# Ports Harbors





The Publisher The International Association of Ports and Harbors







An aerial view of the Island Harbour Bluff and Town Wharf top left

The "Caribbean Maru" loading under the all weather meat loaders at Bluff

The "Southern Cross" under the all weather meat loader

An aerial view of the Town Wharf Bluff and Tiwai Wharf in background A port so fast it has to be called...



Mario M. Cuomo Governor State of New York

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## Ports Harbors

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## IAPH ANNOUNCEMENTS AND NEWS

### Secretary General's Report Submitted To the Conference

The Secretary General's Report to the Miami Conference was completed by the Head Office and shipped to Miami in time for distribution to the delegates there. The IAPH members who will be unable to attend the event will receive the Secretary General's Report and other documents for the Conference from the Tokyo Head Office after the proceedings are over.

The Report covers all of our activities for the past two-year period and complete details of the Association's financial and membership situations. For the benefit of our members and in particular for those who will be unable to be with us in Miami, we reproduce below the introductory remarks by the Secretary General which precede his 74-page Report to the Conference.

### Introduction

#### (from the Secretary General's Report)

I derive great pleasure from being able to report on the activities of our Association for the past two-year period following the 15th Conference in Seoul, Korea, two years ago.

Let me first express to all our members my deep appreciation for the way they have stood behind and worked together with our organization in all aspects of its varied activities. I also wish to proclaim my profound gratitude to the President, Vice-Presidents, the Board and Exco members, chairmen and members of our committees and Legal Counselors as well as the Liaison Officers for the exemplary leadership and devoted service with which they have assisted us in our day-to-day endeavours on behalf of IAPH's worldwide membership.

At the same time, I would like to reiterate our earnest thanks to our friends at the Port of Abidjan, Cote d'Ivoire, for their warm and wholehearted cooperation as hosts of the mid-term meetings of Exco and the other committees last year.

As for the details of the Association's activities, we have kept our members informed of all developments through "Ports and Harbors" during the past two years and you will find summaries of the events concerned in this Report. Therefore, I will simply try to highlight here a few items of importance concerning the scope of our activities to which I would like to invite your special attention.

### Relations with other international bodies and IAPH's growing role

One of the most important aims of our Association's

activities has been to protect the interests of world ports, including IAPH member ports through the development of all these ports and harbors and thereby to contribute to the promotion of free trade in the world. In quest of this goal, we have sought to make IAPH's positions better known in the appropriate quarters by maintaining close contact and cooperation with the various international maritime organizations, including the IMO and UNCTAD.

These activities have been made possible through the representation arrangement under the IAPH/BPF Representation Agreement and through other liaison activities.

It is clear that IAPH's responsibility as a spokesman for world ports has increased greatly in line with the Association's mission to work for the common benefit of its worldwide membership.

#### International Port Development

Another important objective that IAPH has been promoting enthusiastically has been that of encouraging advanced ports to provide their less developed counterparts with the appropriate information, expertise and training opportunities to enable the latter to achieve greater operational efficiency.

I feel happy to say that the IPD Fund, based on revenues voluntarily contributed by IAPH members in developed countries, has contributed - albeit on a somewhat modest scale - towards the attaining of this goal.

As far as continuing this assistance project is concerned, the Executive Committee has stated that it is essential to replenish the reserves of the IPD Fund. I have accordingly requested all IAPH members for voluntary contributions to the IPD Fund towards the raising of US\$70,000 in the two-year term. Thanks to the generous support of our members, we have so far been able to raise nearly 60% of the targeted amount. I now wish to urge all members' continued support of the project so that we can achieve the goal within one year from now.

#### Your journal "Ports and Harbors"

In accordance with the recommendation made at the Seoul Conference by the Ad Hoc Group of Experts especially created to study how the journal might be improved, we have made vigorous efforts towards enhancing the appeal of the journal. We are determined to continue our efforts to upgrade the quality of the journal on the basis of the advice and ideas offered by our members. At the same time we will try our utmost to minimize the publication's production costs.

With reference to our advertising campaign efforts, in accordance with the recommendation of the Finance Committee, the Executive Committee has adopted the view that the production costs of the journal could be greatly reduced if the entire membership would run advertisements in it at least one page a year. Thus, the Head Office has, where appropriate, distributed a campaign letter and a media-kit to all IAPH members and other relevant bodies - both actual and potential clients - to further this idea. We sincerely hope that as many IAPH members as possible will be able to give their support to our advertising campaign efforts and use our journal as a vehicle for their advertisements.

### Membership Campaign

Thanks to the initiatives of the Membership Committee Chairman, Officers and Exco members, we have been able to add several new members in IAPH since the Seoul Conference. Looking to the future, I feel particularly gratified to be able to report to you that some Spanish ports feature in this increase.

### **Financial Status**

I think I can say that at the moment the only thing which gives us something of a headache is the matter of our financial status. In fact this is a subject of the utmost importance, and one which is at the very core of our activities.

The major reason for our concern in this regard lies in the drastic decline of the U.S. dollar and the corresponding appreciation of the Yen against the SDR which has occurred in a comparatively short period. Due to the drop in value of the SDR, our annual balance has dipped into the red, with the revenues falling short of the budget.

In view of this situation, the number of SDR units per membership unit was raised by 5% effective from January 1, 1989, in accordance with the decision of the Board of

### Board OKs Agenda For Miami Conference

At the Board meeting by correspondence held on April 15, 1989, the agenda for the 16th Conference was finalized. It is the same as that outlined in the previous issue of this journal, when it appeared as the "provisional agenda".

### Valencia, Tarragona, Spain, Join IAPH

As we mention in the following "Membersnip Notes" section, we are pleased to convey the news that the Ports of Valencia and Tarragona, Spain, have been enrolled as Regular Members of IAPH. As a result of this addition, altogether six Regular members — Ports and Coast Directorate, Ministry of Public Works and Urban Development in Madrid (1 unit), Barcelona (4 units), Gijon (3 units), Santander (2 units), Valencia (4 units) and Tarragona (3 units) — have joined our ranks. The total number of units subscribed by the Spanish Regular Members now comes to 17, making Spain the second largest IAPH member country in Europe following France (8 Regular Members and 27 units).

Furthermore, the Ports of Bilbao and Mallorca have joined IAPH as Temporary Members.

The significant increase in the number of members and units as seen in Spain is most encouraging for IAPH reflecting Spain's enthusiasm as the host country for the 17th Conference to be held in Spain in 1991. Directors.

Despite the above measure, however, it is hardly possible for the Association to cover the expenses necessary for maintaining the current level of activities from our yearly revenues in the form of membership dues and other sources.

If IAPH is to continue its role as an international organization representing the world port community, while at the same time providing its members with an appropriate level of service, we do need to establish a new financial policy. Thus, I request all members' special understanding of the necessity of placing our finances on a firm footing in the medium and long term.

### **Miami Conference**

I would like to finish by expressing my sincere respect and thanks to our hosts in the Port of Miami and Metropolitan Dade County, Florida, for their strenuous efforts in preparing our Conference. I believe it will be the most important event of this year for our Association. Moreover, I am convinced that the 16th World Ports Conference of our organization will provide all of us with a most rewarding forum in which to work together for our common goals and will enable us to deepen our friendship with our colleagues gathering in Miami from all parts of the world.

> (March 1989) Hiroshi Kusaka Secretary General

### Nominating Committee Membership Changes

In the previous issue, we announced the Nominating Committee membership as it was proposed to the Board meeting by correspondence on April 15, 1989. However, Mr. J. Rommerskirchen, Port of Hamburg, who was listed as a member of the Nominating Committee has been replaced by Mr. Erik Schäfer, Port of Copenhagen Authority, since Mr. Rommerskirchen is to leave the Port of Hamburg and has cancelled his participation in the Miami Conference. In the meantime, Mr. J. Prevratil of Long Beach has been replaced by Mr.C.R. Langslet of the same port due to the former's arrival time in Miami.

Except for these changes, the list of the Nominating Committee for the Miami Conference remain as it was announced in the previous issue.

### Topical Aspects of CLPPI Work

Mr. Paul Valls, Chairman of the CLPPI (Port of Bordeaux) and his team has been active in producing various reports for the IAPH members. Recently the IAPH Head Office has received the following five working papers from Chairman Valls for publication in this journal. In this edition we publish the first two papers with the remaining ones appearing in the following issues of "Ports and Harbors".

### **CLPPI Working Papers:**

(1) Maritime Liens and Mortgages UNCTAD/IMO Joint

Group of Experts (5th Session – Geneva – 12-20 December) (See pages 9-11)

- (2) The Legal Aspects of Electronic Data Interchange (See pages 11-12, 14)
- (3) The HNS Draft Convention
- (4) Containers and Containerships The Legal and Financial Implications for Ports
- (5) Shipowners, Ship Charters, Operators and the Ports

### New Appointment – COPSEC Membership

Mr. M. Juhel, Manager of the Department of Ports and Navigable Waterways, BCEOM - a French Engineering Consulting firm and an IAPH Associate Member in Paris - has recently been appointed by President Wong to serve on the Ship Sub-Committee, COPSEC. His nomination was based on the recommendation of Mr. Jean Smagghe, Director General, Port of Le Havre Authority, who chairs the IAPH Committee on Port Safety, Environment and Construction (COPSEC).

Mr. Juhel's predecessor, both at BCEOM and the IAPH Ship Sub-Committee, was Mr. O. Bonnin.

### **Bursary Recipients**

Mr. C.B. Kruk, Chairman of the Committee on International Port Development (CIPD), has approved bursaries for the following individuals:

Mr. Thomas Ancil River, Point Lisas Industrial Dev. Corp. Ltd. (PLIPDECO), Trinidad & Tobago to participate in the IPPPM Course, University of New Orleans, U.S.A., from 3 to 14 April 1989.

Mr. D.M. Kabungo, Kenya Ports Authority, to participate in a training course at the IHE, Delft, Netherlands.

**Mr. Lam Loon In,** Mauritius Marine Authority, to participate in the PACT training course at the Port of Rotterdam, Netherlands.

### IAPH Busary Scheme in Brief

The IAPH bursary is open to port personnel in developing countries who have been employed in an IAPH member organization in a junior or middle management capacity for at least three years and who are younger than 50 years of age. Application should be sent to the Chairman of the Committee on International Port Development at the following address:

Mr. C. Bert Kruk

Chairman, IAPH Committee on International Port Development

Director, TEMPO (Technical and Managerial Port Assistance Office)

- Port of Rotterdam
- P.O.Box 6622, 3002 AP Rotterdam, The Netherlands Telex: 23077 EUROT NL Fax:31-10-477-8240

The application should include a statement confirming the suitability of the applicant for the course he or she wishes to attend and indicating the benefit both the port and applicant seek to derive from the course. The application should also be accompanied by a letter from the host training port/organization confirming its willingness to provive the required training and specifying the date of commencement and duration of the course.

Under the current system, subject to the availability of funds, 10 bursaries for each year, not exceeding US\$3,500 each, will be awarded to approved applicants. If the total amount required for the applicant's training exceeds the above limit, the balance shall be borne by the applicant's organization.

The conditions for entry for the new term (1990-1991) will be announced in this journal, based on the decision made at the Association's 16th Conference at a later stage.

### **Membership Directory**

### Entry Form to be sent in late May

Towards the end of May, all IAPH members will receive a circular from the Secretary General requesting the members' cooperation concerning the 1990 edition of the IAPH Membership Directory.

Upon receipt of the circular, all members are requested to check the information which will be attached to the entry form and to make the necessary corrections and changes for the given items including:

- 1) name of organization
- annual volume of cargo handled (in metric tons), covering both general and bulk cargo in the case of Regular Members
- 3) address
- 4) mailing addressee
- 5) contacts (telex number and answer-back code, facsimile, telephone numbers and cable address)
- 6) names and positions of principal officers

Normally the Head Office compiles this annual publication in accordance with the following schedule:

- End of May: Entry form to be sent to all members from the Head Office.
- End of July: Deadline for receipt of all up-dated entry forms at the Head Office from each member.
- End of October: Completion of the Directory and distribution to all members.

In the previous editions, some members were listed with an asterisk mark to identify those members whose updated entries had not been received by the deadline. We urge all members to make the latest situation concerning members' organizations available to the Head Office in time for insertion in the new edition of the Directory.

Moreover, members are invited to run their advertisements in the Directory at reasonable rates:  $\frac{1}{2}$ ,000 for a full page (152mm x 75mm) and  $\frac{1}{2}$ 44,000 for a half-page (75mm x 75mm).

### **IPD Fund: Contribution Report**

The contributions from members to the Special Port Technical Assistance Fund ('the Special Fund") as of April 10, 1989 are listed in the box below. There has been a slight increase in the total amount since the last announcement in the previous issue, which was US\$35,379 against our original target of US\$70,000. This situation is to be reported to the International Port Development, Finance and Executive Committees in Miami so that these committees will be able to review and realign the course of the fund-raising campaign for the term following the Miami Conference.

### Contributions to the Special Fund (As of April 10, 1989)

Contributors 2	Amount
Paid:	(USS)
Associated British Ports, UK	3,000
South Carolina State Ports Authority, USA	1,000
Cyprus Ports Authority, Cyprus	700
Japan Port & Harbor Association, Japan	450
Toyo Construction Co., Ltd., Japan	234
Toa Corporation, Japan	500
Port Alberni Harbour Commission, Canada	a 200
Port Authority of New York &	300
New Jersey, USA	1,000
Vancouver Port Corporation, Canada	1,000
Klang Port Authority, Malaysia	200
Saeki Kensetsu Kogyo Co., Ltd., Japan	250
Penta-Ocean Construction Co., Ltd., Japan	1,000
All French Ports by UPACCIM*	1,560
Shimizu Construction Co., Ltd., Japan	390
Taisei Corporation, Japan	390
Japanese Shipowners' Association, Japan	390
Port of Redwood City, USA	100
Puerto Autonomo de Barcelona, Spain	991
Port Authority of Thailand	100
Port Rashid Authority, UAE	500
Japan Cargo Handling Mechanization	••••
Association	390
Obayashi Corporation, Japan	400
Port of Copenhagen Authority, Denmark	1,000
Clyde Port Authority, UK	1,000
Public Port Corporation II, Indonesia	150
Toyama Prefecture, Japan	420
Georgia Ports Authority, USA	1,000
Port of Oakland, USA	350
Kuantan Port Authority, Malaysia	200
Port of Seattle, USA	1,000
Kajima Corporation, Japan	420
Port of Reykjavík, Iceland	500
Canada Ports Corporation, Canada	250
Nigerian Ports Authority, Nigeria	250
Port of Montreal, Canada	1,000
Tangania Harbourg Authority	200
Lunta dal Duanta da Cijan Spain	200
Shariah Danta Authority, U.A.E.	500
Sharjan Forts Authority, U.A.E.	4 0 5 0
Port of Long Pooch USA	4,950
Mouritius Morine Authority	200
Chiba Prefecture Japan	200
Dr Frederik K DeVos Canada	100
Takya Metropolitan Government Japan	3 0/1
Total USS	35.379
Pledged:	20,019
IAPH members in the Netherlands** US	\$3,209
Hiroshima Prefecture, Japan U	JS \$750

\* Union of Autonomous Ports & Industrial & Maritime Chamber of Commerce

**\*\*** Directorate-General of Shipping & Maritime Affairs, Port Management of Rotterdam, Port of Vlissingen, Port of Delfzijl/Eemshaven, Port Management of Amsterdam

### **Visitors to Head Office**

March 1, 1989, Capt. W.E. Murphy, President, Capt. J. Johnson, Member, Alaskan Southwest Pilots Association, and Mr. C. Clemtillion, Chairman, North Pacific Fisheries Management Council

March 10, 1989, Mr. Sadhu Adisasamita, Directorate General of Sea Communication, Ministry of Communication, Indonesia

March 14, 1989, Mr. George F. Talin, Board President, Mr. Joseph F. Prevratil, Executive Director, Mr. Travis A. Montgomery, Director of Trade Development and Mr. Seiji Kobayashi, Japan Representative, Port of Long Beach, U.S.A.

March 17, 1989, Mr. John H. Sargent. Head of External Relations, Costain Group PLC (U.K. PIANC delegate)

March 27, 1989, Mr. Peter M. Rocke, Chairman, Port of Melbourne Authority, Australia and Mr. P.C. Ingram, Commissioner, Government of Victoria, Australia in Tokyo

### **Membership Notes:**

### **New Member**

### **Regular Members**

### Tarragona Port Authority (Spain)

Address: Arranque del Rompeolas, s/n 43004 Tarragona Telex: 56520 JOPT-E Tel: 77/22 66 11 Fax: 77/22 54 99 (Mr. Antoni Pujol I Niubo, President)

#### Puerto Autonomo de Valencia (Spain)

Address: Muelle Aduana s/n, 46024 Valencia Telex: 64508 PAVE Tel: 96-323 09 91 Fax: 96-323 32 72 (Mr. Fernando Huet, President)

### **Temporary Member**

### Junta del Puerto de Palma de Mallorca (Spain)

Address: Muelle Viejo, No.3 Palma de Mallorca Telex: 69075 Tel: 71 51 00 Fax: 72 69 48 (Mr. Priamo Villalonga, Chairman)

### **Associate Members**

#### **PROGEMAR [Class A-II-1] (France)** Address: 3, rue Dosne, 75116 Paris Telex: 610696

Fax: 47 55 08 47 (Mr. Claude Mandray, President)

### International Port Cargo Distribution Association [Class B] (Japan)

Address: 11-10, Shinbashi 6-chome, Minato-ku, Tokyo 105 Tel: (03) 435-8835

Fax: (03) 435-8837

(Dr. Yoshikazu Kawasaki, Managing Director)

### Maritime Liens and Mortgages UNCTAD/IMO Joint Group of Experts

### 5th Session – Geneva – 12/20 December 1988

The 5th Session of the joint group of experts was held in the Palais des Nations, Geneva, from 12 to 20 December 1988. It was followed for IAPH by André Pages.

### 1. Reminders

This session followed four previous ones which had not exhausted the subject.

#### 1.1 Conventions dealing with the subject

The objective given to the group of experts was to draw up a new international convention on maritime liens and mortgages, which would replace:

— that of 10 April 1926, which entered into force on 2 June 1931, but was not ratified by some of the major maritime powers; and

- that of 27 May 1967, which only received its fifth ratification.

#### 1.2 Motivation for a new convention

The new draft is based on the following reasoning: — The developing countries wish to create their own merchant fleets. IMO and UNCTAD support this wish. — The consitution of a merchant fleet requires major

funding, which has to be raised through loans.

- Companies granting loans require guarantees for thier credit in the form of mortgages on ships financed in this way. They are concerned by the multiplicity of lien claims taking precedence over these mortgages, in cases of arrest and forced sale.

- Thus, to create the fleets of developing countries this reasoning seems to insist that the lien status accorded to claims given a higher ranking mortgages should be strictly limited so as not to absorb too much of the proceeds from the forced sale of a ship, which should revert to the mortgage holders.

#### 1.3 The limited view of this motivation

At first glance this objective would appear to meet the needs of all shipowners of any nationality.

However, such a vision is somewhat short-sighted in that:

- the acquisition of a ship is normally followed by its entry into a fleet and then into service; and

- the operator of the ship (its owner or a charterer) finds himself in contact with the multiple partners involved in the maritime world.

Liens granted by the conventions of 1926 and 1967 to certain of these partners, and in particular to port authorities, encourage the latter to avoid arresting a ship which is ready to depart, because her call costs have not been paid. A lien is in fact a guarantee which follows the ship and inspires confidence in her creditors.

Similarly, the operator of a ship has an interest in the fact that the ports at which his vessel calls are rapidly repaired when port works are damaged by other vessels, or that the wrecks or other obstructions are cleared rapidly from port waters.

The liens granted by the 1926 and 1967 conventions to port claims for the repair of damage to port works and for wreck removal are granted, in fact, *through the port authority*, for the benefit of the maritime community as a whole and for the economy of the country which it serves.

