once one and the same.

Urban waterfronts were the focal point of trade and commerce, concentrating on their commercial maritime function — the transfer of cargo between the marine and surface modes of transportation. The waterfront was one dimensional in its orientation, with the port function having the dominant influence on land use activities not only along the water's edge, but in the city's central business district (CBD).

Over time, advances in marine transportation and cargo handling methods, as well as fundamental changes in the 20th century urban lifestyle, both social and industrial, substantially altered the linkages between the port and the city. The changing dynamics of both ports and cities have resulted in a reappraisal of the port and its role in the urban community. In the 1980s, the port no longer has a monopoly on the urban waterfront.

## Reassessment

In the vast majority of cases, this reassessment of the urban waterfront function is directly related to land, its use, its accessibility and its general public perception as a tool for economic and social redevelopment. Often, the still viable marine transportation function and responsibility are overlooked, creating a source of tension and even conflict between the port administration and the urban community.

The orientation of the waterfront has changed significantly over the past several decades, with the degree of change naturally depending on the very nature and maturity of the city. Urban waterfronts of large metropolitan centers may have experienced a wider range of pressures and in a more constant manner than small, less complicated cities, but there are common elements of change linking all ports. The components of change have been recognized by all sectors of the community and have been the subject of multidisciplinary scholarly research.

Undoubtedly, the most significant area of change is the development and sophistication of marine terminals and the vessels using them. Gone are the wooden finger piers jutting out at right angles from the shoreline. In their place are highly specialized terminals designed to handle containers and bulk cargoes. Gone too are the wooden steamers unloaded by gangs of stevedores who made their homes adjacent to their place of work. Some of today's multimillion dollar vessels can virtually load and unload themselves, or they require equally expensive and sophisticated cranes to maintain the efficiency of their "stop at least cost" voyages.

The effect on the waterfront has been significant. Container terminals have been created along the urban shoreline in major port cities and in some cases, such as Roberts Bank in the Port of Vancouver, bulk terminals have been created and developed outside of the urban core. In many cases, the identity of the marine terminal has become separated from the city and even from the main port sector.

A closely-related phenomenon is the development of efficient transportation links in the functional port area. Intermodalism is now the key. In Montréal, containers are placed directly on railcars bound for the American midwest. Unit trains unload grain, coal, sulphur or potash in most major ports. Arterial roads and overpasses have been constructed to handle the ever-increasing truck traffic serving the marine terminals and have been a major expense and planning concern in Vancouver, Saint John and St. John's. The effect on the waterfront is twofold. The vital commercial function of the port is reinforced in the community and structural barriers, both in the physical and psychological sense, are erected between the port and the city. The relationship between the port and the city, once one of mutual interaction, has become less intimate and more a function of location and transportation economies.

Changes in the structure and function of the city itself

have altered the perception of the waterfront. The core of the city, the CBD, was once the location of manufacturing industries which had a functional relationship with the port. Their raw materials were received through the port and their finished products reached market through the port.

For a number of years, though, manufacturing industries have played a diminishing role in the business life of the central city. Industrial firms have migrated to more suburban locations, leaving the CBD to accommodate the high-rise office towers of business and finance.

While obviously there are still many cases of industries located on the waterfront, pulp mills, refineries and fishplants being prime examples, particularly in smaller, "single industry" cities, the CBD of larger port cities is geared towards the provision of specific services rather than the production of goods.

In many striking examples, the historic factors which determined the original locations of port facilities, in relation to the city, no longer apply or even exist. The concept of a port hinterland, easily defined in precise geographic terms, no longer applies to major ports. Global decisions related to the economies of industrial development and transportation planning, have extended the port's sphere of influence. It is no longer necessarily tied to one city and one city alone. In some cases, ports literally do not need cities for their operation. Accordingly, the city's perception of its waterfront is altered again.

## Redevelopment Potential

In relation to the entire city, the port area is generally the oldest sector, having been the original site for industrial, commercial and residential uses. As cities changed, through cycles of progress and decline, the urban waterfront was a natural focal point for redevelopment.

A new waterfront constituency developed, viewing the waterfront as a public resource. Land and water were defined in terms of access, historical and cultural qualities, residential and recreational potential and visual aesthetics.

Promoters of parks and condominiums vied with each other for development opportunities. Special interest groups found their niche. Politicians and real estate agents saw the urban waterfront for what it in fact is — a highly valuable and developable resource. In many cities, restoration, renovation, and recreation became familiar themes as the historical, residential and cultural qualities of the waterfront were physically upgraded and promoted for the benefit of urban residents and tourists alike.

A natural component of urban redevelopment is the involvement of a wide variety of groups and individuals from all walks of life, both public and private. This raises the issue of jurisdiction over the waterfront and which group will ultimately influence and control its development.

## Port Impact

One impact of this changed orientation, and this varies with circumstances and location, was that the historical water-related and water-dependent uses of the port were given less consideration as a viable land use, although their continuing economic impact is of vital importance to the city and its inhabitants.

These changes and their implications ultimately confront port management, albeit at different times and with varying degrees of intensity. The Port of Vancouver is vastly different than the Port of St. John's, and the community's expectation of the ports vary across the country.

Port administrators generally regard waterfront property as that which should be dedicated to and reserved for the traditional port function, the efficient handling of cargo.

From the port's perspective, urban waterfront property is in essence a non-renewable resource. The principal land use patterns in the port were established early in its development and gradually altered over time to accommodate the increasing demand for port services. Ports are not too favourably disposed to relinquishing portions of their holdings, either in the short or in the long term. They will argue that given the finite resource of waterfront land, it is in the public good, and even in the national interest to reserve it for uses that absolutely require a shoreline location, namely marine terminals.

This outlook has often brought ports into conflict with other groups who have perceived the significant potential of urban waterfronts for variety of economic and social development alternatives. Few cities can afford to ignore

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***"Urban waterfront property is in essence a non-renewable resource."***

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the varied opportunities offered by a productive waterfront.

In some ports, changes in traffic patterns, customer preferences, and longer-term port development priorities, have caused certain terminal areas to fall into disuse. Over time, disuse or underutilization leads to blight and this, in turn, leads to changes in the community's perception of the waterfront. Urban waterfront property, not actively used for commercial marine purposes, is a prime target for redevelopment. The traditional urban uses of land — residential, commercial and recreational — now tend to encroach on the area once claimed solely by the port.

General statements regarding the appropriate use of urban waterfront land cannot reasonably be made because each port city has its own set of circumstances which must be taken into account. Port administrations, which today are businesses, ultimately conscious of the financial balance sheet, realize that the desire to reserve waterfront lands for commercial marine activities should be tempered somewhat by specific city, regional and even national objectives for economic and social development proposals.

#### **Response to Change**

Ports, particularly those in mature urban centers, have reconciled themselves with this position and have responded by ensuring that special characteristics of certain waterfront sites have been developed in response to community needs. The Vieux Port projects in the ports of Montréal, Québec and Trois-Rivières have provided the urban population with

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***"Few cities can afford to ignore the varied opportunities offered by a productive waterfront."***

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access to the ports and the St. Lawrence River. In fact in Montréal, the theme of the development is a "window on the river."

The authentic display of the cultural heritage of Place Royale in Québec is linked physically with the port and the river. It is also a key element of the tourist industry, essential for the city.

In Saint John, New Brunswick, the Market Square development, a retail, office, hotel and residential complex has rejuvenated the downtown city core. Situated in the north-end of the harbour, it is possible to watch container vessels load from the comfort of a condominium living room or a hotel lounge.

The Historic Properties development in the Port of Halifax provides year-round access to the ocean, and has created a meeting point on the harbour for office workers and tourists alike with restaurants, boutiques and pubs bringing to life the renovated historical buildings.

There have always been pressures for alternate, non-port-related waterfront developments in the Port of Vancouver. Perhaps the climate, the panoramic setting and even the fact that Stanley Park is on the waterfront, have engendered the community with a very personal view and interpretation of the port. To the credit of the port and the community, the waterfront represents a blending of activities which have perpetuated the human relationship with the ocean — from the public viewing area of the Vanterm container terminal, to the Seabus Terminal, the Canada Place complex of Expo '86 and the port's new cruise ship facility. All the while, the fundamental role of the port in Canada's transportation network has been maintained.

The opportunities for waterfront redevelopment are not restricted to the larger Canadian port cities, but are also evident in smaller centers. In Chicoutimi, the relocation of the marine terminal to Grande-Anse, outside the existing urban center, will lessen the industrial presence of the port in the city and will permit alternate uses of the old terminal area. In Sept-Îles, the construction of the Pointe-Noire terminal, at a significant distance from the city, will encourage heavy industrial development which would not necessarily have been compatible with urban life, even though Sept-Îles is primarily a heavy industry city.

#### **Future Implications**

It is clear that urban waterfronts are playing a significant role in supporting the social vitality of many port cities. The demands on this unique sector of the urban landscape

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***"Perceptions are changing, and there must be a balanced approach towards waterfront development proposals."***

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are being felt by the port community. The traditional role of the port on the waterfront has been challenged, and in some cases usurped.

Will high-rise waterfront condominiums and marinas compete and conflict with the operations of existing marine terminals? Will stockpiles of coal and sulphur continue to block residential views of and access to the waterfront? Will pressure groups, whether completely justified in their orientation, block the expansion of the marine terminals in the city center? Will port managers pursue their development objectives in isolation from the *bona fide* members of the urban community?

Perceptions are changing, and there must be a balanced approach towards waterfront development proposals. The role and responsibilities of the port must be understood by all elements of the urban community, not only in local terms, but also in the regional and national perspectives. In a *quid pro quo*, port administrators must understand the intrinsic values and appreciation which a community places on such a complex resource. Conflicts regarding waterfront jurisdiction, appropriate use, public access and private and public sector participation in project development must be resolved through good planning, sensitivity and an openness for cooperation on all sides.

The perception of the port and the urban waterfront will continue to change as competition for access to and use of the waterfront continues in Canadian port cities.

(PORTUS, Ports Canada)



# International Maritime Information

# WORLD PORT NEWS

## Containerization Into the 1990s

an In-depth Appraisal of  
Near-term Market Growth  
Potential

World container trade volumes are set to expand to a level of some 38 million TEU in 1990, an increase of over 10 million TEU or 36% on the 1985 volume of trade, according to a new report from Ocean Shipping Consultants. Commenting on the improved pace of traffic growth eventualising in the period since 1984, the new survey, entitled *Containerisation into the 1990s*, notes that much of the impetus has been funded by the sustained albeit localised improvement in the major U.S. economy if not least "by generating a degree of export-led growth elsewhere — particularly in certain East Asian and European countries.

The positive impact of slacker oil markets and lower oil prices is also held to have contributed to the upturn although the report comments that the "pace of OECD economic development has remained disparate and in the circumstances relatively weak overall with the U.S. making most of the running."

Enlarging on this theme, the survey suggests that "mounting pressure on the dollar together with increasing protectionist sentiment and friction with major trading partners like the EEC, Japan and certain developing NICs, go some way toward underlining the difficulties attendant on such a course as well as underscoring the relative fragility of the current improved economic environment."

Although the sustained albeit limited near-term growth posited within the industrialised OECD economies is expected to continue to limit the development of trade in primary goods and services, with real growth averaging some 2.5/3.0% per annum in line with depressed liquid and dry bulk commodity traffic volumes, the report anticipates somewhat higher rates of expansion in the manufactures sector of world trade.

On the assumption that present protectionist sentiment within major markets is not translated into actual

## IMO Programme of Meetings

1 August - 31 December 1987

2-11 September	Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety — 32nd session
14-18 September	Facilitation Committee — 17th session
6-9 October	International Oil Pollution Compensation Fund Assembly — 10th session
2-16 October	Legal Committee — 58th session
19-20 October	Legal Committee — Extraordinary session
19-23 October	Intergovernmental Panel of Experts on Radioactive Waste Disposal at Sea
6 November	Council — 14th Extraordinary session
9-20 November	Assembly — 15th session
20 November	Council — 59th session
30 November - 4 December	Marine Environment Protection Committee — 25th session
30 November - 11 December	Joint Intergovernmental Group of Experts on Maritime Lines and Mortgages and Related Subjects

## Programme of Intersessional Meetings of Working Groups for 1987 as Approved by the Council

19-23 October	Ad Hoc Group of Legal Experts on Waste Disposal at Sea
2-6 November	Intersessional Meeting of the Working Group on Marine Pollutants
23-27 November	Working Group on Revision of the IMO Manual on Oil Pollution
30 November - 4 December	Joint MSC/MEPC Working Group on Survey Certification

policy, the survey suggests that trade in manufactures will expand at an average 5% per annum or so in the period to 1990 with even higher levels of growth a distinct possibility given "favourable resolution of the uncertainties presently clouding the international trade environment."

World container trade volumes will expand commensurately, the report said, indicating a compound rate of growth averaging some 6% per annum in the period to 1990—as against an average 15% compound growth registered over the period 1970/1985.

Increased container trade volumes will be reflected in expanding box throughput levels at the great majority of the world's container ports and terminals, eighteen of which are expected to be handling in excess of 1 million TEU per annum in 1990. Two ports—Rotterdam and Hong Kong—are

expected to be handling over 3 million TEU per annum in 1990 while traffic levels at a further three ports, including Kaohsiung and Kobe, are put at a level of over 2 million TEU.

Reflecting the continuing expansion and extension of container traffic levels foreseen as well as the sizable number of terminal construction projects either currently underway or planned, the report goes on to suggest that the number of specialised deep water container berths available worldwide will have increased to a total 794 in 1990 as compared with the 647 existing at end-1985.

Containership fleet slot capacity is also expected to expand at a relatively rapid rate although increased forward fleet scrappage volumes together with reduced volumes of containership new buildings will contribute to the improved levels of both fleet productivity

and utilisation forecast in the report. In line with the present scheduled containership order backlog and anticipated forward scrappage/slippage volumes, the survey forecasts an end-1990 fleet of some 3.05 million TEU, an increase of some 0.5 million TEU or 21% on the end-1985 fleet.

The prospects for forward box population growth and attendant container manufacturing output are less positive according to the report. Although the world container population will have increased by 1 million TEU or 22% to a forecast level of a little over 6 million TEU in 1990, annual container production volumes much in excess of 400,000 TEU per annum are not expected to eventualise in the intervening

period, overcapacity and depressed prices continuing to bedevil the container manufacturing sector of the market. Replacement demand will increasingly underpin the reduced levels of production anticipated as shipping companies and lessor interests continue to sell off large numbers of surplus and obsolescent boxes.

*(Ocean Shipping Consultants)*

## Sweden to Study 8-man Crew System

H.B. Maynard, International Management Consultants, has been appointed to assist the Swedish Shipowners Association (SSA) with a project to determine the feasibility of operating an ocean-going vessel with an eight-man base crew.

