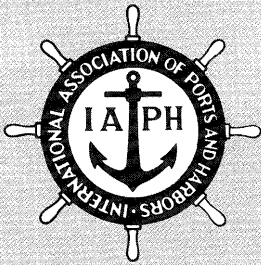


Ports & Harbors

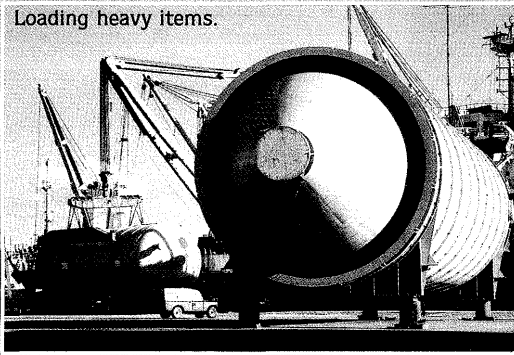
November
1994 Vol. 39 No. 9



The Publisher The International Association of Ports and Harbors

General view of El Musel Port (commercial harbour of the Port of Gijón), from the South, with the shipyard area in the foreground and the city to the north.

Loading heavy items.



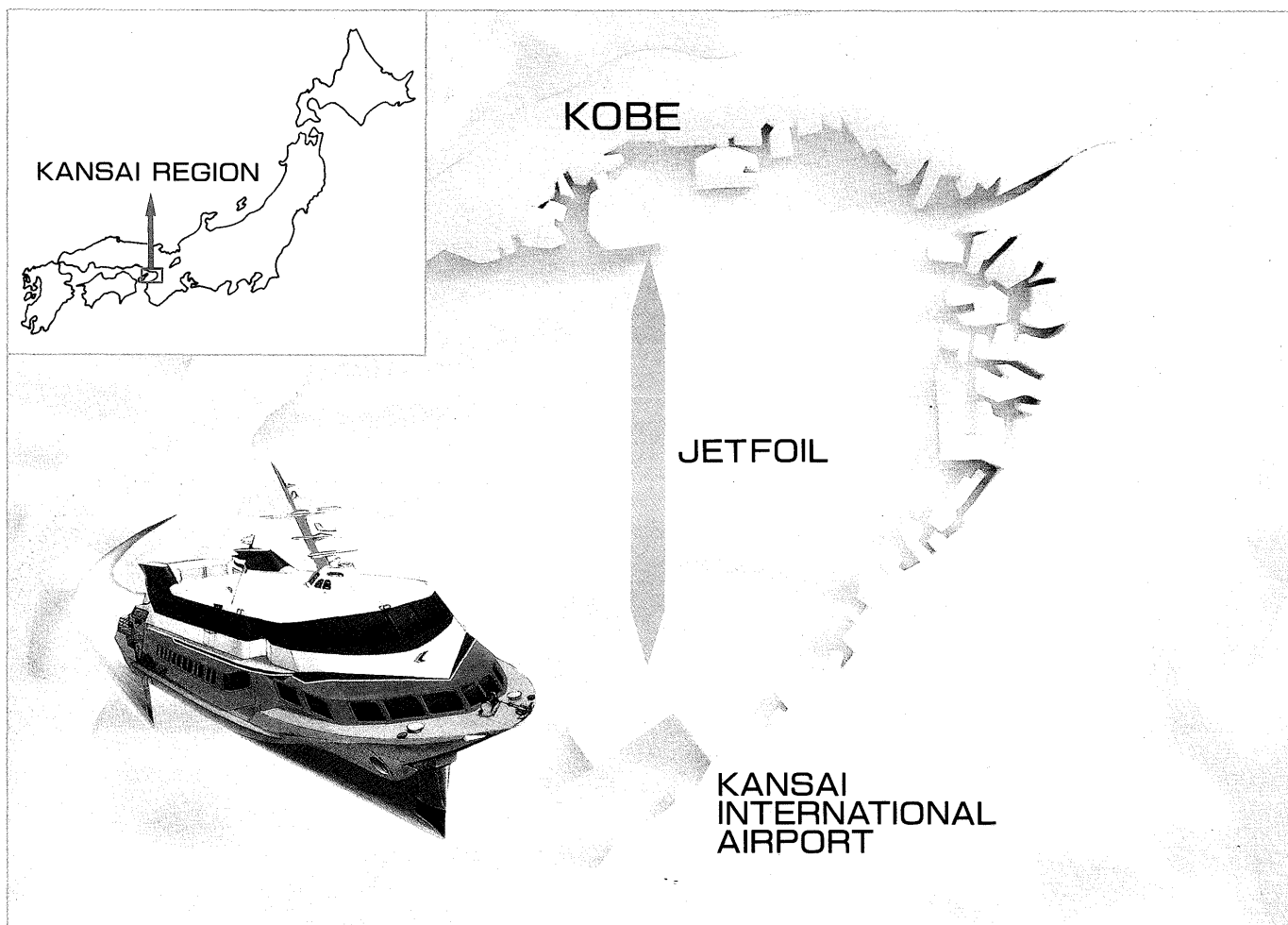
Berthing of M.V. KATSURAGI MARU at the EBHI dry-bulk terminal.



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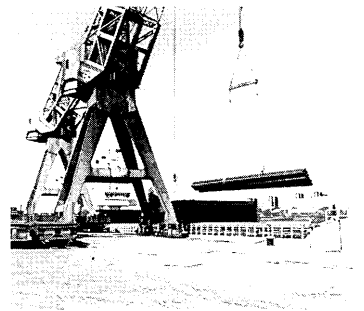
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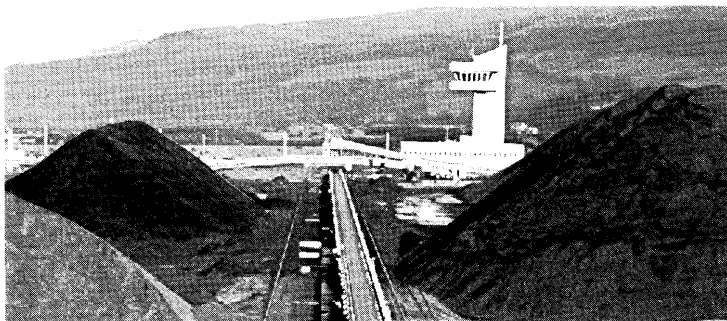
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IAPH ANNOUNCEMENTS AND NEWS



IAPH Observes 39th Anniversary

On November 7, 1994 we celebrate the 39th anniversary of the formation of IAPH. It has been thirty-nine years since our Association came into being at the inaugural conference held at the Hollywood-Roosevelt Hotel in California in November 1955.

The idea of setting up an association of world ports was first aired at a conference of the Japan Port and Harbor Association (JPHA), which was marking its 30th anniversary in Kobe, Japan. Urged by the late Mr. Gaku Matsumoto (the then president of JPHA), the late Dr. Chujiro Haraguchi (the then Mayor of Kobe) and Mr. Toru Akiyama (the then vice president of JPHA), the Association had invited a number of foreign port directors to the Kobe Conference. They took the opportunity to promote their proposal for the establishment of an international body to encourage the exchange of information and the nurturing of mutual cooperation among their counterparts in ports and harbors throughout the world with a view to contributing to world peace by promoting world trade through enhanced port activities. The Japanese pioneers' enthusiasm won the support of the participants at the Kobe Conference and the proposal to create a worldwide organization of ports was accepted. IAPH was founded upon the philosophy reflected in Mr. Matsumoto's motto "World Peace Through World Trade — World Trade Through World Ports", and this vision formed the basis of the original Constitution of our Association.

Three years of preparatory work followed, whereupon at an international port and harbor conference held in Los Angeles in November 1955 IAPH officially came into existence. Since then, 18 conferences have taken place, the last one being held in Sydney, Australia, in April 1993. In seven months' time, IAPH members will gather in Seattle for the 19th World Ports Conference, which is to take place at the Westin Hotel, from June 10 to 16, 1995, hosted by the Ports of Seattle and Tacoma. As has been the case with past conferences, the agenda will focus on the critical issues facing our members as they try to anticipate the challenges awaiting them in their endeavours to maintain a course of

sustainable development.

The IAPH global family, starting with those charter members from only 14 countries at the inaugural conference 39 years ago, has now grown to encompass a membership from over 80 countries and economies.

Our Executive Committee, comprising 30 members representing the three regions (Africa/Europe, Americas and Asia), is the chief executive body, whose mission is to implement the Board's policy and to generally direct all the Association's activities.

To characterize our Association's activities, the technical committees have played a most significant role in producing various reports and guidelines on the major global issues faced by world ports. Traditionally, our committees have tackled in a timely manner those issues of greatest concern to our members in preparation for the changes to come. In the early '60s, the Committees on Containerization and Large Ships were already actively involved in the research work and studies on the trends while the International Port Development Committee was also committed to providing technical assistance to ports in developing countries.

In the '70s and '80s, the scope of activities of the committees have gradually increased to include such issues as port safety, the environment, dredging, the legal protection of port interests, trade facilitation and port communities. Currently there are 12 committees in three groups. The Committees under the "Port Affairs" group are: Port Planning & Construction; Dredging Task Force; Port Safety & Environment; Marine Operations and Cargo Operations. Under the "Trade Affairs" group: Sea Trade; Ship Trends; Combined Transport & Distribution; and Trade Facilitation. In the "Human & External Affairs" group: Human Resources; Legal Protection; and Port Communities. The results of the work done by the respective committees during the biennium will be presented to next year's Conference in Seattle for approval.

IAPH has had NGO consultative status with the United Nations Economic and Social Council (ECOSOC) since 1966,

(Continued on Page 5)



19TH IAPH WORLD PORTS CONFERENCE

Hosted by the Ports of Seattle and Tacoma • Westin Hotel, Seattle, Washington, U.S.A. • June 10-16, 1995

Where in the world will you be in June 1995?

Invitation letter sent out to all IAPH members

Recently our hosts in Seattle and Tacoma have sent out the letter reproduced below to all IAPH members. Mr. M. R. Dinsmore of Seattle and Mr. John J. Terpstra of Tacoma are heading for Tokyo, where they are to make promotional presentations at a gathering which the IAPH Foundation plans to organize for the IAPH members in Japan on October 13, 1994. In the next edition, we will feature the IAPH Japan Seminar, with particular focus on the presentations to be made by Mr. Dinsmore and Mr. Terpstra.

September 15, 1994

Dear IAPH Member:

Where in the world will you be in June 1995?

It is our sincere hope that you will be in Seattle — Tacoma, Washington, USA — to participate in the 19th World Ports Conference of the International Association of Ports and Harbors.

The Ports of Seattle and Tacoma are co-hosting the conference, and we promise you it will be a truly memorable one. We have chosen the theme "New Challenges, New Partnerships" for the conference, which will also mark the 40th anniversary of the establishment of the IAPH organization. Our goal is to offer the best in terms of thought provoking speakers and business topics, as well as giving our IAPH visitors ample opportunities to explore the Seattle-Tacoma area. We also want you to take advantage of the beauty and majesty of the entire Pacific Northwest region.

The official hotel for the conference will be the Seattle Westin Hotel (US\$157 per room, per night - standard single or double occupancy room). The registration fee for the conference is US\$1,000 for IAPH members who register prior to April 10, 1995, and US\$1,200 after that. Please note that the delegate fee includes an accompanying guest registration. Additional conference details are available in the July-August 1994 issue of "Ports and Harbors" magazine.

During the coming months, we will be sending you additional conference information along with registration forms. We are confident that you will find the week an excellent combination of business programs and social events for both you and your guests.

We look forward to seeing you in June 1995!

Sincerely

M.R. Dinsmore
Conference Vice-President
Executive Director
Port of Seattle



John J. Terpstra
Conference Vice-President
Executive Director
Port of Tacoma



IAPH Observes 39th —

(Continued from Page 3)

the International Maritime Organization (IMO) since 1967, the United Nations Conference on Trade and Development (UNCTAD) since 1973, the Customs Cooperation Council (CCC) since 1982 and the United Nations Environment Programme (UNEP) since 1991. Our Association actively participates in their programs and makes recommendations from time to time, either at the request of these organizations or on its own initiative, through specially appointed Liaison Officers.

The day-to-day work of IAPH is carried out through the Head Office in Tokyo in close contact with the President, the Vice-Presidents, the Chairman of Legal Counselors, the Executive Committee, the Chairpersons of the various internal and technical committees as well as with liaison officers.

All the staff members, headed by Secretary General Kusaka, are working as a team to sustain the development of this unique organization, which will continue its endeavours for the benefit of all ports and harbors throughout the world. It would be fitting for us to recall the remarks (originally quoted from the words of Samuel Pepys, the British philosopher) by Mr. John Mather, our immediate past President from Clydeport, at the Sydney Conference. He said, "There are no strangers in the world port communities of the IAPH membership, only friends we have yet to meet."

(By Kimiko Takeda)

1999 Conference: 5 Offer Invitations

In response to the Secretary General's letter dated April 20, 1994 sounding out the Regular Members in the Asian Region as regards the possibility of hosting the 21st World Ports Conference of IAPH to be held in the region in 1999, by the deadline for entry of invitations set at the end of September five ports had confirmed their candidacy for the host of the 21st biennial conference.

They are (in order of receipt of the invitation at the Tokyo Head Office):

- The Port of Osaka
- The Port of Kobe
- Port Authority of Thailand
- Klang Port Authority
- The Port of Yokohama

The final decision is to be made by the Board of Directors through voting at its post-Conference meeting in Seattle, which is scheduled for the afternoon of Friday, June 16, 1995 after the close of the 19th Conference, on the basis of the invitations from the five interested ports above.

Secretary General Kusaka has thanked all the candidate ports for the warm and timely invitations they offered IAPH and for their willingness to make official presentations to the Board in Seattle next year.

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IAPH/IMO Interface Group Meets Sept. 8

IAPH members will recall the formation of the IAPH/IMO Interface Group at Exco's meeting in Copenhagen early in June this year.

Such is the Group's commitment and determination to make a positive contribution to IMO activities that three meetings have already taken place; not an easy happening having regard to the Group's wide-spread membership comprising:

Jean Smagghe — 2nd Vice-President, IAPH (French Ports Association)
Pieter Struijs (Rotterdam)
Goon Kok Loon (Singapore)
Tom Kornegay (Houston)
John Mather, Immediate Past President, IAPH (Clydeport)
Philippe Prevot (Le Havre)
Alex J. Smith, IAPH European Representative (London)

Of IMO's 30 plus meetings in any year some 20 deal with matters of real significance to IAPH members. It is therefore a pre-requisite of the Group's efforts to be generally familiar with the relevant Agendas well in advance of the

meeting dates.

Having established priorities for possible action by IAPH within parameters set by the Executive Council, the Group is able to inform IAPH's Technical Committees of issues to which they are required to respond so that IAPH position papers can be prepared for presentation.

The Group's most recent meeting took place on 8 September 1994 and it was possible to review the work programmes of IMO meetings up to the end of the year. Most importantly the Group endorsed the immediate submission of IAPH papers to the meetings of IMO's Working Group on Ship/Port Interface (24-28 October) on the following subjects:

1. Financial and Organisational Aspects of Reception Facilities at Ports
2. Consideration regarding Education and Training of Personnel Charged with the Handling of Dangerous Substances as General Cargo in Ports
3. Risk Analysis and Contingency Planning
4. Problem Ships in Ports
5. Use of Electronic Data Exchange (EDI) for Ship/Port Interface

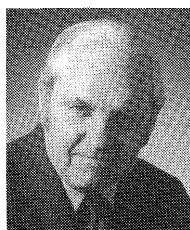
The Group meeting concluded with a most informative and useful visit to IMO to meet Secretary-General William A O'Neil who expressed his pleasure to know of IAPH's continuing and supportive commitment to his organization.



Beginning (clockwise) Mr. Alex J. Smith, Mr. Otto Dijkhoorn, Head of Cargoes and Facilitation Section, IMO; Mr. Jean Smagghe; Mr. H. Tom Kornegay; Captain John Watson, Mr. Pieter Struijs; Mr. W.A. O'Neil, Secretary-General, IMO; Mr. Mark Heah (Port of Singapore) and Mr. Philippe Prevot.

Mr. Falvey Reports On UN CSD Activities

Mr. Patrick Falvey, Chairman of the IAPH Legal Counselors (Special Council, Port Authority of New York & New Jersey), has recently sent a letter to President Lunetta and circulated a copy to the three Vice-Presidents (Cooper, Smagghe and Taddeo), Secretary General Kusaka, the Chairman and Vice-Chairman of the Legal Protection Committee (Valls and Keenan) and the members of the IAPH/IMO Interface Group (Smith, van der Kluit, Mather, Struijs, Goon, Prevot and Kornegay), reporting on the activities of the Commission on Sustainable Development of the United Nations during 1993 and of the results of the Commission meeting on May 16-27, 1994 at New York.



Mr. Patrick J. Falvey

Mr. Falvey's report follows.

Although I did not attend the meetings, I have obtained a copy of the Commission's report. Items of interest to IAPH are set forth below.

Recalling that the Commission is the U.N.'s appointed agent to follow up on the fulfillment of Agenda 21 of the RIO Conference on the Environment and the IAPH policy to carefully follow the Commission's decisions and studies, the most important item to mention is that the Commission has reaffirmed its decision to focus each year on particular clusters of Agenda 21 items and to defer until a later year focusing on the cluster of land side and maritime operations. Immediately and urgently, I should add that this should not deter the IAPH from taking steps to intensify its liaison with and attention to the Commission's activities.

One of the report's findings and recommendations is of particular note in my opinion: there is a lack of coordination among the international agencies having cognizance of the development of global economy and environmental regulations; also, there is a continuing need on the part of these agencies and the Commission for expert technical information and assistance. I see a symbiosis between the two of possible benefit to the IAPH. The existence of the IAPH/IMO Interface Group presents an opportunity for the IAPH members to urge the IMO to emphasize coordination with the Commission on Sustainable Development (CSD), especially the monitoring of its decisions. The Interface Group may also be the instrumentality for providing IAPH information and expertise to the CSD. The CSD acknowledges its lack of resources, both financial and technological, and would welcome the suggested input, I believe. Note, too, that the UN Secretary General has established a higher level Advisory Board to the CSD with which the IAPH/IMO Interface Group might liaise.

In the same vein, the CSD urges governments and international organizations to encourage and enhance the involvement of major groups and non-governmental organizations to provide information and other input in regard to efforts to carry out Agenda 21, by individual nations.

While not stated so bluntly, I detect in the CSD report concern that Agenda 21 may impede needed economic activity and aid from the donor countries to the CSDs, pointedly stating that the primary mission is the survival and the improvement of the standard of living in their populace. The CSD report states: "eradicating poverty and

meeting basic human needs in the process of pursuing sustainable development are overriding priorities" for developing countries.

It is also clear from the CSD report that the CSD in its monitoring of the efforts to carry out Agenda 21 has concluded that the parties to RIO have not made sufficient progress within their own borders and certainly not in the global area of environmental improvement visualized in the RIO declaration and Agenda 21. This will undoubtedly become a major theme of certain single minded environmental advocacy groups both in their presentation to national governments and in their fund raising programs.