In the same way, ports must be compensated on a priority basis out of the proceeds of the forced sale of a ship, for the expenses incurred in the care and preservation of the ship prior to that sale, and again in the common interest involved.

### 1.4 Previous interventions by IAPH

This is the position which IAPH representatives have confirmed in their oral interventions during previous sessions, and which the Association disseminated to its members as well as to the IMO in its paper of 22 February 1988, prior to the 4th Session of the joint group of experts which was held in London from 16 to 20 May 1988.

### 2. The Work of the 5th Session of the Group of Experts

### 2.1 Continuation of the work in hand

The fifth session, like the previous ones, did not exhaust the subject of the revision of the international regulations on maritime liens and mortgages.

The work will continue at a 6th session, which is to be held at the IMO in London from 25 to 29 September 1989. Prior to that session the secretariats of IMO and UNCTAD and the representatives of certain delegations will have prepared additional studies on certain points which remain undecided and will have submitted these to the IMO secretariat, at the latest by 15 May, with a view to their dissemination.

This session is expected to be the last one prior to the convening of a Diplomatic Conference to debate the form of the new convention.

#### 2.2 Questions remaining to be debated

The group of experts did not have time during their 5th Session to examine the following questions which were on the agenda:

 $-\,$  the possibility of and interest in creating a register of maritime liens; and

- the necessity or utility of revising the Brussels international convention of 10 May 1952 (in force since 24 February 1956) on the arrest of seagoing ships. It would appear, however, that this convention, which was ratified by some 60 countries, on the whole gives satisfaction and only requires a few modifications in the form of a protocol.

In particular, the regime of arrests needs to be specified for the case of vessels which belong to a State and which are involved in trading.

Furthermore, the group of experts felt that, at the present stage of the advancement of their work, it would not be possible to draw up proposed standard texts for regulations when introducing into national legislation the provisions fixed within the context of the international conventions on maritime liens, mortgages and arrests.

### 3. Questioning of Recognized Priorities for Port Authority Claims

### 3.1 Scale of maritime liens, mortgages, rights of retention and normal claims

The architecture of the draft international convention envisages a scale according to the degree of protection conferred on various claims against the ship:

a) claims with lien status of the first kind (Article 4) which follow the ship across the world;

[To date (1926 and 1967 Conventions, latest proposal from IMO and UNCTAD secretariats), the following claims by port authorities have been accepted as part of this category:

- claims for injury (for example, those suffered by port personnel);

- port dues, canal and other waterway dues and pilotage fees;

- claims for wreck removal; and

- claims for damage to port works.]

b) mortgages (Articles 1 & 5);

c) liens of a second type (Article 6), created by decision of a State-Party but which do not extend beyond its jurisdiction; d) rights of retention, of limited duration, intended to guarantee certain claims such as those for the repair of a vessel (Article 6); and

e) the imputing in priority, on the proceeds of a forced sale, of certain costs (legal costs, costs of preservation) (Article 11).

### 3.2 Proposals for the possible suppression of liens

The systematic endeavours to reduce top-ranking liens, likely to take precedence over mortages, has led various delegations to submit different proposals, which are often contradictory with each other and which only spare the rights of crews and claims for personal injury. Certain proposals have affected the interests of port authorities; such as the idea that:

- the costs for the removal of wrecks would disappear from the list of claims with lien status, the reasoning being that wrecks are not ships and should be covered by a different law; or that the costs should still be mentioned, but should be relegated to the 2nd category of claims with liens (Article 6);

— port, canal and other waterway dues and pilotage fees would disappear from among the list of 1st category claims with liens status and become (facultively according to the initiative of each State) the object of a right of retention; and

- the costs devoted by ports to the preservation of ships (normally abandoned) until the sale of the ship and only during the period of arrest), would no longer be mentioned in Article 11, except in brackets, i.e. as a provision which could be deleted at a later stage in the debates.

### 3.3 Oral interventions by the IAPH representative

These various proposals led the IAPH representative to make two interventions, the texts of which are attached to the present report:

- one on the subject of the degradation of the position of claims for port dues, damage to port works and for wreck removal; and

 $-\,$  the other on the subject of the questioning of the provisions made in respect of the costs for the preservation of abandoned ships.

The two speeches had not been tabled with the submission of a written paper but the general report of the group of experts session has supplied a written summary.

### 3.4 IAPH's preparation for the follow-up to the group of experts work

The diversity of the opinions expressed by the different delegations shows:

- that the proceedings of the 6th Session of the group of experts and of the diplomatic conference which require careful monitoring by IAPH representatives; and

— that the Miami Conference in April 1989 is occurring at an opportune time for an IAPH position to be fixed on the question and for a written paper to be submitted by IAPH to IMO and UNCTAD, with an eye to the 6th Session of the group of experts and the meeting of the diplomatic conference. This paper could be disseminated to all the members of the Association so that they may draw the attention of their government delegates to the questions at stake in the future convention.

#### 3.5 The situation at the end of the 5th Session

Whatever the end of this subject, it seems at the present stage of the discussions:

- that port authorities would have every interest in convincing their respective governments that the costs for the removal of wrecks should be the object of a reservation clause as provided in Article 18 of the convention of 19 November 1976 on the limitation of liability for the owners of seagoing ships, and benefit from the corresponding priority for compensation. Article 14 of the draft maritime liens and mortgages convention recognizes in the case of conflicts between conventions that priority is given to those conventions dealing with limitations of liability;

- that they would have every reason, when vessels are abandoned, for intervening as rapidly as possible and starting, in their own name, procedures for the arrest of a ship and her forced sale, unless their national legislation deals differently with the problem and is more favourable to them;

- that ports insist that their dues and taxes be settled prior to the admission of ships into port, or that the execution of rights of retention (legal or effective in practice, to which certain delegations have referred), be exercised with a view to the recovery of these dues and taxes and similar port claims; and

- that port claims for port dues (canal and other waterways and pilotage fees) and claims for physical damage to port works retain a good chance of conserving their lien status.

### 4. Multiple Other Points Raised but of Lesser Interest to Ports

The deliberation of the group of experts on the articles involving the interests of ports alone would not explain the slow progress of work.

Simply for information, the various points raised during the session on which discussions were extensive and will continue in the future are mentioned below:

- An international convention was signed at the beginning of 1986 under the auspices of UNCTAD to deal with ship registration (Flag State, maritime administrative control, nationality of the capital investment and crews, registration, charter-parties, bare boat charters...).

- The convention now in hand on maritime liens and mortgages should complete (without contradicting) this convention, in respect of the consequences of a change of flag on the continuity of the registration of rights of mortgage holders, in respect of the modalities of a temporary transfer to a new flag...or a change of flag following the forced sale of the ship.

- Complex problems involving competence, legislation and jurisdiction are involved, depending on different articles concerned and the objectives they seek to attain (competence of place? of original flag? of temporary flag?).

- The modalities of an arrest (forced sale). Prior dissemination of information to all those concerned. The effect of a forced sale on the bare boat charterer. Freedom to transfer the proceeds of a forced sale abroad...

The compromise to be obtained between the maximum of uniformity in the international field, of the regulations resulting from the international convention and the scope to be left, to allow for the peculiarities of national legislations. Cases of "Common Law countries" who have their own habits and customs for the definition of the registration of mortgage holders.
 The distinction to be established between ordinary claims, maritime liens or rights of retention.

- Delays in respect of the extinction of claims with lien status or rights of retention.

- Possible reciprocal agreements between States, concerning second category liens, to extend the territorial scope of application.

— Etc....

### Conclusion

All the main points mentioned in the present report will be cited in CLPPI's report to the IAPH Miami Conference so that the Association as a whole and its members, each in his own country, can prepare a follow-up to these deliberations at IMO and UNCTAD.

### The Legal Aspects of Electronic Data Interchange

As in other domains, the introduction of electronic data interchange has had a profound influence on all sectors of maritime and port life over the past twenty years. It increasingly controls the mutual relationships of those involved in the different branches from the technical, commercial, financial and legal viewpoints.

As regards IAPH, this major topic comes within the scope of the terms of reference of the Trade Facilitations Committee.

During the 15th IAPH Conference at Seoul in 1987, the Chairman of that Committee announced the launching of a major enquiry into acquisitions recorded, in this context, within the ports.

Certainly any revolution as profound as that of electronic data interchange must have major implications on both the financial and legal aspects. An attempt to highlight some of these implications will be found below.

#### 1. Port Authority Internal Management

The first stage of the introduction of data processing in the administration of Port Authorities consisted, as in all major enterprises, in facilitating financial management and monitoring the output of the various sectors of the 'tool.'

### 2. Cooperation Between All the Actors on the Port Scene

The following stage was that of bringing all the various partners in the port world closer together (shipowners and operators, shippers, forwarding agents, hauliers, customs...), each of whom, from his own point of view, had felt the effects of the electronic data interchange revolution.

#### 2.1 International Transport

This phase was accelerated by the development of multimodal transport chains, involving unit loads (mainly containers), which progressively replaced general cargo.

- The container covers an increasingly wide variety of freight.

- It is an attractive mode for serving markets in both developing and industrialized countries.

- The container penetrates far inland, thousands of kilometers from the sea, deep into the heart of landlocked countries, to their dry ports or distribution centres.

- Shipowners or operators are more and more fequently the proprietors of their own fleet of containers, as well as of their ships.

### 2.2 Integration of Electronic Data Interchange in Ports

The correct mutual transfer of information between the multiple partners in the maritime and port world raises numerous problems.

But little by little, compatibility and communicability between the various systems is being established. And a standard launguage has been developed with "EDIFACT," which already ensures the continuity of the communications chain.

- From the technical point of view, there is a question of "compatibility" or "mutual communicability" between the different systems, which is a long way from being solved, given the variety of equipment that has been installed and the wariness of certain users vis-à-vis international standards which, nonetheless, now appear to be well established.

- From the commercial point of view, there remains reticence on the part of numerous participants concerning the risks of what they consider to be private company information being leaked. Such information is often only partially given.

### 2.3 Integration of Activities

Port electronic data interchange monitors the integration of various activities through the hands of one operator and in real time, within the port terminals: the unloading of goods, their shed or open storage, customs clearance, redispatch inland or to another port...or this same process in reverse.

Integration is carried to its maximum extent, when the port terminal operator is, in addition, a maritime carrier, who undertakes the whole multimodal transport process from one end to the other.

In large industrial countries, customs services have followed this movement by setting up offices well inland, in the neighbourhood of major depots or industries.

Thus, from the commercial point of view, local port forwarding agents find themselves stripped of a large part of their traditional attributions, by large commercial companies who possess a network of agencies, located throughout the world.

### 2.4 EDI in Developing Countries

The penetration of EDI in developing countries obliges them to import equipment which is certainly expensive and requires qualified staff to operate. The counterpart is, of course, that it provides their port authorities and customs services with an invaluable instrument for controlling foreign trade and accompanying variations in exchange rates as well as for levying corresponding duties and taxes.

### 3. Establishing and Transmitting Bills of Lading

Maritime transportation very frequently is only the complement to a commercial sales operation between the dispatcher and the consignee. The introduction of data processing has revolutionised the traditional practices where the dispatch of the goods is followed by the dispatch, by post, of the bill of lading (which serves at the same time as the transport document, and the proof of ownership, is negotiable and can serve as a guarantee for the advance of monies by banks).

The electronic transmission of the bill of lading raises, once again, problems of the authenticity and unity of the message, which technicians are trying to solve.

The prevention of fraud, which has by no means yet been perfected in the different fields of data processing, imposes the additional costs of taking the technical precautions and covering the residual risks by insurance.

No doubt, with persistence the situation could be simplified, with the maritime transport contract being limited to a sea ways bill, with no additional function of being a negotiable document and proof of ownership.

#### 4. Ship's Manifest for Passenger Vessels

Recent maritime disasters have highlighted the need to establish a ship's manifest for the transport of passengers, in the same way as one is established for air carriage and even for short domestic or international voyages.

The rapid transmission by electronic interchange of the manifest would eradicate any uncertainties concerning the identity of victims and their families, or the simulated disappearance of individuals.

### 5. Registration of Ships

Because it is instantaneous, electronic data transmission between the different national maritime registries would ensure the continuity required for the inscription of mortgage claim rights, during changes in a ship's flag. This is currently of major concern at both IMO and UNCTAD.

This same observation is valid for the inscription on (or removal from) the registers of Flag States, in cases of bare boat charter, provided, of course, that the vessel is correlatively registered with the Flag State of the owners.

It would facilitate the task of third parties, including Ports, in tracing those liable amongst the owners, the charterers or the bare boat charterers.

And with the same objective, sub-charters could also be registered.

### 6. Coordination Between VTS Authorities

Another point which can be raised is the eventuality, in the future, of maritime traffic intensifying, along given coasts and around certain major ports, leading to a need to establish direct links between the different vessel traffic control centres. This will certainly pose, from the legal point of view, a delicate question of the joint liability of the various VTS centres.

Certainly, this imperative is not as far advanced, at present, as it is in the air transportation industry: the eleven national centres which control air traffic in Europe are having to establish direct links among themselves to try and remedy the current saturation level of the air traffic in Western Europe.

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## **OPEN FORUM**

### **Prospects for the Development of Multi-modal Transport Systems**

By Dr. Sidney Gilman Professor Director, Marine Transport Centre University of Liverpool, U.K.

Presented at the Int'l Maritime Seminar on Changes of the Shipping Environments and Counter-Strategies toward the Year 2000, 25-26 July 1988, Seoul, Korea, which was hosted by the Korea Maritime Institute and sponsored by the Korea Maritime & Port Administration

### Abstract

The paper starts with a review of the dramatic changes in the world fleet of container carrying ships which has taken place in the last four years. It details the growth of the fleet, and the dominance of cellular capacity in the deep sector. It then focuses on the enormous growth in the fleet of large vessels which has taken place within the cellular sector in the last five years. This is followed by a review of choices of ship size and speed in the cellular fleet since the start of the container revolution in 1967, placing the decisions taken by carriers into the context of the relative prices of the major components of ship costs, the state of technological development, the evolution of multi-modal transport and market conditions. This section concludes with an assessment of the importance of economies of size at the present time and a discussion of the prospective long-term importance of the new post-Panamax vessels.

The paper then moves on to consider the logistics of multi-modal networks dealing with the relationship between deep sea-ships, feeders and the inland modes and the implications of current trends for port development. The argument is focused on the nature of concentration in the industry. It starts by establishing the case for a continuation of the multi port strategy which has predominated in deep sea multi-modal transport since the late 1960s. It proceeds to a discussion of load centre economics, the impact of increases in ship size and of increases in the scale and network scope of major operators. The US landbridges are referred to as a special, but very important, case where land transport substitutes on an extensive scale for maritime transport.

In its final section the paper considers in further detail the scale of operation of major carriers and the trend towards a multi-regional or global scale of operation. It also examines changes in market shares on the Pacific, pointing to the increase in market share of the n.i.c.s over the last six years. The implications of these developments are then considered, attention being drawn to the wide geographical scope of the processes of optimisation which take place within the industry, to the prospective nature of shipper carrier relationships and to the implications of regulatory policy. These discussions are focused on issues which are likely to be important in shipping strategy and regulatory policy up to the year 2000.

### Prospects for the Development of Multimodal Transport Systems

### Introduction

My remit for this paper is to consider the development of multi-modal transport to the year 2000. Prediction is always hazardous and multi-modal transport poses particular problems because of the very broad range of possibilities with respect to the shape of transport networks. Their configurations are determined by the complex interactions of a marketplace affected by technology, logistics, politics and regulation, and the industry has retained its capacity for dynamic change and its ability to surprise us for the whole twenty years of its existence. I will start my paper with a review of the dramatic changes in the world fleet of container carrying ships which has taken place in the last four years. I will then move on to consider economies of size, the logistics of multimodal networks and implications for port development. Finally I will discuss developments in the structure of the shipping industry and implications for shipping policy and development.

### Development of the Container Carrying Fleet Ship Size and Type

Table 1 shows the development of the slot capacity of the world fleet between 1984 and 1988 with a cumulative growth rate of some 12% over the period. Of the increase of 969,000 TEU slots 56% were fully cellular, 19% semicontainer, 17% bulk container sector and 9% in the ro-ro sector. Taking the fleet as a whole the cellular sector increased its share only moderately from 50% to 52% over the period; but it also has 161,000 out of a total of 198,000 TEU slots on order, which will raise this to about 55% by 1989. If we also take account of the fact that many of the vessels of under 500 TEUs are employed short sea trades, that flexible ships spend time outside the general cargo sector, and that the large fleet of small semi-container ships operates at low average productivity, it becomes clear that the cellular system is now dominant in the deep-sea trades.

The most important feature of the order pattern of the last four years is the popularity of large vessels of over 2,000 TEUs. This sector grew from a relatively small proportion of the cellular fleet in 1984 to some 582,000 TEU slots — equivalent to 42% — in 1984. It also dominates the present order book with 124,000 out of the total of 198,000 TEU slots, so that within two years or so large vessels will represent about one half of the world's cellular tonnage and a rather larger proportion of the tonnage employed on deep sea routes.

#### **Historical Development of the Cellular Fleet**

The idea of large container ships goes back to the early 1960s, when Sea-Land designed a class of container ships of 2,000 TEUs. After the introduction of containers to the deep sea trades in 1967 there were three generations of cellular ships in the short space of five years. These included Sea-Land's 33-knot SL7s and culminated in the Panamax ships of 3,000 TEUs and 27 knots for the Europe Far East route, about thirty of which were built by the early 1970s. The sheer pace of this development was extraordinary and it naturally led to expectations of the construction of a fourth generation of even larger vessels of, say, 5,000 TEUs plus. This was both technically and operationally feasible in the early 1970s but it did not happen, and in fact there was not even much further construction at the top end of the existing range. The big ships designed in the era of low bunker costs turned out to be much too fast, with 33 knots for the SL7s being penal after 1975 and even the 27 knots of the Liverpool Bay Class Trio ships being unsustainable. In the mid 1970s, following the OPEC oil price increases the emphasis was on speed reduction. In the new environment medium-sized slower-speed vessels could compete very effectively with the Panamax ships and new orders tended to be concentrated in the 1,500 to 2,300 TEU size range. These were typified by Evergreen's L class and Sea-Land's D9s, and Evergreen in particular was able to prosper with these medium-sized

### The Legal Aspects-

(Continued from Page 12)

#### 7. Identification of Ships and Their Operators

This question encompasses two aspects, where EDI has a fundamental role to play:

#### 7.1 Vessels and Port Authorities

### 7.1.1 The Necessity of Accurate and Easy Identification

Port Authorities have to be very precisely informed on the identity of ships which have announced their arrival.

- This is necessary, from the technical point of view, for the choice of quay and equipment to meet the needs of the call.

- It is also essential from the financial point of view to establish port dues and taxes, based on the characteristics of the ship.

- It is also required for drafting ship arrival announcements, which must lead to no confusion.

- It is also a vital element in preventing fraud on the true characteristics of the ship, or even piracy, when during previous calls the ship's identification has been disguised.

#### 7.1.2 Ship Coding

In this regard, within the United Nations Organization the issue is being dealt with by IMO, as far as the coding of ship names and the drafting of specific messages relating to ships are concerned and, where necessary, for the inships. In the late 1970s many of the early third generation ships were either re-engined or had their propulsion systems modified to enable them to compete. Even as late as the early 1980s third generation ships were largely confined to the Europe-Far East route.

In the early 1980s large vessels returned to favour, and from being a relatively small class they have in five years become dominant on major routes. Speed was held down, most of the benefits being taken in pure cost reduction.

