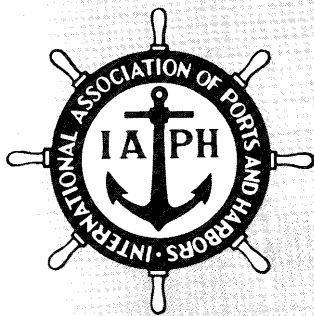
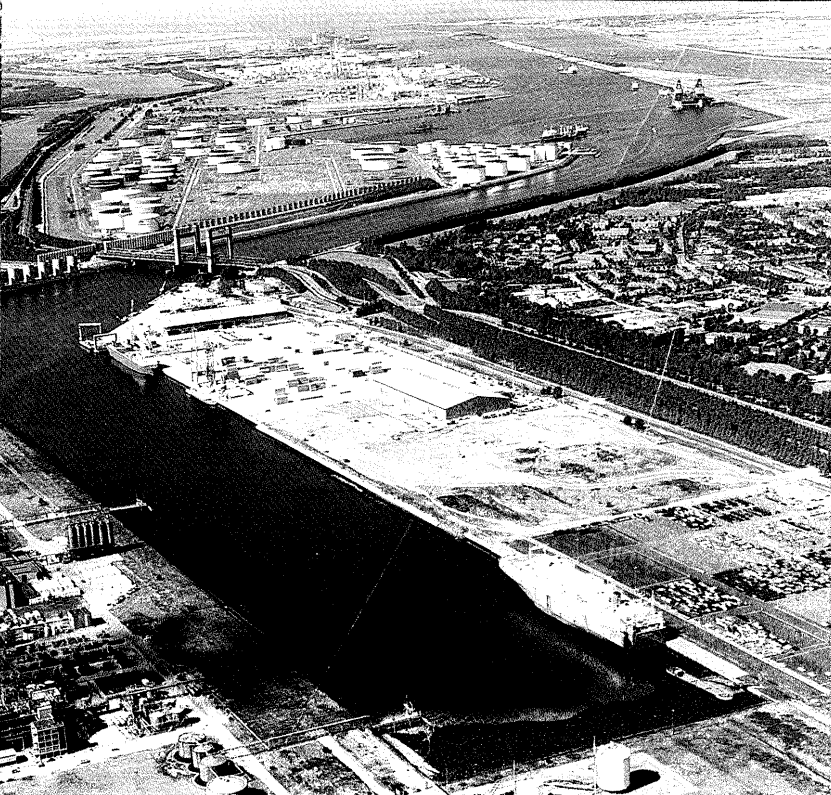