The CSD urges governments to sign on the Basel Convention on Hazardous Wastes and to support the international fund for cleanups established by Basel. It urges that high priority be given to the illegal disposal of tanker ballast and sludge into marine waters. Enforcement of the violated existing regulatory conventions is suggested as a first step.

Finally, the CSD decided to establish an inter-sessional ad hoc open ended Working Group of Governments to nominate experts to assist the Commission in examination of issues relating to the clusters of Agenda 21. The first such group is to focus on land, desertification, forests and biodiversity. This pattern should continue into the future when the more directly applicable cluster for the IAPH comes under intensive scrutiny by the CSD.

Patrick Falvey
Chairman of IAPH Legal Counselors

IAPH Essay Contest: 13 Entries Received

By the closing date for submission of entries to the IAPH Award Scheme 1994/1995, the biennial essay contest, the IAPH Head Office had received entries from the individuals listed below. The papers are to be screened by the panel of judges, of which Mr. Goon Kok Loon from Singapore, Chairman of the IAPH Human Resources Committee, serves as chairman, and the results will be announced in early next year through this journal. The winner of the top prize "The Akiyama Prize" will be invited to attend the 19th World Ports Conference of IAPH in Seattle, where he or she will receive the prize from the IAPH President at the first plenary session, which is scheduled for the morning of June 12, 1995.

ENTRIES TO THE 1994 ESSAY CONTEST

No. Name & Port	Title of Essay (E) English, (F) French, (S) Spanish
1. A.K. Tettey Claims & Documentation Operations Department Ghana Ports & Harbours Autho. Ghana	"How Quality of Port Services Could Be Improved?" (E)
2. Teresita S. Oblepias (Mrs.) Port Operations Specialist Port Opns. & Services Dept. Philippines Ports Authority Philippines	"How to Improve the Quality of Port Services" (E)

- | | |
|---|--|
| 3. Wang En De
Director
Port of Tianjin Authority
China | "The Practice and Results of the Establishment of Tianjin Port Free Trade Zone" (E) |
| 4. Abu Ahmed Shikdar
U.D.A., Planning Cell
Mongla Port Authority
Bangladesh | "How the Quality of Port Services Could be Improved?" (E) |
| 5. Xi Zhicheng
Port Director
Nanjing Port Authority
China | "Promote Port Service Quality With Science & Technology" (E)
(jointly authored by Chao Wenmo) |
| 6. Rita S. Ogbinar (Mrs.)*
Manager
Curriculum Development & Research Division,
Philippine Ports Authority
Training Center
The Philippines | "How the Quality of Port Services Could be Improved?" (E) |
| <i>* 2nd Prize Winner in the previous contest</i> | |
| 7. Erinaldo T. Carreon
Port Operation Specialist
Philippine Ports Authority
The Philippines | "An Alternative Approach to Improve Port Services" (E) |
| 8. W.S. Samaratunge**
Additional Personnel Manager
Sri Lanka Ports Authority
Sri Lanka | "How the Quality of Port Services Could be Improved?" (E) |
| <i>** 1st Prize Winner in the previous contest</i> | |
| 9. Mr. Ephraim Kisanji Mageni
Kenya Ports Authority
J... Section
Kenya | "How the Quality of Port Services Could be Improved?" (E) |
| 10. Dr. eng. Romeo Ciortan
Constantza Port
Administration
Romania | "New Facilities in the Port Hinterland The Concept of Logistics Activity Zone (ZAL) in the Development of Constantza Port, Romania." (E) |
| 11. Mr. Lawrence Oladele Alabi
Nigerian Ports Plc.
Nigeria | "How the Quality of Port Services Could be Improved?" (E) |
| 12. Mr. Wu Wen-fa
Senior Engineer
Qingdao Harbor Authority
China | "A New Type Derricking Mechanism of Harbour Portal Crane" (E) |
| 13. Mr. Peter Y C Ng
Jardine East Asia Shipping
Ltd
Hong Kong | "Hong Kong Container Terminals A Timely Change is Required" (E) |

Mr. Pages reports on the EUROTUNNEL

Mr Andre Pages, an IAPH Honorary Member from Bordeaux, has recently sent the IAPH Head Office an article on EUROTUNNEL, as it was one of the topics Mr. Pages discussed when he, together with his wife, visited the Tokyo Secretariat last May. Mr. Pages has been serving on the Legal Protection Committee, formerly as Chairman and now as a member, and has represented IAPH at the various IMO/UNCTAD joint meetings. We take pleasure in introducing his report on EUROTUNNEL later in this issue, although the subject is irrelevant to his committee activities.

Visitors to Head Office

On Tuesday 30 August, a group of ten experts of the CUTA (Chinese Undersea Technology Association, Taipei) visited the head office, where they were received by Mr. R. Kondoh of IAPH. The mission was visiting Japan to see and study about the current situation and future plans for the man-made island for various purposes, including industrial, commercial and transportation. During its 12-day research visit, the mission, led by **Mr. Sung-Mao Wang**, Executive Secretary, Science & Technology Advisory Group, and accompanied by **Mr. Grobman Wen Lin**, CUTA Secretary General, visited the ports of Yokohama, Kobe and Osaka. The creation of land space by means of filling water areas has become an accepted practice in Japan. In Yokohama, the mission also visited the Hakkeijima Resort Island, a newly created man-made island devoted to recreational purposes. In the Osaka area, the mission visited Kansai International Airport, which was opened and made operable on September 4, created on an artificial island reclaimed from the sea at 5 kilometers offshore.

On Tuesday 13 September, **Mr. F.G. MaKenzie**, Chairman, and **Mr. John Halling**, Chief Executive of Port of Tauranga Limited, New Zealand visited the head office and were received by Mr. H. Kusaka and his staff. The visitors were on a trade development mission to Japan, the U.S.A. and Europe.

On Tuesday 20 September, **Mr. George A. Gratsos**, Member of the Executive Committee, BIMCO and **Capt. Steen Stender Petersen**, Deputy Secretary General of BIMCO (President, Standard Bulk Transport Corporation, Athens, Greece), visited the head office to meet with Mr. R. Kondoh for an exchange of views and comments on various items of mutual concern and interest. The visitors had been attending the BIMCO Exco meeting, held for the first time in Japan the previous day. At the promotional presentation by BIMCO held on Monday 19 September, **Mr. Cheng-Eng Lua**, BIMCO President (Dy. Chairman, Neptune Orient Lines, Singapore), and **Mr. Finn Frandsen**, Secretary General, made an extensive presentation on the roles to be played by BIMCO and urged the local shipping circles to join.

On Wednesday 28 September, a group of five experts representing a research institute on ports and harbours and the major ports of Kaohsiung, Keelung and Taichung visited the head office and met with Mr. R. Kondoh and head office staff. During its three-day stay in Japan the research mission, headed by **Mr. Wang, Chin-Fu**, Chief, Planning & Design Department, Institute of Harbour and Marine Technology (IHMT, Taichung) visited the Port of Yokohama on Tuesday 27 September and Tokyo Port Terminal Corporation the following day. The other four visitors were: **Mr. Lee, Ge**, Chief, Planning, Port of Keelung, **Mr. Liau, Ju-Shiou**, Chief, Planning, Port of Taichung, **Mr. Ge, I-Min**, Chief, Planning, Port of Kaohsiung, and **Mr. Ju, Jin-Yuan**, IHMT Researcher. The Mission was scheduled to visit Hong Kong, Singapore and Malaysia to study those fast growing shipping markets.

The IPD Fund: Contribution Report Fresh donations expected

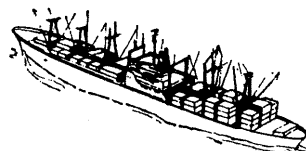
We regret that there has been no progress in our fund-raising campaign for the IPD Fund in recent months. Of the targeted amount of \$70,000, we have so far been able to raise a little over \$50,000. We look forward to receiving fresh donations from our members to the IPD Fund as soon as possible.

Contributions to the Special Fund For the Term of 1992 to 1994 (As of Oct. 10, 1994)

Contributors	Amount
Paid:	(US\$)
ABP (Associated British Ports), U.K.	3,000
Abu Dhabi Seaport Authority (Mina Zayed)	3,000
Akatsuka, Dr. Yuzo, Univ. of Saitama, Japan	230
Akiyama, Mr. Toru, IAPH Secretary General Emeritus, Japan	1,000
Auckland, Ports of, Limited, New Zealand	500
Barcelona, Puerto Autonómico de, Spain	1,000
Bintulu Port SDN BHD, Malaysia	200
Cameroon National Ports Authority, Cameroon	480
Cayman Islands, Port Authority of, the Cayman Islands	250
Clydeport Ltd., U.K.	1,000
Constanta Port Administration, Romania	250
Copenhagen Authority, Port of, Denmark	1,000
Cotonou, Port Autonome de, Benin	100
Cyprus Ports Authority, Cyprus	1,000
Delfzijl/eeemshaven, Port Authority of, the Netherlands	350
de Vos, Dr. Fred, IAPH Life Supporting Member, Canada	150
Dubai Ports Authority, U.A.E.	500
Dundee Port Authority, U.K.	250
Empresa Nacional de Administracao dos Portos, E.P., Cabo Verde	250
Fiji, Ports Authority of, Fiji	100
Fraser River Harbour Commission, Canada	250
Fremantle Port Authority, Australia	250
Gambia Ports Authority, the Gambia	250
Ghana Ports and Harbors Authority, Ghana	250
Hakata, Port of, (Fukuoka City) Japan	1,705
Halifax, Port of, Canada	250
Helsingborg, Port of, Sweden	500
Hiroshima Prefecture, Japan	523
Irish Port Authorities Association, Ireland	1,000
Japan Academic Society for Port Affairs, the, Japan	267
Japan Cargo Handling Mechanization Association, Japan	259
Japan Port and Harbor Association, the, Japan	493
Japanese Shipowners' Association, the, Japan	516
Johor Port Sdn. Bhd., Malaysia	500
Kawasaki, City of, Japan	1,702
Klang Port Authority, Malaysia	200
Kobe, Port of, Japan	3,665
Kobe Port Terminal Corporation, Japan	924

Korea Container Terminal Authority, Korea	100
KSC (Kuwait Oil Company), Kuwait	1,000
Kudo, Dr. Kazuo, Tokyo Denki University, Japan	4,000
London Authority, Port of, U.K.	500
Maldives Ports Authority, Maldives	100
Marine and Harbours Agency of the Department of Transport, South Australia, Australia	150
Marine Department, Hong Kong	500
Maritime Services Board of New South Wales, Australia	367
Mauritius Marine Authority, Mauritius	200
Melbourne Authority, Port of, Australia	1,000
Miri Port Authority, Malaysia	100
Montreal, Port of, Canada	500
Nagoya Container Berth Co., Ltd., Japan	518
Nagoya Port Authority, Japan	3,564
Nanaimo Harbour Commission, Canada	250
Napier, Port of, Limited, New Zealand	100
New York & New Jersey, Port Authority of, U.S.A.	1,000
Niigata, Port of, (Niigata Prefecture), Japan	860
Okubo, Mr. Kiichi, Japan	274
Osaka Port Terminal Development Corp., Oapan	570
Pacific Consultants International, Japan	243
Penta Ocean Construction Co., Ltd., Japan	500
Point Lisas Industrial Port Development Co. Ltd., Trinidad	100
*Primer Concurso Internacional de Memorias Portuarias: Carlos Armero Sisto, Anuario de Puertos: Buenos Aires, Argentina	300
Public Port Corporation I, Indonesia	180
Pusan East Container Terminal Co. Ltd., Korea	200
Qubec, Port of, Canada	250
Shipping Guides Limited, U.K.	500
Solomon Islands Ports Authority, Solomon Islands	100
South Carolina State Ports Authority, U.S.A.	1,000
Tauranga, Port of, New Zealand	500
Toyama Prefecture, Japan	254
UPACCIM (French Ports Association), France	1,905
Vancouver, Port of, Canada	500
Total:	US\$50,299

**1st International Contest of Port Annual Reports sponsored by the Yearbook of the Port of Buenos Aires (Editor, Mr. Carlos Armero Sisto)*



Information System for General Cargo Management at Shed/Yard

By Ye Hanlin
Information Centre
Shanghai Port Authority

1. Summary

Cargo management at the shed/yard is a crucial basis for port operations and also one of the main information sources for port management. At times of manual management, because of the big variety of cargo, complicated specifications, and the wide difference in intra-port cargo movement, it is very difficult to grasp clearly the situation concerning the state of cargo movement at port. Any small oversight will cause confusions and difficulties for port operations.

Based on the characteristic of shed/yard management, our General Cargo Management Information System has adopted the control structure of multi-point collection of data, central processing and distributive output. The data processing is divided into two parts: data before cargo handling and after cargo handling. Data before cargo handling mainly covers: ship handling time, list of delivered cargo, cargo handling notification, cargo manifest and warehouse operation plan. Data after cargo handling covers: input or correction of inbound (outbound) cargo quantity at each management point, data updating of cargo in stock, the obtaining of information as well as data processing and the output of cargo in flow, shifts, day and night operations and whole ship handling, data classification as well as processing, and output of cargo records for each shed/yard.

The development of the system lasts about one and a half years, of which two months are for system planning, four months for system analysis, three months for system design and nine months for putting the system into operation (including program design, system commissioning and system transforming).

2. Results

The application of the system has made it possible to monitor the management of ship-handling as well as of cargo coming in and going out of the shed/yard. Every month, it can manage about ten imported bulk ore carriers, 180 Yangtze River barges and nearly 100 ships for domestic cargo. Through this system, managers and operators can control operations by knowing the latest cargo management situation. Thus, it improves the management quality and the utilization efficiency of the shed/yard.

Before, there needed to be 32 people for cargo management on site, but since the computer was applied, only ten have been needed. This saves about 220,000 RMB every year. Originally, there were about 60 of various documents and reports, the annual cost for which is around 80,000 RMB. Since the computer was applied, the annual cost has been only 15,000 RMB. Meanwhile, as the use of a computer can promptly provide the schedule for the

handling operation, handling efficiency has been improved and the amount of time a ship spends has been shortened, which has resulted in an increase in quick dispatch income. Moreover, this can also provide evidence of charging in time to avoid overdue payment.

The application of computers in general cargo management has changed the original management structure, with a replacement rate of more than 95%.

3. Technology Used

a. Hardware

Host:	AST — 486/DX 33
Simulation terminal:	AST — 386/SX 33*4
Host memory (RAM)	10MB
Monitor:	Standard VGA
UPS:	SANTEK 1000W. SANTEK 500*4
Data transceiver:	4 pairs
Communication speed:	6,600 bps
Printer:	CR — 3240*4

b. Software

C-XENIX operation system (Chinese version) V.2.3.2
Multi-user FOXBASE (Chinese version) V.2.1.3

c. Services that were used in the application

System development:	4 software engineers
System maintenance:	1 software engineer
User training:	120 tally people
	15 cargo delivery people
	6 data statisticians

4. Obstacles Overcome

The first obstacle we have is that the division of the cargo site at the shed/yard changes very often, for which there are two main reasons. Sometimes it happened that there is more than one mark of cargo on the same site. Normally, we add one additional segment to represent a unit of a certain cargo site. Another situation that occurs is that a batch of cargo (e.g. large-sized equipment) occupies more than one cargo site. As for this situation, we input the quantity and weight of cargo to the smallest cargo site while keeping the other cargo sites usable. In addition, we stipulate that the data of cargo in/out should be input at the same time. In this way, the several cargo sites are actually used as one site.

The redundancy or shortage of unloaded inbound cargo and discrepancies in the cargo record are errors that usually happen in port operations. As for the former situation, the tallyman will normally compensate for it with cargo of the same ship, type and package. The computer system will print out the redundancy or shortage as well as its compensation for each mark of cargo on the same ship. The error in cargo quantity is corrected by supplementary input to make it conform to the cargo record.

Pilot Management Information System in the Port of Shanghai

By She Ilui

Dept. of Information System
Shanghai Port Authority

1. Summary

Marine traffic in China has been expanding continuously in pace with the vigorous development of the economy. In Shanghai, the number of vessels entering and leaving the harbour every day has increased enormously, and since most of these vessels need piloting, there is great pressure on management and work on the Shanghai Harbour Pilot Station in their dispatching. The original manual method cannot meet the rapid development of business as working hours have been prolonged and the error rate has increased.

In view of the above-mentioned reasons, we have developed a Pilot Management Information System for the pilot station, which uses computers as the tool of management. The system fully utilizes the advantages of computers, such as their large capacity, high speed and great reliability, while still retaining some useful aspects of the original method. Now, the system can perform the following pilot planning, plan revisions according to the latest situation, supervision and inquiries concerning the actual application as well as the automatic assignment of pilots.

The system has worked well since it was put into use. It has solved all the problems of the original method and has greatly improved the management and dispatching efficiency of the pilot station, which meets the demand for the development of the Port of Shanghai.

It took 10 months to develop the whole system after the procedure of system analysis, system design, detailed design and system application, which fully conforms to the theory of "software engineering".

2. Results

The system has reflected great advantages since being applied in pilot management. The dispatchers can easily know through computers all the details of a ship from its entry into the port till its departure, which has led to a great improvement in efficiency. The details are:

1) It saves time and cost.

Before, there were more than 10 staff working at least 10 hours a day in the dispatch department. Now, they only need to work 8 hours a day. Moreover, the staff has been reduced by about 3 or 4 as the system is capable of doing data input, processing, changes and inquiries by several users at the same time. Meanwhile, as the system has the records of all the ships calling at the Port of Shanghai, it saves a lot of inquiry time and paperwork.

2) It is safer than before.

Previously, the pilot planning, assignment of pilots and even proofreading were all done manually, which resulted in a high possibility of making errors. Since the system was applied, the planning has been jointly carried out by both computer and staff, with the proofreading done by computer. Moreover, the system has been specially treated for safety during the design. So the error rate has decreased from the previous 1% to 0.05%.

3) It enhances pilot capacity, which is beneficial for increasing port traffic.

Under the original working method, pilot capacity was limited to 50 to 60 ships a day. Since the system was applied, the capacity has been increased to about 100 ships, without other equipment being added.

3. Technology Used

a. Hardware

Host:	AST — pp/4
Terminal:	Guoguang GJ — 925A *3
Simulation terminal:	AST — pp/3
Printer:	STAR CR — 3240

b. Software

SCO XENIX Operation system (Chinese version) V.2.3.2
SCO Multi-user FOXBASE (Chinese version) V.2.1.3
Simulation software: PROCOMM

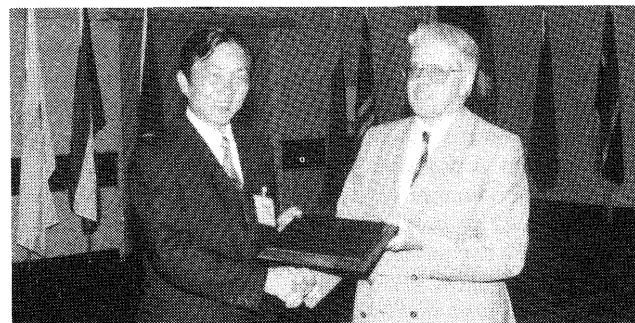
c. Services that were used in the application

System development:	2 software engineers
System maintenance:	1 software engineer
User training:	4 dispatchers
	1 data input person

4. Obstacles Overcome

The most difficult technical problem is how to meet the requirement for rapid information change and real-time data processing. When the pilot plan is put into practice, there may be various unexpected incidents. Once this happens, it is necessary to change the plan conveniently in the system and to guarantee the integrity of the data. The method we adopted was to list all the items of changeable information on the screen, so once revision is needed, the user only has to press the code for the relevant item to change the data. After that, the computer will check for conformity and record the procedure of the revision.