The new era began on the Pacific in the early 1980s. In 1982 APL built three quite fast ships of 2.450 TEUs for its service from the Far East to the West Coast. But the decisive move was taken by Evergreen with its new G class ships of which thirty were ordered, 24 of them for the new round-the-world service and six for the Pacific. This was followed by the US Lines order of the twelve econships for its eastbound RW service, now defunct. After that there was a rapid build-up of orders for large ships, combined with a widespread tendency on the part of owners of medium-sized vessels to enlarge their ships to their feasible limits. The early surge of orders has now been fulfilled and present ordering is on a more limited scale. But the development has left the world fleet with some 207 ships at a size of over 2,000 TEUs, most of them being deployed on the Atlantic, Pacific and Europe Far East routes and some of them, of course, being on multi-regional or RW networks. The twelve US Lines ships were purchased by Sea-Land for only US \$15 million each and have been re-deployed on the Atlantic serving a Sea-Land, Trans Freight Lines and Ned Lloyd grouping. They lost some US\$30 million in value between construction and the Sea-Land purchase.

Towards the end of this hectic period of ordering the Panama Canal barrier was broken by APL, which ordered the five C10s of post-Panamax beam for their Pacific

stallation on shore and on board of any technical equipment that may be required.

The matter concerns numerous international associations with consultative status at IMO, including, of course, IAPH and more particularly, within IAPH, COPSEC. However, for the financial and legal aspects of ports being intimately linked to the technical solutions that are to be found to thse problems, CLPPI must cooperate closely with COPSEC in this field.

#### 7.2 The Mutual Safety of Ships

EDI provides the Masters of vessels with automatic and permanent access to information on other vessels cruising in their vicinity or along the same routes. It is an advantage of fundamental value, which finds its antecedence in air navigation and is likely to considerably increase safety in the more frequented seas of the world.

The list of systems is long. Mention can be made, for example, of:

ARPA: Automatic Radar Plotting Aid

DABS: Discrete Address Beacon System

AMVI: Automated Mutual Vessels Identification

INMARSAT: International Maritime Satellite Organization

Naturally, by presenting these few reflections, CLPPI has only been able to glance superficially at certain very important problems that are posed by the electronic transmission of data. It remains at the disposal of the Trade Facilitations Committee to follow up this examination by further analysis on any points that are suggested.

TADLE TA. WURLD CUNTAINERSHIP FLEET AND UNDER DU	TABLE 1A:	WORLD	CONTAINERSHIP	FLEET	AND	ORDER	BOOM
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	Under 500	500/ 999	1000/ 1499	1500/ 1999	2000/ 2499	2500 +	Total TEUs
Jan-84 Fully cellular							
World slots	78790	151826	235115	236669	96747	83589	756502
Ro Ro Container	200	209	194	130	43		730
World slots	86286	65225	87254	22423	8100		206885
Number of ships	313	97	70	13	4		391
Semi container							
World slots	310066	128185	11167				449418
Number of ships	1167	195	10				1372
Bulk container							
World slots	16962	61061	44592	17000			139570
Number of ships	49	84	34	- 11			178
Barge Carrier	0001	7405		2104			10940
Number of chine	2301	10		3104			12040
Total	1	10		2			19
World slots	494405	413637	378128	279196	104847	83589	1753802
Number of ships	1819	595	308	162	47	30	2961
				· · ·	·		
Jan-88							
Fully cellular	445045	100011	005 400	055500	400045	100.100	4440440
World slots	115815	188914	265463	255580	180915	409463	1416110
Number of snips	409	262	218	148	80	137	1254
World slots	110587	86546	75198	30571	10873	1/550	346434
Number of shins	430	137	60	23	9	5	664
Semi container	400	107	00	20	0	0	004
World slots	426398	193968	16825				637091
Number of ships	1703	301	15				2091
Bulk container							
World slots	21470	82060	106341	82030	12545		304446
Number of ships	62	113	86	50	6		317
Barge Carrier							
World slots	2458	10648	2947	3104	3104		19157
Number of ships	7	17	2	2	2		28
Norld slots	676709	561066	166711	380385	212222	121022	2722220
Number of shine	2611	001900	400744	200303	210000 QA	424022 142	2123230 A282
ramber of ships	2011	000	001				7404

Source: Containerisation International

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### TABLE 1B: WORLD ORDER BOOK (January 1988) Fully cellular

runy cenular							
Slots on order	2527	4480	12252	16777	16424	108980	161420
Number of ships	7	6	10	10	8	35	76
Ro Ro							
Slots on order	3910	7565					11475
Number of ships	12	10					22
Semi container							
Slots on order	7934	9166					
Number of ships	29	15					17100
5		•					44
Total							
Slots on order	14371	21191	12252	16777	24700	108900	198271
Number of ships	48	31	10	10	12	35	146

Source: Containerisation International

southwest service. In order to understand the characteristics of these new vessels one must take account of the fact that Panamax vessels are very constrained in terms of beam, which limits both stability and weight-carrying capacity. This problem is not quite so acute now that speeds have been reduced and block co-efficients increased but it is still an important constraint. At 39 metres beam the C10s have returned to a more normal length beam ratio. They have a capacity of 4,340 TEUs and can be jumboised with a 30m midsection to 5,300 TEUs. Stability is much improved, the need to carry ballast reduced and weight constraints on the positioning of boxes are lifted. At the same time the ships have the lowest block co-efficient of any containerships since the SL7s, they achieved 26 knots in trials and have a service speed of 24 knots, and this can be achieved with a full load at 12 tonnes per TEU for a fuel consumption of 150 tonnes per day. With the benefits of unconstrained stowage, lashing bridges to speed handling on the weather deck and high-speed cranes they will be able to complete their round trips in similar times to standard Panamax ships. Finally, they could operate with a crew of twelve, although they will initially have a complement of nine officers and twelve ratings.

#### **Reasons for the Growth in Ship Size**

There were a number of factors which combined to bring about the rapid growth in the fleet of large containerships. First it was fuelled by the enormous growth of demand, in the Pacific trades. Second, as might be expected, a very high proportion of capacity was ordered by the n.i.c.s in the Far East as they took advantage of their huge increases in trade to build up their position in the world market. In addition to the thirty ships ordered by Evergreen, there were orders by Neptune Orient Line, Yang Ming of Taiwan, KSC, Hanjin and HMM of Korea and OOCL of Hong Kong. In total these rather outweighed the orders of US, European and Japanese lines. Third, supply conditions were propitious. The new vessels could take advantage of reductions in design speed and increases in propulsive efficiency giving smaller engines, greater cargo capacity and substantial savings in fuel consumption per TEU mile. They were also designed for very much lower manning, crew numbers being down to between 14 and 22. Finally, most them were built in Far Eastern yards at a time when they were offering exceptionally low prices. Most of Evergreen's G class vessels, for example, were purchased at between US\$30 and US\$ 33 million each. As a result of these changes the large modern vessels operate at costs only about half those of a European vessel of 1,500 TEUs built in 1980.

However, I do not believe that the choice of large vessels was a result simply of design improvements and the special conditions prevailing in world shipbuilding. After all, carriers could have built very efficient medium-sized ships to compete with the existing fleet. Both capital and operating costs at sea are reduced as ship size increases, the constraints to growth being the size of the cargo flow and any dis-economies which may occur from increased time in port. On the main east west routes port performance has improved; it has kept up with the needs of large vessels and disposed of dis-economies of size in the port sector and this has been done without any need to limit itineraries. In fact, on the North Atlantic, which is a relatively short deep-sea route, very large ships (including the slow econships, now renamed the Atlantic class) can complete their round trips in the normal four weeks. Similarly, the mid-Atlantic can be served with large

vessels in five weeks. On these routes ship size can now expand, certainly up to 3,500 TEUs, subject only to the constraints set by traffic density and service frequency requirements.

The fleet of large container ships now has a quite high market share, but I think there is still scope for some further concentration of capacity towards the top end of the size range as we move towards the year 2000. For secondary routes now using small ships, an intermediate strategy would be to build medium-sized ships of Panamax beam, jumboising as soon as feasible towards the larger size range. Panamax beam can be achieved at between about 1,200 and 1,400 TEUs without excessive violence to the principles of naval architecture, and there are already ships of this type in the world fleet.

I do not think that there will be any rush to build post-Panamax ships as having just re-tonnaged, many carriers are simply not in a position to contemplate further developments. It also looks as if the era of very low building costs and liberal finance may at last be coming towards an end, while some carriers do need the ability to transit Panama.

However, I do think that the new vessels represent an important advance in design and they have breached a psychological barrier. I would not be too surprised to see some further post-Panamax ships even in the next few years, and I think that towards the end of the next decade there could well be large scale re-tonnaging with post Panamax vessels.

### The Structure of Multi-modal Networks and the Nature of Concentration

When I first started working on multi-modal networks I considered critically the McKinsey proposition of the late 1960s, that container systems would inevitably tend towards a highly concentrated form of operation based on a few hub ports supported by feeder ships, relays and inland modes. I have not referred to this for several years as the early studies confirmed the economic case for the multi-port concept, and it is clear that (with a very few notable exceptions) most carriers have from the start tended to follow this approach. Even a casual look at published sailing schedules or the compilations of the C.I. and NYK Yearbooks will confirm that this is still the case and statistical studies at the Marine Transport Centre have provided a comprehensive statement to the same effect.

However, any newcomer to the industry dipping in the press today could be forgiven for believing that the superport dream has either come true or is just about to. The major east-west routes are commonly referred to as arterial or mainstream, it being implicit in this terminology that the small flows all join them. Small container ships serving short sea routes are commonly referred to as feeders, even if they carry no feeder traffic, and short sea traffics in Europe are often referred to as transhipment simply because they cross a European frontier. The word port has been replaced by load centre or superport, and ports generally advertise their load centre status and centrality within the maritime universe.

There has of course been a great deal of concentration in the industry and the trend is likely to continue, but in my view this is not an extreme situation in which a very few ports will act as black holes, exerting an overwhelming gravitational force to attract all the cargo in a region. What is happening is a more complex change in which the basic multi-port/load centre concept for large ships will remain strong but a degree of concentration will occur as a result of processes of rationalisation reducing the number of services. The economics of multi-modal transport is a complex subject and in order to simplify and to condense this part of my paper I will use a dialectic approach. In this I will first mobilise the arguments against the black hole view of concentration and then go on to consider the nature of the actual processes for concentration.

### Propositions Against The Black Hole Concept of Concentration

1. The modern deep-sea container ship is by far the most efficient means ever devised for moving large quantities of general cargo. It costs about 3p per FEU slot mile for a Panamax vessel compared to 80p for inland modes and between 30p and 50p (plus a mobilisation charge) for rail. A large advantage is retained even when load factors drop to moderate levels or when ships have to travel considerably greater distances than the inland modes.

2. As ship costs are reduced by increasing size, main line ships compete even more effectively with feeders and inland modes which have limited economies of size. It is not consistent to argue on one hand that main line ships are very low cost and on the other that they should be substituted as soon as possible within a network by these other modes.

### TABLE 2: ESTIMATED DAILY COSTS 3000 TEU CELLULAR SHIP

Capital Cost US \$m	45.00	
Capital Cost £m.	25.00	
Life (Years)	18	
Rate of interest	12%	
Annual capital cost		3448433
No. of working days	350	
Daily capital cost		9853
I & M (2.7% cap cost p	o.a.)	1929
Fuel t.p.d.	87	
Fuel £.p.t.	100	
Fuel £.p.d.		8700
Aux t.p.d.	3	
Aux £.p.t.	200	
Aux £.p.d.		600
Crew £.p.a.	800000	
Crew £.p.d.		2286
Total Daily Cost £		23367
FELL miles/Day		
$(1500 \times 24 \times 21 \text{km})$		756000
f per FFII mile		0.03
		0.00

3. In constructing their itineraries carriers have for years used a multi-port approach, combining their ports into a geographically coherent itinerary and using inland modes

and feeders to extend the range of each port depending upon its load centre potential.

4. Ports have now become very good at offering the guaranteed slots and fast turnaround times for medium-sized container exchanges which are consistent with efficient multiport operations, and there are no particular economies in port for huge individual container exchanges.

5. Complex networks are hard to control and transit times can easily become extended for transhipped cargo. Possibilities of loss or damage also increase with each handling.

6. There are geographical limits to route amalgamations and the extension of hinterlands, and these have been reached in many cases.

7. Even with the entry into service of large numbers of very large container ships there is no evidence as yet to suggest an overall trend towards a reduction in the average number of ports in main line ship itineraries. There is a continuous process of adjustment within the industry, with some examples of increasing of concentration and others where main line itineraries are in fact extended.

8. Relay opportunities have been increased by the increase in size of vessels on east-west routes. However, they depend essentially on differences in scale, and where the cargo volume on a secondary route will support medium sized ships at adequate frequencies this will usually be the best opinion for the route. There are also many secondary routes which are simply not suitable geographically for the use of relays.

#### **Influence Towards Concentration**

1. The deep-sea trades are now dominated by economies of size in container ships and economies of scope in container networks. Cellular ships now dominate the world container trades and very large ships dominate the cellular fleet. They control the Pacific, a route of only moderate length; they even dominate the relatively short Atlantic although this probably owes more to processes of rationalisation than pure size economies. Nowadays a short route length is no barrier to ship size, so long as traffic density is adequate. Looking at the large carriers, there is also a trend towards the extension of networks across trading regions, the RW services being only one manifestation of this.

2. Any increase in vessel size, with main line itineraries remaining constant, will lead to a natural increase in the size of individual container exchanges. This could, I suppose, be considered to be a form of concentration for the ports but its significance is operational rather than geographical and this may not be too important. The geographical concentration actually occurs as a secondary or derived effect. Ship size on many routes has grown at a faster rate than cargo, and carriers have used large ships to rationalise their service structures, either individually (if they operated multiple services) or by the formation of rationalising consortia. As a result of this process it has been usual for the number of ports receiving direct calls to be reduced.

3. The increase in the scale and market share of the largest carriers and the formation of large consortia reduces the number of players in the marketplace and this in turn reduces the variety in port choice. Nowadays variety is sustained to some extent by secondary routes and the use of flexible ships e.g. semi-container vessels. But even this is tending to be eroded by the increasing concentration on the cellular technology.

4. The broadening of inland distribution networks will tend to concentrate cargo even before the carriers take their decisions.

5. The process of port development associated with containerisation creates huge problems for established labour forces. This gives very large advantages, either to new ports without an established labour force and tradition of working practices, or to those among the established ports which can deal most effectively with the problems of change. These ports can then become centres for reasons entirely unconnected with geography.

### **Conclusion on Concentration**

The trend towards concentration in the industry today comes not from changes in the structure of main line itineraries or the abandonment of the multi port approach, but from increases in ship size and in the scale and geographical scope of large carriers and consortia. I see the result of this more in terms of first, second and third divisions rather than of single super ports and feeders.

#### The US Landbridges

Having just argued in favour of the use of large vessels it is necessary to say something about the landbridges from the west coast of the US which connect Pacific routes to all parts of the hinterland. These landbridges have a number of advantages which make them a rather special case. There are considerable savings in maritime distances over the all-water routes, giving substantial savings in transit time. On the inland transport side costs are held down by the development of double-stack trains, while in the maritime sector ships' costs are increased by Panama Canal transit and by the Panama Canal draught constraint of some 11.0 metres. This would limit the capacity of a Panamax ship to something of the order of 2,600 TEUs (at 12 tonnes per TEU homogeneous weight). This is significantly less than the same vessel could carry at a scantling draught of 13 metres on a Pacific west coast route. Furthermore, the present C10 on a west coast route would have 60% more capacity, and a jumboised C10 twice the capacity of a Panamax ship transitting the canal. In my view the US landbridges will continue to gain in strength. They have already brought about a great deal of integration in multi-modal networks, and the growth of box balancing with inland cargoes is another powerful and important trend.

### **Carrier Scale, Global Networks & Shipping Regulation**

I would now like to consider the scale of the major carriers, and the trend towards a global - or at least multiregional style - of operation. For an illustration of trends with respect to scale I will analyse developments on the Pacific, the world's largest route, the data for which is presented in Table 3. If we take the position as it was in 1980 there were only two carriers with over 300,000 TEUs annual capacity on the route, Sea-Land and APL. By 1986 the lead had been taken by Evergreen, which offered some 666,000 TEUs, followed by APL with 590,000, Sea-Land with 491,000, NYK with 434,000 and Maersk with 432,000. Other very large carriers included K Line and MOL among the Japanese, Hanjin and HMM under the Korean flag, OOCL for Hong Kong and US Lines. Over the period 1980 to 1986 the US suffered a loss of market share from 40% to 25%, the Japanese remained steady at 26% and the Asian n.i.c.s increased their share from 20% to 40%. Since then another major redistribution has already taken place with the demise of US Lines, with a great deal of this capacity presumably going to the remaining two US carriers. Some consolidation is also taking place among Japanese and Korean carriers.

### TABLE 3: CARRIER SHARES IN THE PACIFIC

1980 1986				
US	<b>TEU Capacity</b>	%	<b>TEU Capacity</b>	%
APL	332700	13	589600	10
Sea-Land	340800	14	491800	8
US Lines	131800	5	396500	7
Seatrain	185800	8		0
Total	991100	40	1477900	25
Japan				
J Line	97500	4	82200	1
K Line	101600	4	363500	6
MOL	109200	5	317700	5
NYK	171300	7	434100	7
Showa Line	50000	2	119400	2
YS Line	113200	5	179700	3
Total	642800	26	1496500	26
Other Far Ea	st			
EAC Line			65300	1
COSCO			111700	2
Evergreen	86800	4	666300	11
Hanjin	88000	4	313800	5
HKIL			83500	1
KSC	35300	2	142900	2
NOL	114700	5	193600	3
OOCL	101100	4	285100	5
Yang Ming	71900	2	177600	3
НММ			274600	5
Total	497800	20	2314300	40
Third Flag				
Maersk	146600	6	432400	7
Zim		-	112100	2
Hapag-Llovd	94900	4		
Far East	44000	2		
Total	285500	12	544500	9
Others	67100	3	011000	
Grand Total	2484300	100	5833100	100

Source: Calculated by Mr. Shaojia Liu from NYK and Cl Data

With the acute nature of US balance of payments problems, there is now a very large question mark with regard to future rates of growth on the Pacific. But even a modest level of growth over the next ten years, combined with some further amalgamation and consortia formation, would take a number of carriers towards one million TEUs per annum. Given this scale of operation for the large carriers and consortia, the route could become a very difficult proposition for any remaining or prospective small and medium sized operators.

I do not think it is possible simply to extrapolate trends in market shares, as the n.i.c.s have been building up from a low base. But when cargo does begin to grow again on the Pacific the n.i.c.s will certainly continue their trading development, and if their share were to continue to grow at the rate of the last five years they would have 60% or more of total capacity by the year 2000.

The scale of the large carriers on individual routes is

### TABLE 4: FLEETS OF THE WORLD TOP TWENTY CELLULAR CONTAINER OPERATORS 1986

		Rank	Ships	TEU Slots	RW	Pacific Slot Deploy	Europe/FE /ment	Atlentic	Other
Far East									
Evergreen	Taiwan/foc	1	44	92580	59964	22048	7056		3512
Yang Ming	Taiwan	12	14	26170		15314	10124		732
NYK	Japan	6	22	36365		20662	11105		4598
K Line	Japan	7	20	36118		25750	4326		6042
MOL	Japan	9	17	31605		18997	5606		7002
OOCL	Hong Kong	8	16	31790		20986	6964		3840
Hanjin	Korea	14	14	23878		23878			0
COSCO	China	11	28	29482		12691	12464		4327
NOL	Singapore	18	11	19203		14218	2050		2935
Total			186	327191	59964	174544	59695		32988
US									0
Sea-Land	US	3	23	44417		26140	17227		1050
APL	US	17	10	30652		26894			3758
Total	4		33	75069		53034	17227		4808
Europe									
Maersk	Denmark	2	28	57969		33684	8488		15797
Hapag Lloyd	GFR	4	18	38250			14978	15113	8159
OCL	UK	5	19	36812			17519		19293
Nedlloyd	Netherlands	13	15	24946			10884	6555	7507
CGM	France	15	18	23756			2960		20796
ACT		19	13	18194					18194
BSC	USSR	20	21	17737			8736		9001
Total			132	217664		33684	63565	21668	98747
Other									
UASC	Kuwait	17	13	20970				6448	14522
Zim	Israel	16	18	21858	15352				6506
Total			31	42828	15352			6448	21028
World			382	662752					

Source: NYK Yearbook

impressive enough. But many major carriers operate on two of the three main east-west routes, and some extend their operations into very broad networks. Little is known about the precise economies of increasing network scope outside the carriers themselves. There are also carriers like APL, who operate effectively with rather limited networks and consider that increases in network scope create problems and additional costs rather than providing economies. However, as we look at the industry today the number of carriers per nation has clearly declined and the scale of operation and scope of the networks of those that remain is increasing.