The study will consist of three interrelated parts divided as follows:

1) A study of the minimum manning requirements starting from scratch, i.e. ignoring preconceived ideas based on previous practice, traditions, or habits.

2) The technical requirements/equipment necessary to make possible an eight-man crew.

3) The most effective division of tasks between the sea and land organizations.

Assuming an eight-man crew is found technically feasible, then the conditions required in terms of attitude, compe-

tence and technical excellence will be clearly specified.

In order to make the analysis as precise as possible, three different types of ship will be selected for study, namely liners, tankers and dry cargo vessels.

As regards part 3, i.e. the division of tasks, three different situations will be considered — (a) a large shipowner, (b) a small shipowner, and (c) a ship management company.

The study will be completed in 1988 and trials are expected to commence in the same year.

## New Publications

"Recommendations and Guidelines for Linked Ship/Shore Emergency Shut-Down of Liquefied Gas Cargo Transfer" by SIGTTO

"Guidelines for the Alleviation of Excessive Surge Pressures on ESD" by SIGTTO

The Society of International Gas Tanker and Terminal Operators Ltd. (SIGTTO),  
London Liaison Office, Staple Hall,  
87/90 Houndsditch, London EC3A  
7AX, U.K.  
Tel 01-621-1422  
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## CONTAINERSHIP TRENDS

Very large containerships are still the preference of vessel owners despite the U.S. Lines bankruptcy. As of May 30, there were 170 containerships of 2,000 TEUs or larger in the world fleet, with 43 more on order. That contrasts with 124 such ships a year ago and 101 as of May 30, 1985. Further indication of the trend toward these large vessels is evidenced by the fact that in May they accounted for 32 percent of the world fleet's combined TEU-carrying capacity, up from 23 percent two years ago.

# WORLD CONTAINER SHIP FLEET (a)

(Numbers of Ships, Thousands of TEUs)

TYPE/TEUs	May 30, 1985		May 30, 1986		May 30, 1987		On Order	
	Number	TEUs	Number	TEUs	Number	TEUs	Number	TEUs
<b>Full Container(b)</b>								
400-700	175	92.0	190	96.8	192	99.5	18	9.5
700-1,000	135	114.5	148	125.3	135	114.4	1	0.9
1,000-1,500	213	264.9	239	285.4	213	266.6	13	15.6
1,500-2,000	136	246.5	146	265.2	152	275.2	15	24.7
2,000+	101	299.1	124	364.6	170	483.2	43	130.0
<b>Total F/C</b>	760	1,017.0	847	1,139.0	862	1,238.9	90	180.7
<b>Container-Ro/Ro(c)</b>								
400-700	152	75.5	159	78.5	165	82.0	20	10.8
700-1,000	42	33.9	44	35.6	45	36.4	4	3.7
1,000-1,500	76	95.7	76	95.7	72	91.3	—	—
1,500+	27	53.6	29	57.1	29	58.5	—	—
<b>Total C-Ro/Ro</b>	297	258.9	308	266.9	311	268.2	24	14.5
<b>TOTAL FLEET</b>	1,057	1,275.9	1,155	1,406.3	1,173	1,507.1	114	195.2

(a) Excludes vessels of less than 400 TEUs

(b) Includes barge carriers

(c) Includes pure ro/ro and ro/ro containerships of 400+ TEUs

**SOURCE:** *Shipping Statistics and Economics*, June 1987, P. 41.

## The Americas

### 476 Ports Administered By Canada Coast Guard

To non-Canadians, such places as Goderich, Baie Comeau, Nanisivik, Dalhousie, Pugwash, Charlottetown, Powell River, and Parry Sound may not strike a familiar note. But these are, indeed, commercial ports, and are among the 476 "public harbours and port facilities" administered by the Canadian Coast Guard on behalf on Canada's Minister of Transport. Together, they are one of three distinct groupings of ports that comprise Canada's public port system. The others are the Ports Canada group (including the seven so far accorded "local port corporation" status under the 1983 Canada Ports Act), and the harbour commissions (of which there are nine).

The public ports range widely in size and significance, from those whose primary role is providing basic transport services in isolated areas of the country, to comparatively complex entities serving one or more large industries.

Some measure of their importance is suggested by the fact that in 1985, federally-owned facilities in the public ports generated 6.7 million metric tons (mmt) of cargo. Salt accounted for 24 percent of the total, petroleum products and gasoline 24 percent, ores and ore concentrates 13 percent, forest products (newsprint, woodpulp, and lumber) 12 percent, and grain and grain products 6 percent. Total cargo through the public ports, including that handled across private facilities, amounted to 66.5 mmt, about 20 percent of all Canadian port traffic in that year. The greatest volume — 1.4 mmt — moved through the Lake Huron Port of Goderich. The other top volume ports, each handling more than 300,000 mt, were: Dalhousie (New Brunswick), Charlottetown (Prince Edward Island), Pugwash (Nova Scotia), Rimouski (Quebec), and Port Stanley (Ontario).

The Coast Guard administers the system through five regional offices from its Harbours and Port Directorate in Ottawa. At the local level, a few of the more active ports are supervised by full-time public servants.

Most, however, are administered by harbour masters or wharfingers appointed by the Minister of Transport and compensated by commissions paid on the basis of fees collected from users of the port. Those fees include harbour

dues, berthage, wharfage, storage, and "letting" (or "rentals" paid by tenants). In 1985/86, the public ports grossed revenues of \$7.3 million. Expenditures included \$32.7 million for operating and maintenance and \$35.8 million for capital projects. The rather sizeable difference between intake and outgo was covered by appropriated funds.

In 1985-86, 26 capital improvements worth a million dollars or more apiece were underway at the public ports with a total estimated cost of \$157.1 million.

(AAPA Advisory)

### New Chairman for Nanaimo Commission

The Nanaimo Harbour Commission has announced the election of Mr. Howard Johnston as Chairman of the

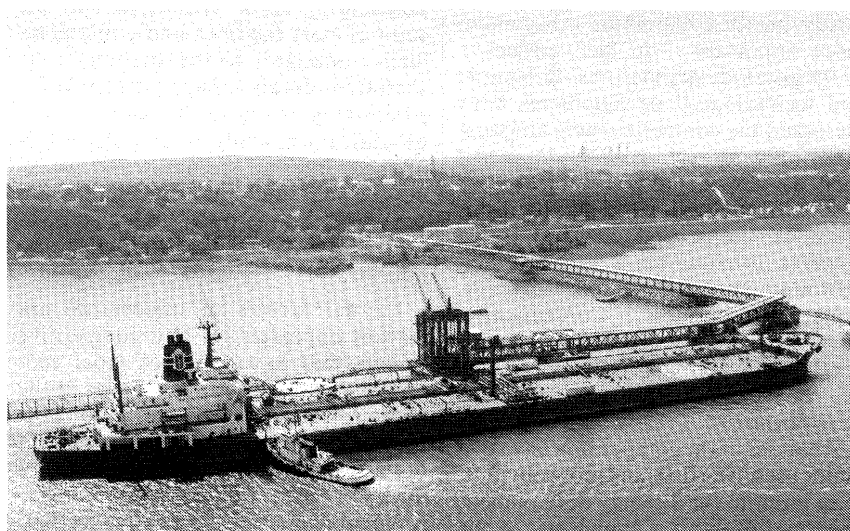
Board, effective June 17, 1987.

He has been an active member of the community for many years and is currently the Chairman of the Nanaimo Gateway Committee and an active member of the Newcastle Pavilion Society and the Newcastle Island Steering Committee.

A successful businessman, Mr. Howard Johnston is President of a wholesale distributing business operating out of Nanaimo that services the whole of Vancouver Island and the lower mainland of B.C.

Mr. Johnston will hold the office of Chairman for a two-year term, in accordance with the By-Laws of the Harbour Commission. Previous Chairman, Mr. Ted Stroyan, resigned from the Commission earlier in June.

(Nanaimo Harbour News)



### Zawrat Delivers Largest Cargo Ever

The Port of Québec handled 7.2 million tonnes of cargo during the first six months of 1987, an increase of 20% compared to the same period in 1986. Tonnage figures for the key commodities of grain, petroleum and chemicals and minerals all showed significant increases.

On July 17, 1987, the Port of Québec received the largest single shipment of cargo in its history, when the Polish-flag tanker vessel *Zawrat* delivered 139,761 tonnes of crude oil to the Ultramar pier, eclipsing a record established two months earlier by the *Czantoria*, another Polish tanker which called at the refinery.

Both vessels illustrated the Port of Québec's potential for increased shipments of bulk commodities. As the farthest inland port on the Great Lakes/St. Lawrence system offering 15 meters of water at low tide, Québec will benefit from the growing use of

deep-draught vessels. It is estimated that more than 80% of solid bulk cargoes are already carried by ships in the 100,000 dwt range.

### New Shipments Records

Enough wood to build 8,000 homes left the Port of Nanaimo this June in what turned out to be an all-time record month for lumber shipments.

A total of 84,249,741 board feet of lumber crossed over the Port's Nanaimo Assembly Wharf, Duke Point, and Harmac's deep sea berths in June. With figures like that, 1987 could turn out to be a record year.

"I wish we could do that every month," says Port Manager Bill Mills who says the Port may well have a record year if the second half of the year matches the first.

(Nanaimo Harbour News)

## **Competitive Analysis: Reconnaissance Before the Offensive**

**By Hassan J. Ansary**

Competitive analysis is fast gaining in popularity as an important part of strategic planning. While ports have been plowing resources — albeit some far more than others — into marketing and sales planning for decades now, it was not until the publication of Michael Porter's now classic *Competitive Strategy* in 1980 that competitive analysis received the same stature in the port strategy development process.

Simply put, competitive analysis is about understanding the competition. Analyzing the competition is becoming more important — in fact, critical — as the port industry matures. Economic and technological developments have increased the competitiveness amongst ports in many regions. Developments such as intermodalism, door-to-door pricing, round-the-world service, double-stack trains, and changing trade patterns, to name but a few, have had profound implications for the traditional port business. Consequently, ports have been forced to look outside of the conventional port operations when developing strategies for future growth thrusts.

Analyses of the competition have two major uses. The first, and more obvious, is an input to the strategy development process. Without a knowledge of the constraints and opportunities presented by the competitive environment in which its port operates, its business strategy represents little more than a "wish list." A second, less obvious but equally important, use of competitive analysis is for assessing the realism of plans developed for, and/or submitted to, the senior management. Many large-scale port facilities have been undertaken on the basis of over optimism about traffic which often characterizes such projects. Competitive analysis can validate, or conversely, cast doubt upon an over-optimistic business plan.

Competitive analysis is not a simple task. In fact, it is like a treasure hunt. It requires significant time and resources; but the outcome can be invaluable. However, it is only made more efficient and useful when a structured, orderly approach is taken.

Competitive analysis must consider both short- and long-term issues. However, as with any strategic study, in order to be efficient, it should focus

on the key issues. The competitive analysis process forces a port to formalize its perceptions about the nature, scope, potential and major trends influencing its hinterland; about the strengths, weaknesses, strategies and market share of not only competing ports, but also of the shipping lines, the railways, and other transportation modes serving the port's hinterland; and about the achievable objectives and implementable strategies open to it in a given marketplace.

In developing a competitive strategy, a port must carefully analyze both the internal as well as the external environments. As part of the internal review process, the port must assess its own principal business strength/weakness factors, including tariff and pricing policies, financial position, market positioning, labor conditions and the state of port facilities and equipment. Such a strength factor analysis is essential for determining a port's relative positioning vis-a-vis its competitors. Identification, analysis, and discussion of these internal strengths and weaknesses help build management team consensus on the port's strategic position and on its future strategies and policies.

Eternal factors of importance are market opportunities and competitive threats that have emerged from economic and/or structural changes in the marketplace, competitors, and port users as a result of deregulation and other developments that affect the industry. As part of the external environmental analysis, a port must also assess the economic outlook for the commodities handled at the port, the viability of shipping lines serving the port, and the composition and prospects of port users. As government policies constitute a key factor influencing a port's environment, an analysis of pertinent policies, including the impact of existing and/or proposed legislations, should also be undertaken. Analysis of these business influences provides the starting point for a detailed, in-depth study of market-attractiveness factors in the hinterland served by the port.

Thus, competitive analysis is directed at a port's long-range objectives and strategies and the characteristics of the changing market environment. It is only after such an in-depth analysis that a port could justifiably claim to have the required understanding of the competitive forces at work to be able to devise appropriate sales or marketing strategies. Without such an understanding of the port's own strengths and weaknesses vis-a-vis the competing

ports, significant valuable resources could be misallocated to marketing, sales, or promotional programs aimed at the wrong market.

There is strong evidence that, over the last decade or so, the North American port industry has entered a new phase in its evolution — from one of growth to one characterized by maturity. Many ports are finding themselves struggling to maintain financial health and profitability. There is a strong belief that there has also been a fundamental and long-term shift in the economy and its ability to foster the needed development for all ports.

As with the quest for the mythical "fountain of youth," port management seems to be navigating the globe in search for everlasting strategies of growth and profitability, always believing the "fountain" for their port lay just beyond the horizon, in a territory they have yet to explore. While not the sought-after haven, competitive analysis is akin to the compass without which the journey is apt to go amiss, leading to barren wastelands of unfitting strategies.

*(PORTUS, Ports Canada)*

## **Quality and Profitability Through Intermodalism**

**By Henri Laflamme**

This year's International Intermodal Expo in Atlanta, Georgia, was an overwhelming success, with over 2,000 participants and 125 exhibitors in attendance. The conference portion of the event included a number of sessions at which transportation executives from across the nation debated promises and challenges of intermodalism.

The railways see many opportunities in intermodalism, particularly in the face of rapidly growing international intermodal traffic. This has been one of the contributing factors to the development of new transportation technologies by the railways — the best examples being the double-stack train and Road Railer. The railways are always looking at ways and means of using the double-stack technology in order to increase their share of the domestic intermodal market. While for many railways their future growth lies in intermodalism, for others, like the Santa Fe, intermodalism is already generating a lion's share of their revenue (37 percent). Some railroad companies have put in place extensive intermodal networks. Burlington Northern is currently running 24 conventional intermodal trains and 34



expediter intermodal trains between 22 hub centers. As for the future, it is generally accepted that growth in intermodal traffic will come mainly from international trade. But railroads are also looking at ways to penetrate the lucrative intercity traffic which is dominated by trucking; and some railroads have already started this process by acquiring truck companies.

Intermodalism is not without challenges of its own. One of the serious problems facing the railways is the low profitability of intermodal business. Several railway executives cited the piggyback business as an example where there is growth but little profitability.