After the system was put into practice, we also met other obstacles. For instance, the dispatchers had never touched computers and therefore had misgivings about the system. In order to solve this problem, we tried our best to improve the interfaces of the system so that users could accomplish most of the work by merely pressing a number. On the other hand, we attached great importance to training at the trial-run stage and helped dispatchers to input data so as to dispel their misgivings.



At a gala dinner for the Ports Canada Computer Conference on June 8, 1994, Mr. Tu Deming, Director of the Port of Shanghai (left), receives the award from Mr. David Jeffery, Chairman of the IAPH Trade Facilitation Committee.

OPEN FORUM

Issues in the Commercialisation of Australia's Ports

An edited version of an address recently made in Australia by

John K. Hirst
Executive Director
The Association of
Australian Ports
and Marine Authorities Inc
(AAPMA)



Introduction

In Australia comments concerning port reform, port costs and port performance are mostly directed at port authorities. Such statements appear to show a lack of understanding that the cost of using a port is made up of many individual costs from a number of service providers.

It appears little recognised that the direct commercial role of Port Authorities in ports in Australia has diminished over the years as a result of the substantial reforms already undertaken by them, and that, conversely, the direct commercial role and importance of port service providers, who act normally with commercial independence from the port authorities, has increased. The port service providers, in most cases, include pilots, tug operators, line handlers and stevedores, Government services (e.g. Customs, Quarantine) and also land transport services. In addition, there are direct government charges at both Federal and State level applying to port users which are not set by port authorities such as charges for navigation aids and conservancy.

It is the totality of the costs of the service providers together with the charges levied by Governments and port authorities that determines the "port cost". The total "port cost" is the cost which is generally criticised as being too high relative to the costs in ports in other countries, which, in turn, causes comments to be made about Port Authority reform. Yet, these costs are often not port authority costs and where they are, they are influenced by factors such as a requirement to pay a dividend to Government etc.

Current estimates of the proportion of the total port cost attributed to port authorities for the container trade in Australia's capital city ports is of the order of 22-30% with the major cost attributable to stevedoring which accounts for between 60-70% of total port costs.

AAPMA does not contend that commercially structured port authorities should be treated differently to other business entities. The Association does, however, see a need for Governments (when establishing themselves in the role of

owner/shareholder in corporatised ports) to set commercially realistic target returns and associated dividend contributions (if they see a need for a dividend payment) as well as allow ports to manage themselves without Government controls. In other words, Governments should not expect to enjoy contributions from the port businesses in which they engage which are any higher than would be obtainable were the same business activities to be conducted by the private sector in competitive circumstances.

Reforms Achieved

With all the mis-informed criticism often levelled at port authorities, it was encouraging to read a recently released report prepared by an Australian Government Steering Committee on National Performance monitoring of Government Trading Enterprises (GTEs) which identified port authorities as the GTE sector which has improved the most in the last five years out of the 56 GTEs surveyed. The Executive Summary stated "The largest improvements (out of all the industry groups) have been achieved by port authorities, which increased sales margins over the six-year period, reduced real prices by almost 30 per cent and cut real debt by almost half."

These improvements have been achieved by port authorities through a number of major reforms with the aim of meeting the goals of being world class, operating at the highest level of productivity, being low cost and yet earning a reasonable return on investment and encouraging the maximisation of throughput. Many of these reforms were highlighted in the Steering Committee's report.

Reforms achieved by port authorities include:

- Reductions in the number of people employed. Between 1988 and 1993 port authority employee numbers fell by 47%. Specific examples include the Maritime Services Board which has reduced staff numbers by 62%, the Port of Melbourne Authority which has reduced their numbers by 54%, the South Australian Marine and Harbors Agency which has decreased numbers by 44% and Fremantle Port Authority which has decreased numbers by 47%, all since 1988. It is interesting to note that the Port of Brisbane Authority reduced its staff numbers by 50% between 1984 and 1988 and has since maintained this level.
- Significant real reductions in port authority costs and subsequent reductions in port charges. Between 1987/88

and 1992/93 port authority charges fell by an average of 26% in real terms.

- Total average real labour productivity, as measured by the Steering Committee has more than doubled since 1987/88.
- Restructuring of port activities into business units.
- Contracting out those activities which can be done more cheaply and possibly more efficiently by the private sector and improving the level of competition in the provision of services.
- In many cases the port authority has adopted a landlord or strategic port manager model approach to port management by giving the right to offer port services to commercial companies. In some ports, however, it may not be appropriate for the port authority to adopt such approaches as it is too small to justify the provision of services by independent operators, or the nature of the business of the particular port may not justify it, i.e. another model may prove more efficient in terms of constraining user charges.
- The negotiation of enterprise based agreements which have led to a reduction in the number of awards and the subsequent multi-skilling of the workforce.
- In many cases the separation of regulatory and community service obligations from commercial operations.

All ports have now established visions for the future similar to the private sector and are adopting strategies to meet established goals.

How Further Reform Can Be Assisted Clarification of Functions

Despite the reforms undertaken by Australian port authorities in recent years, they still remain creatures of their State Government shareholders. The reforms achieved within Government (public sector) practices and policies can go only so far, as demonstrated by achievements to date. However, further reforms can be achieved with consequent reductions in costs, if port authorities have the freedom to develop operational and commercial practices relevant to the port and waterfront industry rather than being constrained by reforms generic to the public sector.

Fundamentally, Governments have tended to both constrain their port authorities through the influence of public sector policies more suited to serving local electorate requirements than the dictates of international trade and "muddled" the functions of these authorities resulting in a less than clear focus of responsibility. The responsibility needs to be better defined and better understood.

Whilst Governments may be attempting to encourage further reforms they still, in many cases, do not have a clear idea of what function their ports should undertake, whether they should be trade facilitators and adopt policies to maximise trade or act as revenue generators for State governments or simply facilities managers providing common user sites to complement terminals owned and managed by self-sufficient private sector operators. The three philosophies are not generally compatible.

It is relevant to note that Australia's ports are relatively unique in that they are expected to operate as viable commercial Government-owned businesses and at the same time have an economic development role. This is in contrast to many other countries where the economic development or facilitation role takes precedence over commercialism and capital funding, and in some cases operating funding, comes

from the Government tax base. In these cases the economic rate of return from ports is based on the trade and business multiplier factors.

Revenue Generation

The revenue generation requirements of some State Governments appear to be the result of a fundamental issue relating to Commonwealth/State financial arrangements. Only these Governments can address this issue and develop appropriate compensatory financial arrangements.

A number of port authorities and particularly those with trade maximisation and economic development objectives, are critical of the principle of the payment of dividends, taxes and rates irrespective of whether they are real or equivalents. Such revenue requirements do not assist in improving service delivery and only add to the cost structure of the port authority. This is particularly the case where monopoly or near monopoly situations exist.

In addition these revenue requirements are not necessarily predictable from year to year which is a major inhibitor to effective, long term financial planning.

Furthermore, they are not necessarily related to commercially accepted rates of return on investment or assets. There is still considerable debate as to how port assets should be valued and additionally there are the issues related to whether assets financed by port authorities out of their own retained earnings and/or borrowings should be considered as "Government" assets and a return obtained from them.

In some cases, these issues could be resolved by the adoption of port authority pricing structures which eliminates all traces of traditional taxing regimes. This would require the revocation of statutory/regulatory instruments setting rates controlled by Government and allowing the relevant port authorities to arrive independently at price levels which their customers consider reflect good value.

A related issue is a tendency for some State Governments to review established practices in relation to Government charges such as land tax and adopt a practice of maximising revenue.

We would thus contend that some State Government dividend and tax equivalent policies are not compatible with the general objectives of the micro-economic reform process, especially if such policies conflict with other policies designed to enhance Australia's overall international competitiveness.

Public Sector Controls

In addition to constraints imposed on port authorities through Government financial requirements, there are a number of Government controls and influences over Australian port authorities related to public sector practices that are greater than those that the private sector have to adopt. These impact on port authority efficiency, costs and thus charges as, for example, it has been estimated that compliance with Government reporting requirements can require the additional employment of, in some cases, up to 6 full time people.

Such controls include:

- compliance with Government labour and employment policies and procedures, rather than having control over and being able to negotiate specific port labour needs.
- requirement to adhere to Government purchasing policy requirements rather than being able to freely negotiate services and supply terms.
- requirement to undertake insurance with Government

funds at non-market rates.

- controls over capital expenditure.
- adherence to financial reporting requirements which focus on procedures and inputs, in particular control of expenditure, rather than the reporting of performance against specified targets and outputs.
- controls over port charges leading to possible public and interest group lobbying influencing commercial considerations.
- constraints on borrowing, repayment of debt, working capital retention, etc. This often includes the requirement to borrow from Governments at non-commercial rates.
- Ministerial approvals required for appointment of Board members and senior staff, often with multi-departmental inputs and often with unreasonable delays in such appointments which can harm effective operations.
- Ministerial approvals for interstate and overseas travel.
- controls over land use.
- compliance with Government information requirements in line with policy initiatives e.g. multi-cultural employment plans, energy budget savings, technology acquisition, contracting plans, etc. many of which are of minimal relevance to a commercially oriented port authority.

It is often overlooked by Government Departments that GTE's already operate under a system of checks and balances such as performance criteria and responsibility to Boards which in turn are responsible to Ministers. The effective dual level of control by Departments together with arduous reporting requirements creates unnecessary workloads and uncertainties.

Some Governments require port authorities to undertake community service obligations, such as beach and harbour foreshore maintenance and rehabilitation, waterway cleaning, etc, for which they receive less than full, or no compensation at all, i.e., the shipping and trading community is forced to bare the cost of community services unrelated to the impacts of shipping and cargo traffic. This also obviously impacts on port authority costs and charges. It is pleasing that State Governments are reviewing their policies as far as community service obligations are concerned.

In addition, Naval vessels appear to believe they have cost free access to ports and port facilities. It is considered that they should not be exempt from the user pays philosophy adopted by other sections of Government.

Commonwealth/State Government Charges

Port navigation systems are controlled by some State Governments through the requirement for a payment by commercial shipping (conservancy charges). In some cases these charges are not related to the cost of providing and maintaining navigation facilities and the fees received are included in consolidated revenue and not used for port related purposes.

In a similar vein the Federal navigation services charges are set for international and coastal shipping without regard to the degree of usage of these services by users. The development of sophisticated navigation systems lessens the need for these services in many cases. The cost of these services would be more appropriately met on a user pays basis according to need, such that all users including the Navy, fishing and pleasure vessels contribute to the cost of the service.

Furthermore, some State Governments control the provision of pilotage services and regulate the numbers of pilots, their recruitment as well as setting the charges. Pilotage charges are a significant proportion of total port charges.

We believe that State Governments should withdraw from the monopoly provision of pilotage services and introduce more contestable market arrangements, where the volume of shipping allows.

It is important for Government service providers to consider who are the beneficiaries of the services and for what purpose the services are provided. We believe that if a service is provided for a particular user or group of users then full cost recovery is appropriate. However, if the service is for the public at large and there is a genuine optional service element then we regard such services as Community Service Obligations which should be funded from the tax base. This is an issue that we believe has not been fully considered by Governments in their charging regimes.

Government Sponsored Reform Initiatives

In this section we wish to highlight different approaches to port authority reform that are currently being implemented or are under consideration in Australia. We believe the essential element in considering alternate port structures is whether the proposed structures and operating rules are consistent with the Government's defined objectives that are to be achieved from the reform process. Such objectives should only be agreed after consultation with all relevant sectors who will be affected by the reform process as it is our contention that Governments do not have a monopoly on wisdom in this area.

It was recently announced that the New South Wales Ports of Sydney, Newcastle and Port Kembla would be corporatised in early 1995. This, importantly, will make them subject to the disciplines imposed by the Corporations Law which requires them to operate in a manner similar to that of any other private sector company limited by shares. They will also be registered with the Australian Securities Commission. This is unique to date in port reform.

Each port company will have its own Memorandum and Articles of Association and each will have an individual share register. All the shares will be fully owned by the Government and nominally held by at least five State Ministers.

Furthermore, the NSW Government has indicated that it is prepared to remove most of the constraints on the ports that are normal for Government Trading Enterprises. These include compliance with government employment conditions and with government information requirements such as multi-cultural employment plans, energy budget savings plans and technology acquisition plans which are not germane to the port business.

Ports will be allowed to act independently of Government when making commercial decisions. A Statement of Corporate Intent, however, is to be developed annually which will, in effect, be an agreement between the Corporation and the Government on the direction the Corporation will take in the next twelve months. Projects for future port development will be agreed between the Government and the Port Corporation through the Statement of Corporate Intent.

As part of the Corporatisation process ports will advise what land they require and undeveloped surplus port land will be held by the Government.

Boards of Directors will be fully responsible to the shareholders for their decisions and will be freed of any responsibility for regulatory matters, allowing them to concentrate exclusively on commercial port issues. The Board of the Maritime Services Board is to be dissolved whilst the Boards of Directors for each of the three ports will be reconstituted.

Corporatisation is likely to make the ports more accountable, with the accountability required by the Corporations Law being more public. The corporations will be given clear objectives and these objectives will be translated into specific performance targets. The ports will lose their powers as regulators with all regulatory powers being transferred to the new State Marine Authority.

It appears, therefore, that the New South Wales Government is prepared to give up a significant amount of the constraints it previously imposed on its ports. It is likely that the ports will be able to operate in a commercial manner free from the usual constraints which are imposed on Government Trading Enterprises, thus leading to further efficiency gains and reduced port charges.

It is not clear, however, what the Government's dividend requirements will be but it is expected that these will form part of the annual Statement of Corporate Intent.

In Victoria, there is consideration to privatising the State's four commercial ports. Whilst not against privatisation of ports, we believe it is important to avoid turning State owned monopolies into private monopolies, as little may be gained from such an exercise. It is important to recognise in this regard the high level of privatisation already existing in Australian ports through the privatisation of service providers.

Of particular concern is the proposal that the Port of Melbourne is to be disaggregated resulting in there ceasing to be a central controlling body performing the role of a port authority. Whilst we strongly support minimal Government involvement in ports, the recommendation to disaggregate appears to have been made with no economic analysis able to demonstrate and quantify the benefits of this scheme over alternate proposals which could achieve Government objectives. We strongly believe a rigorous economic analysis should be undertaken before a decision is made which has the capacity to impact on the economic and structural viability of the major State port. It must be demonstrated that any change reduces the total transport chain costs and not merely moves costs from the public to the private sector.

It appears that the proponents of the disaggregation proposal do not recognise that there still needs to be an effective organisation which has a high level of expertise and understanding of all maritime sectors to maintain an effective overview of the "port". Such an organisation is required to, for example;

- Promote trade and promote services available to shippers and shipping lines. Such a role is essential given the national and international operations of shipping lines and stevedores.
- Develop and implement a port development strategy. A flexible strategy is important in encouraging efficiency within a port as it is a means of allocating best use of scarce resources. Further, the ability to make available future port development sites is important to enhancing competition.
- Resolve co-ordination problems. Due to the large number

of interactive participants in ports, co-ordination problems often arise. Without a central management authority assisting in the resolution of such problems, co-ordination within a port will become increasingly difficult.

- Ensure fair market management. Because of economies of scale, stevedores, shipping lines and other service providers, with their monopoly or quasi-monopoly powers will be in a far greater position to exploit the large number of shippers within a port without the overview of a port authority type body which can ensure conflicts are resolved for the benefit of all users.

A further contrast in the reform process is the corporatisation of three port authorities in Queensland. The Government has agreed charters and established financial and non-financial reporting procedures. Whilst on the surface this move appears to allow these ports a greater say in their own management, in reality, under the new corporatisation arrangements they will be undertaking significantly more reporting relating to inputs and procedures and will have to adhere to a greater number of Government policies and procedures than some of them enjoyed previously.

The new arrangements will have the effect of considerably increasing Queensland Government control over ports which have previously been managed under a philosophy of maximising trade rather than profit. Under this philosophy Queensland ports have consequently been amongst the lowest cost ports in Australia. The new legislation will require them to adhere for the first time to many costly and, based on their past performance, unnecessary bureaucratic controls.

In the past, most port expansions in Queensland have been financed by port authority borrowings and by users. Yet the Government has now stated that port assets do not belong to the Port Authority (i.e. they belong to the Government). Whilst ports will retain their Government appointed Boards, Government will have the right to overrule recommendations of financial structure, capital investment and dividend payments by the Board.

The Government has also changed the arrangements surrounding borrowing and capital expenditure. Previously ports could undertake capital expenditure without Government approval but had to get approval to borrow any funds necessary for capital expenditure. The Government now requires ports to seek their approval for capital expenditure but has given them the freedom to borrow but only through the Queensland Treasury Corporation and within the agreed gearing ratio. It is possible that obtaining Government approval for expanded or new facilities could be very time consuming and could be delayed to the detriment of shippers, especially if the need for such capital expenditure was required earlier than that shown in the Government required 20 year business plan for each port.

Such total control by the Government must surely be seen as a step backwards in terms of allowing ports to manage their business in a commercial and unrestrained manner.

Industrial Relations Issues

As indicated earlier, the major proportion of the total port cost in capital city ports is the stevedoring cost. This cost is largely determined by the labour component and it is understood that labour costs are of the order of 50-55% of container stevedoring costs and probably higher for general cargo.

It is thus imperative that the Australian Government ensures that the gains from waterfront reforms are maintained and wherever possible enhanced. This applies not

only to stevedoring but in all aspects of the total port operation. The Australian Government must continue its support for broad industrial reforms such as award restructuring and progressing EBA arrangements including the encouragement of part time and/or casual employment as occurs in other like industries.

Much of the reform in the transport industry has focused on individual transport modes and little work has been done to look at the needs for integration of reforms between transport modes. Current industrial arrangements in Australia often prevent integration of operations between one transport mode and another through demarcation of responsibilities, union coverage etc. This can affect transport at national and regional levels and is a significant inhibitor to improvements in operational efficiency and productivity.

We believe that ports and port service providers in individual ports should be free to negotiate their own solutions to particular industrial needs to ensure local costs are contained, rather than adhering to a rigid national industrial formula which may be less effective and more expensive in meeting local needs.

Inquiries into Services and Activities

Since 1986, there have been over 32 inquiries into the waterfront and maritime industries in Australia. AAPMA, ports and other industry participants must devote considerable resources to responding to such inquiries. Such resources could be used more effectively in other areas.