If we look at the policies of some of the major carriers in recent ye ars there has been a diversity of approaches. Evergreen have grown enormously, with new investment of a massive scale and with an RW strategy. However, US Lines foundered in a similar attempt and other RW operators have being retrenching in recent years. P & OCL have also followed a policy of expansion and of increasing the scope of their operations, but they have adopted a lowrisk gradualist approach, buying into routes in areas which interested them without massive investment and following up on the opportunities which then came their way. I think that the main opportunities over the next few years will be via the formation of consortia and operating agreements and the amalgamation of carriers. The increase in scale of operation will, I believe, limit the scope for the entry of new fleets, whilst the very large disparity of cargo volume of the three mainstream routes must limit further opportunities for any integrated RW operations of the type which place an equal capacity on each of them.

One implication of the large scale of carriers and the broad scope of their networks is that it is no longer sensible to consider the efficiency of the industry and th"e processes of optimisation within it simply in terms of individual routes. Individual carriers with broad networks have been re-deploying capacity across routes for years. In fact, provision for this is usually an integral part of their management structures and review processes. In recent years there has been major re-structuring across routes in response to changes in market conditions. The most dramatic recent example has, of course, been the redeployment of the ex US Lines econships from their RW itinerary to the Atlantic. This was accompanied by such a comprehensive re-shuffling of the existing tonnage of the consortium members that total slot capacity on the Atlantic was raised only marginally.

The broad geographical scope of this adjustment process has quite important implications with respect to the objectives and assessment of regulatory policy. For example, it would not now make much sense to consider capacity balance on a route simply as a function of closed or open conference function; and a route-by-route interpretation of the efficacy of processes of rationalisation taking place on major US routes under the 1984 Act would surely miss the point if it did not take account of the global nature of oversupply.

(Continued on Page 22 Col. 1)

### **Personnel-Carrying Device for Rescuing Crane-Drivers from High Cabins**

### By Captain Klaus Macke, Dip. Naut. Chief Officer for Working Safety of the Bremer Lagerhaus-Gesellschaft Bremen and Bremerhaven

It is unfortunate that we are not entirely able to exclude the possibility of accidents or acute health risks, such as heart attacks, from day-to-day working life. In spite of all preventive measures, we have to take the risk of such incidents into account in all areas of work. The patient must receive medical aid in the most rapid and practical way. This is primarily a humane consideration and does not need to be expressed in formal regulations.

Regulations are, however, of importance in determining what kind of appliances must be used in bringing aid swiftly to the injured. They must also take into account the fact that the helpers themselves may require protection.

In the case of the diverse and constantly changing activities of a modern seaport, the different rescue devices prescribed by the accident prevention regulations relevant to this field of work must always be at hand.





(Above left) The rescue platform, with the doctor and his assistants, leaves the ground on its way to the patient.

(Above right) The rescue platform is lifted to the required height by the container bridge's equipment hoist.

(Left) The rescue platform docks with the driver's cabin of the container bridge.

Rapid technical developments have taken place in modern handling facilities in the port, corresponding to the equally rapid modernisation processes in ships. This means that new standards of accident protection at work are called for and that safety experts are faced with new problems.

Possibilities for the use of rescue devices must also be revised and changed, particularly where work must be done at great heights as on container bridges. In such places the possibility of accidents or health risks can be disregarded just as little as they can be disregarded during handling work on the quayside itself.

The size of container bridges is continually being increased, and the driver's workplace is currently at a height of some 30 to 35 meters above the ground. It has therefore become necessary to develop techniques adapted to rescue operations at such heights.

The Work Safety Department and Management of the Bremer Lagerhause-Gesellschaft, in close cooperation with the Bremen Fire Department and the Mutual Accident Insurance Association for Wholesale Trade and Warehousing, have developed a rescue platform which meets the demands mentioned above and can be specifically used for rescue at a height from container bridges. A prototype of this platform, constructed by the Technical Department of the Bremer Lagerhaus-Gesellschaft, has since been used in various tests and has been proved effective.

This particular construction has been influenced, for the very first time, by the requirements of emergency medicine. The experience of Bremen's emergency doctors, who travel to their cases by helicopter or special ambulance, was taken into consideration when building this rescue platform. Priority was given to the medically correct method for the transport of injured persons. With this platform it is not only possible to transport the patient in a lying position but also to give him treatment during transport, as sufficient room has been provided for the doctor and his medical assistants.

(Continued on Page 22)





The doctor can carry out further necessary treatment of the patient during the transport in the rescue platform.

The emergency doctor and medical assistants begin the treatment of the patient in the driver's cabin.



The stretchers in the rescue platform and the ambulance correspond so that the patient can be transported without changing stretchers or wasting time.

#### (Continued from Page 21)

The stretcher in the middle of the rescue platform is placed at a height, allowing the doctor to carry out life-saving measures during transport. The necessary medical equipment, such as the defibrilator and emergency case, can be placed within easy reach of the doctor and his assistants. Points for suspending transfusion bottles are provided. The necessary lighting is effected by battery lamps. The dimensions of the stretcher correspond to those used in ambulances and rescue helicopters, obviating unnecessary movement of the patient to another stretcher. The cost of producing the platform is approximately DM 5,000.

The maximum load of the rescue platform is calculated for five persons (patient, doctor and three medical assistants). The platform can be mounted when it is on the ground so that the rescue personnel can reach the required point with greater speed and safety.

The platform itself is raised by means of the container bridge's equipment hoist (capacity 3 tons) to the required height and then docks with the access point made for it. A folding ramp enables safe access to the cabin. This means that the stretcher can be brought to the patient while the doctor, in the cabin, prepares him for transport.

The platform is provided with straps to hold it firmly to the cabin while docking. Ropes of sufficient length are attached to the four extremities of the platform so that firemen or the firms' personnel can hold it steady for docking in high winds.

Operation of the electric equipment hoist can be effected without delay by the firm's personnel or officers of the Fire Department. Since such hoists are found on all container bridges, it is possible to use this platform with all cargo-handling devices of this type on the firm's premises in Bremen and Bremerhaven.

In addition, it is possible to use the rescue platform in cases of accident on board seagoing or inland navigation vessels in the hatch or deck areas. In such cases the platform can be put in position by a harbour crane, so that even on board ship, medical personnel can have a special workplace at their disposal.

The rescue platforms will be kept in readiness at easily-accessible positions in the various works units. They can be carried to the scene of the accident by fork-lift trucks, in accordance with a plan of action worked out between the Fire Department and the Bremer Lagerhaus-Gesellschaft.

The development and introduction of the rescue platform fills a gap in the rescue process and contributes to the further strengthening of the chain of modern rescue procedures.

Bremen, January 1988

### **Multi-modal Transport Systems**

### (Continued from Page 19)

A final question arising from the growth of scale within the industry concerns the eventual nature of competition and shipper carrier relationships. At the moment the industry is very competitive. It contains some very large-scale outsiders, as well as a longish fringe of small-scale operators. Between them these carriers have reduced the market share and power of conference over a very broad spectrum of routes, and this together with over capacity has led to intense competition and very keen pricing policies. It has also limited carrier profitability.

During the next twelve years the increase in network scale and the shares of large carriers could begin to make new entry difficult on many routes. For example, the bargain price of the econships and the scale of the new consortium must surely have given outsiders and prospective new entrants to the Atlantic some food for thought. This increase in scale could lead eventually to re-establishment of the power of conferences, or more likely the exercise of power by an oligopolistic grouping, some members of which use the conference as a lead vehicle for pricing. This will create a great deal of shipper concern and pressure from regulatory bodies, and some progress will need to be made in the form of shipper-carrier relationships if the system is to work harmoniously.

### **Concluding Remarks**

A great deal has already happened in the development of multi-modal networks in the last few years as the large ships have entered service. I believe that the process of rationalisation will continue as the economies of size and scope work through the system and the fleet concentrates even further into the top end of the size range. I am certain that the new large services will continue to operate multi port strategies, but there will be less of them and this will lead to a greater degree of concentration in the port system. It will also lead to the formation of larger shipping groups and possibly a change in balance of power as between largescale conference lines, outsiders and fringe operators. The development of powerful oligopolies will lead to the need for a further evolution in the relationships between shippers and large carriers and for an evolution in regulatory policy. Protectionist policies h&ave often been neutralised by developments within the industry and I think multi-modal transport will continue to undermine the Code and cargo sharing.

For those developing countries which have taken a slow route to containerisation these developments will pose a tremendous challenge. I am convinced that in principle it can be met simply because the modern systems are so efficient in the use of capital. I also believe that a head-in-the-sand approach by developing countries, relying on the review of the UNCTAD Code and a basically protectionist policy, would be self-defeating. It would inhibit the modernisation of shipping services and eventually fail as a result of competition with efficient multi modal networks.a

Finally, I believe the world shipping and trading communities need a multi-lateral approach to shipping regulation based on open trades. This should be consistent with the technological and operational structure of the industry, and embody principles to preserve competition and make provision' for mutually acceptable forms of shipper-carrier relationships.

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Recommendation for radar beacons - 19 November 1970.

Recommendation for a definition of the nominal daytime range of maritime signal lights intended for the guidance of shipping by day — April 1974.

Recommendations for a slow sweep X band racon -25 April 1974.

- Recommendation on the design of normal moorings June 1975. \* Recommendation for leading lights — May 1977.
- Recommendation for the colours of light signals on aids to navigation December 1977.

 Recommendation on the determination of the luminous intensity of a marine aid-to-navigation light — December 1977. Recommendations for the surface colours used as visual signals on aids to navigation (specifications for ordinary and fluorescent colours) — May 1980.

- \* Recommendations for the calculation of the effective intensity of a rhythmic light November 1980.
- \* Recommendations for the rhythmic characters of lights on aids to navigation April 1982.
- Recommendations for port traffic signals June 1982.
   Recommendations on the need to follow national and international standards — May 1983.

Recommendations for the marking of offshore structures ---November 1984 (revised 1987).

Recommendation for the use of retroreflecting material on aids to navigation marks within the IALA Maritime Buoyage System — November 1985.

Recommendation for the marking of fixed bridges over navigable waters — May 1987.

\* Also in Spanish.

SPECIFICATIONS

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## International Maritime Information WORLD PORT NEVS

### **PORTS '89 Conference**

### Copley Plaza Hotel, Boston, Massachusetts, May 22 – 24, 1989

The Ports and Harbors Group of the Waterways, Ports Coastal and Ocean Division of the American Society of Civil Engineers is sponsoring a Specialty Conference, "PORTS '89" to be held at the Copley Plaza Hotel in Boston, Massachusetts on May 22 through 24, 1989. The theme is "Ports in the 20th Century, Where Have We Been, Where Are We Going?" This conference will have 24 technical sessions spread over the three days. Session subjects include design, construction and operation of Container Terminals; Bulk Handling, Petroleum and Military Facilities; Marina and Small Boat Harbors; Dry Docks; Waterfront Residential Development; and, Port Dredging. Also, Materials for Waterfront Structures; Inspection of Port Facilities; Maintenance and Repair; Environmental Concerns; Modeling and Simulation; Geotechnical Problems in Port Structure Design; and Port Planning.

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Exhibits by various manufacturers and service organizations will add to the technical information available to the attendees.

Please call Mr. Kenneth M. Childs, Jr., Childs Engineering Corporation, P.O. Box 333, Medfield, MA 02052, phone (508)359-8945 or Mr. Alexander Surko, Jr., Massachusetts Port Authority, 10 Park Plaza, Boston, MA 02116, phone (617)973-5337 for additional information.

The Copley Plaza, the "Grande Dame" of the city and Boston in May will make this conference complete.

### (Continued from Page 23)

### IALA MARITIME BUOYAGE SYSTEM GUIDELINES

The Guidelines attempt to show how the rules of the IALA Maritime Buoyage System should be interpreted and to draw attention to the advantages and disadvantages of some of the equipment in use. It has six sections which are contained in a loose leaf binder: this will allow updating as the technology progresses. It is available in French, English and Spanish and costs 18 SF.

### **REPORTS SUBMITTED TO IALA CONFERENCES**

Reports submitted to the first eight Conferences, London 1929, Paris 1933, Berlin 1937, Paris 1950, Scheveningen 1955, Washington 1960, Rome 1965 and Stockholm 1970 may be obtained at the rate of 5 SF each.

Reports submitted to the 9th, 10th and 11th Conferences, Ottawa 1975, Tokyo 1980 and Brighton 1985 may be obtained at the following rates:

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Asker, Norway, 1982

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### New Publications

### Bulk Ports and Terminals to 1995

Extensive research by OSC has seen the release of an important new study which gives detailed analysis of the major existing and planned port facilities which play an integral role in the efficient performance of the dry bulk trades.

With regard to terminals already in operation and those planned for construction prior to 1995, highly detailed information is presented which includes: vessel size restrictions, storage capacities/type, handling equipment, port throughput analysis, etc. This in turn is directly related to individual trade and commodity market developments. While discussion of the development in the commodity trades is presented in full the relative forecast trade patterns are also given a thorough analysis and are duly enhanced by the incorporation of the information supplied in the port and terminal development plans.

### **COAL AND GRAIN**

The 1980s has witnessed a massive expansion in the transport of seaborne coal with a subsequent increase in the number of handling facilities. Since the early 1980s there has been a virtual doubling of the number of terminals dedicated to the handling of 35,000 dwt+ coal shipments. On the export side, the study highlights the concentration of investment in the major high volume supply nations. Significant increases in the number of terminals available have been witnessed in Australia and North America (notably the U.S.). Elsewhere, emerging suppliers in, for example, Colombia and China have constructed Cape Size capacity coal export terminals, Puerto Bolivar and Shijiuso being the most obvious respective examples (detail of these and other developments are included in the report).

In hand with this development in exporting terminals has been a rise in the number of facilities capable of importing coal products. Possibly the most notable developments have appeared in the NICs, with particular reference being made to South Korea and Taiwan. In both cases the notion of mass coal imports has been keenly accepted with the result that projects such as those seen at Kwangyang Bay in South Korea (at present 250,000 dwt vessels can be accommodated but there are plans of expansion to 300,000 dwt) and Hsin-Ta in Taiwan (here 2 berths for the accommodation of 150,000 dwt ships are planned) are but two examples of major projects coming to fruition in the region. Expansion of facilities is not restricted to the Far East but are also to be witnessed in South America and Turkey - the latter becoming increasingly reliant on coal for power generation. It is clear that the rising trend in the number of available terminals has also produced an increase in the average handling rates at both load and discharge sites and is likely to continue for the rest of the forecast period.

With regard to the grain trade the trend has once again been one of expansion. However, it is also clear that import facilities have received the greater share of the investment with these terminals almost doubling in number since 1981. Growth is also projected over the forecast period for both load and discharge facilities but on a highly reduced scale to that of the early 1980s.

On the load side the traditional supply regions have been developing existing terminals as opposed to constructing many new terminals with the result that less obvious regions have been making up the total number of load terminals – projects such as Sweden's 80,000 dwt Helsingborg terminal or South Africa's 35,000 dwt operations at Durban and East London being typical examples. With discharge terminals there has been a leap in their number since the early 1980s with Europe accounting for many of the newer facilities. However, developing countries have here increased their significance, with terminal facilities in the Middle and Far East being developed - Egypt is a representative example of the former region with construction of much of the grain handling facility at Damietta having been completed and further expansion envisaged while the country's Safaga terminal is also under development. In the Far East developments at Bombay (80,000 dwt terminal planned), a new terminal in Jurong, Singapore and the start up of a new terminal in Kaohsiung, Taiwan are a few but significant examples.

### Average Coal Handling Rates by Ship Size Capacity

Ship Size Capacity ('000 dwt)	Average Loading Rate (tph)	Average Discharge Rate (tph)	
35/50	2,300	1,080	
50/80	3,085	1,415	
80/100	5,265	1,550	
100/150	5,780	2,360	
150/200	6,640	2,650	
200/250	8,300	3,125	
250+	NA	5,170	
All > 35	3,885	1,710	

Source: Ocean Shipping Consultants

### Average Grain Handling Rates by Ship Size Capacity

Ship Size Capacity ('000 dwt)	Average Loading Rate (tph)	Average Discharge Rate (tph)	
35/50	1,650	740	
50/80	1,685	995	
80/100	2,850	2,075	
100/150	2,445	2,700	
150 +	2,575	3,200	
All > 35	1,755	1,030	

Source: Ocean Shipping Consultants

Existin	ig Major	Bulk Ha (Nu	Indling Fa	acilities b Terminals	y Ship Si s)	ze Capa	acity
	Ship Size Capacity ('000 dwt)						TOTAL
	35/50	50/80	80/100	100/150	150/200	200 +	IUIAL
<b>IRON ORE</b>							
Load	6	25	7	12	. 7	11	68
Discharge	26	34	13	17	22	7	119
COAL							
Load	24	37	8	16	5	2	92
Discharge	60	85	15	30	22	6	218
GRAIN							
Load	60	35	6	4	1	1	107
Discharge	74	59	3	9	2		147
BAUXITE/A	LUMIN	A					
Load	16	10	_	1			27
Discharge	32	23	4	1			60
PHOSPHAT	TE ROCI	K					
Load	12		2	_			14
Discharge	22	11	1	3	_		37

Source: Ocean Shipping Consultants

For each of the major commodities detailed in the report attention is paid to the ship size distribution. The accompanying table highlights the main points clearly but the report expands further on this to give a wider understanding of the questions arising from this pattern.

Within the report case study analyses of bulk handling facilities in particular regions of the world are presented in order to track developments in port productivity. For example the North European ports are analysed in detail. The bulk handling facilities within the area bounded by the ports of Le Havre and Hamburg are representative of probably the most significant range and volume of bulk commodities shipped to Europe. The number of facilities in this area in relation to the volume of bulk they have handled since the early 1980s has revealed an interesting picture which has also been used to produce some indication of the future outlook of these commodity trades within the region.

Through the 1980s North European ports have suffered a loss in their productivity illustrating well the difficulties associated with bulk port development in relation to changes in commodity demand—it seems that port developments have been out of step with the political/economic changes witnessed over recent years. However, the indications are that over the forecast period productivity should pick up to a certain degree, although the previous short-sightedness of recent years will mean that over the study period as a whole the North European port range will report a net drop in productivity.

With details of almost 900 terminals and their associated commodity handling, in addition to in-depth discussion of these commodity trades, a comprehensive view of the recent developments of world bulk ports and important detail of existing terminals is provided in the study. Equal interest is noted for the future world port structure. As such, this report is deemed a valuable asset to all those engaged in Port Planning and Development, Bulk Shipping, and Commodity Shipping Operations.

Bulk Ports and Terminals to 1995, 200 pages of text and tables. Price: 290 pounds sterling (US\$490-00).

Available immediately from: Ocean Shipping Consultants, Beacon House, South Road, Weybridge, Surrey KT13 9DZ, England

Tel.: 0932 853150. Tlx: 94070113 OSCL G. Telefax: 0932 858530.

### Container Port Pressures to 1995

The development of container trade volumes continues to record rapid annual growth. This baseload demand although still increasing — is forecast

### The Americas

### CPHA Conference: Environment Awareness

They came from ports across Canada—from Port Alberni, in the west to St. John's in the east—to sit down and discuss mutual problems and find solutions.