Profitability being marginal at best, it is very difficult to justify new investments. A host of other problems are also currently plaguing intermodalism — among them: insufficient knowledge of shipper needs; involvement of too many parties leading to confusion for the shippers; but most important of all is the risk of overcapacity in intermodal services over the next two years.

In summary, considering the heavy reliance on third parties to handle intermodal traffic, it seems that one of the biggest challenges facing the U.S. railways is not to lose touch with the shipper and his needs. The advent of the double-stacked train has changed the intermodal business, and according to a railway executive, in a couple of years, the new service will represent some 75 percent of all intermodal movements within the U.S. The acquisition of Sea-Land by CSX Corp. is likely the first in a wave of vertical integration moves in the industry that will lead to a new industry structure amenable to assuming responsibility for the movement of goods from one factory gate to another.

If intermodalism for domestic or international traffic is to continue to grow, it must shed its image of inflexibility, which has marred the railway industry over the years, and must offer a service that is not only price competitive with road carriers but is on time and dependable.

*(PORTUS, Ports Canada)*

## **Barbours Cut Terminal Setting Int'l Standards**

When officials of the Harris County Houston Ship Channel Navigation District made plans in the 1960s to build a new container terminal, they looked to the world's most advanced ports as their model. The district — the forerunner of the Port of Houston Authority — dispatched a team to study

container facilities throughout the United States, Europe, and the Far East. Today, the tables have turned, and Barbours Cut Container Terminal isn't following industry standards — it's setting them.

Barbours Cut was 10 years old in April. More than 400 people gathered at the terminal for an anniversary celebration reflecting on the facility's impressive past and looking toward its future.

"Barbours Cut Container Terminal is a very productive facility for the Port of Houston, and therefore an important economic development resource for the city of Houston and surrounding communities," Mr. Archie Bennet, Jr., chairman of the Port of Houston Commission, told guests at the event. "By attracting new business, Barbours Cut is helping our community maintain its position as a center of commerce."

The terminal handled more than 25,000 tons (or 3,100 20-foot-equivalent units) of containerized cargo in 1977, its first year in business. In 1986, Barbours Cut handled 2.5 million tons of containerized cargo (or 308,100 TEUs). In addition, the terminal handled 300,000 tons of cargo not in containers in 1986. Import automobiles arriving at Barbours Cut totaled 104,000 in 1986, compared to 1,228 in 1977.

Figures for the first three months of 1987 showed continued growth. Tonnage at Barbours Cut topped 796,000 tons for the first quarter, up 18 percent from the same period last year. Auto imports rose 4 percent, to more than 28,300 units, while containers handled jumped to 86,363 TEUs, up more than 23 percent.

**Foresight:** PHA officials attribute the \$150 million terminal's success to the foresight of the facility's original planners. Container shipments to U.S. Gulf ports increased dramatically in the mid-1960s, and Navigation District officials knew they had to act quickly. They traveled to ports throughout the United States, Europe, and the Far East looking for ideas to help plan a container facility for Houston. The computer system installed for entry operations at Barbours Cut, for example, was the same type of system Houston port officials had observed at a facility in Liverpool, England.

"We wanted to take the best features of other port's container operations and integrate those features into the finest facility possible," said Mr. Richard P. Leach, now PHA president, who helped plan Barbours Cut. "We also hoped to avoid mistakes that others had made."

The terminal was funded from gen-

eral obligation bonds that Harris County voters approved in a 1973 referendum. Six years later, voters approved funding of further improvements to maintain Barbours Cut's status as a premier container facility. The final plans for Barbours Cut combined the best offerings of the world's foremost container ports. Today, Barbours Cut is considered a model facility.

"By providing a high level of services at Barbours Cut Terminal, we feel we are setting standards that other terminals must match to stay competitive," said Mr. John Horan, manager of Barbours Cut.

Three factors, said Mr. Horan, keep customers coming back to facilities such as Barbours Cut. "The combination of an excellent facility and operational efficiency has attracted both steamship lines and cargo here," he said. Second, a terminal such as Barbours Cut must be responsive to its customers' needs in terms of competitive pricing and service. "This is where our well-developed tariff counts," Mr. Horan said. "Third, a competitive facility must work closely and continuously with steamship lines, agents, brokers and forwarders, labor, governmental authorities and other shipping-related organizations."

Twenty-one lines currently call at Barbours Cut, bringing in mostly containers, roll-on/roll-off cargo and import automobiles. Because Barbours Cut has established a reputation for handling cargo quickly and efficiently, new business at the terminal continues to grow significantly. Importers that chose Barbours Cut as their port of discharge during the past year included: Yugo, a Yugoslavian automobile manufacturer, Deere & Co., a U.S. maker of farm construction and grounds care equipment, and Zetor, a Czechoslovakian tractor maker. This year BMW North American Inc. plans to almost double the number of BMWs imported through Houston to about 22,000 cars.

**Future Expansion:** Barbours Cut's wharves now operate at 85 percent capacity, making future expansion of the terminal imperative, said PHA Executive Director James Pugh.

"Our investment in Barbours Cut will keep the Port of Houston competitive in meeting the increased demand for containerized cargo and imported automobiles," Mr. Pugh said. "By expanding the capacity of this terminal, we can increase the volume of cargo moving through Houston."

Construction on Berth 5 has begun with the paving of a 10-acre area that will temporarily be used to store import automobiles. A second 100,000-square-foot transit shed is scheduled

for completion later this year. The completed berth and adjoining storage area will occupy approximately 40 acres. Work also has started on a 16-acre paved area at the east end of the terminal that will be used to store roll-on/roll-off cargo. That project is expected to be finished next year.

Other plans for improvements are in the works. Port officials have asked the Harris County Commissioners Court to approve a \$100 million bond referendum. Ninety percent of that dollar figure would be used to complete Berths 5, 6, and 7 at Barbours Cut.

*(Port of Houston)*

## **SE Asian Cargo Climbs at New Orleans**

Southeast Asia has developed into a center of opportunity and trade growth for the Port of New Orleans. Last year, the Port experienced sharp increases in imports from Malaysia, Singapore and Indonesia, particularly in rubber and plywood movements.

Figures from 1986 reveal that imports flowing through New Orleans from these three nations totaled 526,571 short tons and represented a cash value of almost \$270,000,000. Imports from Malaysia through the Port have increased 23 percent, from 139,100 in 1985 to 173,372 in 1986. Similarly, Indonesian imports have climbed almost 21 percent from 272,900 in 1985 to 329,012 in 1986. Singapore, also has shown an increase by 11 percent in imports, from 21,600 to 24,187.

Mr. K.S. Koh, manager of the Port's Southeast Asia Office in Singapore, feels the rising trend in imports from Southeast Asia should continue. In a recent visit to New Orleans, he cited various reasons why more shippers from his part of the world are choosing the Port of New Orleans over other ports. Key factors are competitive freight rates and handling costs, attractive transit times, the excellent infrastructure available at the Port, and the closeness of New Orleans to industrial and manufacturing centers in mid-America.

Another critical reason Southeast Asian imports are climbing, stated Mr. Koh, is the special efforts the Port of New Orleans and Mr. Koh's staff in Singapore are making to keep customers and prospective shippers informed about the advantages of shipping through New Orleans.

"We are actively visiting shippers to discuss possible cargo movements through the Port and also ship owners to encourage them to route their vessels

through our Port," said Mr. Koh. Numerous steamship lines serving New Orleans go to and from Southeast Asia on a regular liner basis.

Much like the Port's efforts around the world, Mr. Koh reports that he and his staff have moved into a marketing orientation which strongly encompasses a focus on recent or upcoming improvements at the Port.

Currently in the works is the possible dedication of wharves exclusively for handling specific major cargo types from Southeast Asia. Mr. Koh is convinced that this and other new developments will enhance cargo movements through the Port and ultimately increase business.

Shipments from this part of the globe are substantial. Major imports from Indonesia through the Port are natural rubber, plywood and veneers, comprising about 85% of the Port's total import tonnage from the nation. Coffee is also a major commodity. The sharp hike in imports this year is due, in part, to the significant increase in veneer and plywood cargoes from 85,000 tons in 1985 to 114,000 tons in 1986. Overall, the Port handles almost one-fifth of U.S. general cargo imports from Indonesia.

Malaysia's chief exports to the U.S. through the Port are palm oil and rubber. Although U.S. imports from Malaysia tend to be dominated by electronic goods, New Orleans has benefited from the nation's natural agricultural products. In 1985, the shipment through New Orleans of these two commodities represented a dollar value of more than \$48,000,000.

Mr. Koh says Singapore is the business and trade center of Southeast Asia, and is where most negotiations take place. However, Singapore also imports and exports on a small scale. Principal imports from Singapore include rubber, palm and coconut oils, and finished structural parts. Many products received in New Orleans from Singapore, though, are actually transhipped from other countries within the region.

Although U.S. exports through the Port to all three countries have been significantly less than import figures, Singapore is the leader in cargo exports from New Orleans. The nation received more than 18,000 short tons shipped via New Orleans, including such commodities as paper products, fuel oil additives and vegetable oils.

Mr. Koh said he plans to concentrate his office's efforts on increasing the trade flows through Thailand and India. Of particular interest in Thailand are rubber and steel, whereas electronics and textiles are primary import possi-

bilities in India.

Every nation in his region of the world has distinct features, Mr. Koh pointed out. He said his office is carefully formulating its marketing thrust to meet the needs of individual countries and areas.

"It's a different environment," he said. "You're there at the natural source, where you see sap coming out of a rubber tree. This presents different problems in shipping from anywhere else, but it also provides unique opportunities." *(Port Record)*

## **Mr. Hunter Reelected Oakland Port Pres.**

Attorney G. William Hunter, a former United States attorney for the Northern District of California, has been reelected president of the Oakland Board of Port Commissioners.

Mr. Hunter, a member of the board since June 23, 1981, was the unanimous choice of his six fellow commissioners. Members of the Port Commission are nominated by the Mayor and appointed by the City Council. They serve four-year terms without pay.

Mr. Hunter cited a year of "enormous achievement for the Port of Oakland" and said he looked forward to continuing progress in the coming fiscal year.

"The fiscal year just ended is the first of the Port's five-year plan," Mr. Hunter said. "The overall goal is to generate a \$44.5 million increase in revenues for the Port and new economic-job generating opportunities for the city of Oakland."

## **Port of Oakland To Increase Tariffs**

The Port of Oakland will increase its tariffs and institute tariff adjustments on specific commodities, effective October 1, 1987. This will include wharfage, wharf demurrage, storage, and crane rental.

In the case of wharfage, wharf demurrage, and storage, it will be the first rate increase by the Port of Oakland since November 2, 1984.

The new adjustments were approved by the California Association of Port Authorities.

Most wharfage, wharf demurrage, and storage rates will be increased by approximately five percent.

The base rental charges for container cranes also will be increased by \$20

per hour, in order to ensure the present rate of return for the Port's investment in container cranes is maintained.

Oakland will simplify and standardize its assessment of wharf demurrage and storage rates for containerized cargo. The assessment will be on a per container basis, rather than a weight or measure basis as at present. Non-containerized cargo will continue to be assessed in accordance with current practice.

In announcing the adjustments, Mr. G. William Hunter, President of the Oakland Board of Port Commissioners, said: "The Port of Oakland has held down its wharfage rates for the past three years, mainly because of depressed business conditions encountered by the shipping companies.

"Now that there is a moderate improvement in shipping freight levels in most trade routes, the Port believes tariff adjustments are appropriate at this time in view of the Port's program to significantly expand the marine terminals and transportation infrastructure to the benefit of the shipping community.

"Over the next two years, the Port has scheduled capital improvements totalling approximately \$90 million in the marine sector."

Mr. Hunter said these projects will include expansion of the Howard Terminal, extension of the Outer Harbor Wharf, acquisition of new cranes for the Outer Harbor and Seventh Street Terminals, acquisition and reconstruction of roads to link the marine facilities with the railroad intermodal yards, and significant improvements to the Port's marine-railroad-highway interface.

Mr. Hunter said that projections of current trends suggest container tonnage through U.S. West Coast ports in the year 2000 could be four times the present volume.

He said work is under way to widen and deepen the navigation channels to a depth of -42 feet (-12.8 meters) at mean lower water level.

"The Port of Oakland has, over the past 25 years, become one of the world's major container ports. This achievement is the result of a continuing process of improvements and expansion so as to serve the needs of the shipping community in the face of growing competition for world trade among ports," Mr. Hunter said.

"In this light, we believe that the five percent rate increase we have proposed to take effect in October — which means a rate increase of less than 1.5 percent annually over the past three years — is modest and reasonable."

## **No. 1 US Port for Container Exports To Pacific Asia**

Growth and expansion characterized the Port of Seattle during 1986 as it made unprecedented investments in airport and marine terminal facilities to ensure the Port's continued growth as a world port and air-travel hub.

One of the biggest container ports in the world, the Port carried on two-way trade worth more than \$25 billion last year with 110 countries. Since the Port is geographically closer to Pacific Asia than its California competitors, it's no surprise that trade with Pacific Asian nations accounted for more than 90 percent of the foreign waterborne cargo shipped through Seattle, the only Puget Sound port served by Asian-flag container lines. In fact, the Port of Seattle last year earned the distinction of being the number one U.S. port for container exports to Pacific Asia.

But the Port of Seattle today is more than just a marine-cargo facility. With assets valued at more than \$1.5 billion, the Port is diversified complex of modern facilities which include Seattle-Tacoma International Airport, rail and highway transportation services, warehouse/distribution activities and sophisticated information systems.

As a publicly owned business, the Port of Seattle is probably the best tax bargain in King County. Its primary mission is to stimulate and support the Country's economic development. In so doing, the Port generates about \$250 of direct and indirect economic activity in the County for every \$1 of property tax received. In addition, international commerce moving through the Port of Seattle supports more than 83,000 jobs in King County and another 35,000 statewide.

Put another way, each containership which sails into Puget Sound contributes \$650,000 in earnings to King County. Every incoming, overseas flight landing at Sea-Tac adds another \$17,000. This means not only the jobs of airline employees or longshoremen, but also operators and agents, freight forwarders, truck drivers, bankers, warehousemen and many more. Without the paychecks of the people directly involved in trade, there would be fewer jobs for a host of others, such as grocery clerks, school teachers or carpenters.

The Port's mission was decided upon in 1911 when King County voters established the country's first autonomous municipal corporation to man-

age and develop an increasing flow of sea and air commerce. As a "port authority," the Port of Seattle has the flexibility to quickly respond to the rapidly changing conditions of today's transportation industry. The ability to undertake innovative programs and bold marketing initiatives — such as containerization and the 1970 decision to rebuild Sea-Tac — has earned the Port a worldwide reputation for the state-of-the-art facilities and equipment. Because the Port is a publicly established body, its business is overseen by a board of five commissioners, who are elected to staggered, six-year terms. Commissioners serve without salary, and their meetings, held at Port headquarters, Pier 66, are open to the public. The operations of the Port are directed by a staff headed by the executive director.