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June 1988
Vol. 33, No. 5

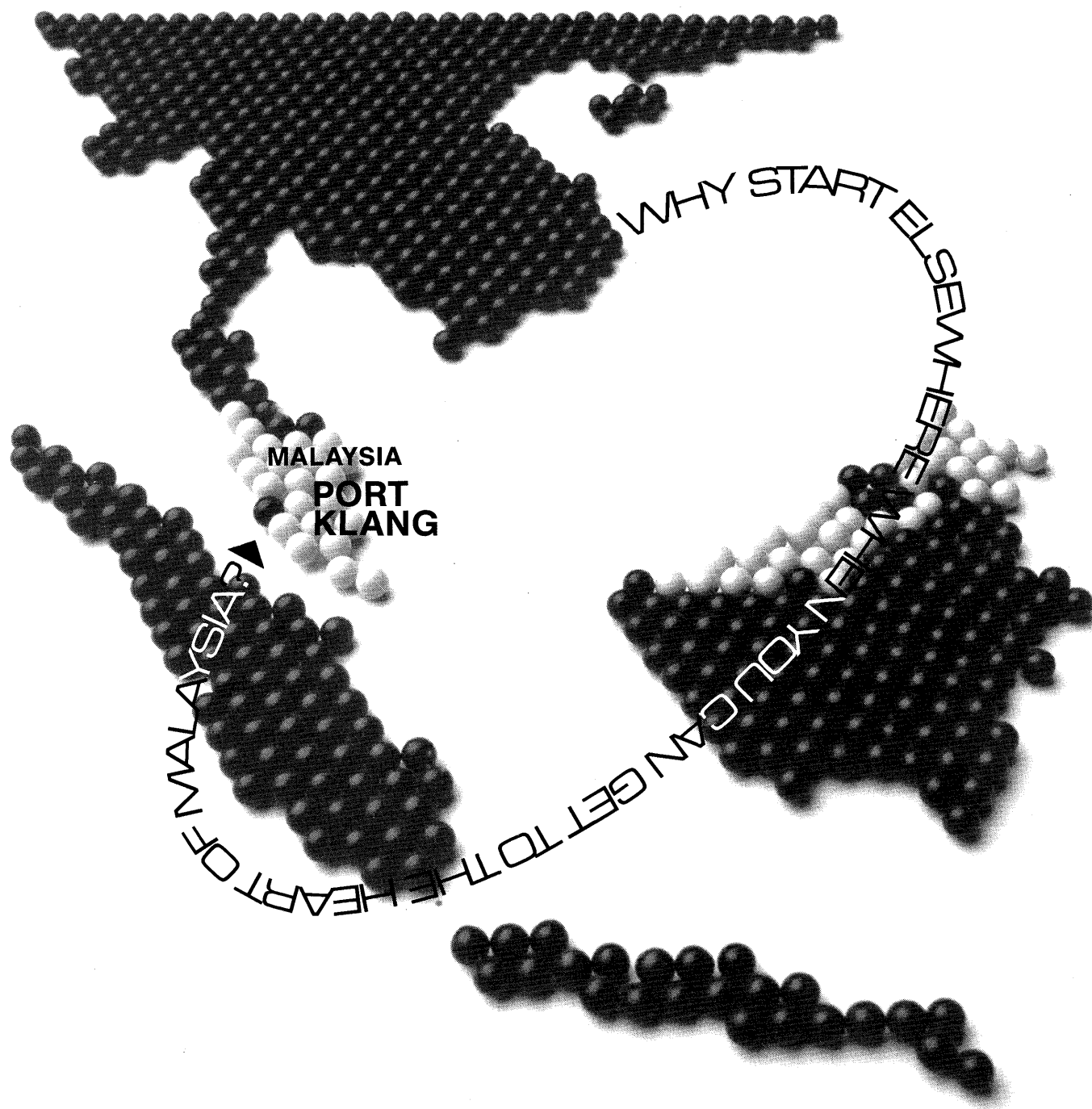


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Ports & Harbors

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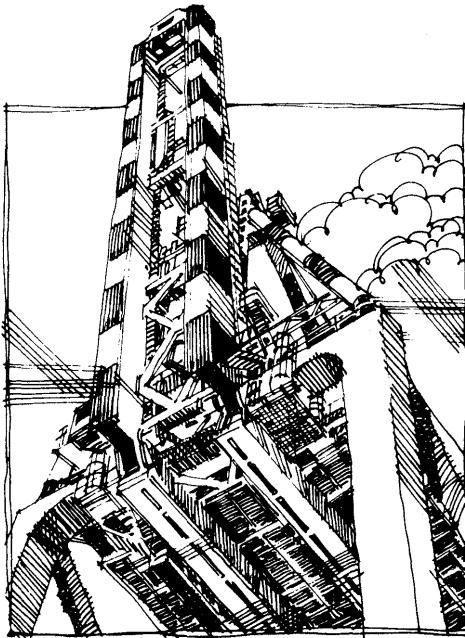
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Notice: The next issue will be the July-August combined issue. Due to the fact that the editing of this (June) issue must be finished by the end of April, the news and articles covering the mid-term meetings to be held in Abidjan from 24 to 30 April will appear in the July-August combined issue of the journal, which will be sent to all members and readers towards the end of July — IAPH Head Office.