More than 200 delegates and guests

to show some stabilization over the near term on high volume intra-OECD trades. Elsewhere, route conversion and sustained economic growth seem set to result in further rapid expansion. This new study from Ocean Shipping Consultants provides an in-depth analysis of the future development of container trade volumes on а national/regional basis. In addition to providing sophisticated analysis of the future development of trade volumes the study also assesses the level and direction of future port investment requirements and assesses competitive pressures on key port ranges.

Against a background of productivity analysis the effect of forecast terminal capacity utilisation rates is utilised to forecast the port market in the critical period to 1995. The study identifies regions of emerging overcapacity in the international container port industries and assesses the requirements for further investment to handle anticipated increases in container throughput levels.

The study contains detailed analysis of the following key aspects:

Forecast national and regional container trade levels;

Container terminal productivity analysis;

Estimated port range utilisation levels to 1995;

Forecast regional container port investment projections.

Price £380 each (U.K. only) or US\$680 (all overseas sales), inclusive of airmail postage and packing.

Study Sales Department, Ocean Shipping Consultants, Beacon House, South Road, Weybridge, Surrey KT13 9DZ ENGLAND.

Tel: 0932 853150. Tlx: 94070113 oscl g (ref. 22231001). Fax: 0932 857660

were on hand at the Hotel Newfoundland to attend the recent 30th annual conference of the Canadian Port and Harbour Association (CPHA), a gathering which had distinct environmental overtones.

The theme of the conference was "Offshore in the 90s and Environmental Awareness," a theme that is becoming increasingly more important today as world leaders begin to respond to the alarm being sounded by environmentalists.

All panel sessions, in one way or another, related to the environment. In one session, delegates viewed a film about a marine disaster near New York City. They broke off into discussion groups to outline the steps they would have taken to combat the disaster.

A panel of resident experts then explained how such an emergency would be handled in St. John's harbour.

The workshop dealing with a port disaster is really what the CPHA is all about. The point was hit home when Immediate Past President Cy E. Pringle gave his report to the delegates immediately after new President, Don Brooks, Port Manager of the Port Alberni Harbour Commission officially took over.

#### Greenhouse 2050

An increase in sea level of more than a metre, projected to take place by the middle of the next century because of the so-called "greenhouse effect," could have a devastating impact on communities and port cities located along the East Coast of North America, delegates attending the 30th annual meeting of the Canadian Port and Harbour Association (CPHA) in St. John's, Nfld. were told.

The greenhouse effect, caused by the build-up of carbon dioxide and other gases in the atmosphere, is predicted to raise global temperatures, alter rainfall patterns and raise sea levels by more than one metre. In the Great Lakes, Shipping and power generation could be seriously affected by falling water levels.

Human activities such as deforestation, the burning of fossil fuels and even agricultural practices have significantly increased the amount of carbon dioxide and other greenhouse gases in the atmosphere.

"If we keep on going the way we're going, we may not have a liveable planet for much longer," said Ms. Nancy Cutler, Director, Climatological Applications Branch, Canadian Climate Centre. Ms. Cutler was one of the speakers taking part in the "Greenhouse 2050" panel presentation.

"Investments being made today will be affected by this warming trend," said Dr. Marie Sanderson, founding director of the Great Lakes Institute and now geography professor at the University of Waterloo. "Industry will have to evaluate the risks," she added.

CPHA delegates were told that the increased temperature will lead to shorter winters and short ice seasons which could reduce Canadian Coast Guard ice breaking requirements. On the other hand, as the frequency of climate extremes, including storms, may increase, costs may rise for buoy tending and search and rescue.

But the point was hammered home that damage, especially flooding along the Atlantic coast, would outweigh any benefits.

In a Climate Centre study of the possible impacts of a one metre rise in sea level at Charlottetown, Prince Edward Island, it was shown there would be significant social and economic impacts threatening many waterfront developments, including more than 250 buildings, streets, sewer systems and parks.

The study noted that the influence of the sea pervades all aspects of life in the Atlantic Provinces, surrounded as they are by the ocean. A rise in mean sea level will have significant impacts on the adjacent land masses.

To combat the rise in temperatures, panelists said that a concerted global effort will be required to combat pollution. In addition, carbon dioxide and greenhouse gas emissions must be reduced by 20 per cent by the year 2005.

Steps will also have to be taken to reduce deforestation and increase forestation. They said there must also be a change of attitude in the use and conservation of energy.

(Port of Toronto News)

### Prince Rupert Releases Economic Impact Study

The Prince Rupert Port Corporation released recently the summary results of a Port Economic Impact Study. The purpose of the Study was to determine the economic contribution made by cargo handling activities at the port to local, regional and national economies. The study was conducted for the port by the Canada Ports Corporation who utilized the services of an expert on economic benefit estimations to study all the ports within the Ports Canada family.

Key study results for the Port of Prince Rupert are:

Employment Impact				
Direct Jobs	2,461			
Indirect Jobs	1,760			
Total	4,221			
Revenue Impact	\$370,000,000			
Personal Income Impact				
Direct	\$70,000,000			
Responding	\$137,000,000			
Total	\$207,000,000			
Tax Impact	\$60,000,000			

#### **Employment Impact**

**Direct Jobs** are defined as the number of full-time equivalent jobs generated by the transportation of cargo to ports and by activity at the port itself. This would include cargo terminal employees, longshore positions, ship agencies, railway staff, truckers etc.

**Indirect Jobs** include those jobs that result from the purchase of goods and services by those directly engaged in port activity.

#### **Revenue Impact**

This refers to sales generated by firms engaged in handling and transporting cargo to ports including loading onto vessels but excludes any revenue from the sale of the cargo itself.

#### Personal Income Impact

**Direct** are earnings associated with the jobs created by port activity and the transportation of goods to the port.

**Responding** is income received by those holding jobs that are induced by the port activity.

### Tax Impact

Is interpreted as the national, provincial, and local tax revenues generated by port activity, including personal, as well as corporate tax contributions.

The magnitude of the statistics indicate quite clearly the importance of the port industry for Canadian exports. Port General Manager and CEO Bob Tytaneck commented: "Canada is a trading nation, relying on the exchange of goods for its economic health. These figures for the Port of Prince Rupert reflect clearly the significance of the business of transporting cargo to tidewater for loading onto vessels bound for destinations around the world as an economic activity."

Reflecting the large hinterland that stretches onto the Prairies for grain, the economic benefits are quite widespread. Approximately 80% of the benefits are related to inland transportation to ports, namely rail and truck. The remaining 20% are jobs and income at the port itself. Marketing Manager, Mr. Joe Stranan, commented: "This points conclusively to the value of internationally oriented transportation to the national economy and the commercial importance of the port to the Prince Rupert region". A total of 550 jobs generating a revenue impact of \$50,000,000 and personal income of \$27,000,000 is the estimated economic advantage of port activity in the Prince Rupert vicinity. In a community the size of Prince Rupert, this reflects economic activity that is critical to the well being of the region.

### Québec to Upgrade Solid Bulk Terminal

In order to increase handling speed and productivity at its Beauport solid bulk terminal, the Port of Québec will invest \$10 million to purchase new handling and loading equipment. Under the terms of an agreement between the Port and Cast, St. Lawrence Stevedoring will continue to operate the new facility following its completion in the spring of 1990.

"This investment will definitely have a positive effect on our region. By increasing its share of the mineral transshipment market and diversifying its revenue base, the Port will be in a favourable position to continue modernization of the entire maritime infrastructure," said the Honourable Pierre Blais, Minister of State for Agriculture and Minister responsible for the Québec City region at a recent press conference.

The Port of Québec had mandated Acres International Ltd., a Toronto consulting firm, to evaluate market potential in bulk shipping and propose designs for a more efficient terminal.

The ensuing study indicated that increased demand for Brazilian iron ore at U.S. steel mills could favour the Port of Québec, where deep-water facilities can accommodate large bulk carriers. However, Acres also reported that current handling equipment could neither meet projected demand nor compete against rival ports in the U.S.

These shortcomings will be corrected by the complete redevelopment of the bulk terminal, including construction of a 1,000 meter long conveyor system to move cargo from dockside to storage areas or directly from ship to ship. A ship loader and travelling stackers will also be installed.

These improvements will result in a state of the art facility capable of simultaneously unloading and loading a wide range of products such as iron ore, coal, copper, quartz, gypsum and clinker. Overall loading/unloading capacity will be doubled from three to six million tonnes.

Time in port will also be significantly reduced for vessels calling at the terminal, a major advantage for shippers who must pay a \$20-\$25,000 daily chartering fee for a 100,000 tonne or more bulk carrier.

From an environmental standpoint, the upgrading project will reduce dust

emissions by 50% through the use of receiving hoppers, which prevent particles from billowing upwards when cargo is dropped by grab buckets. The new conveyor system will largely replace the current fleet of bulldozers, a major source of dust emissions when used to move materials on the terminal site. (Port of Québec)

### Bulk Paces Vancouver To Record Performance

Canada's largest port built on its strengths in 1988 to achieve an all-time record throughput of 71,316,000 tonnes. Details of the 11.5% tonnage jump were announced by the Vancouver Port Corporation.

Bulk commodities accounted for over 86% of total tonnage, reaffirming the Port's status as a world leader in bulk cargo handling. Coal led the way at 23.6 million tonnes—a 26% jump over 1987.

According to Port Manager and Chief Executive Officer, Mr. Francis MacNaughton, the increase in coal exports is due to strong demand from the Japanese steel industry, as well as the growing energy needs of the booming economies of South Korea and Taiwan. The ongoing Australian miners' strike is also seen as a factor in the increased demand for Canadian coal.

Mr. MacNaughton noted that grain was the only major bulk export commodity which did not register an increase in '88.

"Supply, limited by severe Prairie drought conditions, caused grain exports to fall off towards the end of the year," he said. "But for much of 1988, Canada's efficient grain handling system kept up with 1987's record-setting

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PORT OF THUNDER BAY Ontario, Canada pace, resulting in a shortfall of just 3%." Grain exports in 1988 totalled 12.5 million tonnes, compared with 12.9

million tonnes registered in 1987. Other Western Canadian resource commodities contributed significantly to the upturn in port performance. The call for increased agricultural productivity in China is seen as the major factor leading to a 21% increase in Saskatchewan's potash exports through the Port of Vancouver. Potash reached a record 4.8 million tonnes.

A new record in sulphur exports is attributed mainly to large orders from Israel and Morocco, where fertilizer production programmes gained momentum in 1988. Alberta's sulphur producers shipped 6.6 million tonnes through the Port in 1988—an increase of 18% over the previous year.

The forest product sector benefited from continuing positive trends in the U.S., Great Britain and Japan. General cargo shipments of lumber reached a record 3.3 million tonnes—up 17%. Pulp movements grew to 1.4 million tonnes—another record, and an increase of 8% over the previous year's total.

In the container trade, a new record was achieved—for the sixth year in a row. Port of Vancouver container terminals handled 305,738 TEUs—an increase of 8.9% over 1987's TEU total of 280,777. In tonnage terms, containerized cargo grew 13.5% to 2.7 million tonnes, representing 3.9% of Total Port Tonnage.

Container performance was considered very satisfactory by the Port Manager. "Even though rationalization among the lines has meant fewer vessels calling Vancouver, we've managed a significant increase—in both tonnage and TEUs," said Mr. MacNaughton.

The Port's valuable cruise sector also posted a record in 1988 by handling 324,261 revenue passengers—an increase of 10,380 over the previous year's total. During the May through September season, 19 ships, representing 12 international cruise lines, completed a total of 209 voyages.

Mr. MacNaughton concluded his comments by paying tribute to the port industry and Canada's import-export sectors. "The Port's outstanding performance in 1988 would not have been possible without the responsiveness and 'team effort' demonstrated by the entire Port community," he said. "The dedication and hard work of our terminals, workforce and all the marine support industries are what keeps our port competitive and growing."

### Special NPA Program With Incentive Tariffs

Since January 1989, the National Port Authority of Panama has developed a special program with new incentive tariffs, in order to increase transshipment activities and more cargo to Panamanian ports (Cristóbal and Balboa).

For a 20 feet container throughput the new rate is US\$100 and US\$175 for a 40 feet container (empty or full). Full transshipment containers have 30 days of free storage.

With a view to reduce operation costs to users, the storage tariff for empty containers on chassises in US\$15.00. The new storage rates are:

- For empty containers up to 20 feet US\$4.00 and for more than 20 feet US\$6.00;
- For empty containers on chassises up to 20 feet US\$14.00;
- For chassises up to 20 feet US\$8.00 and more than 20 feet US\$12.00.

With these improvements, National Port Authority tries to increase its competitiveness and performance and at the same time tries to offer a better service to the international maritime industry.

### Port of Houston Fetes 75th Anniversary

From historical exhibits to boat parades—a number of activities are planned for the months ahead as the Port of Houston marks 75 years as a deep-water port.

The festivities will commemorate Houston's transformation into a deep-water port in 1914. On Nov. 10 of that year, President Woodrow Wilson pressed a remote button in his White House Office, firing a cannon on the banks of the Houston Ship Channel. The blast officially opened the country's newest deep-water channel, which had recently been dredged to a depth of 25 feet.

**SPECIAL EXHIBIT:** The celebration kicks off on Jan. 21 with the unveiling of a historical exhibit at the

Museum of Texas History, located in Sam Houston Park in downtown Houston. The exhibit, titled "Port of Houston: Main Street to the World," will include educational displays about the port's staple commodities, historical information, a video and a scale model depicting the port. One room will feature a reconstruction of a Houston wharf in 1919, complete with murals, cotton bales, sound effects and authentic cotton scales.

"It will be like stepping back into time when you walk into the room," says Mr. Lee Vela, PHA public relations manager.

The Port Authority is working with the Harris County Historical Society to present the historical exhibit, which will be on view through April 16.

**TRANSPORTATION FESTIVAL:** The 75th anniversary will be the theme for this year's International Transportation Festival, to be held May 19-21 at PHA's Turning Basin Terminal. The festival is held each May in conjunction with National Transportation Week and consists of two concurrent events—the Trans Expo exhibition and the Maritime Festival, benefiting the Houston International Seamen's Center.

**REENACTMENT:** The highlight of the anniversary festivities is scheduled for Nov. 10-12, when the deep-water channel's official opening will be reenacted. The weekend's events will include ceremonies, a parade of vessels and an industry exhibition of businesses along the ship channel.

(Port of Houston)

### Door-to-door RoadRailer Service at Jacksonville

Norfolk Southern Railway subsidiary Triple Crown Services Inc. has begun offering door-to-door Road-Railer service at Jacksonville, providing importers and exporters with yet another option of moving cargo to and from the Midwest.

The RoadRailer units are bi-modal freight units equipped with both permanently mounted single rail axles and tandem highway axles, making them capable of operations over the rail and highway.

The Port of Jacksonville is the first and only seaport in the Triple Crown service.

"We developed this service because there was a lot of freight coming into Florida and not much coming out. With JAXPORT being a net import facility, we saw a fit where they would help our outbound (out-of-state) loads," said Mr. Bob Durham, regional marketing manager for Triple Crown.

"Based both on the rates Triple Crown has quoted and the demise of the ILA's (International Longshoremen's Association) 50-mile rule, carriers will find it cost effective to ship freight in ocean containers to Jacksonville's marine terminals and have that cargo transloaded into the RoadRailer units for quick shipment to the Midwest," said Jacksonville Port Authority Managing Director Paul D. deMariano.

"A dockside transloading operation is a natural," Mr. Durham said. "It is possible to take the materials out of the containers or trailers and return them immediately to the steamship lines. That way you don't tie up the equipment for two weeks."

The service, which began operating five days a week in late January, links Norfolk Southern's West Jacksonville intermodal yard with Atlanta and Fort Wayne, Ind. Connecting service is offered through Atlanta to Alexandria, Va.; and through Fort Wayne to Cleveland, Buffalo, Detroit, Chicago, St. Louis and Kansas City.

Triple Crown provides second morning delivery by rail to Buffalo, Chicago, Cleveland, Detroit, Fort Wayne and Alexandria; second day service to St. Louis, and third morning delivery to Kansas City. The RoadRailer units are then drayed to points within a 150-mile radius of the destination cities.

"This is a premium service designed to compete with over-the-road carriers," Mr. Durham said. "We're looking for customers who want quick transit and low damage," which is possible because of the sophisticated air suspension in the 48-foot RoadRailer units and the avoidance of classification hump yards.

"This service development opens up a tremendous door of opportunity here at JAXPORT, said Mr. Neal Ganzel, JAXPORT director of marketing and sales. "Shipping lines calling Jacksonville from the Mediterranean and South America, who are not heavily committed to an extensive intermodal system, will have in this service a cost-effective way of delivering cargo over Jacksonville to the Midwest and Northeast, and likewise a cost-effective means of receiving cargo in Jacksonville for ocean shipment."

### Passenger Traffic Thru LA Cruise Center Up 25% Over '87 Total

Cruise passenger traffic through the Los Angeles World Cruise Center soared past the half-million mark in calendar year 1988, establishing the Port of Los Angeles complex as one of the busiest cruise facilities in the U.S.

The Cruise Center, capable of handling five full-size vessels simultaneously, accommodated 519,915 passengers last year, a more than 25% increase over the 1987 total of 414,919.

The number of modern, luxuriously appointed cruise vessels calling at the Port also rose dramatically. The Cruise Center recorded 338 vessel arrivals last year, a 24.35% increase over the 1987 total of 271.

Most frequent points of destination for ships sailing from the Port of Los Angeles included the Mexican Riviera and Alaska.

### Baltimore Rejoices as Cargo Volume Increases

The Maryland Port Commission announced that during 1988, the amount of general cargo and container cargo handled at the Port of Baltimore increased for the first time since 1984. Total general cargo at public and private marine terminals increased by 1.7 percent. More than 6.5 million tons of general cargo moved through the Port last year.

Container cargo port-wide rose about 3 percent in 1988 to more than 4.7 million tons, while at MPA facilities alone, 5 percent more container cargo was handled than during the year before.

"We're pleased that we turned the corner in 1988 and reversed the trend of declines over the previous three years," said Mr. Richard Trainor, Chairman of the Maryland Port Commission.

"In addition, we had an increase in general cargo during December at MPA terminals, compared to December 1987. That is significant because it comes after several months of modest declines," Mr. Trainor said. "We ended the year on a very positive note."

For the second year in a row, the Port maintained its record-high level of auto handling in 1988. Auto exports increased a dramatic 105 percent, which offset a 6.7 percent decline in imports caused by a drop in the value of the dollar overseas and other economic factors. Total auto cargo handled at the Port in 1988 amounted to 468,050 vehicles, nearly matching last year's record total of 468,827.

"The figures for 1988 show that we were able to take advantage of the growth in exported autos," said Mr. David A. Wagner, Executive Director of the Maryland Port Administration. "On top of that, the Port of Baltimore has great opportunity to expand its auto cargo even more. Next to our new Toyota terminal, we have 150 acres of land in the Masonville area, which we have begun to develop for auto customers. It's an example of our aggressive strategy to increase business at the Port," Mr. Wagner said.

### Berth-expansion Work To Pile Foundation

As part of the NY & NJ Port Authority's \$5.8 billion capital program, a \$3,727,000 contract for the expansion of the berthing capability at the Port Authority Auto Marine Terminal, now under construction on the Jersey City/Bayonne waterfront, has been awarded to Pile Foundation Construction Company, Inc. of Arverne, New York, it was announced by Chairman Philip D. Kaltenbacher of the bistate agency.

"The \$50 million automobile-handling facility, which has been completely leased, now will be able to berth and handle two car carrier ships simultaneously," said Chairman Kaltenbacher. "This berth expansion is an integral part of our port improvement program and will help to ensure this Port's competitive edge in the import/export automobile industry," he stated.