We feel that Governments should reduce significantly the number of inquiries which they undertake and let the industry continue with its reform agenda as most inquiries have provided little insight into how further reforms can be achieved.

For example, the Australian Government's 1993 Industry Commission report into Port Authority Services and Activities made blanket recommendations for all Australian ports. It failed to recognise that each port is different and each must function in a way which best suits its business situation. For example, the overall needs of a capital city port are quite different to the needs of a regional bulk port in terms of port management, services requirements and customer needs.

The Report also made recommendations regarding the monitoring of the progress of reform. Whilst we have no objection to the monitoring of progress of port authority reform, we feel it is important that the debate shifts to 'Government Best Practice' i.e. it is inappropriate to judge

a port authority when a number of inputs are influenced by Government. The emphasis needs to shift to the way in which Government action influences port authorities. In our view, Governments should not influence/manage inputs and should let ports take the responsibility for outputs. If Governments want to monitor the progress of port reform they should establish an agreed brief charter for ports and then monitor port authorities' achievements against agreed outputs.

Review of Competition Policy in Australia

In August 1993, a report commissioned by the Australian Government made a number of recommendations on competition policy including the recommendation that competition policy in Australia be extended to include all sectors of the economy. Presently, a number of sectors, including State Government Trading Enterprises such as port authorities are exempt from competition policy.

Port authorities support the report's recommendations and feel they largely reinforce the direction of reform already under way in the port and maritime sector. Ports particularly welcome the recommendation that GTEs operate in a framework which ensures they compete on an equal footing with the private sector and with other GTEs. Such a framework will allow ports to operate without the public sector controls they are currently subject to.

We are therefore greatly disappointed with the continuing stalemate which exists between the Federal and State Governments. The State Governments are demanding a greater percentage of tax revenue from the Federal Government in return for allowing their GTEs to be made subject to competition policy and at this stage, the Federal Government is not prepared to give in totally to these demands. The recommendations have therefore not as yet been taken up and it appears likely that port authorities will not be made subject to competition policy for some time.

Conclusion

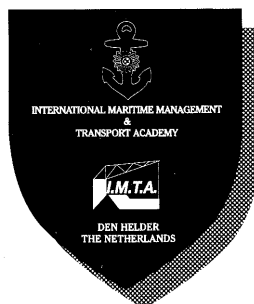
The process of further port reform is very much a live issue in Australia at present. Further process can only largely be made with the co-operation of Federal and State Governments and an acknowledgement by Governments that ports are businesses and as such, should not be subjected to Government controls and inputs.

It is hoped that the ongoing experience in port reform in Australia will provide valuable lessons for ports in other countries.

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WORLD PORT NEWS

The EUROTUNNEL — A Few Facts and Figures

At Last, Eurotunnel Is Open for Traffic

By Andre Pages
IAPH Honorary Member



The Structural Layout

EUROTUNNEL is a rail link between Great Britain (near Dover and Folkestone) and France (near Calais).

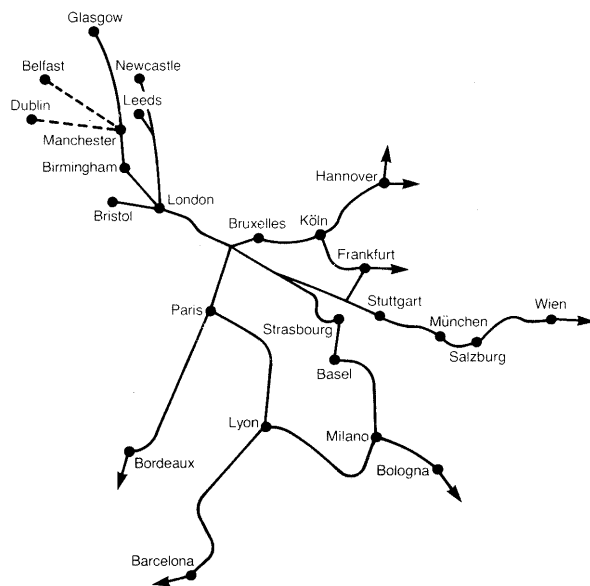
It is 50.45 km long, including 37 km drilled under the sea into the Chalk-Marl bed, as far as 130 m deep below the sea level at its lowest point. Its layout is designed for train speeds of up to 200 km/h, with generous curves and slopes limited to 1.1%.

It includes:

- 2 rail tunnels (7.60 m inner diameter) for trains, with 2 cross-over connections
- 1 service tunnel (4.80 m inner diameter) with connections every 375m with rail tunnels
- 2 rail and road terminals (Calais: 1,600 acres - Folkestone 400 acres)
- track equipment (1,435 m gauge, 60 kg/m rails, 25,000 V catenary lines)
- pumping stations, ventilation equipment, signalling and transmission systems
- the supply of special rolling stock for the shuttles (terminal to terminal connection): 750 m long trains, closed carriages for passenger cars, coaches and heavy goods vehicles (H.G.V.)

The Operators

At the end of 1987, the governments of the two countries, jointly granted the channel tunnel group (EUROTUNNEL

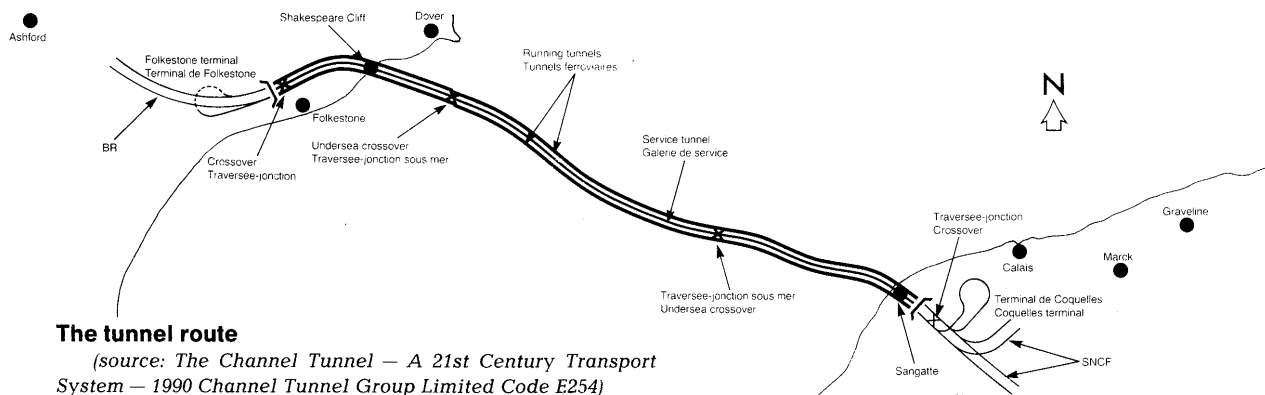


Potential rail freight services via the Channel Tunnel

(source: *The Channel Tunnel — A 21st Century Transport System — 1990 Channel Tunnel Group Limited Code E254*)

in short) with a concession expiring in the year 2042.

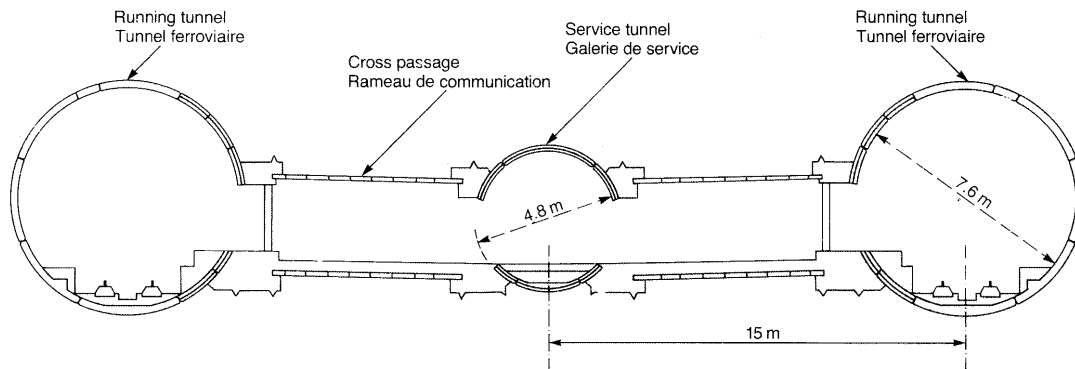
EUROTUNNEL had to carry out the studies, select the contractors, and cover the financial requirements for the construction, by issuing shares and stocks as well as taking out loans. The whole operation has been entrusted to Transmanche Link, a consortium of construction, mechanical and electrical engineering companies. The initial estimate was settled at around FF50 billion, or £5 billion. In the end, it will come to FF100 billion, because of a large number of underestimated or unforeseen charges (for example, sophisticated safety measures), erosion of monetary values,



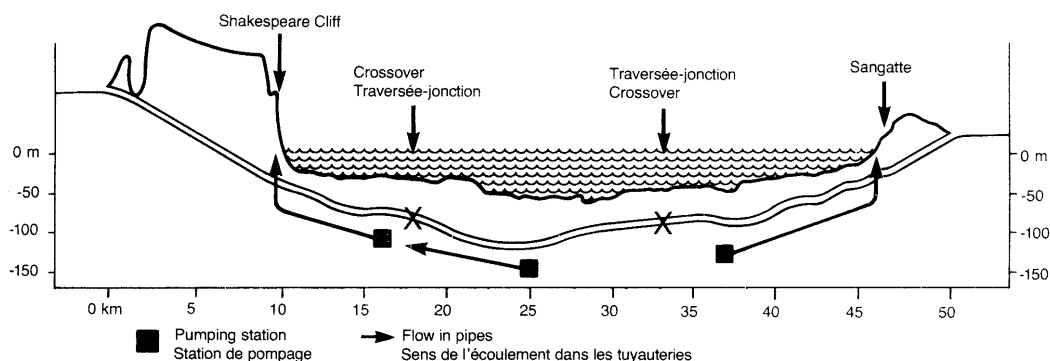
The tunnel route

(source: *The Channel Tunnel — A 21st Century Transport System — 1990 Channel Tunnel Group Limited Code E254*)

Typical section through the tunnels showing cross passage structure



Tunnel drainage system



(source: *The Channel Tunnel – A 21st Century Transport System* – 1990 Channel Tunnel Group Limited Code E254)

and loan interest over 7 years (instead of 5 years as expected).

In compensation, the 2 governments have postponed the end of the concession to the year 2052.

Presently, EUROTUNNEL is issuing new shares and is taking out new loans in order to raise FF7 billion to cover the operating needs for the first few years, before the balance-sheet comes out of the red.

The Traffic

The EUROTUNNEL is gradually opening to traffic. It will give way to:

- through trains connecting British Rail to continental railways;
- freight trains running between major regional hub terminals;
- passenger trains, and among them Eurostar, expected to connect London to Paris or Brussels in 3 hours, and later in 2 and a half hours when a fast train line is built in Britain; and
- shuttles for freight or passenger traffic, running from terminal to terminal in 95 minutes.

As claimed by EUROTUNNEL, its traffic can amount to

- 30 m. passengers, in the first full year of operations,

and 45 m. by 2013;

- 15 m. freight tons — 37% and finally 40% of all the cross channel routes traffic.

EUROTUNNEL is now competing with:

- 5 main ferry service companies;
- 8 ports in Britain and 9 on the continent, highly involved in ferry services and some others;
- over 27 m. tons of overall freight ferry activities (half of it on the Dover-Calais route);
- and also over air traffic (for example, for the 3.6 m. passengers on the London/Paris route in 1993, with a total transport time between city centers averaging 3 hours).

The competition for traffic shares will involve publicly or secretly discounted fares and amenities for passengers, drivers, shippers and hauliers in order to gain and maintain their confidence and continued patronage.

Most shipping companies as well as many ports are heavily investing in new equipment, to get ready for that competition.

If needed, shipping companies will shift their vessels to new routes. But how about ports, if they are suffering from heavy losses of activity, and are unable to replace them by new ventures?

Conference on Gulf Ports' Future Role

A conference will be held on "The Future Role of Ports in the Gulf States Co-operation Council" in Kuwait, 3 - 5 December 1994. It will be under the Auspices of His Highness El Sheikh Saad al Abdallah Al Salem Al Sabah, Heir to the Throne and Prime Minister, and organized by Kuwait Ports Authority — El Shoeikh.

Kuwait Ports Authority will sponsor accepted papers. Sponsoring will cover transportation, accommodation expenses as well as papers' remuneration for each accepted paper.

The Committee would also like to draw the attention of interested companies, agencies and organizations who wish to participate in the Conference or Conference exhibition that the Conference Venue will be:

Kuwait Sheraton Hotel
Fahd El-Salem avenue
P.O. Box 5902 SAFAT 13060
Fax 2448032 Tel 2422055

Conference Fees: \$350 per participant (instead of US\$650 as previously announced)

Fees cover: Registration, Conference, publications and social events.

New Publications

Asian Containerisation to 2005

According to a new study* from Ocean Shipping Consultants Ltd the outlook for the container trades and ports in the Asian markets is very positive. Sustained economic growth has boosted container trade volumes and this is set to accelerate more rapidly in the next few years. Despite massive investment in new port facilities to handle these demand increases forecasts indicate some major constraints in capacity on a regional basis.

The study — which represents the culmination of a fourteen month research project — identifies demand growth in the period to 2005 under different economic scenarios for each of the major port range markets in east Asia. In addition, the supply/demand equation for cellular container shipping serving these trades is also evaluated.

Asian Container Port Volumes

The overall development of regional east and south-east Asian container port volumes since 1986 is summarised in Table 1. In overview terms, it is apparent that there has been a significant increase in port demand with an increase of some 145 per cent recorded to reach a total of 46.4m TEU in 1993. Within a generally very dynamic world demand profile the Asian ports have now moved into primary position and are recording by far the most dynamic growth.

The study analyses developments on a national basis but the overall development of demand is here summarised on a sub-regional basis. At one extreme, the Japanese markets have developed broadly in-line with OECD trends as a whole, with demand linked closely to economic expansion. Elsewhere in the region, the surge in economic growth has seen market share increase sharply. The integration of Hong Kong with PR China has been a major feature of the past few years, and the gradual integration of Taiwan will see the emergence of a Chinese Economic Area. These markets have together recorded

an expansion of some 150 per cent with total port demand reaching 18.6m TEUs in 1993.

Even more rapid development has been recorded in the South-East Asian markets where total port demand has nearly trebled since 1986. This is the result of strong economic growth, continued increased container penetration of general cargo trades and also the magnifying effect of transshipment which boosts the number of container moves as trade expands. The efficient basing of transshipment on Singapore will continue to characterise these trades despite general port investment in the region.

Forecast Container Port Demand

Although trade growth remains vulnerable to disruption at the macro-economic level the most likely outlook from the current perspective suggests further massive expansion in demand in each regional market, although the study does differentiate between prospects for each significant port range.

Considered in total it is anticipated that demand will increase by some 124

Table 1
Asian Container Port Demand Development 1986/1993

	— million TEUs							
	1986	1987	1988	1989	1990	1991	1992	1993
Japan	5.65	6.21	6.88	7.18	7.90	8.54	8.90	9.10
Chinese Economic Area	7.55	8.97	9.97	10.70	11.82	13.99	16.25	18.62
South Korea	1.53	1.97	2.21	2.47	2.67	2.89	3.18	3.39
South-East Asia	4.22	5.04	6.24	7.92	9.54	11.28	13.03	15.26
Total	18.95	22.17	25.30	28.27	31.93	36.70	41.36	46.37

Source: Ocean Shipping Consultants Ltd.

Table 2
Forecast Asian Container Port Demand to 2005

	— '000 TEUs				
	Japan	Chinese Economic Area	SE Asia	Korea	Total
1993	9100.8	18623.0	15255.7	3393.1	46372.6
1994	9319.8	21104.7	17693.7	3834.0	51952.2
1995	10056.4	23808.0	20192.8	4370.8	58428.0
1996	10766.2	27029.9	23233.4	4973.9	66003.4
1997	11476.1	29993.8	26633.5	5670.2	73773.6
1998	12240.6	34241.5	30911.5	6293.9	83687.5
1999	12977.7	37923.6	35591.3	6973.6	93466.2
2000	13769.5	41554.2	40972.6	7740.7	104037.0
2005-I	17974.1	65945.6	69776.4	11533.0	165229.1
2005-II	17455.3	59676.8	64193.0	10376.0	151701.1

Source: Ocean Shipping Consultants Ltd.

per cent between 1993/2000, with continued further growth recorded between 2000/2005 — although here a high and a low demand case have been identified. This pace of expansion will place considerable pressures on port investment and on the availability of shipping to handle rapidly developing regional trade volumes.

Although demand expansion will be broadly based, it is clear that the most rapid demand increases are anticipated for China (broadly defined) and for the south-east Asian markets. It is anticipated that growth rates will be 123 per cent and 170 per cent respectively between 1993/2000. Indeed, the pace of subsequent expansion will be even more rapid.

The development of total Asian container port demand to 2005 is summarised in Table 2.

Regional Container Port Investment and Capacity Utilisation

The study provides an in-depth analysis of national and regional port investment programmes and presents an analysis of economic container handling capacity over the forecast study period. The results of this analysis are summarised in Table 3. Clearly, each regional market has targeted massive investment at the container handling sector, and it is forecast that regional annual container handling capacity will increase by some 130 per cent to 2000. Whilst this is seen to correspond fairly closely with demand there is also seen to be a mis-match on a regional basis.

The development of capacity utilisation — on a percentage basis — is summarised in Table 4, with this representing a comparison of annual capacity forecast with forecast demand. In Japan the depth of the recent recession has undermined container trade growth and thus committed investment will proceed at a pace greater than demand growth. This will see capacity utilisation rates fall to lower levels in the period to 2000.

The scale of investment in Chinese mainland ports is massive and will probably be more than is directly needed in the short term. Conversely, there will be major capacity constraints in both Hong Kong and Taiwan over the next few years. This suggests a lack of deepsea capacity and an over-supply

of smaller facilities in the Chinese market as a whole. In terms of capacity utilisation this suggests a general weakening over the forecast period.

In Korea there is already a heavy reliance on general cargo facilities and this has resulted in a lack of available economic capacity (this explaining the estimated utilisation rate of 135 per cent identified for 1993). Despite investment in Busan and Kwangyang

Bay this will not provide sufficient further capacity. Throughout the period the available Korean facilities will be saturated with demand.