Last year, the Port Commission moved to sharpen the Port's competitive edge by investing a record \$100 million in airport and terminal improvements. By assuring the Port's future as a world port and air-travel hub, the Commission pursued economic benefits on behalf of the people who live and work in King County.

## **Waterfront Labor, Management to Review Container Decision**

The parties to the International Longshoremen's Association Master Contract will meet to discuss a federal agency's ruling against their nearly 20-year-old rules on the handling of containerized cargo.

The parties are the ILA, the New York Shipping Association, and the Carriers Container Council.

Mr. John M. Bowers, president of the International Longshoremen's Association, AFL-CIO, NYSA president Anthony J. Tozzoli and Mr. David J. Tolan, chairman of the CCC, said officials at the session will "review and attempt to digest" this week's 169-page decision by the Federal Maritime Commission.

The agency, ruling in a proceeding that began in 1981, held that the so-called Rules on Containers in the East Coast waterfront labor contract are illegal under federal shipping law.

The rules basically reserve for ILA members the job of packing and unpacking containers carrying the goods of more than one shipper that are bound to or from points within a 50-mile radius of the docks.

The National Labor Relations Board  
(Continued on Page 26, Col. 1)



(Continued from Page 25, Col. 3)

and the Supreme Court of the United States have upheld the validity of the container rules under federal labor law as a legitimate form of work preservation.

The rules were adopted in April, 1969, as part of the process that won union acceptance of automated cargo handling.

(*NYSA-ILA Contract Board*)

## Channel Construction in New York-New Jersey Port Officially Started

With federal, state, and local officials participating, the Port Authority and the U.S. Army Corps of Engineers celebrated the official start of channel construction in the New York-New Jersey Port under an Agreement of Local Cooperation signed last year.

Part of an overall \$345 million program under the Water Resources Development Act of 1986, the dredging of Kill Van Kull and Newark Bay Channels is the culmination of a 25-year effort to bring much-needed channel improvements to the Port of New York and New Jersey. It will permit large, modern container ships to serve Port Newark and the Elizabeth Port Authority Marine Terminal, America's largest container port. The improvements will be extended in a later phase to the Howland Hook Marine Terminal, Staten Island, New York.

"These channels are the arteries of the New York-New Jersey Port which is a vital asset to the region's economy accounting for approximately 3 percent

**Veteran Golden Gate Official Retires** — After 45 years in the transportation industry, Mr. Fred DiPietro (2nd, left) was recently honored upon his retirement as manager of the Port of Redwood City. Participants included Mr. Alexander Krygsman (left), president of the Golden Gate Ports Association and director of the Port of Stockton, who presented Mr. DiPietro with a ship's bell on behalf of his fellow port officials, who included Oakland deputy executive director, Mr. James J. O'Brien and San Francisco's director of maritime affairs, Mr. Ronald Stone (both right). Mr. DiPietro's long career included assignments with the Ports of Oakland and San Francisco, Pacific Forwarders, Inc., and States Marine-Ishmian Line Agency. He has also served on a number of industry assignments including as chairman of the California Marine Affairs and Navigation Conference, president of the California Ports Association and the Golden Gate Ports Association, and as a director of the Marine Exchange of San Francisco Bay Region. Succeeding DiPietro as Redwood City port manager is Mr. Floyd Shelton.

(*Marine Exchange of the San Francisco Bay Region*)

of the Gross Regional Product," said Port Authority Executive Director, Mr. Stephen Berger, during the ceremony.

"This Port generates \$14 billion in economic activity, \$4.2 billion in wages and salaries, \$2.3 billion in business income and a half-billion dollars in state and city income and sales taxes," Mr. Berger stated.

Under a cost-sharing program, now being used for the first time in the New York-New Jersey Port, the Port Authority will provide up to \$50.8 million, or 35 percent of the total construction cost, to bring the 35-foot channels to a depth of 40 feet and to carry out selective channel widening work.

Providing and maintaining a waterway at required depths between the Anchorage Channel in Upper New York Bay and the Port Newark-Elizabeth Port Authority Marine Terminal complex is the responsibility of the U.S. Army Corps of Engineers.

At the request of the Port Authority, Congress directed the Corps of Engi-

neers in 1972 to study the need for deepening and selective widening of these channels to accommodate the anticipated future growth of deep-draft container ships.

The objective of the Port Authority was to obtain an initial channel depth of 40 feet within two years after the start of construction in order to satisfy current and immediate foreseeable needs of shipping serving the Port Newark-Elizabeth Port Authority Marine Terminals while reserving total deepening to 45 feet to a future date. The 40-foot channel depth will be extended to the Howland Hook Marine Terminal in Staten Island.

The study was completed and Corps construction of a new channel depth with selective widenings was authorized by the Water Resources Development Act of 1986.

The Federal Government, no longer required under that act to provide the full funding of dredging projects in the nation, will contribute \$94.6 million, or 65 percent of the cost.

## Port of Charleston Sets All-time High in Total Tonnage

In a record-shattering performance, the Port of Charleston achieved all-time highs in container, general cargo and total tonnages for the fiscal year ended June 30.

Container volume, which accounted for 78 percent of general cargoes and 66 percent of total port tonnage, reached 4,139,956 tons for a 21 percent increase over the previous year's mark of 3,408,423 tons.

TEUs for the latest year totaled 506,232 for a net gain of 16 percent over the previous fiscal year high of 434,914 units.

General cargoes (container and breakbulk combined) totaled 5,305,455 tons, up 21 percent over the previous year total, 4,366,993 tons. Breakbulk cargoes, which increased 22 percent from 958,570 to 1,165,499 tons for the latest fiscal year, also broke the million-ton mark for the first time since 1982.

"The 1987 Fiscal Year surpassed our goals and expectations," said S.C. State Ports Authority Executive Director W. Don Welch. "The six individual record-breaking months for container volume were unprecedented," he said, "and we scored remarkable gains even in breakbulk volume, surpassing the million-ton mark for the first time in five years."

Port Director of Sales and Marketing, Mr. L. Duane Grantham, said, "The numbers reflect the 19 new ocean liner services and other maritime-related businesses, our Port staff has worked to bring in, and the new tonnages we've helped attract to our long-established lines. It is not often that a port increases both its container and its breakbulk so dramatically. That is gratifying to us as are the increased vessel calls — up 15% from last year."

Mr. Grantham also noted that the Port's efforts to achieve a better balance of cargoes (increasing imports as well as exports) showed up in the Fiscal 1987 breakbulk cargo volume, which was 66 percent import. Imports accounted for 764,977 tons of breakbulk cargoes and 2,431,544 tons, or 46 percent, of total general cargoes, he noted.

"Containerized cargoes, as expected, continued 60/40 in favor of exports," he said. "Charleston is still an export leader, but significant import growth has been accomplished through target marketing this past year," Mr. Grantham said.



*Activity at the Port of Tacoma's North Intermodal Rail Yard.*

## Tacoma Ready to Build New Container Terminal

The Port of Tacoma announced that it has received the necessary permit from the U.S. Army Corps of Engineers to move ahead with construction of a major new container terminal, known as Terminal 3, adjacent to the Port's highly successful North Intermodal Rail Yard.

According to Port of Tacoma Commission president Joe Faker, "This work is a major step in Tacoma's continued growth as a world class container port, and another example of our commitment to be a leader in containerization and intermodalism." The Port's container traffic has grown over 340% in the last three years, from 150,000 TEUs (Twenty-foot Equivalent Units) in 1984, to 667,000 TEUs in 1986. The Port is expected to handle over 700,000 TEUs in 1987. The Port of Tacoma, now the sixth largest container port in North America, is currently 20th largest in the world.

When completed in March 1989, Terminal 3, adjacent to Tacoma's existing Terminal 4 complex, will have three full container ship berths, each capable of accommodating the largest container ships afloat, and a total of over 65 acres of adjacent backup storage area. The entire complex is serviced directly by the adjacent North Intermodal Yard, the largest ondock intermodal rail yard on the West Coast. Construction is currently underway at the Port to increase the North Yard's capacity to two full intermodal trains, totalling 67 double-stack cars.

## Port of Tacoma Posts Gains for 1st Half of '87

The Port of Tacoma's half-yearly statistics show gains in several categories, including containerized intermodal movements, lumber, grain, wood chips and total tonnage.

Container lifts in the Port-operated North Intermodal Yard were up 33% from a year ago. "The intermodal growth is a result of an increase in business from Maersk Line and several other carriers, including Star Shipping, Lloyd Brasileiro and Columbus Line," said Port of Tacoma Commission President Joe Faker.

The Port currently is expanding its intermodal capacity at the North Intermodal Yard from 40 double-stack cars to 45. Further expansion of the yard is planned later this year that will boost capacity to 67 double-stack cars. Currently, 10 double-stack trains regularly go from the Port of Tacoma each week, in addition to conventional trains.

Total tonnage was up 19%, from 4,463,745 short tons in the first half of 1986 to 5,325,884 in the first half of 1987.

Another Port of Tacoma highlight for the first half of 1987 was an upgrade on its Standard & Poor's bond rating from A to A+. According to the bond rating company, the upgrade was based on "growing demand, revenue diversity and an overall increase in the size of Port operations."

In March, Tacoma became the first port on the West Coast to go online with U.S. Customs Automated Manifest System (AMS).



## Port of Copenhagen: Status as Base Port Advantage for Users

The Port of Copenhagen has the status of a proprietary institution, comprising the parent company — the Port of Copenhagen Authority — and its wholly-owned subsidiary, the Copenhagen Free Port & Stevedoring Co., Ltd., which is generally referred to under its Danish designation "KFS."

In accordance with the stipulations of Act No. 109, passed by the Danish Folketing on 29 April 1913, with subsequent amendments, and Act No. 237 of 12 May 1976, the Port of Copenhagen Authority is subject to the supervision of the Ministry of Public Works.

The Port of Copenhagen, operating as a commercial port, bases its activities and planning on the following main objectives:

1. to provide a full range of modern facilities and advantages for the Port's maritime traffic, while offering the Port's users and the business community in general the highest levels of efficiency and service, on reasonable, competitive terms,
2. to maintain and increase the volume of traffic so as to retain its status of base port,
3. to achieve a return on investment at the level required to ensure efficient operation of Port facilities, while at the same time maintaining a satisfactory level of self-financing,
4. to contribute, via appropriate use of port land sites, towards promoting development of commercial activity, housing and recreational facilities in Copenhagen,
5. to maintain stable employer-employee relations, while ensuring satisfactory conditions, motivation and an opportunity of personal development for the Port's employees.

The Port of Copenhagen's status as a base port enables it to play a major role in meeting the requirements of the overseas line conferences. The main feature of the base port system is that freight rates for cargoes to or from any base port in a specific region are the same, irrespective of which base port is used for cargo handling.

The Port's status as a base port represents a major advantage for its customers, who are exempt from charges for the preliminary freight stage. The status is obviously also a factor of major importance to the Port, as it can thus compete on more equal terms with other base ports.

The Port of Copenhagen, however, exerts no direct influence on its status,

as the international line conferences act independently when fixing freight rates and deciding which ports are to be classified as base ports.

While the main factor taken into account when according a port the status of base port is the volume of cargo available, emphasis is also placed on the level of service and the fees charged by a specific port.

### Key Figures for Group

	1983	1984	1985	1986
(DKK '000)				
<b>Turnover</b>	149,317	173,322	177,996	193,278
Primary operating result	-1,315	10,485	12,831	14,621
Result before extraordinary items	-8,819	3,805	7,617	25,155
Result for the year	-16,534	6,457	62,773	316,329
Total assets	445,994	419,291	493,103	743,202
Net capital, 31st December	145,138	111,230	188,054	497,955

### Key Figures

Profit ratio	-0.9%	6.0%	7.2%	7.6%
Return on investment	-2.0%	0.9%	1.5%	3.4%
Net capital/Total assets ratio	32.5%	26.5%	38.1%	67.0%
Return on net capital	-10.9%	4.4%	56.4%	168.2%

### Copenhagen Free Port & Stevedoring Co., Ltd.

In 1891 Københavns Frihavns Aktieselskab, which has now become "KFS A/S," was authorised to take over and continue operation of the Free Port created under the terms of an Act passed by the Danish Parliament on 31 March 1891.

KFS's main functions are handling of ships' cargo, storage and release of cargo items, and related warehouse operations.

KFS's objectives are to continue to develop and create a basis for cargo turnover by ensuring stable working conditions, and to provide the highest levels of efficiency and service for all forms of cargo handling for its customers and users, by maintaining the highest standards in terminal installations, equipment and staffing.

The Port of Copenhagen Authority owns all the areas in which KFS operates and all of its major fixed assets in the Free Port, and is responsible for reinvestments etc. in these facilities.

The right to use the areas, installations and equipment has been transferred to KFS against payment of rental charges at current market rates. Rental charges cannot, however, exceed KFS's operating result prior to payment of the rental charges.

Port of Copenhagen Authority's shareholding: 100%.

(Annual Report 1986, Port of Copenhagen Authority)

### New Promotion Policy For Port of Marseilles

The Commercial Department has implemented a new port promotion policy defined under the aegis of the Commercial Commission.

#### Promotional Activity

This policy aimed at ensuring a much wider presence of the Port of Marseilles Authority at very important international events and also aimed at a better efficiency of the promotional action engaged in by the Department, thanks to a better preparation and a better cohesion of port professions.

In this spirit, the port was represented at various fairs and international symposia throughout the world where our port, Europe's challenger port, was reasserted and where very many contacts were either made or consolidated.

In addition, a promotional assignment program was prepared and implemented with help from the port community and the Chamber of Commerce and Industry of Marseilles (either on the spot or abroad). Specialized working groups were set up for various countries (eg. Swiss traffic, German traffic). These working groups helped to prepare the assignments of the officials from the Commercial Department and also studied the commercial situation of the areas or the countries to be visited by PMA officials. Their professional spokesman



led the talks with the PMA management.

The officials working for the PMA public relations department also accompanied 60,000 people around the Eastern and Western harbour areas during the year.

### Customer Relations

The various services of the Commercial Department kept up their contacts with the customers, that is, shippers and owners.

Owing to a rather dreary world market, dominated by the world ship-

ping crisis and an ever increasing competition between European ports, PMA officials strived to promote Marseilles Fos with the inland transport firms and the shipping firms in order to improve the number and the quality of the transport chains offered by our port.