### NY & NJ Keeps Close Watch on EC, Asia

### By Lillian Liburdi Director, Port Department The Port Authority of New York and New Jersey

"Managing transition." At first glance, these words make little sense, for it is port "complexes" and "enterprises" that we usually think of ourselves as managing. But as we approach the start of 1989 and head closer to the 1990s, "managing transition" is really the name of the game in the port industry. The maritime world, as we knew it, is gone and the maritime world of the future is still in its formative stages. And all around us the forces of change are whirling away and making us rethink our strategies and objectives. In this time of transition, we must reflect upon and analyze the forces at bay, do our best to anticipate scenarios for the future, and devise new strategies accordingly.

The Port of New York and New Jersey is actively studying the global forces at work on the maritime industry. As we plan our physical and operational strategies for the coming years, we are paying close attention to the economic, political, and social forces that ultimately impact the flow of cargo throughout the world. The global environment in which we must compete has undergone dramatic growth and change since 1980.

While international trade has grown at an average annual rate of three percent since 1980, global patterns of trade have changed significantly and the repercussions in the industry have been felt far and wide. The economic growth of Pacific Rim countries has exceeded that of Western Europe, Latin America, and the Middle East, which has placed East Coast ports at a geographic and, therefore, competitive disadvantage with West Coast ports. It has also resulted in greater competition among East Coast ports for a smaller share of world trade.

Another phenomenon that has strongly impacted the industry is the doubling in container capacity of steamship lines, leading to a situation where carrier supply far exceeds cargo demand. In large measure, this excess capacity is the result of subsidies pro-

vided by foreign governments to support their national flag carriers. The resulting price wars among carriers has significantly reduced the revenues of steamship lines, many of whom are battling to stay alive.

Deregulation, as brought about by the Shipping Act of 1984, has also greatly changed the shape and form of the industry. Steamship lines have been given more freedom and are starting to control cargo routing to a much greater extent as they expand their intermodal activities. However, it is becoming much more common to see the combination of ship, rail and truck carriage on a single bill of lading. In an ardent effort to keep their costs down, steamship carriers are putting more and more pressure on ports to lower their prices and improve their efficiency.

As a result, ports are becoming more aggressive and competitive in their pursuit of cargo. Ports and rail lines all over the country are expanding their intermodal capabilities. They are building intermodal yards near container terminals; they are putting up extra gates for truck entrance and exit; and where feasible, they are putting doublestack trains into service.

Ports, however, cannot do it all themselves and, having very little actual control over cargo, they must attempt to use their influence and bargaining power wherever possible. Successful ports will be those who are best able to pull all necessary constituents together in an effort to maintain old and attract new steamship lines to their shores. In the New York-New Jersey Port, for instance, we put a lot of energy into establishing good dialogue and relationships with our tenants, our steamship lines, our terminal operators, our unions, and the government agencies involved in regulating our industry. We are especially excited about our new partnership with labor, who has shown us that it is willing to make adaptations in the way it does business in response to changing conditions in the industry.

None of us in the maritime industry can afford to merely respond to present-day influences, however. As we keep a watchful eye on the future, there are several phenomena we are studying closely. These include Europe's intent to drop trade barriers among the twelve members of the European Community (EC) by 1992. This situation must be monitored because, depending upon how events unfold, our port could be helped or hindered. It is not yet clear if the EC will result in a "protectionist" common market, or if it will pass on the benefits of lower internal barriers to the United States and other countries. Will U.S. companies have to set up subsidiaries in Europe? Will steamship companies have to think about merging with foreign counterparts or will trade be made easier as a result of the standardization of products? The effects on our trading relationships could be dramatic, and the situation is being closely followed.

We are also watching, with interest, what is happening to the Asian economy. We have observed a gradual movement of investment dollars from Northern countries to Southeastern Asian countries such as Thailand. Singapore, and Indonesia. As investment dollars have grown, so have manufacturing and development operations. We are following this closely, trying to assess what products and commodities will be produced and where they will be exported. Again, our trading relationships might be affected and we are trying to anticipate future trends.

We also have an eye on Hong Kong. What will happen when she is integrated into China in 1997? Will she remain a manufacturing center? Will our trade routes be affected?

Last, but not least, in recognition of the weakened dollar and slower growth of imports, we are focusing attention on expanding our export capabilities. When a region is weakened, as ours has been, other solutions must be sought. We are focusing our energies on three goals — that of stimulating the growth of the remaining export cargoes we do have, reaching inland to bring mid-North American exports through our port, and trying to develop new products in our region for export — such a fruits, wine, lumber, poultry, etc.

During these "times of transition," which are so challenging and formidable for ports around the world, we can do no less than rise to the occasion and dedicate ourselves to the excellence in leadership and service that we are created to provide.

(Via Port of NY-NJ)

### NY & NJ: ACES In Pilot Operation

A communications breakthrough now in pilot operation is about to speed the way steamship lines, terminal operators and customhouse brokers do business with one another throughout the New York-New Jersey port.

Today, as in other ports throughout the nation, maritime industry members here must communicate by mail, messenger, and endless follow-up calls. Their operations are interdependent, but their computers can't talk to one another. Before the onset of summer, however, they should be able to exchange essential cargo status details within minutes via the electronic data interchange services of ACES, the port's pioneering Automated Cargo Expediting System.

Using standard data codes and uniform document and report formats, for example, a steamship line with a ship on the way will be able to transmit itemized cargo arrival notices to every customhouse broker in port, if need be, as soon as the line's computer receives a vessel manifest from abroad. The job might take a half-hour. Nowadays, it could take a number of days.

Is my container off the ship yet? Is my shipment ready for inspection? Is it all cleared? Anything held? Any outstanding charges? Follow-up calls such as these now keep staff of the port's more than 100 steamship lines, 300 brokers and six major marine terminal operators on the phone to one another throughout the 48 hours cargoes usually stay in port.

### And More to Come

By early spring, these details, too, will travel via ACES, reducing errors, delays and countless headaches, and speeding delivery of cargo to port customers. In time, ACES will also be ready to add truckers and rail lines to its electronic network. International freight forwarders and others on the export side will be invited to follow next.

Almost four years under development, ACES was shaped by a volunteer committee of key port users—five customhouse brokers, four steamship lines and two terminal operators—with the Port Authority, the 12th member, as catalyst and systems organizer. Realists

### Oakland: A Step Closer To Delta Disposal Plan

The Port of Oakland announced that it has completed a draft Supplemental Environmental Impact Report (SEIR) on its plan to transport dredged materials to the Delta for use as a construction material to reinforce flood levees.

The 400-page document includes scientific tests showing the Port's Inner Harbor dredged materials meet state and federal drinking water standards and would have no significant adverse impact on the Delta environment.

"With the completion of this draft SEIR," said Mr. James J. O'Brien, acting CEO of the Port, "We're one step closer to completing the process for the Port's Phase I channel deepening project."

Mr. O'Brien said public comments will be accepted in writing and in testimony at a hearing scheduled for March 1 at 7 p.m., at the Stockton Hilton Hotel. These comments will be incorporated into the final SEIR to be considered for certification by the Port of Oakland's Board of Port Commis-

all, committee members knew what they did and didn't want.

### One Step at a Time

"Other ports throughout the country have been struggling forever with sophisticated systems no one is buying," noted Mr. Larry Sposi, the Port Authority's ACES project manager. "Our Port Working Committee said—let's take it one step at a time. Maximum security is a must. But at the same time, let's keep costs within reach of everyone. And let's not reinvent the wheel. There are several good electronic data interchange (EDI) networks already out there. Let's check them out."

The committee also insisted that ACES be compatible with every kind of computer, from laptop PC to advanced mainframe systems. And they agreed that the Port Authority should stay on the job as umbrella agency even after ACES was up and running.

What the industry committee determined was needed is what its members are now using daily in pilot operation. GE Information Services (GEIS), one of the EDI industry's leading sioners in early April.

"We look forward to receiving public input on the SEIR at the Stockton hearing. We're encouraging all interested groups and individuals to attend," Mr. O'Brien said.

The Port has already received letters of support for its plan to reinforce weakened Delta levees with its dredged materials from many elected officials, community and business groups, including: Congressmen Ron Dellums (D-Oakland) and Vic Fazio (D-Sacramento), the California State Chamber of Commerce, California Farm Bureau, country farm bureaus in Sacramento and San Joaquin, the Teamsters Union. International Longshore Workers Union and the California Central Valley Flood Control Association, among others.

Residents of Twitchell Island and the Lower Jones Tract, the two Delta sites slated to receive the dredged materials, also strongly endorse the Port's plan, which comprises Phase I of the Port's channel deepening project. This phase includes the removal and disposal of about 440,000 cubic yards of bottom sediments.

third-party networks, has been signed on as ACES' electronic network interchange service developer and operator. Working closely with committee members, GEIS has developed ACES software for PC users, and upon request will help tailor software for port industry members who opt to use their own computer mainframes.

ACES planners have also hit home on low costs. The Port Authority has agreed to distribute the system's PC software free to all users who join the network within three years. There will be no special ACES membership fees. The cost of sending or receiving a document could run as low as twenty cents, less than the cost of a postage stamp.

Now ACES's sponsors are getting ready to go public, with the Port Authority's Larry Sposi in the lead. All are aware that every other port in the nation will be watching. Comments Mr. Al Silvey of Silvey Shipping, one of the Working Committee's customhouse broker: "Once we have ACES off and running, users won't know how they did without it. The system can't miss." (RE: Port)

### NYK DST Services To Oakland Boosted

Nippon Yusen Kaisha\* (NYK Line), whose containerships call at the Port of Oakland on two routes between the U.S. and the Far East, has boosted the number of its double-stack train (DST) services from the Midwest to Oakland to seven per week.

Using the "Triangular Service" initiated by Southern Pacific Lines, the stacktrains originate in Los Angeles and move eastbound with import cargo. From the Midwest, the trains are then routed to Oakland loaded with shipments bound for the Far East, and domestic goods for the Bay Area, over the Southern Pacific's Central Corridor via the Donner Summit right of way through the Sierra Nevada mountains. NYK is the first trans Pacific carrier to use this route for regular stacktrain service.

NYK now offers daily stacktrain departures Monday through Friday from Chicago and twice per week from Cincinnati. From Chicago NYK double-stack platforms are routed to Denver via the Burlington Northern railroad to join up with the Southern Pacific's daily Central Corridor Service to Oakland. From Cincinnati, double-stack platforms are routed to East St. Louis via CSX railroad, and then to Kansas City to join SP's daily Oakland-bound train. Centex, NYK's DST operator, contracts with the Southern Pacific to provide this service.

According to Mr. Takeshi Watanabe, vice president and general manager of NYK North America, the new service expands the line's domestic cargo distribution options, while extending its vessel cut-off times for intermodal cargo. "By sending international cargo to Oakland, we ensure timely intermodal connections with NYK vessels." Mr. Watanabe explained that NYK gains an additional two days loading time in Oakland over vessel cut-off dates in southern California, where the line's stacktrains previously terminated.

In Oakland, NYK vessels call at the Matson Terminal, a 65-acre (26-hectare) facility operated by Matson Terminals, Inc. Southern Pacific's 85-acre (34-hectare) intermodal terminal has three tracks that can accommodate 30 five-platform double-stack rail cars



NYK Line containers from a Midwest stacktrain are unloaded at the 85-acre (34-hectare) intermodal yard of Southern Pacific Lines, in the heart of the Port of Oakland.

holding 300 40-foot containers. The facility is within 1.5 miles (2.4 kilometers) of all of the Port's container terminals.

\* An Associate Member of IAPH

### Container Barge Traffic Booming: Portland

Container barge traffic on the Columbia and Snake rivers is booming and the Port is at the center of the thriving river trade. Container movements by barge have been so strong on the Columbia/Snake system during 1988 that the Port needed only 11 months to record its best year ever for container barge activity.

For the year, the Port had 431 barge calls with 19,880 containers moved equaling 33,126 TEUs. The previous annual bests were 334 calls (in 1987), 17,192 containers (1985) and 28,622 TEUs (1985).

The nearly 20,000 containers handled for 1988 represent a vast improvement from the 125 containers handled in 1975 during the first year of container barging on the Columbia/Snake system. The increase in the barging of containers on the Columbia/Snake system is the result of several factors: the increase in demand for exports from the Pacific Northwest; the steamship lines calling on the Port expanding their export container capacities; and the Port's intermodal system that connects the river system with three transcontinental railroads and two interstate highways through the Port's Terminal 6.

Domestic cargo is another small market that has contributed to the growth of container barge traffic.

The forecast for the future is continued growth as long as the demand for exports remains strong and there is sufficient export container capacity on the steamship lines serving the Port. (Portside)

### Customs Clearance West Coast's Quickest

Portland demonstrated the shortest amount of time for major West Coast ports for Customs clearing both general inspection and intensive examination cargoes, according to the results of a study undertaken by Booz Allen & Hamilton for the Western States Coalition for Effective U.S. Customs Service.

In Portland, Customs cleared 68 percent of general inspection cargo within eight hours, while the West Coast average was 42 percent within eight hours, and it handled 34 percent of intensive examination cargo within eight hours, more than doubling the West Coast average of 16 percent.

(Soundings)

### San Diego Convention Center Spectacular

The 25th anniversary of the founding of the San Diego Unified Port District highlighted a year of planning and dynamic growth. As the District strides into its next 25 years of service, opportunities and challenges associated with promoting the development of tidelands for trust purposes will become increasingly complex.

The Port District was created by the state legislature in 1962 as a unified administrative agency charged with the duty to promote commerce, navigation, recreation and fisheries on the state tide and submerged lands around the periphery of San Diego Bay. As a trustee for the people of the state of California, the District is responsible for these tidelands, except for the U.S. Naval Bases and other governmental exclusions.

No other single event in the 25-year history of the District will have as dramatic an impact on the waterfront as the construction of this region's spectacular convention center. When completed in the fall of 1989, this magnificent facility will establish a visual and architectural landmark on the Bay. Construction has progressed smoothly through the excellent work of the Fluor Corporation Contract Management Team. This \$150 million facility will offer convention, trade show and meeting venues unparalleled in this nation. The ambiance of a beautiful waterfront setting coupled with an imaginative design will be difficult for meeting and convention planners to resist.

Local citizens can enjoy the lovely setting as well, since the entire waterside portion of the building is terraced and provides interesting vistas of the Bay and its activity. This unique site and exciting structure will be made available to the city of San Diego on a "token consideration" 20-year lease. The San Diego Convention Center will be operated by the Convention Center Corporation, an agency of the city of San Diego.

The administration of San Diego's regional airport, Lindbergh Field, situated on state tidelands, is also the District's responsibility. The prospect of another regional airport in a different location yet to be found does not alter the need to provide the traveling public with a modern, efficient and safe facility. Improvements to the airport terminal during the past year included the installation of new passenger waiting areas in the north end of the West Terminal, offering comfortable seating areas near gates 24 through 29. A complete renovation of the food service and newsstand concessions throughout the airport has resulted in a more attractive space for passengers awaiting aircraft boarding.

Curbside access and the improvement of space in which transportation vehicles may work more efficiently have received a great deal of attention as passenger counts continue to increase. A new, more strictly regulated taxicab system was also developed. This new system will upgrade the cleanliness, safety and responsiveness of taxicabs at the airport. In addition, taxicab drivers are now required to pass a written examination, insuring knowledge of the city, literacy and English-language proficiency.

Maritime commerce activities continued at last year's levels, with bulk cement accounting for the majority of the cargo shipped through the District's terminals. Discussions continue with importers of perishable foods from South America which may result in new vessel calls in 1989. Automobile imports continue to be a priority for the marketing efforts of the District. Prospects for this highly desirable commodity remain good.

The management philosophy of the District seeks to strike a balance between providing amenities and facilities and assuring the necessary resources to sustain them. Through this planning approach, the Port District has completed another successful year. For the 19th consecutive year, revenues from operations are sufficient to cover operating and capital expenditures as well as meet the District's bonded indebtedness obligations. Nor will any tax subsidy will be required in the year ahead.

These accomplishments are the result of extraordinary efforts by the District's loyal and hardworking employees, the steady policy guidance of the Board of Port Commissioners, the active support of the officials of the member cities and the trust and support of the public. (Annual Report 1987/1988)

### TEU Tonnage Growth Dramatic at Charleston

"The Port of Charleston's throughput totaled 5.6 million tons of container cargo in 1988," said Mr. W. Don Welch, executive director of the Port of Charleston. "That total is 1.1 million tons up from last year's record volume and in large part reflects the excellent growth enjoyed by the established lines at Charleston."

The TEUs at Charleston jumped from 581,760 in Calendar Year 1987 to 717,477 in Calendar Year 1988. That is a 23.3% increase. Container tonnage increased 24%.

The cumulative growth rate at Charleston since Calendar Year 1985 is an amazing 81.5% in containerized cargo.

"The Port has a carefully planned and phased growth program," Mr. Welch said, "to bring new container capacity on-line as the market requires. We do not speculate, we plan on a sound business and fiscal basis."

The Port of Charleston has a \$17 million expansion underway at North Charleston Terminal, a \$15 million project underway at Columbus Street Terminal and recently received approval to initiate a \$60-65 million expansion at the Wando Terminal. The Port is also looking at sites for an entirely new terminal, which will be designed to accommodate continued growth into the next century.

### Mr. Fabulich President Of Tacoma Commission

Mr. Jack Fabulich has been elected president of the Port of Tacoma Commission by his fellow commisMr. Jack Fabulich President of Port of Tacoma Commission



sioners, succeeding Mr. Robert Earley. He served previously as vice-president of the five-member commission that sets policy and approves major expenditures.

Serving on the commission since 1976, Mr. Fabulich is the president of Parker Paint Manufacturing Company in Tacoma, Washington, a subsidiary of Williams Holding Inc. of Boston, Massachusetts. (Pacific Gateway)

### Tacoma Terminal 3 Nears Completion

Terminal 3, the Port of Tacoma's new \$32 million container facility, is in the final stages of completion and will open in the spring.

The wharf will be finished in early March, with completion of the paving of the yard and the installation of the lighting system by the end of the month. Two Kone cranes costing \$9 million and constructed at Versatile Pacific Shipyards in Victoria, British Columbia, will be fully-operationable by June.

The two additional post-Panamax cranes will make a total of six cranes in the adjoining Terminal 3 and 4 complex. Four of the cranes, including the new Kone ones and two Sumitomo cranes delivered in 1986, will be able to traverse back and forth on a curved crane rail between the two wharfs and will operate on Terminal 3 and Terminal 4 jointly. These articulated cranes will allow any size ship to be handled at either terminal.

Initially, both Kone cranes will run manually, but future automation is possible. They will have a 145-foot outreach and a 61-foot backreach, with a capacity of 50 long tons.

The two terminals will have a combined acreage of 65 acres. An improved and enlarged Terminal 4 will have two berths totaling 1,900 feet, while Terminal 3 will have one berth of 950 feet. (Pacific Gateway)

### Africa/Europe

### **1988 – A Profitable Year** For Port of Copenhagen

In 1988 the Port of Copenhagen managed to increase its turnover in spite of various political interventions during the year.

Turnover reached a total of 9.4 million tons and the port thus maintained its position as the second largest in Scandinavia.

The major rise showed in container turnover which increased by 30% — from 82,285 TEUs in 1987 to 106,377 TEUs in 1988.

For comparative reasons, the figures for the previous years are quoted below:

Total	cargo turnover	TEUs
1983	6,723,256	49,266
1984	7,584,444	67,966
1985	7,416,608	67,064
1986	7,712,562	67,876
1987	9,368,124	82,285
1988	9,373,303	106,377

As regards exports, a very satisfactory result was reached with a gain of 10%, whereas imports dropped by 3% mainly substantiated to the recession of tanker turnover.

18,704 vessels all together called at the Port of Copenhagen in 1988 compared with 15,764 in 1987 (an increase of 18%).

BRT likewise showed a rise from 60 million tons against 54 million tons the year before — a rise of 4%.