In south-east Asia, demand growth will continue to squeeze capacity. Despite massive investment in Singapore and all major regional ports, it is forecast that all economic capacity will be fully utilised by 1999. This suggests that port congestion will constrain

Table 3
Asian Container Port Capacity Development to 2005

	— million TEUs/annum									
	1993	1994	1995	1996	1997	1998	1999	2000	2005-I	2005-II
Japan	9.80	11.00	14.35	15.55	17.35	18.00	19.20	19.20	23.30	23.30
Taiwan	7.90	7.90	7.90	8.75	8.75	10.90	10.90	13.40	13.40	13.40
Hong Kong	10.80	10.80	12.60	12.60	14.10	15.60	15.60	16.35	17.85	17.85
PR China	3.20	4.34	7.99	10.04	14.99	20.64	21.14	27.99	29.49	29.49
Chinese Econ.Area	21.90	23.04	28.49	31.39	37.84	47.14	47.64	57.74	60.74	60.74
Korea	2.51	2.51	2.51	3.01	4.01	5.21	5.21	6.61	8.01	8.01
Malaysia	1.50	2.10	2.45	2.45	2.45	2.45	2.45	3.65	3.65	3.65
Singapore	11.50	14.05	16.45	16.45	16.45	20.20	22.45	22.45	26.80	26.80
Indonesia	1.80	1.80	1.80	2.45	2.75	3.25	3.25	4.05	4.05	4.05
Thailand	1.85	1.85	1.85	1.85	2.35	2.35	3.15	3.15	3.15	3.15
Philippines	2.05	2.35	2.35	2.35	2.35	2.60	2.60	2.60	2.60	2.60
Vietnam	0.05	0.05	0.25	0.35	0.35	0.65	0.65	0.65	0.65	0.65
South-East Asia	18.75	22.20	25.15	25.90	26.70	31.50	34.55	36.55	40.90	40.90
Total	52.96	58.75	70.50	75.80	85.90	101.85	106.60	120.10	132.95	132.95

Source: Ocean Shipping Consultants Ltd.

Table 4
Summary Table — Far East Container Port Utilisation to 2005

	— percentage									
	1993	1994	1995	1996	1997	1998	1999	2000	2005-I	2005-II
Japan	92.9	84.7	70.1	69.3	66.2	68.0	67.6	71.7	77.1	74.9
Chinese Econ. Area	84.3	91.6	83.6	86.1	79.3	72.6	79.6	72.0	108.6	98.3
Korea	135.1	152.6	174.1	165.1	141.4	120.7	133.8	117.1	143.9	129.6
South-East Asia	81.3	79.7	80.3	89.7	99.7	98.1	103.0	112.1	170.6	156.9
Total	87.3	88.4	82.9	87.0	85.9	82.2	87.7	86.6	124.3	114.1

Source: Ocean Shipping Consultants Ltd.

Table 5
Asian Base Case Additional Port Requirements to 2005

	to 1995	1995/2000	2000/2005
Gantry Cranes — no. of units			
Japan	17	69	77
Chinese Economic Area	83	168	231
Korea	11	24	26
South-East Asia	24	140	193
Total	135	401	527
Container Berths — kilometres			
Japan	—	0.11	9.96
Chinese Economic Area	11.22	19.38	56.49
Korea	2.41	2.13	5.31
South-East Asia	4.82	20.63	53.34
Total	18.45	42.25	125.10

Source: Ocean Shipping Consultants Ltd.

growth beyond this date.

Implications for Port Investment

The question of identifying required levels of *investment* in the container port industry is complex. Although the new study has gone to great lengths to define the actual requirement for future port capacity, the translation of this into actual dollar spending is problematic and, given the number of individual assumptions necessary to develop synthetic estimates for the region as a whole, probably of little direct relevance. For example, although typical cost levels can be identified for the development of a typical container berth these will, obviously, vary significantly in-line with the particular civil engineering conditions to be found at individual locations. Furthermore, real estate costs also show widespread divergences between ports in different economic locations.

Similarly, the study has been forced to simplify the development of demand for container gantry cranes. The actual specifications of individual units now varies greatly, from smaller units to large post-Panamax cranes. This obviously results in a similarly wide divergence in unit costs. Given this, no direct attempt has been made to quantify overall investment in this sector, although the derived number of cranes required on a regional basis has been summarised.

Container Gantry Cranes and Container Berth Requirements

Table 5 summarises the regional estimates of required gantry crane additions and new berth construction that has been analysed in some depth in the various sections of the study. Such is the dynamism of anticipated demand growth that a sustained increase in the number of additional units is indicated (this excludes orders already committed).

As is to be expected given the relative market share of the Asian ports the actual importance of orders placed in this region will be of greatest significance. Under Base Case conditions it is forecast that the region as a whole will generate a requirement for some 135 further units by end-1995. This will subsequently accelerate significantly in the later part of the study period.

A similar approach has also been

taken to summarising the development of required additional investment in dedicated container berths. In this case there is also a clear relation between underlying trade volumes and the total level of required investment in new container handling quays. Considered in total it is forecast that there will be a need for a further 18km of container quays in the period to end-1995, with this accelerating sharply throughout the balance of the forecast study period.

There is a clearly a massive and sustained requirement for further investment in the regional container port industry and the study provides a coherent appraisal of demand growth and required development by port range market.

* *Asian Containerisation to 2005*, an analysis of container trade, shipping capacity and port development was published on 26th August 1994, and is available from:

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Surrey KT16 9BE
England
tel: +932 560332
fax: +932 567084
telex: 94070113 OSCL G

Price: UK£525, US\$880 (overseas sales)

Y.C. Kalindaga: "Perspectives on Regulatory Policies in Liner Shipping and Implications for the UN Liner Code"

For over two decades now, the liner shipping industry has been characterized by fundamental changes, including a weakening of the traditional liner conference system, while non-conference operators have gained a substantial share of cargoes in most trades. In parallel, new forms of cooperation between liner carriers have gained in importance. Government policies have also been changing with a trend towards emphasis on the role of free markets in the supply of shipping services. However, for the most part traditional liner conferences continue to be tolerated and exempted from competition laws. On the other hand, while certain countries have legalized cooperative agreements such as consortia and

trade-wide stabilization agreements, in other jurisdictions the legal position regarding such institutions remains to be clarified.

The study examines these developments with a view to assessing the future outlook for governmental rules and regulations in liner shipping, including the role of the UN Liner Code. It points out that existing studies of the industry do not provide indepth analyses of existing market structures to allow a prediction of future regulatory policies. However, even given sufficient analysis of market structures, there would be the normative question of determining what types of market structures would justify government intervention and the types of appropriate intervention to be applied.

It then reviews actual developments in shipping policies at the national, regional and international levels, which provide a more practical basis for predicting the future direction of policy. Finally, it suggests that the UN Liner code provides an appropriate framework for minimizing possible jurisdictional conflicts in competition rules in liner shipping. However, to enhance its acceptability, its goals must be adjusted in order to promote a greater balance between service efficiency on the one hand, and the distribution of economic benefits between countries, on the other.

ISSN 0721-1232, 70 pages

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Institute of Shipping Economics and Logistics

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B. Volk: "The Shipbuilding Cycle — A Phenomenon Explained?"

The international shipbuilding industry is subject to distinct cyclical fluctuations. Within a short time the demand for newbuildings may increase considerably or collapse completely.

In spite of the paramount importance of the shipbuilding industry for providing for the transport means for performing global trade, only a few theoretical publications exist which focus on an explanation of the fluctuations in shipyard production and

employment. A paper of Tinbergen published 60 years ago is still considered the standard investigation in this area. The last comprehensive work in this field was published in 1961. A re-examination of the subject appeared to be long overdue.

The author of this book has written a doctoral dissertation on the reasons which provoke the cycles in world shipbuilding. The dissertation attracted an international audience; this book now available to the public represents an abridged, translated version of it.

Four hypotheses were formulated in the dissertation to explain the shipbuilding cycles. In accordance with former theories it was assumed by the author that the changes in freight rates for seaborne transportation represent one main factor explaining the fluctuations in world shipbuilding production. A second determining factor for the cyclical movements was assumed to be innovations which elicit shipowners to order newbuildings even in times of freight rate depression. As a third element the author pointed to the habitual behaviour of the main actors in international shipping: business enterprises obviously do not always order newbuildings on the basis of rational considerations; psychological and speculative factors have to be considered as well. The fourth hypothesis formulated is that governmental intervention cannot be maintained permanently in opposition to market forces.

In the dissertation the various hypotheses were subject to in-depth research and analysis. Main emphasis is focused on the developments over the last 25 years.

ISSN 0174-5727, 208 pages

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2209655

The Americas

Halifax: Labour Sets Stage for New Business

An established shipping line is now

working towards a major expansion, thanks to the forward thinking of Halifax port labour unions.

David Bellefontaine, Chairman of the Port of Halifax Gateway Council, credits the labour locals with a tremendous team attitude. "It takes the right people to make concessions now for future business, to think in terms of the Port as a whole, and to lead by action. The Port has those people."

Locals 269 and 1341 of Halifax's ILA (International Longshoremen's Association) workforce have voted to reduce certain rates. Their concessions are expected to encourage the shipping line St. Pierre Ro/Ro to add an extra leg to its shipping service, in essence beginning a new service between Halifax and Boston.

The extended shipping service connecting Halifax to Boston could bring up to 68 more vessel calls to the Port of Halifax, 100,000 tonnes of container cargo, 20 longshoring jobs (person years), plus another 60 associated and spin-off jobs to the local economy.

The Gateway Council's mission is: "To forge a unifying relationship among the Port's transportation stakeholders in order to provide and promote a competitive, high-quality level of transportation service for our customers."

US Port System: Toward Another Record Year

A tidal wave of imports is pushing the U.S. port system toward another record year despite sagging export tonnage.

During the first six months of 1994, U.S. waterborne foreign commerce, as reported by the U.S. Bureau of Census, totaled 489.7 million short tons, a gain of almost one percent from a year ago and 5.3 percent greater than the 465.2 million tons handled in January-June 1992.

This year's tonnage carried a value of \$269.4 billion, up 8.9 percent from the first half 1993 total of \$247.8 billion.

Export tonnage was down nearly 19.0 percent, with dry cargo off 16.1 percent and tanker cargo exports lower by 12.1 percent. That loss, however, seems to have been largely concentrated in the bulk sector—in coal, for example, which is experiencing its worst export year in more than a decade. Liner export

tonnage actually gained — up 2.8 percent from 1993, as did the value of export trade, which rose 0.6 percent, to \$91.5 billion.

For imports, however, it was a period of double digit growth, with volume higher by 12.3 percent (to 318.6 million tons) and value jumping 13.8 percent (to \$156.4 billion). More specifically, tanker imports rose 8.8 percent, to 220.9 million tons, and dry cargo by 21.1 percent, to 97.7 million tons.

Among the port ranges, the top performer was the South Atlantic with a volume increase of 11.6 percent. Others finishing in the plus column were the North Atlantic (up 5.2 percent despite the negative impact of the depressed export coal market), South Pacific (+7.4 percent overall and the only range to post gains in both exports and imports), and the Great Lakes (+6.2 percent).

Liner Cargo: Tonnage overall increased by almost 7 percent from a year ago and 8.1 percent compared to January-June 1992. Exports rose by 3.3 percent and imports by 12.3 percent. Gains occurred in every port range, the most impressive being the South Pacific (+14.3 percent) and North Pacific (+13.4 percent)

Containerized Liner Cargo: Exports increased by 2.8 percent, imports by 8.0 percent, and total tonnage by 5.3 percent. The only negative growth was in the Gulf (-8.1 percent). Elsewhere, the record shows: North Atlantic (+5.2 percent); South Atlantic (+2.7 percent); South Pacific (+9.8 percent); and North Pacific (+5.6 percent).

(AAPA Advisory)

Georgia Railroad Cited For Quality Operations

The railroad operated by the Georgia Ports Authority (GPA) at its Colonel's Island automotive facility near Brunswick, Ga., has been recognized for its quality operation, by the Association of American Railroads (AAR).

In fact, the railroad received the highest quality rating since the group revised its origin quality review program in January, 1994. The program, conducted to date at 84 rail auto ramps throughout America, keys on safety and damaged prevention.

"The responsiveness of the Colonel's Island Railroad, its extreme flexibility

and its dedication to customer satisfaction is the envy of North American rail loading operations," said Ray Fries, chief inspector for AAR. "The quality team at Colonel's Island is truly dedicated to continuous improvement and customer satisfaction."

The Colonel's Island railroad operates two locomotives on 21 miles of tracks, interchanging railcars with Norfolk Southern Railway and CSX Transportation. The railroad is responsible for multi-level spotting, inspection and preparation.

International Auto Processing is responsible for vehicle baying, loading and securement. Last year more than 130,000 vehicles moved through the Colonel's Island facility.

"This prestigious award underscores our mission of moving cargo the best," said GPA Executive Director George Nichols. "That teamwork between GPA and IAP ensures the goods are delivered safely and efficiently time after time."

Now in its 50th year of service, the GPA operates terminals at the deep-water ports of Savannah and Brunswick as well as barge terminals at Bainbridge and Columbus. GPA maintains trade development offices in Savannah, Brunswick, Atlanta, New York, Athens, Oslo and Tokyo.

Over 2 Million TEUs Handled at Long Beach

A whopping 25 percent jump in container movements is the highlight of fiscal year figures just released by the Port of Long Beach. During the year ending June 30, the port handled 2,335,292 TEUs of containers, a jump of 25.7 percent. This is the first time that Long Beach has broken through the two million TEU ceiling. Last year 1,857,800 TEUs passed through Long Beach. Loaded outbound cargoes also scored an impressive 30.2 percent rise over the previous year's numbers, 721,611 TEUs versus 554,246 TEUs. The inbound side of the picture also logged a dramatic 23.9 percent jump to 1,161,652 TEUs from last year's 937,402 TEUs.

Overall, Long Beach recorded 83,343,845 metric revenue tons for the fiscal year versus last year's 72.4 million tons of cargo, an increase of 15.1 per-

cent.

Port officials attribute the past year's performance to several important factors. Additional services were started by shipping lines to take advantage of the double-digit economic growth in China and Southeast Asia. This fact, coupled with the introduction of large "super ships" in the 4,000 TEU class, enabled several Long Beach steamship companies to post some of their best annual cargo tonnages ever recorded.

Commenting on the port's impressive showing, Don Wylie, director of trade and maritime services, said, "Long Beach's dramatic increase in cargo movements reflects an increase in trade world-wide. Ocean shipping is currently one of the best bargains in the world; this will continue to fuel increased trade growth on a global basis."

Int'l Market, New Lines Buoy Oakland Results

The Port of Oakland moved the equivalent of 99,100 loaded 20-foot containers in July, bringing the calendar year-to-date total to 621,000 TEUs, or 12.4 percent more than the first seven months of 1993.

New business — from the Blue Star/Columbus joint service, China Ocean Shipping Co., National Shipping Corp. of the Philippines and Nedlloyd — accounted for some 15,000 TEUs. Leaders among incumbents were American President Lines, Hanjin, K-Line and Mitsui-O.S.K. Line, contributing a combined increase of 40,500 TEUs. Other lines posting big year-to-date gains were Hapag-Lloyd, Hyundai, PM & O and Yang Ming.

Yang Ming in particular saw explosive import growth of 127 percent in July, following a robust increase of 58 percent in June. Year-to-date July, the Taiwan-based line's Oakland imports were up 17 percent. Its Oakland exports also soared in July, rising 98 percent. Year-to-date July, its outbound shipments were up 30 percent.

Port officials said that the continued strong international market elevated Oakland's January-June 1994 growth rates for both trans Pacific and total international trade by more than four percentage points over January-April.

They noted that Oakland's 15.1 percent trans Pacific growth for the first

six months of 1994 almost matched the 15.8 percent first six months' trans Pacific growth for the West Coast as a whole.

And they pointed out that Oakland's strong May and June performance also pushed Oakland's year-to-date June, 1994 growth for all international trade to 1.2 percent above the rate for the West Coast.

These trends will continue, they said, because of the services COSCO and the four other carriers inaugurated at Oakland earlier this year.

Seattle: Container Volumes Keep Climbing

Container volumes at the Port of Seattle continue to climb — up 19% when comparing the first six months of 1994 with the same period in 1993. Year-to-date through June, more than 583,000 TEUs have crossed Port docks.

"What more tangible proof have we that U.S. and world economies are doing better than more cargo crossing docks at one of the nation's leading container ports and a primary gateway for trade with Asia?" said Patricia Davis, president of the Port of Seattle Commission. "When the Port of Seattle does well, it's not just a positive sign for our local maritime businesses and the people who work here in longshore, trucking or warehousing. It's also a positive indicator of what's happening across the country, from manufacturing cities throughout the midwest to our state's own agricultural communities — there's more demand for U.S. products. As trade barriers come down, the U.S. is able to sell more merchandise abroad and conversely people in other economies sell their own products globally — increasing their buying power."

Seattle ranks fifth among U.S. ports based on container volumes. However, unlike the top four, Seattle is a gateway port — most of its cargo is neither produced nor consumed by its local population.

An even better indicator of increased trade is that a larger percentage of the containers moving through Seattle is full — both import and export. Year-to-date figures show more than 435,000 TEUs — a 27% increase, filled with cargo in two-way trade with Pacific

Asia were handled at Seattle's six container terminals. Comparatively, west coast ports are showing an average 13% increase in full container volumes so far this year.

"In terms of full container traffic, export containers have surpassed imports through this gateway so far this year," said Keith Christian, acting managing director of the Port's marine division. "Not only are we continuing to export large volumes of raw products such as animal feeds and frozen fish, but also more value-added, or manufactured, products are being shipped to Asian markets — from auto parts to refrigeration equipment. We anticipate that export of more high-value products will be positively reflected in the 'balance of trade' (based on dollar value) of goods moving through this harbor when 1994 year-end figures are published."

Protection, Development On Seattle's Waterfront

The U.S. Environmental Protection Agency and the U.S. Department of Justice have crafted two separate agreements under the federal Superfund program concerning a West Seattle wood treating facility. These agreements signal a major step forward in the effort to both protect the environment and promote economic development on Seattle's working waterfront.

According to Chuck Clarke, EPA regional administrator in Seattle, today's (30 August 1994) settlements together reflect one of EPA Administrator Carol Browner's top priorities: to clean up contaminated property and return it as rapidly as possible to productive use.

"We have seized a unique opportunity to restore a highly contaminated Superfund site to its full commercial potential," said Clarke. "The agreements put the Port in a position to both improve the environment and enhance Seattle's maritime economy."

The first agreement is a federal consent decree settling Superfund liability for two wood treating facilities, one of which is located on Bainbridge Island. The other is located in West Seattle near the mouth of the Duwamish River and is operated by Pacific Sound Resources ("PSR," formerly the Wyckoff Company).

The other Superfund settlement is a prospective purchaser's agreement providing for the Port of Seattle to purchase PSR's West Seattle property. Settlement highlights include:

- **Settlement of Liability** — Under the consent decree, PSR shareholders will cease all wood treating operations, liquidate PSR assets and property and establish an environmental trust for cleanup actions at both wood treating sites. The shareholders have been granted a "covenant not to sue" by federal and tribal natural resource trustees and EPA.

- **Site Cleanup** — In addition to the environmental trust provided by the PSR settlement, the Port will play a major role in cleanup at the PSR Site in West Seattle, with EPA oversight. Under the prospective purchaser's agreement, the Port will acquire the West Seattle property in exchange for a package of in-kind services and cleanup funds, totalling \$16.2 million. The agreement also includes a covenant protecting the Port from liability for additional clean up costs from existing contamination. Site demolition and hazardous waste removal will begin immediately.