As far as sailings and lines are concerned, the port had to face up to a crisis both in the Mediterranean theatre for coastal traffic and the failure of U.S. lines "Round the World" service, in addition to the restructuring drives for some services serving Southeast Asia and the Far East. These difficulties appear to have been circumscribed and at the same time, the port has been able to provide for a market increase in the role it plays in traffic going to North America thanks to extra services offered to the North American continent. The port has also been able to develop its contacts with the Pacific thanks, in point of fact, to the new "Round the World" container services that have also enabled the port to capture other types of complementary services.

From the inland transport point of view, the cooperation policy developed over the last few years essentially with national and international railroad partners have enabled the Port Authority to safeguard the quality and the competitiveness of land transport services out of Marseilles Fos with the hinterland in Europe that has been provided with services by river and road transport companies in Benelux, all shipping their goods towards ports in the North.

As regards the shippers, they have been informed of the modernization drives undertaken within the PMA by all the port community and have always been informed of what's at stake in order to reach, despite inevitable conflicts, an improvement of port services and a decrease in forwarding and transport costs.

### Development Actions

1985 was the year when the Free Port storage concept was launched in addition to work groups on specific produce both being intended to capture for Marseilles, traffic with a very dense near hinterland, but that used to transit by other ports. What were the results of this action in 1986?

**Free port storage:** The fact that the PMA applied a new dynamic negotiation policy based on spot market prices, enabled it to attract some initial resounding successes in local industry. The fact that the port provided systematic information on foreign customers will probably generate spin offs

at a later date.

**Produce working groups:** These working groups deal with products selected by the commercial commission in view of their low participation in overall port traffic figures. The reason for that being generally the high cost of port transit operations in the PMA, thus making our competitor ports more attractive.

An in depth analysis did, for each case, enable us to measure the cost discrepancies and set objectives to be reached by all the partners working in our port community.

*(Marseilles/Fos Europort South)*

### New Strategy For Port of Le Havre

The redundancy arrangements worked out between employers and the unions were on the agenda of the meeting of the Port of Le Havre Authority's Board of Directors.

The agreement was a milestone on the way back to a fully competitive situation for the whole of the port community here and is part of an overall plan formulated by the port authority, in full collaboration with its partners in the port.

### Plan to Increase Competitiveness

The four main lines of action concern:

- Inland transport, where there is an absolute need to align prices on those in force on routes to and from foreign ports.
- Dock labour, where costs have to be brought down to a level comparable with those in the rival ports of Antwerp and Rotterdam.
- Capital investment to take greater advantage of our easy accessibility.
- Non-handling items capable of reducing port costs, and particularly transit costs.

The plan is sure proof that both employers and labour in Le Havre are determined to take up the challenge on equal terms of the great ports of North West Europe, though we shall need to wait for the end of the year to evaluate it fully.

### New Commercial Strategy

The Director General then unfolded the main lines of the new commercial strategy, which is based on:

- 1) The port community and the mobilisation of local business in the new association known as PORT ALLIANCE.
- 2) A thorough knowledge of the competition, starting with that of the

### New Container Quay Alongside Scheldt

The Municipal Council of Antwerp has approved the general principles of an agreement between the City of Antwerp and the Belgian Government in relation with the construction of a container quay alongside the River Scheldt.

The container quay which will be built south of the access channel of the Berendrecht Lock under construction, is of fundamental importance for the port of Antwerp. The useful length of the quay wall will be approximately 1,180 meters which can offer berthing space for four container vessels with a standard length of 260 meters. Depth at low tide will be 14 meters so that very large container vessels will be able to berth there. The land behind the quay for container handling has a surface area of approximately 55.4 hectares where a maximum of 29,000 TEU can be stored.

The following general principles were accepted:

*The Belgian Government will build a quay wall in the bed of the Western Scheldt which — upon completion — will be handed over to the administration of the City of Antwerp. The City will then give the terminal in concession to the Hessianatie. The City of Antwerp will pay 40% of the overall building cost of the quay wall (1,434 million BF, covered by a loan); 60% will be paid by the Government. The investments in the maritime access route will be paid fully by the Belgian Government. The cost of superstructure or equipment (2,400 to 2,600 million BF) will be paid by the private sector.*

*The share of the City of Antwerp will be used preferentially to cover the initial building cost of the quay wall.*

The construction of the new quay will be started in 1987 and is to be ready for operation in 1989. *(Hinterland)*

big North European ports.

3) Following up and making the most of every improvement in competitiveness, both in port costs and in land transport costs.

4) Attracting a maximum number of services, by strengthening relations with shipping companies, seeking out new companies and new ports to serve, and developing our transshipment operations.

5) Improving our image with shippers through marketing campaigns and the winning back of lost traffics.

6) Improving the image of Le Havre itself, which depends on human attitudes and on the energy put into promotion and the provision of information.

### Reorganization of the Management

To carry out this ambitious programme, the port's commercial management has been reorganised into three services, three commissions and a number of overseas offices.

- The Shipping Clientele Service will be responsible for shipping lines already using Le Havre and for attracting new services.

- The Cargo Clientele Service will see that Le Havre is present wherever decisions are made about marine transport in France and throughout the world.

- The Inland Transport and port Transit Service will implement the decisions of the Port Authority in the fields of inland transport, movement within the port and market development.

- The Port Promotion Commission has been newly created as a first step towards the Port Alliance and will be in charge of improving the overall reputation and image of all port and port-related services in Le Havre, of which the port proper is but one element.

### "Port Alliance"

The Port Alliance is a new association bringing together the Chamber of Commerce and Industry, the Port Employers' Association and the Port Authority for the purpose of promoting the Port of Le Havre. In 1985 a first step was taken with the setting up of the "Alliance," an association formed by a large number of leading members of port, shipping and economic circles imbued with a common determination to acquire a better understanding of port affairs and to promote the port of Le Havre and its related activities.

(Port of Le Havre FLASHES)

## Railway/RoRo Linkspan for Dunkirk — Designed for Speedy Turnround

The Paris office of MacGregor-Navire (MGN) has won the order to design and supply a two-tier linkspan to the French Port of Dunkirk. It will be capable of conveying the weightiest units of rolling stock now in use or likely to be introduced over the next two decades.

The new unit will provide ship/shore interface at the French end of the reconstituted rail ferry service to Dover, U.K., due to commence early 1988. To be installed at the port's Quai d'Alsace, it is custom-built to permit direct access onto, or from, the upper and lower decks of the large rail/RoRo ferry currently building at the Dunkirk yard of Normed for French Rail (SNCF).

For some years European rail wagons have tended to increase in both size and weight-factors which, at Dunkirk, have precluded transit of the heavier units over the existing linkspan and thus, have limited the type/volume of traffic embarked. Hence, the designed loading capacity of the new structure compared with the old unit, reflects the higher wagon limits now prevalent; the figures are — 7.2 tonnes/linear metre and 25 tonnes/axle for the MGN design as against the 5 tonnes and 20 tonnes of the existing installation.

## Frs 40 Million Pledged For Port of Rouen Channel Improvement

Secretary of State for the Sea, Mr. Ambrose Guellec, announced that the government had decided to provide Frs 40 million in the current year for the port's access channel improvement programme.

There had been fears that the port would have to cut back its dredging effort this year in the absence of sufficient government funding, but Mr. Guellec said that the government intended to continue backing the port's efforts to deepen the channel in the river Seine which links it to the sea.

The channel deepening programme allowed the port to reduce freight costs by enabling it to accommodate bigger ships carrying their maximum load, he said.

The Frs 40 million it would be making available in the current year would maintain investment in the port's accesses at the same level as in 1986.

Mr. Guellec said that the government was very conscious that the prospects of the cereals sector in an increasingly competitive international market depended upon improved competitiveness in the port and shipping sectors.

The government was only able to have an indirect effect on freight levels, he said, through such measures as it had taken to help the French merchant fleet and, in particular, bulker operators, he said.

By helping shipowners to improve their competitiveness, the government's measures were encouraging the use of French flag vessels to transport cargo and thus opening the way to greater French control over the country's ex-

port business.

But improvements in the quality of port services and reductions in transport costs could have a much more direct effect, he said.

This required a new effort by all parties in the ports sector to ensure maximum flexibility over working hours and conditions and the adaptation of manpower levels to traffic requirements.

"This is, to my mind, the first duty at the present time of port communities. It is the contribution they must make to the obligation which falls on all to support France's cereals export effort, of which the importance in agricultural and commercial terms is clear. There was a surplus of Frs 30 billion in the last (cereals export) campaign, despite a 15 per cent drop, caused by the fall in prices."

Mr. Guellec told participants at the Cereals Day that the government intended to encourage ports to improve competitiveness through a policy based on four main priorities:

- The encouragement of greater private sector participation in port investment;

- A port-by-port approach to improved competitiveness in the cargo-handling sector, notably through a reduction in dockers' numbers;

- A reduction in the cost of surface transport to and from ports, notably through deregulation measures;

- The promotion of greater collaboration between all parties involved in the port transport chain through the creation of a National Council of Port Communities.

In the field of private sector involvement in port financing, Mr. Guellec said that Rouen was already setting an example to other ports.

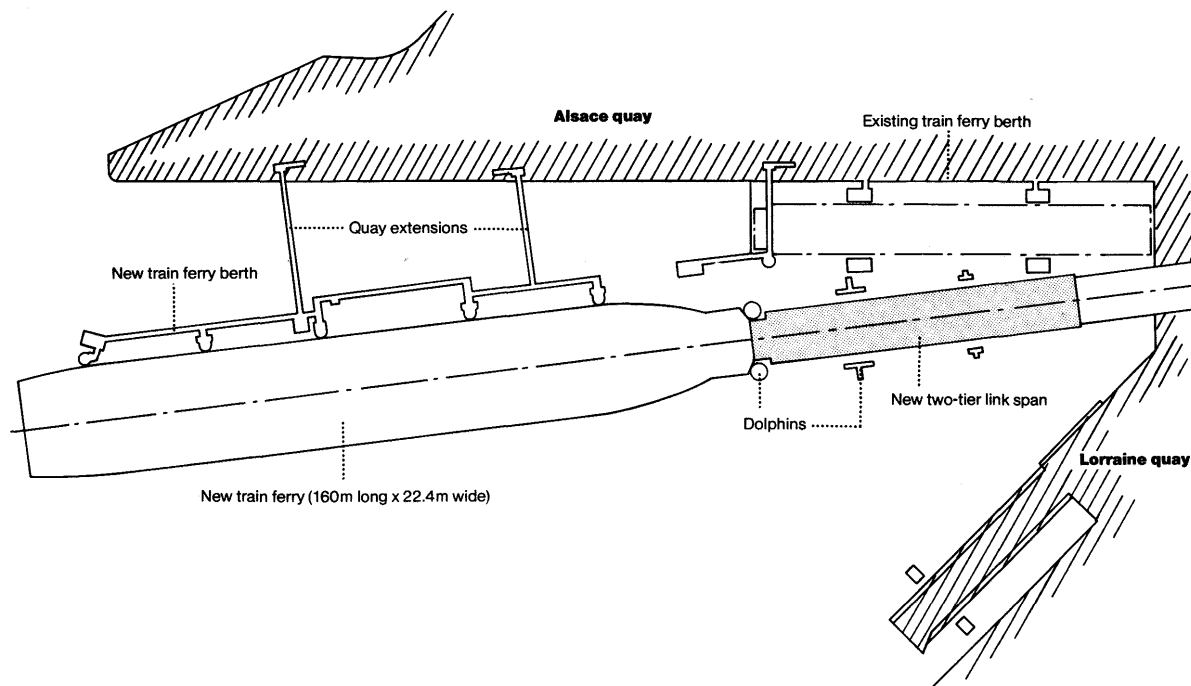
(Rouen Port)

## New Train Ferry berth, Alsace Quay Terminal, Dunkirk

*Simplified plan view showing the orientation of the new berth compared with the existing arrangement. Phasing of use as between the old and new berths will take place over an 18 day period, with little impediment to traffic flow.*

*The civil works and the linkspan are tailor made to accommodate the new double-deck jumbo ferry (shown here, in outline, at the berth) when it commences operations on the newly-constituted Dover-Dunkirk service early in 1988.*

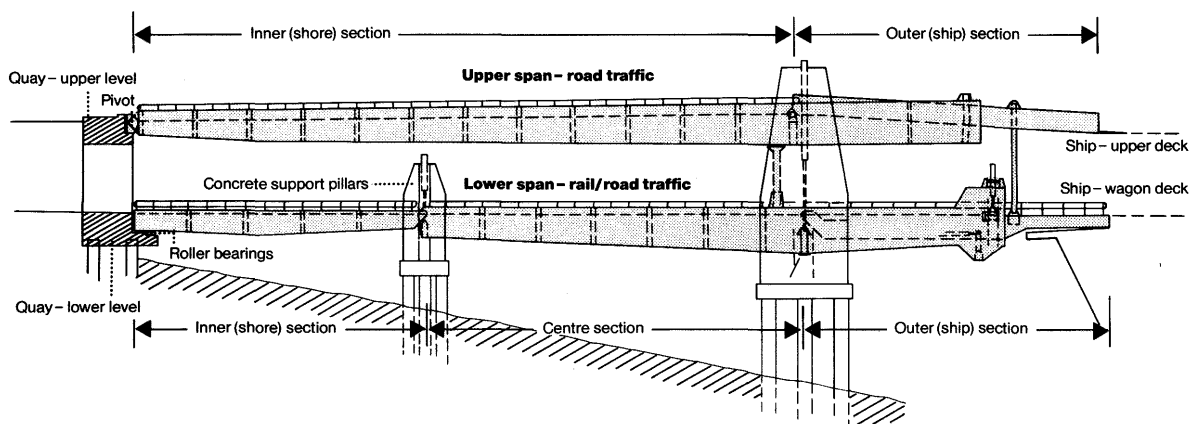
*Both linkspan and access equipment in the ferry, are of MacGregor-Navire design.*



## Dual purpose (rail/road) link span for Dunkirk Port Authority

*Designed by MacGregor-Navire, France, the two-tier interface will be used primarily for servicing the 'jumbo' rail/RoRo ferry now building at the Normed Shipyard, and due to enter service on the Dunkirk-Dover route early in 1988.*

*Permitting direct access to the cargo decks – rail wagons and/or road vehicles transiting the lower span with road vehicles only over the span above – fast loading and discharge (necessary to meet the envisaged four crossings (each way) per day) will be possible.*



## Bremen Consultants Active in Many Countries

In view of the continuous expansion of world trade and the changing pattern of the traffic together with the growing containerization of shipping there is a constant demand for expertise. The speed and efficiency of transport which today international trading partners expect, especially the reliable and careful handling of expensive industrial products, require a smoothly working transport chain from the manufacturer to the final receiver as well as an efficient administration.