### Nonstandard Containers Increasing at Le Havre

Following on what was already a very big rise in the number of maxi-containers in 1987, from 5,000 the previous year to 7,000, the rate at which these nonstandard containers are being adopted has jumped again in 1988. Judging from the results for the first six months of the year, we can expect well over 10,000 for the full year.

The main reason is that Maersk's High Cubes, which are 45 ft long, have now joined the 40 ft long x 9 ft 6 in high boxes that are common these days

on ACL and Evergreen vessels, to name but two. Indeed, the proportion of 9' 6" high containers to be found on Maersk vessels is astonishing, regularly amounting to over 15% at each call, with a maximum of 31%. Developments since Maersk's North Atlantic service started up mark a clean break with earlier trends and it is clear that maxi-containers are being adopted far more quickly than was originally expected.

Considering the big gain in productivity resulting from their use by shippers, due to an increase in volume which makes it possible to load bulky cargo or simply reduce the number of containers (two 45' x 9' 6" containers replace two 40' and one 20' ISO containers), all shipping companies are preparing to follow the market, even though they are not committing themselves to a policy based solely on maxi-containers. 25% of the 23,000 containers included in Maersk's latest order are of the 9' 6" high variety. Hapag Lloyd is providing cells for 45' containers in vessels under construction. M.O.L., which operates in the Far East and is part of the Trio Group, is also introducing 45' containers on its Pacific routes, and Sealand says it is ready to follow.

There can be no doubt that a major step forward has been taken and that the way now lies open for a new generation of containers. Forecasts made in late 1987 for 1994 have had to be revised upwards. The previous bracket of 47,000/90,000 maxi-containers expected annually at Le Havre is now fixed at 100,000/150,000. Coping with them efficiently supposes urgent modifications both to the rail network (i.e. tunnel width on the line between Paris, Rouen and Le Havre) and to existing road traffic regulations.

### Limerick Port Set to Expand and Prosper

On his reelection for the 23rd successive year, the Chairman of Limerick Harbour Commissioners, Mr. G.E. Russell told the annual general meeting of the harbour authority, that present indications are that the port will continue to expand and prosper in the years ahead.

Over the past year trading results in Limerick port and harbour have been

highly satisfactory and trading returns for the year ended June 30 last achieved a record level of 5.61 million tonnes as compared with 4.66 million tonnes for the calendar year 1987.

Outlining the growth he pointed out that over the past 25 years:

\* ship sizes entering the Estuary have increased from 10,000 d.w.t. to 150,000 d.w.t.—a fifteen-fold increase.

\* the volume of goods loaded and

discharged has increased from a level of 450,000 tonnes to 5.5 million tonnes—a twelve-fold increase.

\* investment in maritime-related industrial plants adjacent to the waters controlled by the Commissioners has achieved a level of almost  $\pounds 2$  billion.

No other Irish port has rivalled these achievements over the equivalent period.

This spectacular level of progress in



### New Handling Record at Burchardkai

The HHLA Container Terminal reports a new handling record in 1988. At 807,393 TEUs nearly 100,000 more boxes were handled than in 1987, an increase of 14%. With 8.084 million tons, container tonnage for the first time exceeded the 8-million mark.

If the containers are added which were handled at other HHLA terminals, the company's containerisation degree has now reached exactly 78% (with a handling total of 10.786 million t). The chief contributors to this growth rate were once more the East Asia trading area (plus 32% to 414,000 TEUs) and the feeder services, particularly in maritime transit with Scandinavia (plus 13% to 208,000 TEUs). Compared with the first full operating year of 1968, handling at Burchardkai increased 25-fold. This constant growth was accompanied by permanent expansion not only of the terminal and equipment, but also of the services, including the logistics systems, in which Burchardkai in some cases even holds a leading position worldwide. Even after 20 years of steady handling growth, together with constant expansion, there is still no sight of a halt to the development of this biggest and most modern terminal in the port of Hamburg. Extension of Berth 9 on the Elbe side is currently well under way. In July this year a further 210 metres of quay will be available there with a water depth of 15 metres.

Also in the present year (August) the 12th container crane will go into operation there, and tenders are at present being prepared for a 13th crane. The dimensions of both cranes are "Post panmax-Standard." Their lifting capacity is 70 5.

Simultaneously with completion of this "North terminal" the last reserve surface of Burchardkai will have been developed. It will considerably increase the annual handling capacity.

the Shannon Estuary could not have been achieved unless the Commissioners had developed the deep-water navigational channel and provided vastly improved services.

The development of the deep-water navigation channel entailed intensive hydrographic surveying, updating of navigation charts, locating wrecks, installing modern and sophisticated navigational lighting and other aids, as well as extending the existing port control radio communication system.

The larger vessels now using the Estuary are valued at between  $\pounds 20 - \pounds 30$  million each and consequently demand a high level of expert assistance on entering and leaving the harbour. As a consequence, the Commissioners are now the argest navigational lighting authority in the State, with the exception of the Commissioners of Irish Lights, who are responsible for lighting along the entire coast.

Techniques have had to be developed, having regard to local limitations, to handle in safety the giant-sized vessels now using the Estuary. All vessels moving to or from berths are supervised by the Harbour Master or by a fully qualified Deputy. Considerable improvements to port services to cope with the demands of the larger ships had to be provided in training and equipping of pilots, and in arranging for tug boat, oil pollution control, fire and other emergency services.

### **Single European Act**

Following the full implementation in 1992 of the Single European Act and the consequent lowering of trade barriers, opportunities for Irish exporters will be considerably enhanced provided they can meet the requirements of their European customers in terms of quality, cost and delivery. To maximize on these opportunities efficient transportation links must have top priority with countries of the EEC. Currently almost 75 percent of Irish exports are destined for EEC countries.

As an island nation Ireland is almost totally dependent on sea transport for its exports and imports, and, therefore, ports have a key role in the transportation chain, being the focal points of international trade at which the various transportation modes of land and sea converge and interact.

(Continued on Page 37, Col. 1)

(Continued from Page 36, Col. 3)

### Efficient Transport

It is vital, that in the fiercely competitive world of the future, our ports are managed and equipped in such a way as to ensure the effective and efficient transfer of goods in and out of the country. The importance of efficient ports to the Irish economy will be of even greater significance from 1993 onwards when, following the opening of the Channel Tunnel, Ireland will be the only State in the EEC solely dependent on ports to service its external trade.

In a recent speech to the Rotary Club of Waterford Mr. Albert Reynolds, T.D., Minister for Finance, put the matter in perspective when he stated:

"With the advent of the internal market the importance of achieving maximum efficiency in the operation of our ports and in shipping cannot be overstressed. Once the Channel Tunnel is in operation Ireland will be the only country separated from the rest of the Community by sea. This makes it all the more important that we manage all aspects of our sea transport operations to minimise the geographic disadvantages for Irish exporters".

In the light of recent developments nearer home the MInister's words are both apt and opportune in emphasising that the primary responsibility of Irish ports is to provide a safe, efficient and low-cost service to their import and export customers.

(Shannon Shipping News)

### Final '88 Cargo-handling Figures for Rotterdam

At the end of last year the mayor of Rotterdam, Mr. Bram Peper, announced that the total volume of goods handled would amount to 262.3 million tonnes. In the event, this prognosis by the Municipal Port Management proves to have been rather on the cautious side.

Largely due to the significant volume of incoming oil and ore in December, the total volume handled in the fourth quarter topped 75 million tonnes—a rise of more than 10% on the same quarter in 1987.

The total volume handled in 1988 was 272.8 million tonnes (1987: 255.0 million tonnes)—an increase of almost 7% on 1987. Ore handling rose 25.2%



(Photo by Rotterdam Municipal Port Management/Freek van Arkel)

from 34 million tonnes in 1987 to 42.6 million tonnes in 1988.

The volume of coal handled fell back slightly (down 3%) as did that of oil products (down 6.8%). Crude oil rose from 82 to 85.6 million tonnes (up 4.3%). Other bulk goods increased from 41.1 to 43.3 million tonnes (up 5.4%)

The total volume of bulk goods handled rose from 207.8 to 219.3 million tonnes (up 5.5%). Container handling increased by 12.6% from 30.6 to 34.5 million tonnes. The other general cargo rose from 9.0 to 10.2 million tonnes (up 13.4%). The general cargo sector as a whole grew by 13.4%, from 47.2 to 53.3 million tonnes.

### A Good Year

It can be concluded that the port of Rotterdam had a very good year. The final figure was determined in part, however, by the spectacular result for the month of December. Over the first three quarters, for example, imports of crude oil were more or less in line with the 1987 figures. On the basis of the figure available at the beginning of December it appeared that oil imports in the fourth quarter would actually be down. On the other hand, there were reports about OPEC agreements on production cuts to take effect in 1989 and on a rise in oil prices. This would mean that imports might increase significantly in December or January. It was expected that this would start to happen in December, but that the effects would not really be felt until the new year. It is now clear that imports rose sharply as early as December.

### Developments

1988 was a good year, not just because of the high cargo handling figures, but primarily because of numerous developments which show that the port of Rotterdam is arming itself for the future. The business community and the authorities are working together to improve Rotterdam's competitive position. The announcement of the merger plans for ECT, Müller-Thomsen and Quick Dispatch, the growth of fruit handling, the proposed expansions of Bell and Unit-Centre, the planned investments in a new coal terminal for Frans Swarttouw, in a modern distribution centre, the "Port of Rotterdam Distripark," and in the new Sea-land Terminal, and the success of Netrail are all signs of the zest with which those who operate in the port are tackling the job. We must also remember that, in the social sphere, the improved relations between workers and employers offer hope for the future.

### Port of Tarragona in Profile

The Port of Tarragona has a long history. Its origin as an artifical port goes back to Roman times when a breakwater and wharf were built. In the late Middle Ages, several royal privileges bestowed on the port were intended to revitalize its activities, but it was not until the 18th century that the plans were carried out which marked the beginning of its present infrastructure.

The Port of Tarragona has recorded the fastest growth rate of all Spanish ports over the last 10 years. During the last 5 years, it has invariably ranked among the three top Spanish ports in terms of total volume of commercial traffic and came first in 1983.

The type of cargo where the fastest growth rate was recorded in the recent past and which nowadays makes up the highest percentage by volume of the port's throughput is liquid bulk materials, primarily due to the petrochemical industry in its immediate hinterland. But besides the extraordinary increase in liquid bulk cargo, especially petroleum products, there has also been a steady increase in the volume of dry bulk materials handled. Shipments of general cargo have also gone up with the port attracting new traffic, in particular, the products of an inland automobile factory.

The improvemenet of infrastructures and the development of port facilities during the last ten years has proceeded at such a rate that the Port of Tarragona is now fully in line with modern standards. In fact, new investments in plant and facilities during this period, for instance new quays, exceed 74% (4,420 m of quay length out of a total of the existing 9,350 m) which, expressed in equipment value come to 52%. As a result, the tonnage which the port is capable of handling has increased substantially if the capacities of these new infrastractures are compared with the original facilities.

Building and construction work in process and planned in the near future will further increase the port's capacity and will considerably improve land communications. In this context the following works and projects, among



Port of Tarragona

many others, are of outstanding importance: Construction of the Catalunya Quay ("Muelle Catalunya"), the new extension of the breakwater and the so-called "Transverse Axis" (Eje Transversal). The construction of the Catalunya Quay means that the port will then have the most modern deep water quay on the Spanish Mediterranean coast. The extension of the East Breakwater (Dique Levante) will guarantee the protection of practically all quays and port installations. The Transverse Axis," on the other hand, will in the future provide a freeway linking the port directly to the network of motorways and national roads.

### Prospects of Development — "Catalunya Quay"

Taking it for granted that the favourable situation will persist with sea transport at a sustained high level, the Port of Tarragona is firmly decided to improve all port facilities in the long term. Under its short-term programme, the Port Management is directing its concentrated efforts within the framework of the Port Plan 1985-1990 to three major projects two of which are already in an advanced state of development ("Catalunya Quay" and "New Break-water, phase 1"). The third, the "Transverse Axis" has just been started. Other short-term projects include: "The North-South Bypass" which will link the zone of the jetty and quays without cutting across the fishermen's quarter



Mr. Antoni Pujol I Niubó President Tarragona Port Authority

and projects providing for the construction of superstructures, accessways, loading and unloading facilities for inflammable and explosive products, etc. All these will complement its modern and efficient infrastructure enabling the Port of Tarragona to handle a wide spectrum of shipments and to ensure a quick turnround of the ships loading and unloading.

Specifically the Port of Tarragona has proved its ability, on the strength of its location and thanks to its facilities and equipment, to cope with new needs when it was recently called upon to add large car shipments to its regular schedules. The policy of diversifying the equipment and service facilities is intended to be continued also in order to develop the throughput of those products which at present are not being handled or the volume of which is small.

Among the future facilities offered by the Port of Tarragona, special mention should made of the "Catalunya Quay" which is a quay of 672 m berthing length, 250 m of quay apron and 20 m depth of water. The total area is 17 hectares. All these facts make it one of the most important quays in the Mediterranean. It was designed to handle preferably dry bulk cargo, to load and discharge ships of over 150,000 D.W.T. and 300 m keel length. In addition to the projected extension structures, it is proposed to install three high-capacity unloaders. These facilities will easily bring the port's capacity to over 3.5 million metric tons per year. The quay is scheduled to be commissioned during the first four months of 1989.

### Frontier Controls Will Remain After 1992

### **By Rt Hon Lord Young of Graffham** Secretary of State for Trade and Industry

Completion of the Single European Market will present British business with its biggest challenge since we joined the European Community in 1973. It is a challenge that will affect every business, large and small, and not least the ports where the barriers separating us from the rest of Europe are symbolised by customs houses up and down the country.

But the Single Market will also provide great opportunities. Opportunities for growth, prosperity and jobs. And above all opportunities for easier trade. Ports serving the Community will naturally benefit from the dismantling and removal of those obstacles that currently hinder trade. They will also benefit from the future economic growth that a unified market will bring.

The Government has always firmly believed in open markets. An open, competitive economy in which enterprise is encouraged is the foundation of our economic strategy and the foundation of our economic success. It is also the moving force behind the creation of a Single European Market by 1992.

Trade will be easier because goods will be able to move more freely within the Community. But frontier controls will not totally disappear.

We cannot abolish all controls if we are to protect our citizens and stop the movement of drugs, of terrorism and of illegal immigrants.

It is vital for the whole economy that links to the rest of the European market work with maximum efficiency. The ports no longer provide our sole mode of transit, and will from the mid-1990s be sharing the growth of cross-Channel business with the Tunnel. But the advances in both cargo-handling and information technology hold out the firm promise of a major continuing role in goods and passenger trade.

British ports will continue to provide the main routes between Ireland and the continent, and they have opportunities also for expanding trade with the Iberian peninsula, the Mediterranean, and wider world markets.

The British ports industry has been responding vigorously to the opportunities that the Single Market will bring. It has already felt and responded over the past two decades to the great turnaround in this country's trade pattern, from the traditional markets of Empire to the increasingly integrated European market.

The British Ports Federation performs a vital role in keeping its members informed of developments in the European Community. I am sure it will continue in this. But if the ports industry is to prosper it must be able to compete effectively. British ports must act now if they are not to be overtaken.

(Review, BPF)

### Ports to Meet Environment Challenge

### By Dr. Siân Pullen

In recent months environmental issues have become inescapable. Scarcely a day goes by without the media highlighting toxic wastes, nuclear wastes, pollution in the North Sea, the greenhouse effect, the destruction of the ozone layer, acid rain and seal deaths.

At the Conservative Party Conference in October, environmental issues hit the headlines once again. Margaret Thatcher in the concluding speech of the conference referred to the "Tory commitment to protect the environment" and "Conservatives who are not merely friends of the earth" but "its guardians and trustees for generations to come." It is, of course, not only the Conservatives who should count themselves as guardians and trustees: every human who consumes the air, food and water that this planet provides has that responsibility.

With public awareness of the health of the environment increasing, the onus will be on industry to 'clean up its act.' All areas of industry and commerce will come under close scrutiny, by U.K. and European Parliamentary bodies, and by environmental pressure groups.

Port operations that are subject to recent and ongoing environmental legislation include the disposal of dredged spoils; reception facilities for oily wastes, chemical residues and garbage; transfrontier shipment of hazardous waste, and port development and expansion.

### **Dredged Spoil Disposal**

Most Western European countries, concerned about industrial and river estuary pollution, have already become signatories to a series of international conventions which seek to apply uniform safeguards and regulations for the waters they share. The disposal at sea of dredged material from ports is regulated by the Oslo Dumping Convention set of guidelines.

### **Pollution from Ships**

A series of five 'optional' annexes, each dealing with a different aspect of marine pollution, exist under the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78). Each annex needs to be ratified by a minimum of 50 percent of the world's merchant fleet before it can come into force.

As each annex comes into operations, ports are required by law to provide appropriate reception facilities for ships using the port. It is important that ports can themselves dispose of the waste.

#### **Hazardous Waste**

The process of implementing the

Transfrontier Shipment of Hazardous Waste Regulations 1988 will soon be complete. Imports of hazardous waste into the U.K. have increased significantly in recent years, and the regulations will introduce a new system of control for shipments into, from and through the U.K.

### **Port Development**

Many ports will have recently discovered how difficult it is to carry out major development and expansion without incurring opposition from environmental groups. In some cases such pressure has prevented development taking place.

As more stretches of coastline are designated Sites of Special Scientific Interest, and as the Government is discouraging Private Bills for the purpose of development and expansion, it becomes ever more difficult to reconcile port progress with environmental protection.

Whether such a balance is possible is a question that will become of increasing importance to the BPF and its members in the coming years.

(Review, BPF)

### Pressure to Scrap Dock Scheme Grows

### By Ken Cooper OBE Chairman of NAPE

For the last 18 months port employers have waged what is widely acknowledged to have been a highly successful lobbying campaign against the National Dock Labour Scheme.

We are closer to repeal today than at any time in the last 40 years. This is thanks to the widespread support we have received from within Parliament and other interested parties.

No less than 228 Conservative Members of Parliament have pledged their support by signing Early Day Motion 275. No other motion in the last session of Parliament attracted such universal backing.

We have won the support of virtually every powerful industrial organisation and pressure group in the country. Without exception the response has been enormously positive. In many ways the campaign is developing a momentum of its own. People we have never heard of, people we have never spoken to are demanding the Scheme should go.

Even some dockers themselves are calling for repeal. I quote from a letter received by a port employer from a Registered Dock Worker:

"I wish you well. The Scheme no longer has any place in today's world. It is a very nice feeling that I have a 'job for life' but how much more efficient and how much busier would my own port be without it? There is a definite change of attitude taking place among the dock workers. There are many more people who think like I do. I urge you not to let this matter rest."

All of this has been achieved in the last eighteen months. From nowhere we have developed a nationwide campaign that has attracted enormous support. The pressure needs to be maintained.

### Competition

We have come a long way, but we are in fierce competition with other industries. When the Government decides its legislative programme it is not a question of whether it agrees or disagrees with the repeal of the Dock Labour Scheme. I know of no government Minister who would give twopence for it.

But next year the Government wishes to privatise electricity, privatise steel and reform the universities. We are in competition with other great issues for valuable government time. Having successfully forced our way on to the political agenda we now have to force our way on to the Government's agenda. We have to make our case unstoppable, win more supporters and redouble the efforts we are making.

### Agenda

This is not just a task for port employers nationally. Every individual employer and every organization associated with the ports industry must make their views known at every opportunity and at the highest levels.

The port employers are united in their wish to see the industry develop to its full potential. In the run up to 1992 nothing less will do. By abolishing the Dock Labour Scheme the Government will be playing its part in helping us move forward to meet the challenges with which today's vibrant economy presents us. (The National Association of Port Employers)

### Upgraded Radar System at Southampton

Associated British Ports is to spend over £0.5 million on upgrading the harbour radar surveillance system at the port of Southampton. More than 60,000 commercial vessel movements are handled annually by the port's Dock and Harbour Master.