- **Economic Development** — Under a separate regulatory review process, the Port of Seattle has proposed an extensive development project at its West Seattle container terminal. To meet the needs of American President Lines, the current tenant, the Port plans to nearly double the 83 acre terminal size — requiring the PSR site for development. The Port is currently responding to public comments on the draft Environmental Impact Statement, made available for review earlier this year by the Port and two other lead agencies — the U.S. Army Corps of Engineers and the Washington State Department of Ecology. The Port projects that when completed, the expanded terminal operation will bring more than 1,500 new jobs with an average annual income of \$46,000 to the region. Other economic gains anticipated by the Port include \$200 million in new business revenues and nearly \$5 million in new state and local tax revenues each year.

According to Patricia Davis, presi-

dent of the Port of Seattle Commission, today's announced agreements pave the way for positive regional economic expansion.

"The Port of Seattle appreciates the responsiveness with which EPA and the Department of Justice have acted on our need to acquire, clean up and redevelop one of the Pacific Sound Resources sites," said Davis. "Our expansion project has a deadline by which we must deliver a working container terminal to American President Lines. The cleanup and the working terminal will bring environmental and economic health to our region. The Port thanks government at all levels — local, state and federal — as well as the PSR shareholders for their cooperation in providing for the rapid cleanup and redevelopment of the PSR property."

Lois J. Schiffer, Acting Assistant U.S. Attorney General for the Environment and Natural Resources Division, praised the agreements with PSR and the Port as a creative use of Superfund authority.

"The agreements announced today show how environmental protection and a sound economy go hand-in-hand," said Schiffer. "The PSR settlement insures that those responsible for contamination dedicate their assets to cleanup. The Port agreement provides additional funds and work that will speed the cleanup. Meanwhile, the Port and the public will gain by rapidly restoring the land to productive use. With cooperation between government and industry like that shown here, we can have both a healthy environment and a healthy economy."

Matson Navigation Starts Calling Port of Seattle

On July 13, a west coast, all-water service began calling the Port of Seattle. Matson Navigation Company, the leading ocean carrier between the continental U.S. and Hawaii, marked the start of the service with the call of the MANULANI at Terminal 30.

"We congratulate Matson on the development of this new service and on their selection of Seattle as their Pacific Northwest connection," said Port Commission President Patricia Davis. "Matson is a leader in domestic cargo movement and they have partnered with labor to create a service

which is competitive with truck and rail alternatives." Matson is the Port of Seattle's fourth largest container line based on year-to-date volumes as of April 1994. Terminal 30 is leased and operated by TraPac, a subsidiary of Mitsui O.S.K. Line, and provides services to Mitsui, K-Line, South Pacific Interline, and now Matson's new "Pacific Coast Shuttle."

Matson's coast-wise service will provide connections between the ports of Los Angeles, Seattle and Vancouver, B.C. It is designed to support international container lines by shifting containers between west coast ports in what is commonly referred to in the industry as a "feeder" service. The new Matson service also is the line's first entry into the British Columbia marketplace. The Pacific Coast Shuttle represents a commitment of resources by Matson — both in a vessel to provide the weekly call at each port and in nearly \$2 million in vessel retrofits.

The Port of Seattle is an economic catalyst to the entire Puget Sound region. It develops and manages commerce through the Seattle harbor, Seattle-Tacoma International Airport, warehousing and distribution centers, Shilshole Bay Marina, and Fishermen's Terminal. The Port impacts more than 80,000 jobs in the region and handles greater than \$35 billion a year in two-way trade.

Record Tonnage Again For Port of Charleston

An unprecedented four consecutive record breaking months for container traffic in the spring of fiscal year 1994 helped the Port of Charleston achieve its highest total tonnage volume ever, 7.5 million tons, up 5.7 percent over last year. Container tonnage was up nearly 10 percent to 6.9 million tons and twenty-foot equivalent units (TEUs) were up more than four percent to 838,295 TEUs.

It can be said that the Port of Charleston had a phenomenal spring of 1994. A new record for container traffic was set in March, only to be broken in April, and broken again in May and in June. Charleston handled more than 600,000 tons in each of those months, something only accomplished

1994 Fiscal Year Cargo Report Card

TEUs:

431,514 Export 406,781 Import 838,295 Total TEUs

Container Tonnage:

North Charleston Terminal 2,616,239
Columbus Street Terminal 1,793,859
Wando Terminal 2,520,444
Total Container Tonnage 6,960,400

Breakbulk Tonnage:

North Charleston Terminal 42,655
Columbus Street Terminal 281,228
Union Pier Terminal 197,438
Wando Terminal 3,690
Total Breakbulk Tonnage 505,009
Total Port of Charleston Tonnage 7,465,409

once before in the port's history — May, 1989.

New services, a recovering world economy, and cooperative spirit amongst the various waterfront entities, including a productive labor force, were the primary factors of the surge in volume according to W. Don Welch, executive director of the State Ports Authority.

"Many people involved in international trade felt that we have been due for an upturn. We tried to position ourselves to take advantage of that when and if it did happen. I would like to think our fiscal year past is evidence of an upturn and that we were a part of a steady, if slow, growth pattern,"

Welch said. "I believe the Port of Charleston is unique in the cooperative spirit that allows us, as a port, to remain a most attractive option for shippers and shipping lines. That goes for private businesses and our labor force, as well as port employees. It is a team effort in Charleston."

Steady growth in container traffic was the foundation for the high year-end figures, particularly the last four months.

"We had a fantastic spring in terms of container volume," said L. Duane Grantham, director, marketing and sales for the Port of Charleston. "I can't ever remember a time when we had four record months in a row. (*Port News*)

Africa/Europe

EU Support Possible for Helsinki East Harbour

The Ministerial Committee for EU Affaires when in for the construction of East Harbour at Vuosaari in Helsinki by including this port as the second most important item in Finland's list of her primary European projects. The list also includes the southern road-and railway connection Turku-St. Petersburg and improvement of the Kokkola route and port.

Consequently, if Finland becomes a

member of EU, she may have European financing, planning aid or interest subsidies provided that the Union finds such investments interesting.

Helsinki to Introduce Fixed Quay Places

"First in, first served" is the traditional principle applied by cargo ports in the distribution of quay places. This rule was challenged when the Port of Helsinki started experimenting with fixed quay places to be allotted to shipping companies.

The first to receive a quay place of its own was the shipping company Team

Lines Finland Oy which, since the beginning of July, has a place at Melkki quay in the West Harbour at its disposal. Unifeeder Oy followed one month later with a place at Saukko quay.

To get a permanent place, a shipping company must maintain a regular fixed day-service to and from the Port of Helsinki.

The quay place arrangements are not, however, definite, but the situation might be re-evaluated after a three months' testing period.

Port of Marseilles Authority Training Activities

Academic training

Since 1998, the PMA has been running ITIP (Institut des Transports Internationaux et des Ports/Institute for International Transport and Ports) which is a specialised Institute of the Conservatoire National des Arts et Métiers — CNAM/Museum and College of Higher Education for training students in the application of science to industry, which belongs to the Department of Education. The aim of the Institute is to provide a two-year training course, for holders of the French Baccalauréat/"A" Levels, in International Goods Transport. It is a full-time course and students sit a final exam to get their diploma in International Transport and Ports, which is officially recognized by the Department of Education as an undergraduate qualification. The Regional Council (called PACA in French) provides financial support for the Institute.

At the end of the last academic year, twenty nine students qualified for their diploma.

The current academic year has 51 students enrolled with 26 in first year and 25 in second year.

Training courses and advanced courses

In 1993, IFEP provided 19 courses both in Marseilles and in other ports and 183 trainees attended an equivalent of 1,466 days of training in the following fields:

- Basic knowledge on ports

- Ships and the port environment
- Advanced course in international shipping (2 sessions)
- Port operations
- Commercial function in a port
- Advanced course in managing a Purchase Department
- Instructor training (2 sessions)
- Field trip for Directors of the Port of Odessa
- General Port Safety
- Computerizing the accounts in a port
- Practical training on how to operate a container gantry crane (2 sessions)
- Management and maintenance of port infrastructures
- Management and maintenance of utilities (water, power and telephones)
- Advanced training on maintaining marine engines
- Advanced training on welding aluminium
- Advanced training on international shipping
- Study of the French port system

Participants came from France (Marseilles area and elsewhere), Eastern Europe (Ukraine and Romania) and Africa (Benin, Gabon and Morocco). It is to be noted that some courses were organised as part of contracts lasting several years, such as the following:

- Management and maintenance of port infrastructures
- Management and maintenance of port utilities. This course was organised for the Moroccan Authorities (Office d'Exploitation des Ports) over a period of three years for a total of 36 senior Moroccan executives (and funded by the World Bank):
- Instructor training
- Field trips organised for the Port of Odessa in the Ukraine as part of a technical assistance programme for the development of the port of Odessa. The courses accommodated 40 senior executives and were held in Marseilles and in other ports of Southern Europe (with EEC funding).

Engineering in the field of training

IFEP continued its co-operation

venture with the Institut Supérieur Maritime (The Maritime Institute) in Bou Ismail (Algeria) to set up a post-graduate course (PhD level) in shipping and port management. A total of seventeen teachers were sent to Algeria for periods of 4 to 5 days at a time and the teaching materials were supplied as part of existing Franco-Algerian accords. (*Europort: Activities 1993*)

Indexes Show Le Havre Service Improvement

Several indexes make it possible to assess the service quality of the port. Two of them are particularly revealing and concern the full container ships serving transoceanic links whose calls generate more than 100 container moves.

The first index is related to the productivity per call, that means that it determines the number of containers per hour of presence of the ship at berth from her berthing until her leaving. This index increased by 25% in August 1994 in the port of Le Havre in comparison with November 1993 (a period of time characterized by the setting-up of the new stevedoring organisation) and by 11.5% in comparison with June 1994 (a month during which numerous industrial disputes happened).

The second index of service quality concerns the number of container moves per gantry and per hour, for the same type of ships as defined above.

This index increased by 18% in August 1994 in comparison with November 1993 and by 8.5% in comparison with June 1994.

It can thus be affirmed that two months after the enforcement of the stevedoring agreements, the service quality offered to the customers of the Port of Le Havre has highly improved.

General Cargo, Bulk Turnover Up in Hamburg

The Port of Hamburg's boom goes on. In the first half of 1994 cargo turnover increased by 6.7% to reach 33.6 million tonnes. And the Port expects this positive trend to continue in the second six months of the year with turnover traditionally higher from July to December. This would result

in an overall turnover for 1994 that is considerably higher than in 1993 — provided economic recovery in Europe and America continues unabated. Moreover, the Port of Hamburg also has high hopes of profiting from changes in the structure of the consortium business in 1995-96.

The Port of Hamburg saw growth in general cargo and bulk turnover, up 6.2% and 7.2% respectively, while container turnover increased by 10.1% to 13.6 m t and by 8.7% to 1.3 m TEUs. This enabled Hamburg to improve its position vis-a-vis Rotterdam, its main rival. In fact Hamburg achieved higher growth rates than the Dutch port in container traffic and overall cargo turnover.

Bulk

In the first six months of 1994 grab cargo turnover totalled 6.8 m t, an increase of 17.8% on the same period last year. However, comparisons with previous years show that the 1994 figures were not as spectacular as would first appear. In fact, recession resulted in particularly poor figures in 1993. The recovery which began in the second half of 1993 was based on a powerful surge in the demand for steel, particularly in East Asia. And the German steel industry's higher capacity utilization led to increased imports of ore. Since the beginning of this year there have also been increased signs of an upswing on the European steel market.

Suction cargo turnover also increased in the first half of this year — by 6.5% to 2.7 m t. The driving force behind this growth were exports of stockpiled grain which accounted for almost a third of suction cargo turnover this year. Imports of fodder and feedstock fell.

The low price of crude oil in recent months resulted in falls in imports of petroleum products (down 19.9%) and liquid cargo turnover in general (down 3.3%). The increase in imports of crude was not enough to compensate for the fall in petroleum products.

General Cargo

The figures for the first half of 1994 were very good with total general cargo turnover reaching 17.1 m t. The containerization rate rose by 2.1 percentage points to 79.5%. Conventional general cargo turnover accounted for 3.5 m t,

2.6% less than in the corresponding period last year. However, the fall in conventional general cargo, an on-going phenomenon since 1985, was actually slower than in previous years.

Although exports of iron and steel continued to fall, imports of conventionally handled citrus and sub-tropical fruits, at 556,000 t, were 26.5% higher in the first six months of this year than in the same period last year. With an estimated containerization rate of around 18% in imported citrus and sub-tropical fruits, a further 125,000 t should be added to arrive at the total turnover in this sector. Imports of bananas accounted for 320,000 t in the first half of 1994, up 31% on last year. This growth was primarily due to increased transit traffic, in particular with Eastern Europe.

The growth in container turnover was slightly less spectacular than the 1993 figure but with 945,246 containers (or 1,314,844 TEUs) handled, an increase of 8.7%, it was a very satisfactory result. More incoming loaded containers were handled than outgoing ones (570,092 TEUs compared to 547,502 TEUs) but the increase in exports was actually greater (9% and 7.6% respectively).

New Line Service Brings Jobs to Amsterdam

As of August 18, the stevedores of Amsterdam will be receiving a significantly larger amount of work. As of that date, the shipping company Norbulk of Hong Kong will be arriving in Amsterdam regularly. Amsterdam will become the incoming port for combination vessels, with wood (products) and bulk goods. Unloading such a cargo is highly labour intensive and therefore means more work available for the Amsterdam stevedores.

The Hong Kong based shipping company has signed a contract with Westport Terminals Amsterdam, a joint venture of VCK and Cornelder, until the end of 1995. The bulk load will be unloaded by IGMA, the largest stevedore for agri bulk goods in the Amsterdam port. For the unloading, storage, shipment and delivery of the wood, Westport Terminals will work together with the multipurpose terminal Combined Terminals Amsterdam. The

Dutch agent of Norbulk is Ademar BV in Rotterdam. The first ship, the "World Agamennon" with almost 9,000 tons of bulk goods and 8,000 cubic metres of wood, arrived in the port recently.

The proximity of a general cargo as well as a bulk goods stevedore is ideal for the unloading of such a combined cargo and played a role in the choice for Amsterdam. For the time being, Westport Terminals will take care of the vessels at its own terminal in the Vlohaven. Should this present spatial problems, Westport Terminals is considering renting space elsewhere, on the intermodal transport centre Amsterdam Westpoint in the Amerikahaven, for example.

MarineSafety Rotterdam: Company Description

MarineSafety Rotterdam b.v.* is a private Dutch company jointly owned by MarineSafety International, Inc. (MSI) and the Gemeente Rotterdam (the Municipality of Rotterdam). MarineSafety Rotterdam is located at Wilhelminakade 701, Rotterdam, The Netherlands.

Capabilities

MarineSafety Rotterdam b.v. has unique capabilities in the design and the optimization of harbors and fairways, the training of the nautical users inclusive, ranging from ship's crew, pilot, tugboat captain up to and inclusive the traffic control operator and authorities involved. In this way the immediate safety is served in an unique way. In order to achieve this, MSR has at its disposal unique expertise, methodologies and techniques in port design and maritime training.

Moreover, MSR uses the expertise of both the parent company Flight Safety International with over 40 years experience and market leader in training of air crew and the Rotterdam Municipal Port Management in the design of both ports/fairways and the training of the nautical users involved.

Description of the Center

The MSR facility accommodates 5 Ship Bridge Simulators and one Vessel Traffic Services (VTS) Simulator. The

Full Mission Bridge (FMB no. 1) has a wheelhouse, equipped with Det Norske Veritas compliant instruments, exactly matching a real ship's bridge. The wheelhouse is placed on a hydraulically moveable platform, allowing realistic ship's motions. The Computer Generated Imagery (CGI) System creates a visibility of 360° horizontally and 35° vertically. The visual system is the state of the art with features such as an update rate of minimal 20 Hz, texturing, anti-aliasing and shading. Furthermore, an elaborate sound and vibration system is added. It all results in a research and training tool of a previously unknown quality in the maritime world.

Furthermore MSR accommodates four smaller FMB simulators to allow greater flexibility towards the client and to allow the most sophisticated research studies and training simulating the real world of a seagoing vessel, assisted by real tugboats. The Full Mission Bridge Simulators nos. 2 and 3 are equipped with a CGI system of 225° horizontal by 40° vertical field of view. The FMB Simulators nos. 4 and 5 do not yet have CGI visuals. Provisions have been made for an easy addition of visuals when required. Except for total field of view and the motion base, these simulators nos. 2 - 5 will have the same capabilities as the Full Mission Bridge. FMB Simulator no. 4 will be configured as the bridge of an inland shipping, self propelled barge. As all simulators are of modular design, any bridge can be shaped to the particular wishes of the client. All five bridges can be operated either stand alone or interactively.

A multi station Vessel Traffic Service (VTS) Simulator forms an integral part of the MSR facility. It comprises the state-of-the-art concepts concerning ship information services, monitoring and control of harbor traffic. The VTS complex is capable of stand-alone training and research, but can also be joined to the bridge simulators for interactive training or research.

All simulators will be supported by classrooms and (de)briefing facilities, incorporating the latest audio-visual- and communication techniques.

For information, phone +31-10-486 66 54; fax +31-10-484 60 71.

* Associate Member of IAPH

First Gov't-Certified VTS Simulator, Program

MarineSafety Rotterdam b.v. has designed a multi purpose VTS simulator and training program for VTS operators and supervisors. The VTS simulator is the first being certified by a Government Agency.

After a rigorous evaluation — under the chairmanship of the former Director-General of Shipping and Maritime Affairs, region Rotterdam-Europort, Mr. Cees van Aken — a panel of five experts and being the formal representatives of the Minister of Transport, Public Works and Water Management, declared on June 07, 1994 the MarineSafety Rotterdam VTS simulator to be a "suitable VTS simulator" for training and education purposes.

With this certified VTS simulator MarineSafety Rotterdam will provide basic and refresher training courses for Port of Rotterdam VTS personnel. This will be the start of serving training for VTS operators throughout the European Union and the rest of the world. It can also play an important role in R&D in this challenging field of interest.

To obtain more information or to schedule training, contact our Manager Marketing and Sales, at 31.10. 486 66 54, or via facsimile at 31.10 484 60 71.

Zeebrugge, Gothenburg For Mutual Development

The Ports of Zeebrugge in Belgium and Gothenburg in Sweden have formed a development company called Gothenburg nv. The aim of the company is to develop the two ports to equal standards in a number of fields and to stimulate plans for a fast transport link between the ports in order to meet the needs of the industry.

The joint development company has been formed by the Bruges-Zeebrugge Port Authority, the Sea-Ro Terminal in Zeebrugge, and the Port of Gothenburg AB. The company is registered at Brugge. The scope of the company will cover activities related to the two ports.

Within the framework of the company, the two ports agree to cooperate in a number of fields to achieve high and identical quality levels. These fields

include information technology, logistics, loading and discharging using roll on, roll off as well as lift on, lift off methods, marketing, and customs procedures.