Within a few years the Bremen advisory firm Port and Transport Consulting Bremen GmbH (PTC), a subsidiary of Bremer Lagerhaus-Gesellschaft, succeeded to gain a firm foothold in the business of consulting. Originally PTC was founded as a port consulting firm for the purpose of assisting port administrations abroad to extend or rationalize their facilities. Initial enquiries came from oil exporting countries which had serious difficulties during the days of the first oil shock, when their ports were unable to absorb the exploding import traffic.

After its expansion a few years ago PTC developed consistently into a comprehensive consulting enterprise. Many projects are now in hand for account of shipping lines, port administrations and shipowners, as well as from inland organizations everywhere. These activities at home and abroad have introduced PTC to large international institutions, such as the World Bank and various branches of the United Nations and also to the public organizations in Germany which arrange economic aid for developing countries.

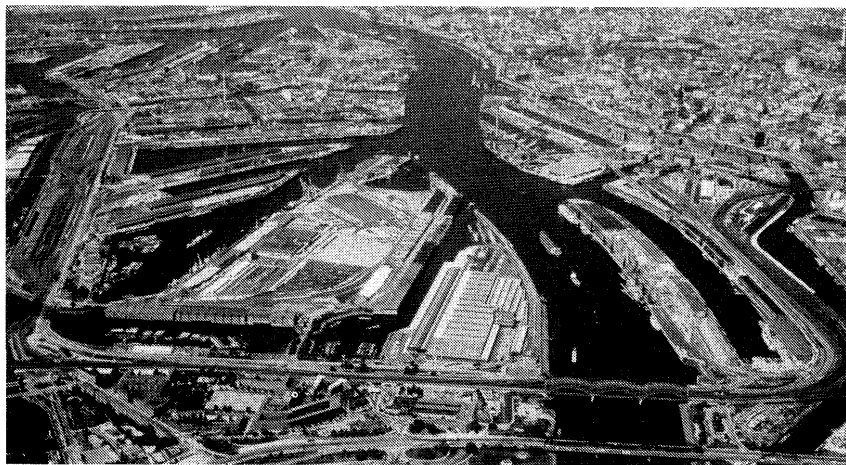
### Bremer Lagerhaus-Gesellschaft

The Bremer Lagerhaus-Gesellschaft is the Port Operating Company of the free port area of Bremen and Bremerhaven. The company was founded in 1877 by local merchants and is now organized as a stock company. The capital is amounting to 12 million D-Marks. The majority of the shares is in the hands of the municipal government of the City of Bremen.

**Employees:** 4,100 persons

**Facilities:** Quay length 17,000 metres; Shed space 850,000 square metres; Open air storage and traffic area 2,800,000 sq. metres; Various special purpose facilities

**Equipment:** 170 cranes; 24 container gantry cranes; 3 floating cranes; 75



## 28.9 Million Tons in Six Months in Hamburg

Cargo-handling figures for the Port of Hamburg continue to show an upward trend. In the first six months of '87, 28.921 million tons passed through the cargo-handling facilities of the Elbe Port — a considerable gain of 6.8 per cent on the same period last year (27.075 million tons). Incoming goods amounted to 18.940 million tons, a gain of 3.9 per cent, while outgoing cargo shot up by 12.8 per cent to 9.981 million tons.

The growth rates in general and bagged cargo handled were particularly favourable. The volume handled in the first half of '87 was 11.722 million tons, an increase of 11.2 per cent over the same period in '86 (10.539 million tons). Incoming general and bagged cargo rose by as much as 13 per cent to 5.331 million tons (the outgoing volume by 9.8 per cent).

van carriers; 480 fork-lift trucks  
**Annual performance:** 16 million tons, including 15 million tons of general cargo (9 million tons containerized) and 610,000 automobiles.

### Containerization 60%

"The container revolution in the Port of Hamburg continues unabated — containerization has nearly reached the 60% mark," explained Mr. Klaus-Dieter Fischer, member of the Board of Directors of Port of Hamburg, Marketing and Public Relations (regd. Assn.), at a press conference in Ham-

burg. "It is particularly pleasing to note that we were able to record an increase of 36% this year over the first six months of '86 on Southeast Asian routes, Hamburg's most important container trading region."

The figures available also paint an impressive picture of containerization trends in Germany's largest seaport. In the first six months of '87, 681,802 containers (on a TEU basis) were handled, up from 597,028 for the same period last year, an increase of 14.2%. Incoming container traffic accounted for 349,296 units, outgoing traffic for 332,506.

(Port of Hamburg)



Heavy sea-borne traffic to and from the Far East underlines the Port of Hamburg's outstanding significance on Southeast Asian trading routes.



## Brochure Published On Container Transport By Inland Vessels

The Port of Rotterdam Authority has produced a brochure about the transport of containers by inland vessels between Rotterdam's docks and the West German, Swiss and French hinterland. It includes a summary of the scheduled container services and the inland container terminals.

The transport of containers by inland vessels has really taken off in the last few years. While in 1977 no more than 50,000 containers (TEUs) were carried on barges between the port of Rotterdam and the hinterland, in 1986 more than 220,000 containers originating in or destined for West Germany, Switzerland and France found their way via our rivers and canals.

Inland shipping can now be regarded as a fully-fledged carrier. A complete package of services is now available for inland container transport via rivers and canals. Several inland shipping lines have a comprehensive schedule of sailings for container transport. In fact, there are sailings every day. At the moment, there are more than twenty specialist container terminals along the Rhine and Main for transshipment. There are also facilities for stuffing and stripping containers, and for cleaning and repair.

The four-language brochure listing these services for container transport by inland waterways will be sent free of charge upon request. Please address requests to: The Port of Rotterdam Authority, External and Commercial Affairs Department, P.O. Box 6622, 3002 AP Rotterdam, Netherlands, or call (+31) (0)10-489 42 11.

## Mr. McNab Reelected London Employers Pres.

The London Port Employers' Association at their Annual General Meeting on 24th June reelected Mr. John McNab as Chairman. Mr. Derek Allison was reelected Deputy Chairman and Mr. Graham Spittal was elected Treasurer.

In his Chairman's Report, Mr. John McNab expressed satisfaction at the orderly way in which the Port's registered workforce had been reduced by some 600 in 1986. The bulk of this was achieved in the last quarter of the year under a special voluntary severance scheme. The labour force was now virtually in balance with requirements.



**CHERRY QUEEN IN HAMBURG** — Keen interest was shown in Hamburg's Free Port by Joshiko Fukuchi, the Japanese Cherry Blossom Queen. She was accompanied during her visit by the German Cherry Blossom Princess, Doris Schröder.

## Computerisation: Hallmark of Technical Logistics

"The future task of world port lies in technical logistics, and the hallmark of this is computerisation." This was the theme of Professor G.C. Meeuse's farewell lecture given on 26 November last year to mark his retirement from the chair of transportation at the University of Technology, Delft, where he had taught in the Mechanical Engineering department for twenty-eight years. His address was entitled "Controlled progress," and subtitled "Computerisation, the hallmark of technical logistics." Throughout his professional life, Professor Meeuse has had close contacts with the port of Rotterdam. In past years he worked for the Port Labour Inspectorate, and he is still a full-time member of the board of the Transport and Port Training Association. He was also closely involved in the work of the ICHCA (International Cargo Handling Coordination Association).

In his lecture, he observed that the period of his professorship had coincided with the phase shift from engineering to technology and from process to system. Following the first industrial revolution a century and a half ago, when mass and energy became inter-linked, the world now finds itself in the epicentre of a second, informational or — more accurately — technological revolution, in which mass and energy are fused with the additional element of information.

The port has gradually acquired a wider significance and — rightly — a central function. There has been balanced growth towards a transportation centre where goods flows are combined or separated. A port starts with the creation and maintenance of its accessibility as a transport centre. Because of the speed, transshipment capacity is modified, after which, because of the linking of dissimilar transport phases, the storage facility is expanded to a buffer function.

On the way from source to destination, products are transformed and transported, and the port can provide support for this function. It is a product centre which reminds one of the historic entrepot functions of seaports, when ocean transport was still a hit-and-miss business. Out of this springs the

management of the depot as a stockroom for product owners and those who have an interest in the products. Professor Meeuse pointed out that this function need not be limited to end products, but can also apply to raw materials. In this way, suppliers delegate a degree of market responsibility to third parties.

Data flows must occur in synchronisation with product flows, and must initiate subsequent processes in good time. This requires good coordination, and it is in this respect that the port can put itself forward as an information centre. The better the communications function is fulfilled, the more the port can play a central role in the whole goods transport process. Ultimately, this will result in its acquiring the function of a logistics centre. In Professor Meeuse's view, this will involve bringing into line the disparate interests in products and the information relating to their carriage, transshipment, storage (which together make up transport) and even the various transformations that products undergo during manufacture, upgrading, assembly and packing. The far-reaching linking of the component parts of these integrated products chains, which is needed for this logistical function, requires in the first place a change in attitude on the part of those involved — however, it can often be brought about without significant capital-intensive investment.

### Logistics

As the professor explained, computerisation means the intelligent and technical implementation of the achievements of information science and technology in operations, processes and systems; computerisation also involves, above all, the appropriate attitudes on the part of those concerned.

Professor Meeuse expressed his admiration for the government's impressive efforts in the Dutch Information Technology Stimulation Plan. In addition to the automation of communi-

### Inauguration of DanLink Great Event of 1986 For Port of Helsingborg

The greatest event in the Port of Helsingborg in 1986 was the completion of the new freight train ferry berth in the South Harbour and the inauguration of DanLink on November 3. The transfer of the freight train traffic from the North to the South Harbour means putting an end to the "railway

*(Continued on Page 35, Col. 3)*

cations and administration, information technology opens up unprecedented opportunities for the mechanisation and automation of operations and processes in machines and plants. The linking of administrative and operational automation by using one as a signal source for the control of the other deserves a great deal of attention.

The first industrial revolution led from autonomous dealings to coordinated process control. Computerisation, the hallmark of the second revolution, will lead man to an integrated systems approach. We have information science and electronic logic at our disposal for control on the basis of the rates of handling and processing. Technical logistics is developing systems for recognizing, monitoring and controlling the system of components in machines, installations and structures. Logistics management is responsible for controlled and flexible operations and processes like those which are needed to guide goods flows from suppliers through a company to the customers.

Professor Meeuse defines four orders of logistics: connected movements, linked streams, coordinated processes and integral systems.

The first order includes the transfer of mass, energy and information. The final state of the preceding link is geared to the initial state of the subsequent part of the system. In the second order, the mass, energy and information flows are linked. The third order involves the attempt to rationalise complex relationships, in which a systems approach is optimised. The fourth order of logistics lies in the further intertwining of various technological operations.

### Science

Professor Meeuse also took the opportunity of his farewell lecture to point out that as a result of the expansion of "transport" as an area of study at Delft University of Technology, the university was the first institution in the scientific world to make a contribution to the development of transportation technology.

Dutch society has understood the new approach, as evidenced by the remarkably great demand for graduate engineers who have already become familiar with the subject of technical logistics during their studies. He therefore appealed to the Dutch technical education institutions to maintain this field of education and research, in order to meet the demand for graduates trained in logistics.

*(Rotterdam Europoort Delta)*



## Gigantic Storage At Mouth of Rhine For Polluted Silt

The map of the Netherlands is changing. A gigantic peninsula, covering 260 hectares and surrounded by 28-meter high dykes, is currently being built at the mouth of the Rhine. This man-made area, which has been named the "Slufter," is being created not for economic gain but out of pure necessity. It is to be the storage site for silt from the waterways and dock basins of Rotterdam which is so heavily polluted by chemical wastes that it may not be dumped at sea.

Every year, the City of Rotterdam authorities and the national government dredge 10 million m<sup>3</sup> of polluted silt from the Rotterdam port area. From November, it will be possible to dump this in the Slufter. Until the year 2002. Then the man-made peninsula will be full. In order to avoid having to build yet another Slufter, the City of Rotterdam is working on a project aimed at improving the quality of the silt in the docks by cleaning up the waste discharged into the Rhine.

The City of Rotterdam's Rhine project plans to achieve the clean up through negotiation with the industries which dump the waste. Where this fails, legal means will have to be considered. Rotterdam is basing its approach on technical research, legal research and information. The technical research is being undertaken by the International Centre of Water Studies (ICWS) in Amsterdam, and the legal research by Erasmus University in Rotterdam and a firm of lawyers. The project has been split into three phases. At the end of last year, the Rotterdam City Council was given a report on the first phase. At the beginning of this year the council approved the commencement of the second phase, for which around five million guilders have been made available.

### First question: Who is dumping what?

In the first phase, the technical research concentrated primarily on identifying discharges of the heavy metals cadmium, copper, chrome, lead and zinc into the Rhine. Survey vessels took 1,200 samples at 120 points, including 21 tributaries and streams, between Rheinfelden (Switzerland) and Arnhem. It was possible to identify the discharges in sixty cases. Of these, sixteen proved to have polluted the river to a serious extent.

These sixteen discharges were traced

to fourteen sources, one in Switzerland (chemicals), two in France (chemicals), ten in West Germany (municipal sewage treatment, steel industry, non-ferrous and chemicals), and one in the Netherlands (non-ferrous).

Attempts to open discussions with these major polluters were successful in only three cases. These efforts are being continued in the second phase of the project.

During the first phase, the legal experts concentrated on studying the possible legal means available to the City of Rotterdam in the event of legal proceedings against polluters. Their findings show, among other things, that the Dutch Civil Code provides grounds for the assertion that the dumpers are liable for the damage suffered by Rotterdam, and the Rotterdam court has the authority to pass judgment in a suit against foreign dumpers.

### Second question: How much is being dumped?

In the second phase of the Rhine project, which is now under way, the technical research is aimed at establishing the amounts of pollutants discharged by a number of dumpers, who have been selected for this study on the basis of data obtained during the earlier research. The other discharges will again be checked for their heavy metal content, by the same method used in phase 1. In addition, there will be a desk study of the micro-pollutants. Finally, the relative proportion of a discharge in the silt in the Rotterdam region will be examined. The purpose of all this is to make it possible to arrive at a definite selection of quantitatively significant dumpers, and to determine the frequency with which samples will have to be taken during the third phase of the project in order to come up with an accurate calculation of the yearly average.

During this second phase, special attention will be paid to the dumpers in the Rotterdam region. Measurements are being carried out here in conjunction with the national authorities. The legal investigation will continue in parallel with the technical research during the second phase.