Modern replacement radar display equipment, with full daylight viewing facilities, and new associated computer and recording equipment will be installed at the Vessel Traffic Services (VTS) Centre by Electro Magnetic System Ltd of Yeovil, Somerset.

The existing radar scanners will be retained and service will be uninterrupted during installation. Microwave links, receivers and subsidiary equipment will also be renewed under the direction of the Port Engineer at Southampton.

Port Director, Mr. Dennis Noddings, commented:

"Monitoring and controlling the movement of large numbers of commercial vessels in busy areas such as the Solent and Southampton Water requires the highest standard of equipment and expertise. As the harbour and pilotage authority, ABP's investment in modern marine facilities meets the increasing demands of shipowners' requirements and maritime regulations."

### Deep-sea Oceanography Centre at Southampton

Plans to build a new centre for deep-sea oceanography at the port of Southampton have been allocated funding, following the announcement of the science budget allocations for 1989/90 by the Secretary of State for Education and Science, Mr. Kenneth Baker.

The new centre will occupy a 13-acre site alongside Berths 26 and 27, Empress Dock, and will comprise: The NERC Institute of Oceano-

graphic Sciences Deacon Laboratory, now at Wormley, Surrey (IOSDL);

NERC Research Vessel Services (RVS), now at Barry, South Wales; The bulk of the University of Southampton Departments of Oceanography and Geology, and elements of other departments, now at Highfield, Southampton;

A new Inter Disciplinary Research Centre for Ocean Instrumentation, accommodated temporarily at the University of Southampton.

Relocating at Southampton combines the research and development carried out by IOSDL and the responsibilities of RVS in a unique location, creating a new link with industry and involving the University of Southampton. Southampton's Port Director, Mr. Dennis Noddings, commented:

"The new centre will provide an ideal interface between the waterfront development schemes and the port's busy cargo handling activities. This is further evidence that Southampton is well placed for a diverse range of activities."

The centre will be the national focus for all aspects of research and teaching in oceanography; it will serve as the homebase for the Royal research ships and for their technical and marine support. At any time, up to 500 staff and students will be working at the centre, which will house the country's largest collection of marine equipment.

### Southampton to Support 'Interports' Conference

Associated British Ports has announced its support for the 1990 'Interports' international conference being hosted by the Southampton Junior Chamber (SJC).

ABP's sponsorship of the conference provides a significant financial boost to the organisers and highlights the importance the Company places on the future of the ports industry in Europe and the potential for trade growth.

Southampton Port Director, Mr. Dennis Noddings, commented: "I am sure the removal of European trade barriers in 1992 will be high on the agenda. We expect a very good attendance from port authorities and users on the Continent."

Mr. Noddings handed over a cheque for £5,000 to Conference Director, Mr. Geoff Scott, who as 1988 President of the SJC was responsible for Southampton's bid to host the conference.

### Asia/Oceania

### New Chairman for Port Of Brisbane Authority

The Port of Brisbane Authority has a new executive chairman—Mr. Alan J.W. George, 53, M.B.E., the managing director and principal of the engineering-manufacturing firm of George & Courtier Pty. Ltd., Brisbane.

His appointment was announced on February 9 by the Minister for Maritime Services (Hon. Don Neal, M.L.A.).

Mr. George replaces the Hon. A.M. "Max" Hodges, who turned 72 on February 11, and who—after more than nine years as executive chairman—has retired from active business life.

Mr. Neal described Mr. George as ... "a successful Queensland businessman, who has developed export markets in Southeast Asia and China" ... and who was awarded the M.B.E. for services to the metal trades industry.

He went on: "Mr. George is the chairman of the Queensland China Council and co-chairman of Fujian-Queensland Economic and Trade Co-operation Council.

"His expertise will ensure that Brisbane continues to cater for the growing needs of port users who are relying on a fast, economical services."

Mr. Neal also paid tribute to Mr. Hodges for his achievements.

He said the decision to replace him should not be taken in any other light than the government felt that it was time for a younger person to take over in a rapidly changing industrial and commercial environment.

"Mr. Hodges was at the forefront in developing the new \$250 million port complex at the Fisherman Islands which led to an increase in trade through the Port of Brisbane," he said.

"He also kept harbour dues at the same level as they were in 1982, which is a 60 percent reduction in real terms." (Brisbane Portrait)

### Launceston to Assist Bass Strait Ferry

The announcement by Tasmanian Ferry Services that George Town would be the home port for the fast Bass Strait ferry service has resulted in an offer from the PLA (Port of Launceston Authority) to assist with building the necessary docking facilities.

PLA Master Warden, Mr. John Ferrall, said early cost estimates of constructing the special dock have been between \$700,000 and \$800,000.

The new 300-passenger ferry will cost Tasmanian Ferry Services about \$17 million to build and should be in service by late 1990.

The proposed catamaran will take only four hours to cross Bass Strait from George Town to Port Welshpool in Victoria. One return trip will be made each day with a second evening crossing during peak demand times, such as Christmas and Easter.

It is expected that some form of financial assistance would be sought from the State Government, either in the form of a grant or low-interest loan. The project would be implemented as part of the PLA's normal commercial operations.

"The offer of PLA assistance has been made in a spirit of co-operation between ourselves, the George Town Council, local residents, and others involved," Mr. Ferrall said.

(News, PLA)

### H'kong Ranks Among World's 3 Best Ports

Hong Kong has one of the most perfect natural harbours in the world - it ranks among the three best, along with San Francisco and Rio de Janeiro.

The port has always been a key factor in the development and prosperity of Hong Kong, which is strategically located on the Far East trade routes and is in the geographical centre of the now fast-developing Asia-Pacific Basin.

Largely due to the opening up of China Hong Kong has regained its previous importance as a re-export centre. In 1987, Hong Kong's re-exports totalled \$182,780 million, accounting for 48% of total exports.

Hong Kong's industrialists require frequent and direct shipping services in order to compete successfully in the market places of the world, and the port is well served by more than 150 major shipping companies. Victoria Harbour covers an area of 5,000 hectares, varying in width from 1.2 to 9.6 kilometres, and it can accommodate vessels of up to 305 metres in length, with draughts of up to 14.6 metres.

In terms of tonnages of shipping using its facilities, cargo handled and the number of passengers carried, Hong Kong is considered to be one of the major ports of the world.

Administration: Responsibility for administering the state-owned port is vested in the Director of Marine. The Ports Operations Committee advises him on the shipping, commercial and other changing needs of the port, while the Ports Committee advises the Secretary for Economic Services on long-term planning.

The Marine Department ensures that conditions exist to enable ships to enter the port, work their cargoes and leave as quickly and as safely as possible. It is concerned with the many aspects of safety standards on all classes and types of vessels, from the largest oil-carrying tankers to the smallest passenger-carrying sampans. It also supplies all the aids to navigation, maintains mooring buoys for ocean-going ships, manages the Hong Kong-Macau and China Terminals and administers public cargo working areas.

**Containerisation:** The Kwai Chung Container Port, located in the northwestern part of Victoria Harbour, has six berths totalling more than 2,300 metres fronting on to more than 103 hectares of cargo handling space, which includes container yards and container freight stations. Up to six 'third generation' container ships can be simultaneously accommodated and worked at these berths.

The Container Port Committee advises the Secretary for Economic Services on the day-to-day operation and future planning of the container port.

The Port of Hong Kong handled a total of 3.4 million TEUs in 1987. Although Hong Kong already ranks as the leading container port in the world, further expansion of the Kwai Chung Container Terminal is taking place. During 1987, the reclamation of some 26 hectares of seabed at Kwai Chung Creek was completed to provide back-up space for the container terminals.

Shipping: More than 15,200 oceangoing vessels call at Hong Kong each year. During 1987, a total of 204,986 vessels of 205.4 million net registered tonnes entered and cleared the port, with ocean-going vessels accounting for 15,241 arrivals and 15,240 departures. On an average day, 562 ocean-going vessels and river trade craft arrive and depart. At any time, there are about 5,000 local craft working or underway in the harbour.

Total deadweight tonnage of cargo discharged by ocean-going vessels in 1987 was 41.51 million tonnes, compared with 36.66 million tonnes in 1986. Cargo loaded was 19.61 million tonnes, compared with 16.99 million tonnes in the previous year. River trade involved 6.15 million tonnes of cargo — mainly foodstuffs from China for local consumption — being discharged, and 3.3 million tonnes of export cargo being loaded.

Hong Kong has a reputation for having the fastest ship turnaround in Asia and for port charges which are among the lowest in the world. On average, there are 140 ocean-going ships working in the port daily. During the passage of a typhoon in 1983 the port accommodated some 215 oceangoing ships — with room to spare.

On average, conventional ships working cargo at buoys are in port for only 2.5 days and container ships are here for about 13 hours, excluding steaming, berthing and unberthing time. (Hong Kong: The Fact)

### \$22 Million ADB Loan For Indonesia Project

The Asian Development Bank approved a loan of \$22 million equivalent for the Ninth Port Project in Indonesia.

The loan, from the ordinary capital resources of the Bank, is repayable in 25 years with a five-year grace period at an interest rate determined in accordance with the pool-based variable lending rate system.

In conjunction with the loan, the Bank will provide a technical assistance grant of \$515,000 to finance the services of consultants in port maintenance and rehabilitation and computer services.

The borrower will be the Republic of Indonesia which will relend a portion of the loan proceeds to Perusahaan Umum Pelabuhan IV (Perum IV), the government Corporation for Sea Ports. The Bank loan will finance the port rehabilitation component of the project while \$12.6 million from the ExportImport Bank of Japan will finance the consulting services and purchase of harbor craft and cargo handling equipment on a parallel co-financing arrangement with the Bank.

As the world's largest archipelago comprising about 13,500 islands, Indonesia is dependent on an efficient shipping and ports system to develop its natural resources, promote regional economic development, reduce the cost of trade and increase exports. It has some 300 public ports, many of which were built prior to Independence and are in need of rehabilitation.

### Export, Import Thru Osaka Record High

The volume of containerized cargo handled at the Port of Osaka in 1988 surpassed the previous year's record both in export and in import, and reached in estimation the highest of approximately 9 million tons and some 450,000 TEUs.

Above all, the volume of imported containers has remarkably increased nearly by 20%, owing to the advantageousness of the Port of Osaka directly connected with the Greater Osaka Region as one of the largest consuming and production centers of Japan, with the change of Japanese economic trend from expórt- to import-oriented.

In line with this, distribution facilities at the South Port have steadily been constructed. Following the opening of Building No. 3 of the International Container Center (15,000 square meters, opened in March 1988), privately operated multipurpose distribution warehouses have begun operating, meeting the increase in importation especially of manufactured goods.

Combined with the comprehensive container service network, this has greatly enhanced the distribution capacity of the South Port.

(Osaka Port News)

### Tacoma Officials Visit Sister Port Belawan

During their two-week official tour in Indonesia the Port of Tacoma Team consisting of Mr. Michael L. Gehrke, Mr. Robert L. Macleod and Mr. Michael R. Sawers visited the Port of



Port of Tacoma officials at Belawan, its sister port.

Belawan on 17-19 February 1989.

On this opportunity Tacoma Team with the cooperation of Port of Belawan held debriefings and a one-day Seminar on "The Improvement of Management and operations of a Non-Container Multipurpose Terminal."

The successful seminar was attended by Principal Government officials as well as private companies and other port users in the Port of Belawan.

This implementation is one of the cooperation programmes of a sisterport relationship that was established and proclaimed by both parties in Medan on November 11, 1980.

Since 1960s trade between the two ports/countries has significantly increased year by year.

Palletized crumb-rubbers with the total volume of 631.957 tons in 1988 was the dominant cargo exported directy from the Port of Belawan to Port of Tacoma.

Mutual benefit has been achieved by that Seminar, through an exchange of ideas and experiences besides the latest development of each port, and the rapid advancement of technical equipment applications may also be introduced.

### Johor Port: Malaysia's Port Training Centre

Johor Port acts as the centre in Malaysia for Trainmar (Training Development in the field of Maritime Transport) — a programme supported by the UNDP and UNCTAD. The national centre was set up in 1984 and

deliveries were initially confined to Trainmar course only.

In 1986 the national resource centre was upgraded as regional resource centre for training needs of port personnel in the region as well. Since then the centre has held several courses drawing participants from a number of countries.

Since the centre was set up in Johor Port, a number of courses have been conducted by local and foreign port experts in a variety of port operations and administration. Participants who have attended the courses include those from other Malaysian ports and ports in the neighbouring region, including Thailand, Indonesia, the Philippines, Egypt, India, Burma and Ethiopia.

The Malaysian Trainmar Resource Centre in Johor Port has 25 qualified instructors who specialise in different areas of expertise. The Centre has modern lecture rooms, a library, audio equipment, a 1,000 sq ft studio and editing rooms, word processors and other communication facilities.

Johor port also provides two full time staff while a third full-time and three part-time staff are now funded under the joint financing scheme set up by the 10 principal ports in Malaysia. UNCTAD assists in contributing computers, audio and video equipment to the centre. (NADI)

### Port Klang '88 Tonnage: Biggest Ever Increase

Port Klang chalked up the biggest ever tonnage growth in its history when cargo handled last year hit a new record of 15.8 million tonnes. Compared with the 13.2 million tonnes in 1987, this is an increase of 19.7% or a hefty net increase of over 2.6 million tonnes.

In announcing the port's trade statistics for 1988, Klang Port Authority's general manager Hashir Abdullah said, "The last time the port registered such a hefty increase in its trade was in 1973 when tonnage handled increased by 1.2 million tonnes."

Port Klang's average annual growth rate is around 7.5%.

Mr. Hashir also announced that the KPA's pre-tax profit last year registered a sizeable increase of 64% to touch M\$18.2 million. Pre-tax profit in 1987 was about M\$11 million.

Mr. Hashir said that the upsurge in cargo volume through the port was not just an indication of the country's improving economy but also of the success of the port's promotion campaign.

He explained that over the last few years the KPA had attracted new trade to the port by offering incentive packages in the form of tariff rebates and relaxation of certain requirements to reduce port costs for importers and exporters. This, together with "the KPA's willingness to assist port users in every possible way had gone a long way towards attracting more trade to the port."

Mr. Hashir said that the KPA is ever ready to discuss special terms with any importer or exporter.

He said, "We invite importers and exporters to meet with us to discuss ways to help them reduce port cost. Ours is an open-door policy and we mean it when we say we would do all we can to give a helping hand to our clients."

### Penang: Dangerous Cargo Master Plan

The handling of dangerous cargoes in the Port of Penang has increased considerably over the last few years. Some 500,000 tonnes of bulk dangerous cargo and another 150,000 tonnes of packed dangerous cargo were handled at the Port in 1987. Total port tonnage for the year was 7.83 million tonnes. With increased industrial development around Penang and in the northern region of Peninsular Malaysia, it is expected that there will be a continuous growth of shipments and varieties of dangerous cargo transported.

The dangerous cargoes imported through Penang include vinyl chloride monomer (vcm), Liquified Petroleum Gas (LPG), petroleum and petro-chemical products, sulphur and a wide variety of other chemical and non-chemical goods. They are mainly handled at the PPC's installations on the mainland. Considerable amounts are also handled at private jetties.

In its efforts to maintain and even increase safety standards in dangerous cargo-handling and storage, PPC has obtained the technical services of a team of consultants from the Port and Transport Consulting, Bremen through the technical assistance of the Federal Republic of Germany.

During their stay in Penang the team comprising Capt. Karsten Bruenings, a dangerous cargo expert, Mr. H. Wilking, an economist, and Mr. J. Siefert, a town planner, will undertake the following tasks: -

• Assess the present overall situation in the Port of Penang and its immediate surrounding areas regarding dangerous products and cargoes in relation to the socio-economic environment.

• Investigate and forecast possible developments regarding the production and transport of dangerous cargoes in the vicinity of the Port of Penang.

• Establish, in cooperation with the responsible authorities, a dangerous cargo master plan for the Port of Penang.

This is a follow-up of the study made by Capt. Karsten Bruenings in 1986 when he reviewed the current system of the handling and storage of Dangerous Cargoes in the Port of Penang. Among others, he evaluated and assessed the safety situation for the PPC's facilities. One of his main recommendations was to establish a dangerous cargo master plan for the port and its immediate surrounding, so that further development of the port area is based on sound safety principles and on a cooperation among authorities, industries, port users, the public and other interested parties.

(BERITA pelabuhan)

### Good Financial Result: Southland Harbour

The Southland Harbour Board in its final year as a trading identity showed

a good financial result despite the difficult year nationwide. The tonnage of cargo at 1,580,795 tonnes was the second highest on record with particular increases in aluminium, fertilizer, petroleum and forest products.

The Board's Chairman, Mr. Tom Shirley did not seek re-election and will concentrate as Chairman of the Port Company, South Port NZ Ltd.

At the annual meeting in December the former deputy, Mr. Rex Powley, was elected Chairman of the Board with Mr. Dave Frew as his deputy.

The Board can feel justifiably proud of the position at the date the operating assets were sold to South Port. Few Port Companies would be in a similar financial position and it is indeed a reflection on all staff.(*Bluff Portsider*)

### ADB Assistance for PNG Port Development

The Asian Development Bank has agreed to provide technical assistance in the amount of \$350,000 to Papua New Guinea (PNG) for the Second Ports Development Study. The grant will be financed by the Japan Special Fund.

The objective of the technical assistance is to assist the Papua New Guinea Harbours Board (PNGHB), executing agency for the study, to review its port system requirements, and to prepare a study identifying priorities for rehabilitation and development of port facilities throughout the country.

Further development and improvement of the port system will enable PNG to upgrade its port facilities which need urgent rehabilitation in view of the larger than anticipated traffic increases and the rapids shift to containers. To prepare a rational program for port development, the Government has sought Bank assistance in formulating a master plan for replaceing and rehabilitating port facilities, including the main wharf at Port Moresby which is nearing the end of its physical life.

### PSA Sets Up Data Link With Port of Bremen

### By Sharon Gan

**Public Relations Department** On 1 December 88, the Port of Singapore Authority (PSA) established a "teleport" link with the Port of Bremen, West Germany. This is in line with PSA's aim to become the leading information handling port in the Far East.

A Letter of Intent to set up this data link was signed between MAP Services Pte Ltd. (MAPS), a subsidiary of PSA on behalf of the Port, and Datenbank Bremische Hafen GmbH (DBH) for the Port of Bremen. Mr. Ng Kiat Chong, Chairman, MAPS and Mr. Wene Lampe, Managing Director, DBH were the signatories at a signing ceremony held at the PSA Conference Hall on Tuesday, 29 November 88.

Teleport is part of PSA's efforts to promote Electronic Data Interchange (EDI) in port operations. While TRADENET caters to the information flow between traders and the Government agencies, and PORTNET caters mainly to information flow between port users and PSA, Teleport will cater to international information flow between ports for exclusive use by port users in Singapore.

With the EDI link, port users in Singapore and Bremen would be able to exchange advance shipping data, such as arrivals and departures of vessels from various ports through the computers of the respective ports more quickly and efficiently.

"As the Asia-Pacific area is a growth area and we have many imports from Singapore and the other Asia-Pacific countries, it is very important that the information flow of trade must be smooth to facilitate the flow of shipment. Singapore has a good foundation for the Teleport link, with its know-how in telecommunications and contacts with customers in Bremen and Singapore," said Mr. Wene Lampe.

PSA's vision of the future is an "electronic highway" of information linking Singapore to other container load centres. Faster clearance at the port will be possible with information flow preceding physical movement.

Earlier on 15 November 88, Singapore established teleport links with two major Hong Kong ports — Hong Kong International Terminal (HIT) and Modern Terminals Ltd. (MTL) to exchange information on loading containers at their respective terminals. This advance information flow will help to improve yard planning at TPT and result in faster ship turnround time.

(PSA News)



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**OTAS:** Transtainer<sup>®</sup> Automatic Steering System

**•TOS**: Transtainer<sup>®</sup> Operation Supervising System **•POS**: Portainer<sup>®</sup> Operation Supervising System



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