Having reached a common quality level, both ports will install a loading/unloading system needed for a fast-ship link. Plans for such a link incorporate fast and frequent goods transit with roll on, roll off vessels, and with ports to match; e.g., terminal handling times will have to be drastically reduced. The two ports have found that they have a common interest in the project.

ABP Holdings' Half-year Profits Up by 29%

(1994 Interim Results : 6 months to 30 June 1994)

Announcing the Group's 1994 interim results, Sir Keith Stuart, ABPH Chairman, said:

"In the first half of 1994, Group results have advanced strongly, reflecting rising levels of activity in the ports and solid progress in our property business."

- Pre-tax profit £38.0m (1993: £29.4m), up by 29 per cent
 - Ports and transport: profit £35.7m (1993: £28.4m)
 - Property income (port-related): £11.1m (1993: £10.2m)
 - Property investment income: £5.8m (1993: £5.4m)
 - Property development: profit £0.6m (1993: £1.0m)
 - Profit on sale of investment property: NIL (1993: £1.5m)
 - Interest charge: £15.2m (1993: £17.1m)
- Earnings per share, adjusted for the 1 for 1 scrip issue on 26 April, up by 29 per cent at 7.6p (1993: 5.9p)
- Interim dividend: 2.0p per share (1993 interim: 1.75p per share), an increase of 14 per cent

In the first half of 1994, Group results have advanced strongly with pre-tax profits increasing from £29.4m to £38.0m.

Profits from ports and transport operations increased to £35.7m (1993: £28.4m), reflecting rising levels of activity in the ports and reduced severance costs of £0.8m compared with £4.0m



Sir Keith Stuart, Chairman, Associated British Ports Holdings PLC.

in 1993.

Income from port-related property increased to £11.1m (1993: £10.2m).

Investment property income rose to £5.8m (1993: £5.4m).

During the first half of 1994, there have been no sales of investment properties (1993: profit of £1.5m).

Property development activities achieved a profit of £0.6m (1993: £1.0m).

The overall financial results have also benefited from a continuing decline in the cost of interest charged to the profit and loss account, which in the first half of 1994 was £15.2m (1993: £17.1m).

Earnings per share, adjusted for the one for one scrip issue on 26 April, were up by 29 per cent at 7.6p (1993: 5.9p), after a tax charge of £9.5m broadly similar at 25 per cent (1993: £7.2m at 24.5 per cent).

Dividend

The directors have declared an interim dividend of 2.0p per share (1993 interim: 1.75p per share), an increase of 14 per cent. It will be paid on 2 November to shareholders who are on the register at 13 October 1994.

Finance and Capital Investment

"The level of investment in fixed assets has continued at a high level during the first half of 1994 with expenditure of £23m in the ports and transport business," said Sir Keith.

Net borrowings on the balance sheet increased marginally from £345m at 31 December 1993 to £349m at 30 June 1994, but there was a reduction from £12m to £9m in the Group's share of borrowings in associated companies.

The level of gearing was reduced to

51.4 per cent compared with 60.0 per cent in June 1993 and 52.5 per cent in December 1993.

A £170m revolving credit facility expiring in equal tranches in 1999 and 2001 has been agreed in principle, subject to legal documentation, and is expected to be signed by the end of September 1994. This will replace facilities which terminate during 1994 and 1995.

Ports and Transport

Total tonnage of cargo handled at ABP ports was 55m tonnes (1993: 53m tonnes) with increases in a number of trades including timber and manufactured goods, and a continuing strong growth in containerised and unit load business. Some bulk trades, including coal and grain, were at lower levels than in the previous year.

The number of passengers passing through ABP ports increased by 8 per cent to over 2.1 million.

- At Southampton container Terminals, a joint venture with P&O Containers Limited, throughput of containers was at record levels with 268,000 container units handled, representing a 22 per cent increase on the same period in 1993. Further investment in the container port is being planned to meet expected growth in business and the needs of the larger vessels which will be coming into service over the next

few years. Additional container-handling equipment has been acquired and two additional high-capacity cranes have recently been ordered; further areas of land are being brought into use.

- At Hull, the commissioning of the new River Terminal 1 for the rapidly expanding North Sea Ferries' services between Hull and Rotterdam has resulted in the unit load business advancing strongly. The Port of Hull has also achieved strong growth in its timber trade; it is now the UK's leading timber-importing port.
- At Immingham, work is complete on the new deep-water jetty — now full operational — for Conoco. Further growth in unit load business will flow from the new four-berth-roll-on/roll-off terminal now under construction for DFDS, which will be operational from April 1995.

Commenting on the Group's South Wales ports, Sir Keith said:

"Our South Wales ports have in recent years tended to suffer from the general drift of port business to the east and south coasts, but their underlying strengths have enabled them to continue to maintain a good overall trading performance.

- At Cardiff, cold store facilities have been expanded and a new container service between Cardiff and Dublin,



At Southampton Container Terminals (SCT), a joint venture between Associated British Ports and P&O Containers Ltd, additional container-handling equipment has been acquired and post-Panamax cranes ordered.

to be operated by Coastal Container Line, a subsidiary of the Mersey Docks and Harbour Company, will commence operations in late September.

- At Newport, new investments are in hand to provide facilities for the grain and animal feed trades, which present an entirely new business for the port.

Property Investment

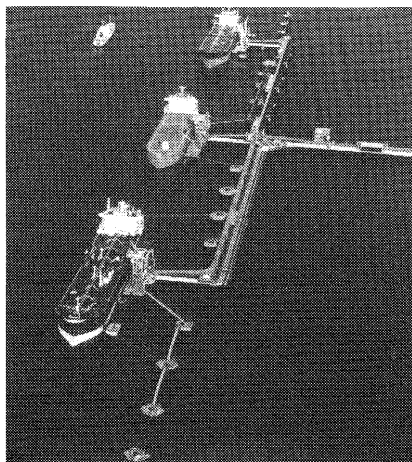
Sir Keith said:

"Grosvenor Square Properties' (GSP) investment portfolio is now 95 per cent let, and further growth in investment income will flow from developments as the new office building for NCM Credit Insurance Ltd at Cardiff, which will be ready for occupation in the spring of 1995. Prospects for our Capital Waterside scheme at Cardiff have been substantially boosted by the Government's decision to proceed with the Cardiff Bay Barrage, on which work has now begun."

While the Group's strategy is to build up a growing portfolio of high-quality investment properties, sales are made where market opportunities offer attractive returns, as exemplified by the sale on 1 September 1994 for £12m of a shopping centre at Morecambe.

Property Development

Property sales and profits were at a somewhat lower level in the first half, but further progress has been achieved in letting space within GSP's develop-



The new third Berth at the Immingham Oil Terminal is now fully operational and will increase the port's oil and petrochemical-handling capacity.

ment properties, including a recent letting of 41,350 sq ft at Denham to Renault UK.

Prospects

Sir Keith, commenting on prospects, said:

"Following the strong performance in the first half of 1994, prospects for the Group are excellent, with our ports well-placed to take advantage of the upturn in the UK economy and expanding world trade. The continuing high level of capital investment offers scope for further growth in future years. The property side of our business is also looking strong with a good underlying growth in investment income."



Port of Hull's River Terminal 1 has resulted in expanding North Sea Ferries' services between Hull and Rotterdam. The port also achieved further strong growth in its timber trade; it is now the UK's leading timber-importing port.

ABP Newport Invests in Animal Feed Facility

Associated British Ports (ABP) has announced the major refurbishment and conversion of an existing facility into a purpose-built store for animal feedstuffs at its Port of Newport for new customer, Glocom Limited.

The new terminal will feature improved bulk crane facilities and specially designed dust-suppressed hoppers. Roche Construction has been awarded the civil engineering contract and Northern Conveyors will build the hoppers.

The 8,200 sq m store is adjacent to the deep-water berths on the North Side, South Dock, which has the capacity to handle cargoes of up to 30,000 tonnes carried in deep-sea vessels from India and the Far East. The terminal and store will cater for the direct discharge, storage and distribution of animal feedstuffs for Glocom Limited.

Stuart Bradley, ABP Managing Director, welcomed the news and said:

"I am particularly pleased with this development for two reasons: firstly, it brings a new customer, Glocom Limited, to our port and secondly, it establishes Newport in an entirely new trade with strong growth potential."

Dic Williams, Port Manager, Newport, said:

"This new investment underlines the strategic location of Newport for being well-placed to serve the animal feedstuffs trade in the UK. The combination of a new bulk terminal and a modern animal feed store will enable us to meet the needs of the shipowner and provide a first-class service to Glocom and their customers."

Glocom Limited is part of the Thailand-based multinational G Premjee Group; the company is a major importer of animal feedstuffs into the UK.

Trevor Bartle, Marketing Manager at Glocom, said:

"We are delighted to be partners with ABP Newport and are confident that the new facilities will further enhance our ability to offer a "Total Quality Service" to our customers. Quality and flexibility are vital in business today and we are sure that, together, Newport and Glocom can meet the challenges of today's highly competitive marketplace."

Barcelona: First Quarter Shows 20.7% Increase

The total traffic of the port of Barcelona during the first quarter of this year came to 4.6 million tn., which represents an increase of 20.7% as compared with the same period of the previous year, which can be considered as a clear signal of recovery, after the poor results during the last financial year.

As per the figures provided by the Port of Barcelona Authority, all the cargo specific sectors show a positive sign. Thus, in the field of general cargo it came to 1.6 mill tn. This volume implies a large growth: 28.56%. As for solid bulks, growth has been even larger, coming to 36.78%. As for oil products, the increase was 10.11% and non-oil fluids 3.3%.

Also, and although to a lesser volume, the container volume that reached a total of 114,795 teu, presents an increase of 3.86% over the same period of the previous year. In the same fashion, containerized general cargo reached the volume of 1,336,795 tn, which represents a global increase close to 11%.

All these figures are no doubt hopeful, and are in line with what has been registered at other Spanish and European ports. (*Port Newspaper*)

PLA to Deepen River Thames at Diver Shoal

The Port of London Authority has embarked upon the implementation of its plans for a multi million pound project to deepen the River Thames at Diver Shoal in lower Gravesend Reach. This will substantially improve access to berths above Gravesend in the Port of London for deeper draughted vessels, as well as to extend 24 hour access for other shipping.

The PLA has appointed Consulting Engineers Posford Duvivier to prepare the detailed design leading to the construction of a series of groynes along the north shore. Construction work on the project is due to start in the Spring of next year, with completion scheduled for December 1995. Throughout the project a full navigational channel will be maintained with no interference to shipping.

The project is designed to increase

the water over Diver Shoal thereby providing daily access to the Port for vessels of at least 13 metres draught above Gravesend.

Improvements to depth during the construction period of the project will be secured by dredging. Dredging undertaken in August this year achieved a depth of 8.2 metres at chart datum. By its dredging programme for 1995 the PLA will be seeking to ensure that this improvement is sustained or bettered.

Describing the project as a "major investment for the Port of London", David Jeffery, PLA Chief Executive, said: "This project will further strengthen London's position as a deep-sea port, and the UK's largest port."

"In addition to deepening Diver Shoal, the PLA is investigating the means of improving the southern approach channels to the Port of London to benefit, in particular, the short sea and near sea trades."

He continued, "Investment on this scale indicates the commitment of the PLA Board to play its full part alongside the private operators in securing the future prosperity of the Port of London. Already this year, the first six months trade figures for the Port of London showed a five per cent increase in cargo tonnage to more than 23 million tonnes. The extra depth and improved access will attract further new trade and customers to the Port."

Asia/Oceania

New Commercial Setup For NSW Ports

A more commercial focus for major NSW ports will mean new gains for port users, including export-oriented farm and mining industries.

Deputy Premier and Minister for Ports Ian Armstrong, announced corporatisation of the Hunter, Sydney/Botany and Illawarra ports, fulfilling a Coalition Government commitment to increase the autonomy of port operations.

Under the changes, the Maritime Services Board of NSW is to be abolished.

Autonomous port authorities at

Newcastle, Sydney/Botany and Port Kembla will be created under the State Owned Corporations Act.

The MSB Waterways Authority will be replaced by a new State Marine Authority responsible for regulatory matters including marine administration and safety, but delivery of services to the public including boat registration and licensing will remain unchanged.

"For the first time, commercial functions of ports will be clearly separated from regulatory functions such as boat registrations and licenses," Mr Armstrong said.

"Ports will remain under government ownership as they are today, but corporatisation will allow increased commercial orientation with an emphasis on export trade development.

"This new emphasis on trade development will benefit the entire NSW economy, and reaffirm this state as leading the national agenda for waterfront reform," he said.

Mr Armstrong said that since 1989 average port charges had fallen 36 per cent in real terms, trade throughput had risen 25pc and port debt halved.

The NSW port reform program has ranked among Australia's greatest success stories in microeconomic reform.

Corporatisation will lock in the gains of the past five years and result in:

- new benefits for industry, especially agriculture and mining
- new commercial disciplines and accountabilities
- a new focus on business growth
- clear identification of commercial functions of the ports.

Mr Armstrong said legislation would be presented to the Parliament during the Budget session, enabling the port corporations to begin during the first half of 1995.

Marine safety legislation would also be consolidated from the existing 10 Acts into a single new Act, removing outdated and irrelevant clauses.

Outstanding co-operation between management, staff and unions of the MSB meant there would be little if any impact on staff from the corporatisation.

"The MSB staffing level of around 700 is down from the 3,000 in 1989,

and employees have been at the forefront of the enterprise bargaining system.

"The current enterprise agreement will remain in place until December 1995, guaranteeing no involuntary redundancies, and after this the management, staff and unions will be free to further decide their future through the enterprise agreement negotiating process."

Mr Armstrong said corporatisation would give a new "hard edge" to the marketing effort at NSW ports, creating a distinct goal of boosting trade performance.

He said opportunities ranging from the Olympics bid win to emergence of Asian economies gave NSW ports an unprecedented chance to become key trade links to the world.

Growing Intelligence of Yard Stacking Cranes

By Toru Takehara

Manager, Advanced Crane Projects
Mitsui Engineering &
Shipbuilding Co., Ltd.

Stacking Profile Scanning System

A stacking height profile of the containers in each stack is necessary to select optimum cycle paths when in automated mode. In principle the data on the sizes of stored containers in the Upper Supervisory System can be downloaded to generate a stacking profile, however, it is very important to double check the stacking profile to ensure safe operation. The system uses ultra-sonic means to detect the actual

individual stacking heights of each row of the target slot and contributes directly to the optimum path calculation.

AGV Docking System/Chassis Position Detection

The centering function of the AGV or yard chassis relative to the crane is very important for automated operation. The system adopted for detecting the center of both the AGV or chassis is to combine optical transmitter/receivers on the crane sill beams with reflectors mounted on the AGV/chassis.

In the case of semi-automated operation with a manned chassis, signal lights guide the driver in centering his vehicle to the stacking crane.

The AGV docking system involves the functions of the AGV positioning at the crane center and being stationary during container handling operations by the yard stacking crane. The interface information between AGV and crane is transmitted via wireless data communication system and the Upper Supervisory System.

Centering systems of this type are already in use in container operations but special attention is needed to achieve the required accuracy and to accommodate the inherent lack of precision of rubber tyred mounted machinery.

Anti-collision

Normal crane-to-crane anti-collision systems are routine crane technology and are applied where appropriate. For the operational flexibility of rubber tyred cranes, for example the ability

to transfer at right angles to the regular travel path, and the means that special attention has to be paid to anti-collision in the automated mode, ultra-sonic detection systems can be applied.

The technology required for the combination of both automated crane operation, and AGV use, is the subject of an ongoing R&D program to ensure that while being safe, the system does not interfere excessively with the container handling operations.

Remote Control System

Remote control using wireless data communication is both practical and effective. Ordinary operations will be automatically carried out by the commands of the Upper Supervisory System, however, extraordinary and emergency operations should be controlled manually by remote control.

The remote control system is located in the yard control centre and consists of video screens, crane manual control levers, all function switches, crane no. selection button, and message display board.

The remote crane operator's task is only to carry out the operation which is specified on the message display board. He selects the object crane by number, and monitoring the video screen, he uses the manual control levers to manipulate the crane remotely from the yard control centre.

Conclusion

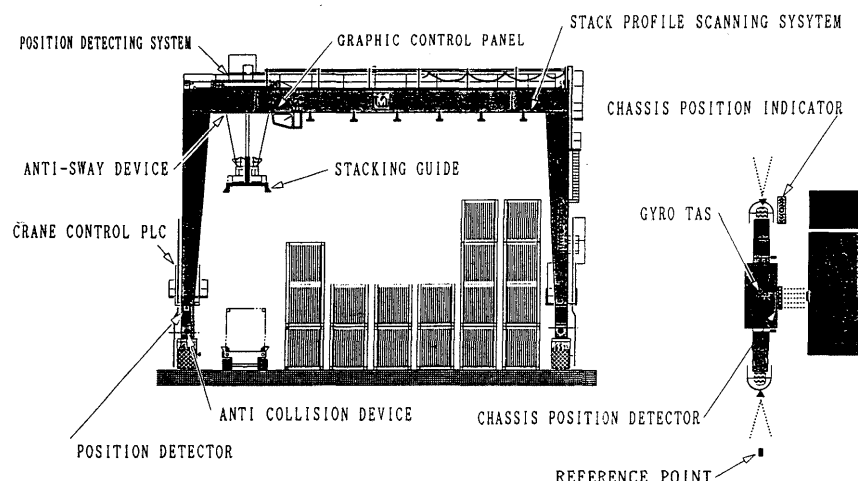
These new key technologies are applicable not only to rubber tyred stacking cranes but also to rail mounted gantry cranes and to bridge cranes for automated operations. The fully automated crane is the ultimate target for the future terminal of the 21st century, but these new technologies also could be easily installed on existing cranes to provide partial automation, contributing to the support, and improving the productivity, of the less experienced crane drivers.

(PACECO Newsletter)

At PKCT: Pollution bites the dust

Port Kembla Coal Terminal's win in the NSW Minerals Industry Environment Excellence award is a well-earned tribute for the \$3 million

Configuration of Automated Transtainer



contaminated water collection and treatment system.

The computer-controlled system was recognised for the massive reduction achieved in runoff pollution and for its engineering excellence. It allowed the Terminal to move from a reactive, piece-meal approach to a long-term pro-active solution designed to maximise process water recycling and comply with licence requirements.

Each year 600 megalitres of untreated water used to flow into Port Kembla Harbour, along with the equivalent of 24 truckloads of coal dust.

Now runoff flows into the Harbour only on days when rainfall exceeds 80 millimetres — which is usually just three times a year — and coal dust has been dramatically reduced to just half a truckload. No oil or grease is detectable in the water and its Ph level is equivalent to the area's tap water.

The need for such a system arose after a consortium of coal producers took over the terminal in 1990.

Dealing with this problem presented a real challenge. The area has high local rainfall, the 65 hectare site at the Harbour's northern entrance is flat, making gravity drainage impractical, and the site had to be operational during the implementation of the pollution control system.

The Illawarra Ports Authority provided principal funding. PKCT engineers co-ordinated the project. Conceptual design, specification and project management was the job of Materials Handling Professionals while Illawarra engineering firm Mechatricity handled the detail design and site construction.