In order to continue to operate as a port, Rotterdam, together with the national government, has to dredge out 24 million m<sup>3</sup> of silt from waterways and dock basins every year. Dredging involves a lot of work and costs a great deal of money, but is not a problem in itself. Getting rid of 14 million of the 24 million m<sup>3</sup> of silt is no problem either. This is sea silt, and it can go back to the sea. The remaining 10 million m<sup>3</sup>

of river silt and mixed river and sea silt, however, presents the port with almost insurmountable problems. The Slufter will provide an interim solution. By 2002 it will be full. But Rotterdam will still have to get rid of its harbour silt. As far as Rotterdam is concerned, it is a question of dredge or go out of business.

*(Rotterdam Europort Delta)*

## DanLink—

*(Continued from Page 34, Col. 2)*

inconvenience" and the notorious man with the red flag walking in front of the freight trains through the central parts of Helsingborg.

The inauguration of DanLink means access to a computerized new freight train line for the industry with a capacity of 20 all-trains and 10 ferry-calls per 24-hour-period. With DanLink the transport time from Helsingborg to Hamburg and the Continent was shortened by close to 24 hours. Thus, DanLink means the implementation of practically all of the timesaving with which the investigators had calculated in connection with a bridge or tunnel connection across the Sound.

But DanLink also had other direct consequences. New freight train ferry projects on the South and West coasts were proclaimed now and then. Within a few months there were decisions on different projects with a transfer capacity which may only be satisfied on the long-term perspective. This means interesting competition on railway ferried cargo in future. In this competition, DanLink will keep very well up with the competition thanks to the many advantages which the route means as far as capacity, frequency and costs are concerned.

For the Port of Helsingborg it is important to work in the present having the future in view. We endeavour to get satisfied customers who believe in the Port. This does not in any way contradict the vigorous debate on harbour extensions and stevedoring which has been going on during the year. On the whole the debate has been constructive even if it may be difficult to satisfy the high environmental demands from the inhabitants close to the South Harbour.

From a result point of view 1986 was a satisfactory year. This is especially true with a view to the five-week-strike which unjustly hit the Port at the end of the year as well as the loss of traffic due to the delay of DanLink.

*(Annual Report 1986, Port of Helsingborg)*



## Major Investment for Tivoli Terminal

Hot on the heels of a further dramatic increase in container traffic at the Port of Cork comes news of Cork Harbour Commissioners' decision in principle to invest up to £3 million at the Tivoli Container Terminal. Container traffic has made immense strides over the past few years and traffic handled by scheduled container lines doubled in the period 1984/1986. The upward trend continued in the first quarter of this year when container traffic amounted to 9,000 TEUs (20 ft. equivalent units), an increase of 3,500 TEUs or 63% on the corresponding quarter of 1986. This spectacular increase confirms the Port of Cork's status as Ireland's fastest growing container port and justifies the significant investment which the Harbour Commissioners have made at Tivoli in recent years.

## Waterfront Development Starts at Southampton

Southampton's latest waterfront development is now underway with the construction of a new office complex on the site at Town Quay.

The development is another step forward for Associated British Ports' plans which are already bringing new life to Southampton's waterfront further east at Ocean Village.

ABP have now signed a lease with Bargate Securities who are to carry out a comprehensive redevelopment of the whole Town Quay area.

## Hull Offers New Timber Handling Facility

An additional cargo handling facility for softwood has been created at ABP's Port of Hull where timber imports include Russian and Scandinavian softwoods, Canadian lumber and Far Eastern hardwoods.

The new facility — situated at No. 3 Quay, King George Dock — was first used on 20 July and since that time some 15,000 cubic metres of softwood have passed over the quay.

The deepwater quay, 400 metres long and able to accommodate the largest vessels that can enter the enclosed docks, offers a new open storage area of 14,000 square metres and is equipped with four 6-tonne capacity cranes, all of which have been refurbished.

Mr. Mike Fell, ABP's Port Manager at Hull said: "Timber is an obvious growth area for Hull and ABP intends to exploit fully the port's potential for handling this important business."

## PLA Surprised at Navigation Proposals

The Port of London Authority is surprised to read reports in the press that Trinity House is suggesting that a large number of aids to navigation should be transferred to, and funded by the port authorities. We would expect that the PLA, the BPA and other port authorities would be properly consulted before proposals are made which are fundamental to their areas of responsibility.

Contrary to reports, there has been no formal consultation about the Trinity House proposals. The PLA, therefore, cannot comment in detail. However, Trinity House appears to be seeking unilaterally to divest itself of long-standing statutory responsibilities as a Lighthouse Authority.

The PLA welcomes any economies being made in the costs of providing buoys and lights in the estuary provided

that safety standards are not put at risk. The PLA would expect such matters to be reviewed continuously as normal good management practice. The proposals for the Thames estuary seem not to provide economies but simply seek to transfer responsibility from Trinity House to the PLA, without the existing funding. It is difficult to understand the rationale behind such a proposal. The continuing costs would have to be recovered and thus there would be no reduction in the charges falling upon the shipping industry.

The PLA along with the BPA and all other port and shipping interests in the U.K. will continue to try to persuade the Government of the iniquity of light dues falling to the shipping industry as compared with almost every other country where such a service is funded by central Government. Hitherto, the Government has failed to change its stance, despite being out of line with European and other countries.

(PLA News)

## BPA Review: Pilots Facing New Challenge

On May 15, 1987, the last day of Parliament before the general election campaign began, the Pilotage Act 1987 achieved Royal Assent.

The changes contained within the Act are the most significant since the original 1906 Act was passed. The challenge for both port authorities and pilots alike is now to ensure that the new provisions are implemented smoothly and without disruption to allow a truly cost effective and efficient pilotage service.

Throughout the months of discussion in both Houses of Parliament, meetings between the BPA and the UKPA (Marine) sought to establish guidelines which would be helpful to both the new "Competent Harbour Authorities" (CHAs) and the pilots' representatives at local level.

One of the great changes likely to be brought by the new legislation is that to the employment status of pilots, who have had a unique quasi self-employed status.

They have been answerable in financial terms only to themselves in the local pilotage district. But, by transferring responsibilities of the pilotage service to the new Competent Harbour Authorities, the new Act makes it possible for pilots to be directly employed by the new authorities.

This fundamental shift in the employment relationship is going to be difficult to carry out. For a start, how do you compare a pilot's previous gross earnings, as determined by the self-employed formula, with the new salary to be offered? Clearly these matters have been of great concern to both the port authorities and the pilots' representatives.

Another matter which has been discussed at length by the two principal parties is the future of the Pilots National Pension Fund. The pension fund is an important contributor to the redundancy terms agreed for pilots no longer required by the Competent Harbour Authorities under the transfer to the new arrangements. Both the BPA and the UKPA (Marine) have agreed that the pension fund should continue for all existing pilots. However, a number of changes will have to be discussed between the parties.

A great deal of the work to implement the terms of the new legislation will now switch to local level. Competent Harbour Authorities have to determine what kind of organisation they require for a cost effective pilotage service.

## Multi-purpose Tug Delivered to Mauritius

In line with its port development programme, the Mauritius Marine Authority (MMA) has recently acquired a multi-purpose Voith Water Traction. The acquisition of this powerful tug was financed by a soft loan, which the Government of the Federal Republic of Germany graciously placed at the disposal of the MMA. The contract for the construction of the tug was awarded to Martin Jansen Shipbuilders, a German firm, specialized in shipbuilding.

The christening and handing-over ceremony of the tug was done on 22 May 1987 in the presence of His Excellency the Governor-General, Sir Veerasamy Ringadoo, the Prime Minister of Mauritius, Mr. Anerood Jugnauth, and His Excellency the Ambassador of West Germany, Mr. K. H. Rouette. The tug was given the name of "Sir Seewoosagur," after the late Sir Seewoosagur Ramgoolam, former Prime Minister and former Governor-General of Mauritius.

The main dimensions of the newly-acquired tug are:

Length o.a.:	29.25 m
Length between p.p.:	27.00 m
Breadth moulded:	9.00 m
Breadth o.a.:	9.64 m
Depth moulded:	3.61 m
Draught summer freeboard:	4.77 m
Sea-going Service:	4.40 m
Harbour Service:	

*Sir Seewoosagur* is fitted with two Deutz-MWM engines type SBV 6M 628. It is fitted with Voith Schneider propellers, sophisticated navigational aids and oil combat equipment and remarkable fire-fighting facilities. *Sir Seewoosagur* will therefore enable the MMA to provide more efficient and safe pilotage to larger vessels. Before the commissioning of the new tug, Port Louis Harbour could accommodate vessels of 195 metres long at maximum. With *Sir Seewoosagur* and the dredging of the turning circle, the port is now in a position to handle and accommodate vessels around 225 metres long.

The acquisition of this multi-purpose tug falls within the series of projects undertaken by the MMA to offer a better and safer service to the shipping community in general. The MMA is working on other important projects with the main objective of producing more efficient and economic port facilities and services.

## Asia/Oceania

### Australian Waterfront — Views of Customers Must Be Heard

"Exporters and importers daily face fierce international competition yet the Australian waterfront and our ports that they use are immune from foreign competition. As an island this is a basic fact we face but it places waterfront users well behind the eight ball," Mr. Ivan Deveson, Chairman of the Importer/Exporter Panel of the Waterfront Strategy and Managing Director of Nissan Australia, said recently in Melbourne.

Mr. Deveson was speaking at a luncheon organised by the International Cargo Handling Coordination Association (ICHCA). It was the first occasion at which the views of the Importer/Exporter Panel had been publicly presented.

"Since we lack land borders with other nations which would engender some international competition for our waterfront and ports, we need to develop other mechanisms to improve our waterfront performance and give exporters and importers a more constructive voice in the industry.

"The Federal Government's Waterfront Strategy is providing all parties in the industry with a framework to improve waterfront performance. It includes the Importer/Exporter Panel, which was established to represent the views of customers, whose performance depends so heavily on waterfront efficiency; including the manufacturing, retail, mining and agricultural sectors.

"Importers and exporters, especially small businesses, are some of the most commercially exposed people in our economy and are crucial to our trading performance, economic development and ability to provide secure jobs (the value of our overseas trade was \$57 billion in 1985/86).

"This is why the work of the Importer/Exporter Panel is vital for users. We must use this opportunity to pursue user concerns in a constructive way.

"After all, users do pay the bills," Mr. Deveson said.

"Under the Waterfront Strategy all those involved with the shore-based industry are represented and are working on ways to improve their performance. We want a constructive and cooperative relationship with these groups, including waterfront operators,

port authorities and unions.

"We don't underestimate the complexities or difficulties of the waterfront. There is no simple magic wand solution.

"But the Importer/Exporter Panel is determined to effectively represent waterfront users by pursuing remedies to problems they face," Mr. Deveson said.

Issues that the Panel are especially focussing on include:

- Stevedoring and container depot efficiency

- Improving industrial relations and the waterfront's reliability

- Port management issues, including efficiency of operations and consultation with users

- Cost of tugs.

"Now that waterfront improvement is firmly on the nation's agenda, users must ensure their concerns are accommodated in any changes that are made. This means that factual material must be gathered and real work on real problems must take place. This has already started on the waterfront and with port authorities.

"The Importer/Exporter Panel has started canvassing user problems and if any user has not received our letter I urge them to ring the Importer/Exporter Panel Secretariat on 062-68 7183 for information.

"I know that many involved in providing stevedoring and associated services, in port authorities, and waterfront unions and employees want an improved waterfront, so that Australia can improve its trading performance and secure more jobs — and users want to work with them to achieve this.

"We must all use and not lose this opportunity," Mr. Deveson concluded.

## **MSB Maintains Freeze On State's Port Charges**

The 18-month-old freeze on charges in NSW ports has been extended indefinitely.

The current freeze was due to end on 30 June 1987, but the Minister for Public Works and Ports, Mr. Laurie Brereton, said it would be maintained for as long as possible in the new financial year.

NSW port charges have risen by only 7% in the 3 1/2 years since the beginning of 1984, compared to about 30% growth in the Consumer Price Index — an estimated saving of \$40M to the MSB's commercial clients.

Mr. Brereton said the extension of the freeze represents an annual saving of around \$10M to the shipping and export industries at a time when Australia is fighting to maintain and im-

prove its international trading performance.

"It has been made possible by the greater efficiency and cost containment by the NSW ports system since the restructuring of the Maritime Services Board," he said.

The extension of the freeze is one of a number of measures by the MSB to assist NSW export industries.

*(Maritime Services Bulletin)*

## **New Chairman of Port Of Melbourne Authority**

Mr. Peter Rocke has been appointed Chairman of the Port of Melbourne Authority.

Mr. Rocke, Regional Director of Victoria and Tasmania for Mayne Nickless Ltd., is also the current Victorian President of the Road Transport Association.

Appointed on 29 July, Mr. Rocke, 53, has been with Mayne Nickless for 23 years, holding several executive positions.

He is also Chairman of the Webber Task Force, Melbourne Working Party on Shore Based Shipping Costs.



**Mr. Rocke**

## **Ship Simulator Installed At Port Kembla**

The first ship simulator to be installed in an Australian port has been commissioned at Port Kembla.

The \$200,000 simulator will increase the capacity and efficiency of the port by making it possible for larger ships to use Port Kembla and reduce the impacts of tides and weather on shipping movements.

The simulator is programmed with the characteristics of Port Kembla, and can replicate the handling characteristics and dimensions of any ship. It will allow the Port Kembla pilots to simulate various combinations of weather and tide conditions and assess the capabilities of any ship in those conditions.

The pilots will be able to test the ship-handling techniques that would allow a vessel to manoeuvre safely in the port in conditions which at present are considered marginal or unsafe.

The result will be that the port can

handle larger ships for a greater part of the time, which means there will be fewer delays and less idle time for facilities like the Port Kembla Coal Loader. The simulator will also be used to demonstrate to foreign shippers the capacity of Port Kembla to accommodate ships which might currently bypass the port.

The purchase of the simulator for Port Kembla is part of the Maritime Services Board's drive to increase the efficiency of the NSW ports system. Other ports around Australia have expressed interest in following the lead set by Port Kembla.

*(Maritime Services Bulletin)*

## **Radar at South Head To Improve Safety of Shipping in Sydney**

The South Head Signal Station at the entrance to Sydney Harbour has installed a new state-of-the-art radar to improve the control and safety of shipping in the harbour.

The General Manager of the Maritime Services Board, Mr. Les MacDonald, said the installation of the radar was part of a program to upgrade facilities at the NSW ports.

"We have an excellent safety record in the State's ports, and these works will help us to further improve vessel safety and the efficiency of ship movements," he said.

The MSB's Signal Station at South Head has been equipped with radar since 1973. "The new German-made Krupp-Atlas 8600 ARPA system is the most modern and effective radar of its type available for maritime uses," Mr. MacDonald said.