The system involves a series of water collection sumps, strategically placed throughout the site to collect storm-water and runoff. All water is collected in ponds and pumped to a 12 megalitre settling lagoon. The coal particles are then removed by natural and accelerated settling while degradable chemical additives speed up the process. An oil skimmer collects oil and grease and the clarified water is pumped to tankers to be recycled for road washing and dust control on site.

The computer controls allow constant monitoring of every sector of the system. Plant variables, rainfall, evaporation levels and temperature are recorded, providing a valuable and extensive data base for reporting, analysing and planning.

The system more than meets the Environment Protection Authority requirements and future developments should see the Terminal eventually recycle up to 60 per cent of its water.

This success prompted the PKCT to nominate the system in two awards, the State Minerals Advisory Council 1993 Awards for Environmental Excellence in the NSW Minerals Industry and in the Institution of Engineers awards for environmental excellence.

It won the first award and was a finalist in the second award.

It is believed to be the first time any industry in Illawarra has won such an award and the honour also generated congratulations from overseas customers.

(Harbourline)

Penang Charting New Heights Of Excellence

January 1, 1994 marked an important milestone in the history of the Port of Penang with the corporatisation of the operations of Penang Port Commission (PPC).

Under the corporatisation exercise, the business, movable assets and liabilities of PPC were transferred to Penang Port Sdn Bhd (PPSB), a company incorporated on December 7, 1993 and fully-owned by the Minister of Finance (Incorporated).

Corporatisation was effected pursuant to the signing of the Privatisation Agreement between the Government of Malaysia, PPC and PPSB whereby PPSB is licensed by PPC to operate, manage, maintain and provide port and ferry services including undertaking development projects. PPC assumes the role of landlord for properties leased to PPSB as well as retaining related regulatory functions.

The facilities and services provided by PPSB are as follows:-

Cargo handling — breakbulk, dry bulk, liquid bulk and container.

Marine services — pilotage, tug service, dredging and other related services.

Ferry service linking Georgetown, Penang to Butterworth on the mainland as well as operation and management of Ferry Terminals and Bus Complex.

Dockyard services for vessels and marine craft at Bagan Dalam Slipway.

Security and fire-fighting services within Port Area.

Other services relating to the operation of the port.

PPSB is committed to operate as a commercially responsive and flexible entity to fulfill the needs of the port users by introducing and implementing measures which will lead to greater efficiency and better utilisation of resources in the port.

Exciting times await the Port when its superscale projects come on stream next year. The Port anticipates that its throughput will be significantly boosted with the commissioning of the multi-million ringgit North Butterworth Container Terminal and the expansion of the Pral Bulk Cargo Terminal.

(Baylink)

Penang Records Positive Growth in 1st Quarter

The Port of Penang continued its year of robust growth in the first quarter of 1994 scoring a nine per cent gain in total port throughput.

The Port handled 3.34 million tonnes in the first quarter of the year compared to 3.07 million tonnes in the same period last year.

In line with the country's strong economic growth, container traffic sustained momentum with an 11 per cent growth to reach a volume of 82,317 TEUs. Containerised cargo edged by 15 per cent to 1.43 million tonnes. The container terminal handled an average of 30 TEUs per nett hour in the first quarter of the year compared to 29 TEUs in the same period last year.

Robust traffic between Penang and south Thailand continued to spearhead the growth. For the first quarter of the year, some 147,066 tonnes (6,961 TEUs) of Thai cargo were shipped through Penang Port to the United States, Japan and Taiwan. This figure marked a 28 per cent increase over the same period last year. The Thai cargo comprise mainly rubber, canned food and fruits and frozen seafood.

Double-digit gains were also posted by liquid bulk and breakbulk cargoes. Liquid bulk cargo soared to 851,140 tonnes in the first quarter of the year, registering an increase of 12 per cent. Breakbulk cargo surged 13 per cent to 402,972 tonnes in the review period of 1994. Meanwhile, dry bulk cargo slipped by seven per cent to 654,829 tonnes.

(Baylink)

Ports of Auckland Ltd: Pre-tax Profit \$47.2 M

Ports of Auckland Limited, in its first year as a public listed company, has achieved a paid profit of \$31.6 million, up from last year's \$22.1 million record, an increase of 43%.

The company earned a pre-tax profit of \$47.2 million, up 39% from last year's \$33.9 million.

Revenue for the year was \$125.4 million, an 18% increase on the \$106.5 million achieved in the previous year.

Total assets at June 30 were \$327.2 million. The result represents a return on average net assets of 18%, and a return on equity of 12%.

The company generated net cash flows from operating activities of \$40.7 million, more than double the previous year. It was used to retire debt of \$15 million, to make dividend payments of \$9.9 million and to purchase \$19.8 million of fixed assets.

Earnings per share were 15.9 cents. Net asset backing per share is \$1.40.

The directors have recommended a final dividend of 5 cents per share, giving a total dividend, fully imputed, for the year of 10 cents per share. This compares with the previous year's dividend of 5.4 cents.

The Chairman, Sir Richard Carter, said the result reflected record volumes of cargo, up 11% over the previous year, together with increased efficiencies, strong control of cost and the benefits from the Westhaven Marina Extension sales. The result was well ahead of that forecast prior to the company listing on the New Zealand Stock Exchange.

Auckland is New Zealand's largest general cargo port handling 60% of the value of New Zealand's general cargo imports and some 25% of the total country's exports. The company handled 341,168 containers, more than half the country's total, and more than two thirds of container traffic in the North Island.

"We are also the leading New Zealand export port for beef, wool and dairy products. A significant achievement over the year is the increase in our container export volumes which now equates almost exactly with the volume of imports," said Sir Richard.

"The port is winning business from throughout the North Island and

steadily increasing its market share through the efficiency of its operations and marketing activities."

Sir Richard said the trend to hubbing on a major port would continue to grow, with road, rail and coastal shipping being used to bring export goods to the port and distribute imports.

"Shipping lines are looking at opportunities to reduce the number of New Zealand ports at which they call. This year some 30% of the company's container throughput was carried by ships calling at Auckland as either a sole port call in New Zealand or the North Island.

The company is continuing to improve the efficiency of its operations with new road and rail exchanges currently under construction at the port, further investment in computer planning and information systems, and additional cargo handling plant. A new large, container gantry crane will be installed next year.

Ports of Auckland Limited has been successful in its cruise ship marketing initiatives with 29 passenger liners calling at Auckland during the summer season. This was up from 16 the previous year and already 36 ships are expected during the coming season.

The company is continuing to review its property assets to determine those essential to port operations in the long term and to assess appropriate strategies for the remainder.

During the year major activities were the development of Viaduct Quay and associated refurbishing work in adjacent areas. Sales of the 255 berth extension of the Westhaven Marina have progressed very well and the project is due for completion September 1994.

Deepwater Channel at Yangtze River Mouth

The Yangtze River, more popularly known as Chang Jiang (the Long River) in China, covers a total length of 6,380 kilometers. The 170km-long estuary section from Xuliujing in Jiangsu Province to the outer exit into the sea is called Changjiangkou, or the Yangtze River Mouth. The river is only 5km wide at the Xuliujing Section, but widens to 90km at the outer exit gate. The average runoffs of the river reach 30,000m³/s, and nearly 500 million tons of soil and sand are brought down here

by the river water from upstream every year to be deposited near the exit, forming submerged sandbars and shoals.

The Yangtze River Mouth, under the combined effects of runoffs and tides, is divided into a north branch and a south branch by Chongmin Island from Xuliujing downwards. The runoffs mainly discharge into the sea via the south branch. The south branch is further divided into the south harbor and the north harbor by the Central Sandbar, Changjian Island and Hengsha Island. The south harbor consists of the Southern Stream and the Northern Stream. The north branch is no longer navigable. The navigability of the north harbor, the Northern Stream and the Southern Stream is hindered by the sandbars at their entries into the sea. The natural water depth of the shoals is only around -6m.

Currently, ships enter the Yangtze River via the Northern Stream, which relies on regular dredging to maintain its depth of -7m, prohibiting large container vessels from entering the Port of Shanghai and other Yangtze River ports. 25,000 tonnes can enter the port only at high tide.

With the rapid growth of the Chinese economy, there is a pressing need to develop navigation on the Yangtze River. However, the limited dimensions of the Yangtze channels do not meet the world trend towards jumbo-sized ships, and have gravely restricted the capacities and functions of the Port of Shanghai and other Yangtze River ports, forming a bottleneck for the economic development of Shanghai and the whole Yangtze River Delta. Therefore, the State attaches great importance to the project to deepen the approach channel at the estuary of the Yangtze River. The study on the Evolution Rules of the Changjiangkou Sandbars and the Proposal for the Creation of Deepwater Channels were started in 1992, in which nearly 100 professionals from all parts of the country pooled their wisdom and expertise. The report was completed in December 1993, and was approved by a screening panel organised by the State Planning Commission in March 1994.

The study report puts forward a proposal for deepening the channel in the Northern Stream of the south harbor to -12.5m to allow the entrance

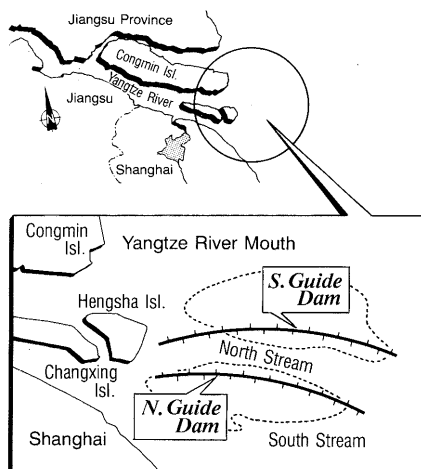


Diagram of the Project of Deepwater Channel at the Yangtze River Mouth in the Port of Shanghai

of 3rd and 4th generation container vessels and 50,000-ton bulk carriers into the Port of Shanghai at any time of the day, and 100,000 tonners in high tide.

The project will give first priority to enhancing the navigability of the River, and at the same time attention will be given to its overall regulation. The whole project will be carried out in three phases, spanning a period of 10 years.

The massive project requires a total investment of RMB7,800 million. The fund will be raised by different means, including levying channel dues from large ships passing the deepwater channel, the leasing of reclaimed land, loans from development banks and appropriations from the state and local treasuries.

The deepening of the access channel at the Yangtze River Mouth is of special significance to the development of the Port of Shanghai in its ambitious drive to become one of the major international hubs on the west rim of the Pacific Ocean. At present, the authorities concerned are stepping up the preparatory work to ensure an early start to the massive construction project.

Performance of Port of Singapore

Singapore has been the world's busiest port in terms of shipping tonnage since 1986. It is also the world's leading container port after Hong Kong, handling 9.05 million TEUs in 1993 and accounting for over 8% of the world's throughput.

For the first six months of this year,

container throughput increased by 15.8% to reach 4.88 million TEUs. South East Asia remains as Singapore's leading cargo generators, handling 35% of the total throughput for the same period. For Aug 94, the Port handled a record 921,000 TEUs* and for the period from Jan - Aug 94, 6.70 million TEUs* were handled, an increase of 15.1% over the corresponding period in 1993. By end 1994, the Port is expected to handle well over 10 million TEUs for the year.

Singapore's seaborne trade with the European Community (EC) has increased over the years. In 1993, 1.38 million TEUs were handled, reflecting an increase of 23.1% over 1992. This strong growth has continued into 1994, with 0.75 million TEUs handled in the first six months of this year (17.7% growth). Rotterdam and Hamburg continue to be Singapore's leading EC traders, handling 3.04 million TEUs and 2.46 million TEUs respectively in the same period. Shipping linkages are also well established with some 19 sailings to Rotterdam and 18 to Hamburg weekly.

The strong economic growth in South East Asia and the emerging markets in China, Australia and South Asia have contributed to the robust growth of our Port. This, together with our extensive shipping network by 530 shipping lines to over 700 ports worldwide and the efficiency in our port operations will help Singapore retain an edge as a global hub port.

The Port of Singapore Authority (PSA) is committed to providing quality and efficient services in cargo handling, warehousing, distribution, bunkering and ship supplies. In 1994, the World Competitiveness Report ranked Singapore top in terms of port access for business requirements. We also won the 1994 Asian Freight Industry Awards (AFIA) for "Best Seaport: Asia", "Best Container Terminal Operator" and "Best Warehouse Operator". This year, the University of Syracuse recognised PSA for its excellence in the field of transportation and distribution through the Salzburg Concept Medallion Award.

To stay at the forefront of port technology, PSA uses over 280 computer applications in all facets of its activities and services. To facilitate just-in-time planning and operations,

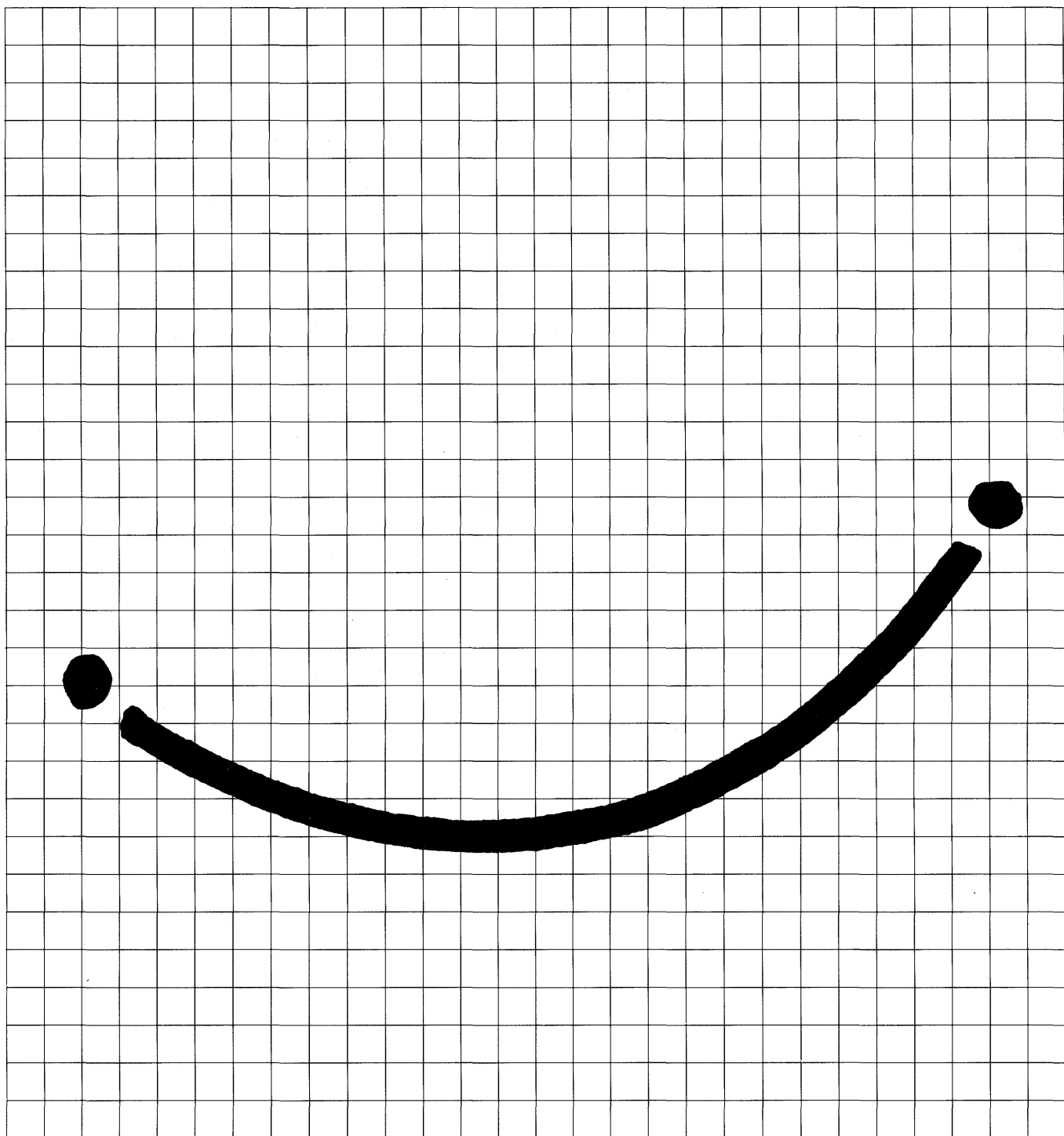
PSA has established Electronic-Data Interchange (EDI) links with ports in Bremen, Hong Kong, Seattle, Le Havre, Hamburg, Marseilles, Thailand, Penang and Belawan for the exchange of shipping information and pre-planning of operations.

PSA also shares its know-how in port management, IT applications and training with other ports in the world. The Singapore Port Institute, PSA's training arm, offer an extensive range of maritime courses which includes port management and operations, shiphandling and crane simulation training, and customised training programmes for ports. More than 3,000 overseas shipping and marine personnel have participated in the training programmes through various training schemes. Ports which have undergone these programmes include Indonesia, Brunei, Sri Lanka, Vietnam and China. Earlier this year, PSA also trained staff from Voltri Terminal in Genoa, Italy in equipment handling and maintenance. A group of Australian pilots are also currently undergoing a training programme for navigation with the aid of the Full Mission Shiphandling Simulator at the Institute.

PSA's expertise in maritime services is also extended by our 11 subsidiary and associated companies, including SPECS Consultant Pte Ltd, CWT Distribution Limited, SingaPort Cleanseas Pte Ltd and MAP Services Pte Ltd.

The port is constantly planning ahead to keep pace with the increasing demand for container handling facilities. A new container terminal will be developed in four phases over the next thirty years. The first 5 berths will be operational in 1998. The new terminal will feature the latest in automated equipment and real-time operations systems, including the Automated Guided Vehicle System (AGVs).

This year, the Port has sufficient capacity for 13.1 m TEUs, supported by 30 berths, 92 quay cranes and other equipment. New berths and equipment are being added at the two fully operational container terminals of Keppel and Tanjong Pagar this year. Brani Terminal, developed at a cost of S\$1.4 billion will be fully completed in 1995. By 1996, the Port will have 32 berths and 99 quay cranes and have a handling capacity of 16 million TEUs.



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Comprehensive Distribution Terminal

Osaka: a metropolis virtually at Japan's center representing along with Tokyo the Japan of today. Osaka port: the gateway of Japan and pillar of the Osaka economy linked with 100 countries and 400 ports around the world. Featuring a full complement of port facilities including container, passenger and ferry terminals, and directly connected by a highly developed traffic network to the massive hinterland and the 24-hour Kansai International Airport open September 4th of this year, it forms a comprehensive distribution terminal uniting sea, land and air. Those who know, know.

Passenger Terminal
Terminal for international cruise ships



Container Terminal
Accommodating 2000 full-container ships a year



Ferry Terminal
Japan's largest domestic ferry terminal accommodating two million people a year



Port of Osaka would like to invite the 21st World Ports Conference of IAPH in 1999

Now You Know

OSAKA PORT



Port of Osaka

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TEL 06-612-0171 FAX 06-612-7790