"The radar, which has a practical range of 24 nautical miles, is fitted with a high-resolution screen which can be viewed like a TV set, rather than through a viewing hood.

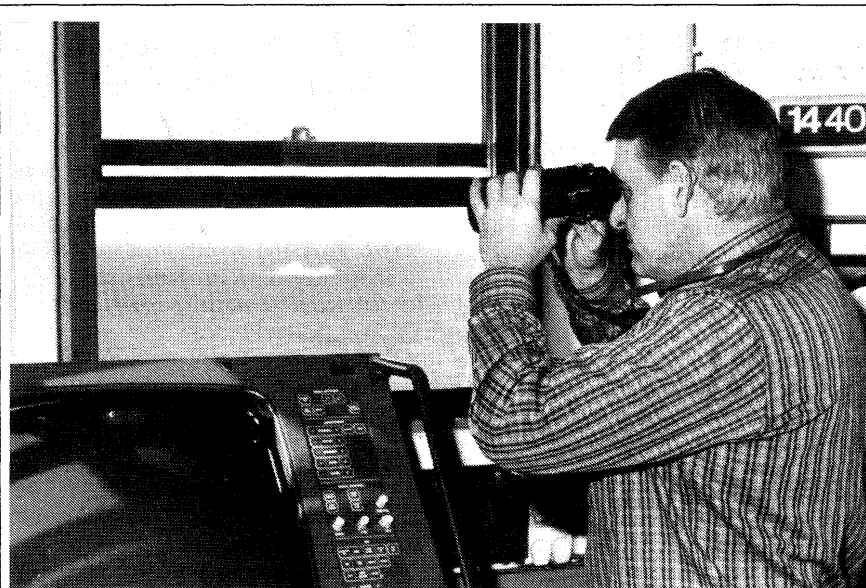
"The plotting of targets is automatic. With the press of a button, the radar can select a vessel up to 20 nautical miles away and give its range, bearing, speed, closest point of approach and the time of arrival at that point."

Mr. MacDonald said the radar was able to store and display maps of the area showing details such as the proper approaches to the port, the pilot boarding ground, the port channels and the Military Firing Ranges off North Head.

"By displaying the maps on the screen, the operator can warn a ship immediately if it approaches danger," he said.

"The system can also be set to give an alarm if a ship enters a pre-deter-





*South Head Signalmaster Roy Davies uses binoculars to check the identity of a southbound vessel outside the Heads.*



*A close up of the MSB's new Atlas 8600. Data relevant to vessels being tracked appears in sharp relief in the information panels at far left of the screen.*

mined guard zone.

"The radar is so precise that in poor visibility the operator can 'talk in' the pilot vessel to a selected ship off the port."

Following the installation of the new radar, the MSB will also install a radar monitor in the Port Operations and Communications Centre at Millers Point to improve the control of shipping inside the port.

A microwave link will be established between the two stations to enable direct monitoring of all movements inside and outside the port.

The site of the South Head Signal Station has been continuously occupied

since the first years of European settlement, when marines kept watch for ships and used flag signals to advise the colony of new arrivals.

Mr. MacDonald said the new radar systems and microwave link would keep the control of shipping in Sydney at the forefront technological advances.

## **Kobe Port Fetes 120th Anniversary**

Attended by dignitaries from all over the globe, the 120th anniversary of the Port of Kobe was celebrated in grand

style befitting the venerable but forward-thinking world class port.

In ceremonies unveiling Meriken Park, a public garden built on reclaimed land overlooking the harbor, Kobe officials opened the Kobe Maritime Museum to the world. A low structure topped with soaring white framework reminiscent of ships' bows, the museum houses information and exhibits related to the sea and the Port of Kobe.

Sister ports of Seattle and Rotterdam made contributions of artwork for permanent display in the park. Seattle's gift was a dramatic wooden sculpture of an American Bald Eagle, which now graces a fountain in the park. A lifesized bronze sculpture of two children playing marbles was presented by the Port of Rotterdam, and is displayed in another section of the park, banked by pink and white flowers.

Representing Georgia Ports Authority at the two-day celebration were Vice-Chairman William Faulkner and Far Eastern Director Isao Togioka, who presented an inscribed brass friendship bell to the Port of Kobe.

The anniversary celebration created an opportunity for the Port of Kobe to announce its foray into the 21st century via the Port Renaissance Project. Several years in the planning stages, the Project's goal is to make the Port of Kobe a sea-land-air intermodal terminal by 1995.

The project envisions the construction of various new facilities, including container berths, to keep up with new transportation and ship-building technologies. The project also calls for the redevelopment of conventional facilities to enhance the port's functions and encourage a more effective utilization of waterfront land.

The Port of Kobe now consists of four main facilities. Two ambitious man-made islands, Port Island, opened in 1981, and Rokko Island, now partially functioning and scheduled for completion in 1990, combine modern berthing and cargo handling space with residential, retail, and commercial areas. Two land-side facilities, Maya and Shinko Piers, provide berthing and storage to accommodate all vessel types, including the largest passenger ships terminal in the Orient.

Because of its fine natural harbor and strategic location near the central area of Japan's industry and culture, the Port of Kobe was a gateway to trade and cultural exchange with the Asian continent as early as the third century. Its opening to foreign trade in January 1868 signalled the beginning of Kobe's rise to prominence as the leading Japanese and world port it is today.

## Port of Colombo: Record Container Traffic

In the recent past Colombo has recorded an impressive figure of transshipment container traffic consequent to the recent port developments providing modern sophisticated facilities and services to the shipping trade. It is a known fact of simple geography that no other port in the region is so centrally located to attract shipping, and the Port of Colombo has offered more of the latest equipment and even a better service making a big difference to customers in saving time and money, thereby attracting increased volumes of transshipment trade.

The total number of containers handled for 1986 was 341,358 TEUs,

as compared with 215,876 TEUs in 1985. Out of this volume 65% has been transshipment container volumes. Consequent to the evidence of increase in the container volumes and the trend of future projection indicating further increases, the Port of Colombo has embarked on providing further facilities under an up-dated Master Plan for the development of the Port of Colombo. It is abundantly clear that more and more shipping lines have turned their attention to make Colombo their base port for the feeders to operate from Colombo to the regional ports, and to service 4th generation vessels operating round the world service. In addition, Colombo has announced a very attractive container volume rebates to Shipping Lines.

The present facilities provided in the Port of Colombo are:

### "Jaye" Container Terminal

Berth	Length (m)	Depth (m)	Cranes	Dry Slots	Reefer Slots
1 & 2	632	13	Four 35.5 T Mitsui Paceco	3,432	44

The transfer cranes — 35.5 tonnes under the spreader — are also available in the marshalling area. A Container Freight Station of 5,400<sup>2</sup>m is available in situ for stuffing and de-stuffing of cargo.

### Q.E.Q. Container Terminal

Berths	Length (m)	Depth (m)	Cranes	Dry Slots	Reefer Slots
1 & 2	425	12	Two 35.5 T Liebherr Gantry cranes	5,500 2/3 high	30

Four transfer cranes — 35T under the spreader — 40 and 25 Ton heavy forklift trucks with sufficient prime movers and trailers are available. A further gantry crane will be installed in the near future.

## Pyongtaek to Be Made A Multi-purpose Port

The port of Pyongtaek, which is at present an exclusive LNG unloading and storage terminal, will be developed into a multi-purpose port.

Aiming at easing port congestion at Pusan and Inchon, the government is planning a bold project to expand the port so that it will be able to accommodate 60 ships of up to 100,000 dwt at the same time and handle a total of 40 million tons of cargoes a year.

With a schedule of the construction starting from next year, the government is to complete a feasibility survey for lock gate system and to work out a master design for the project by the end of this year by funnelling one billion won.

At the first stage of the expansion project which is scheduled to be completed by 1996, the port will be developed into one of the nation's gateways for foreign trade capable of accommodating 18 ships at a time at a cost of 318.4 billion won.

(Korean Maritime News)

The Ports Authority has spent Japanese Yen 7,600M. equivalent to Rs. 760M. for the stage I of the JCT and Japanese Yen 8,941M. equivalent to Rs. 1300M. for Stage II of the JCT.

### Training Institute

Sri Lanka Ports Authority has inaugurated a Training Institute. It is the only Training Complex in the region with facilities for training in Port operation, management and technical training within a single organization. The training facilities include:

- Equipment Operator, Training Yard
- Ship-Simulator/Training Rig
- Mechanical/Electrical Workshop — capable of taking in 150 at a time
- Air-conditioned Curriculum Unit
- Six air-conditioned Class rooms could accommodate up to 26 in each
- Technical Library
- Air-conditioned Auditorium could accommodate 300
- Air-conditioned Audio Visual Room.

## Security Services Now Available to Private Firms at Kelang

KPA security personnel are now available for hire to all private firms operating within the fenced areas of North Port and South Port as well as to those leasing KPA land outside the fenced areas. Guards to escort payrolls are also included in the new service.

Previously, security services for the private sector were confined to the supply of guards on board ships.

To cater for the extended service, a Special Services Unit has been set up in the Security Department. The 25-man unit is headed by Assistant Security Officer Abdul Hadi Aziz.

Members of the unit are specially trained to deal with different work procedures and situations in private companies. If a company has a long-term contract for security services, the guards are trained specifically to orientate themselves with the environment of the company concerned.

(WARTA LPK)

## Tug Service by PSA Faster and Cheaper

Over the past decade, the number of vessel arrivals (over 75 GRT) has increased significantly from 22,500 in 1977 to 33,400 in 1986. PSA's tugs now perform about 52,000 jobs a year as compared with 32,000 jobs a decade ago, an increase of 38%. Despite these increases, over 90% of vessels requiring tug assistance are served without delay.

To provide efficient tug services, PSA's policy has been to maintain a modern fleet of tugs. The older craft are replaced with new highly manoeuvrable tugs equipped with fire-fighting and anti-oil pollution capabilities. The time taken to deploy tugs has been reduced by linking the tug and pilotage computer systems, which expedites the processing of orders and amendments.

To maximise the availability of tugs, maintenance teams work shifts so that the tugs can be sent for preventive maintenance during off-peak hours.

PSA has a fleet of 17 tugs to assist vessels in berthing/unberthing, shifting and towage operations in the Port. The tugs are of varying capacities to cater for the wide range of vessels calling here.

To meet orders promptly during peak periods, PSA's tugs are complemented by those leased from the private sector.

(PSA News)





## Berth of a nation...

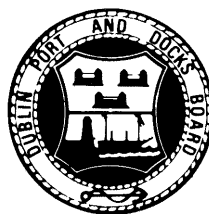
Any company's greatest asset is its people and Dublin Port is no exception. Our staff are willing, able and proud to provide the best possible service, using techniques and equipment that can't be found anywhere else in Ireland.

Dublin Port boasts the deepest Ro/Ro berth in these islands, a number of groupage depots and extensive container storage areas. There's a direct rail link to the quayside, with a full range of trans-shipment and bonding facilities.

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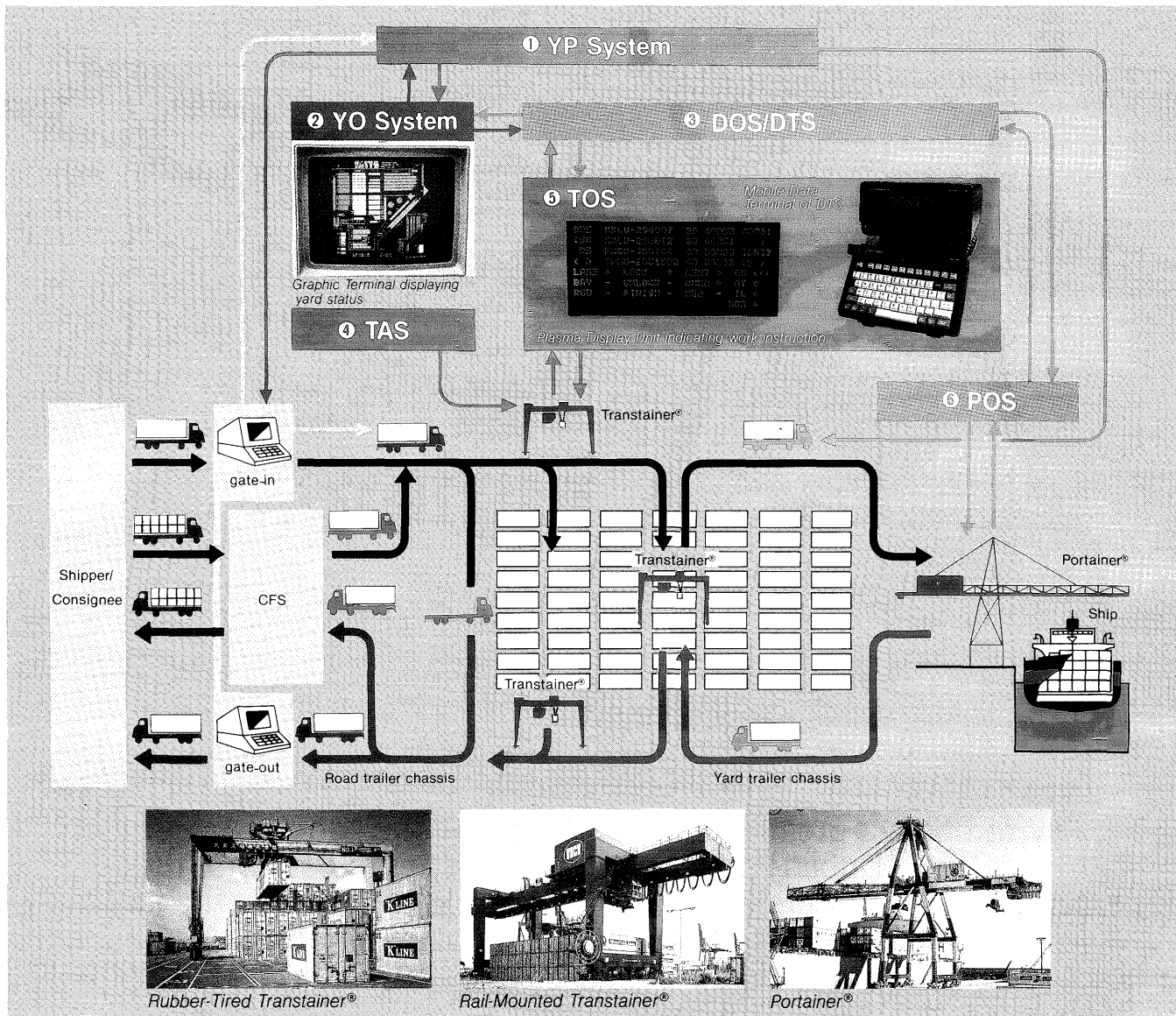
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