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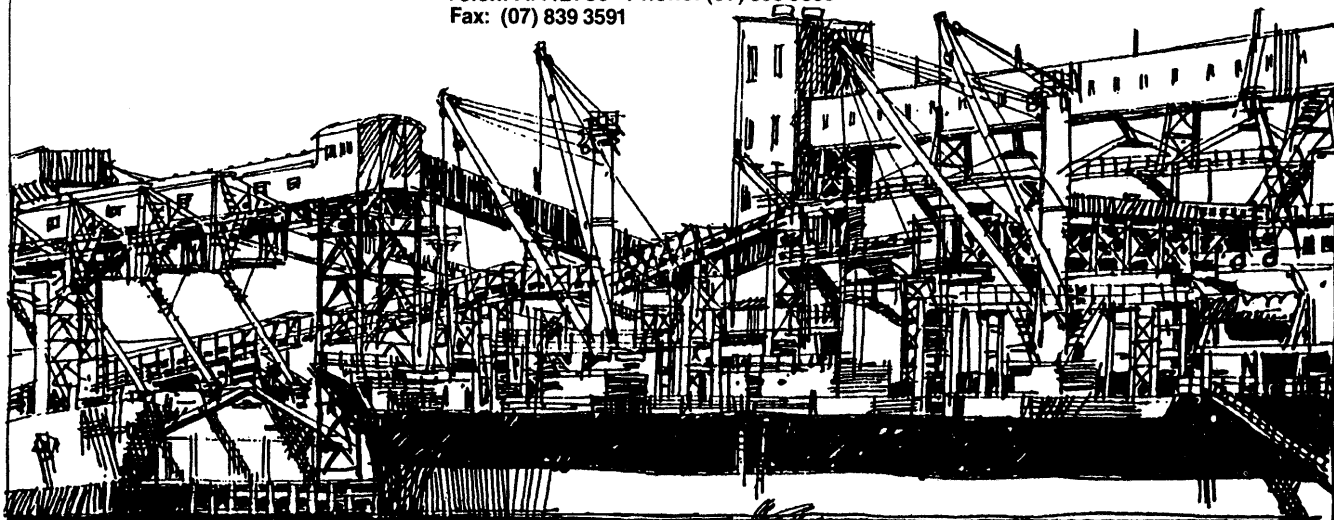
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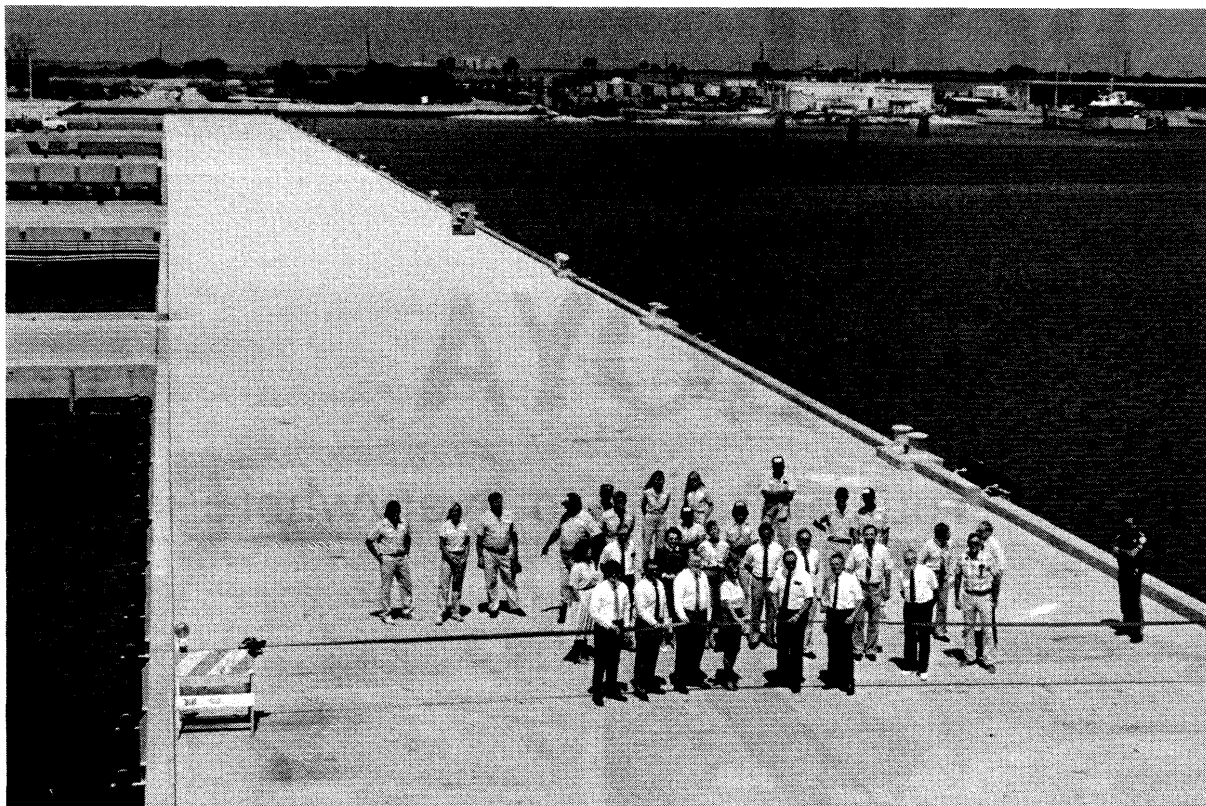
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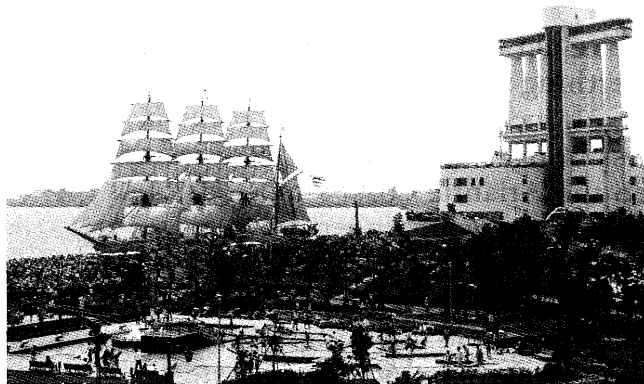
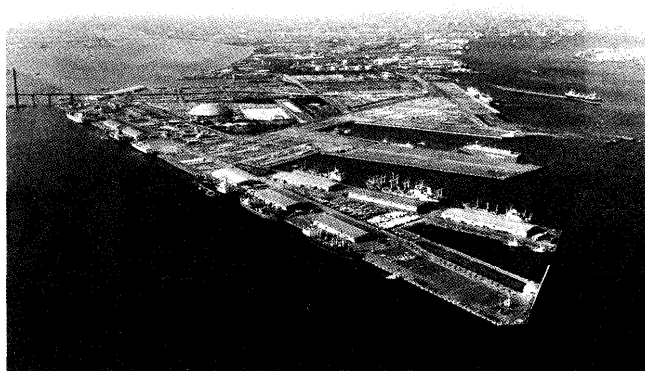
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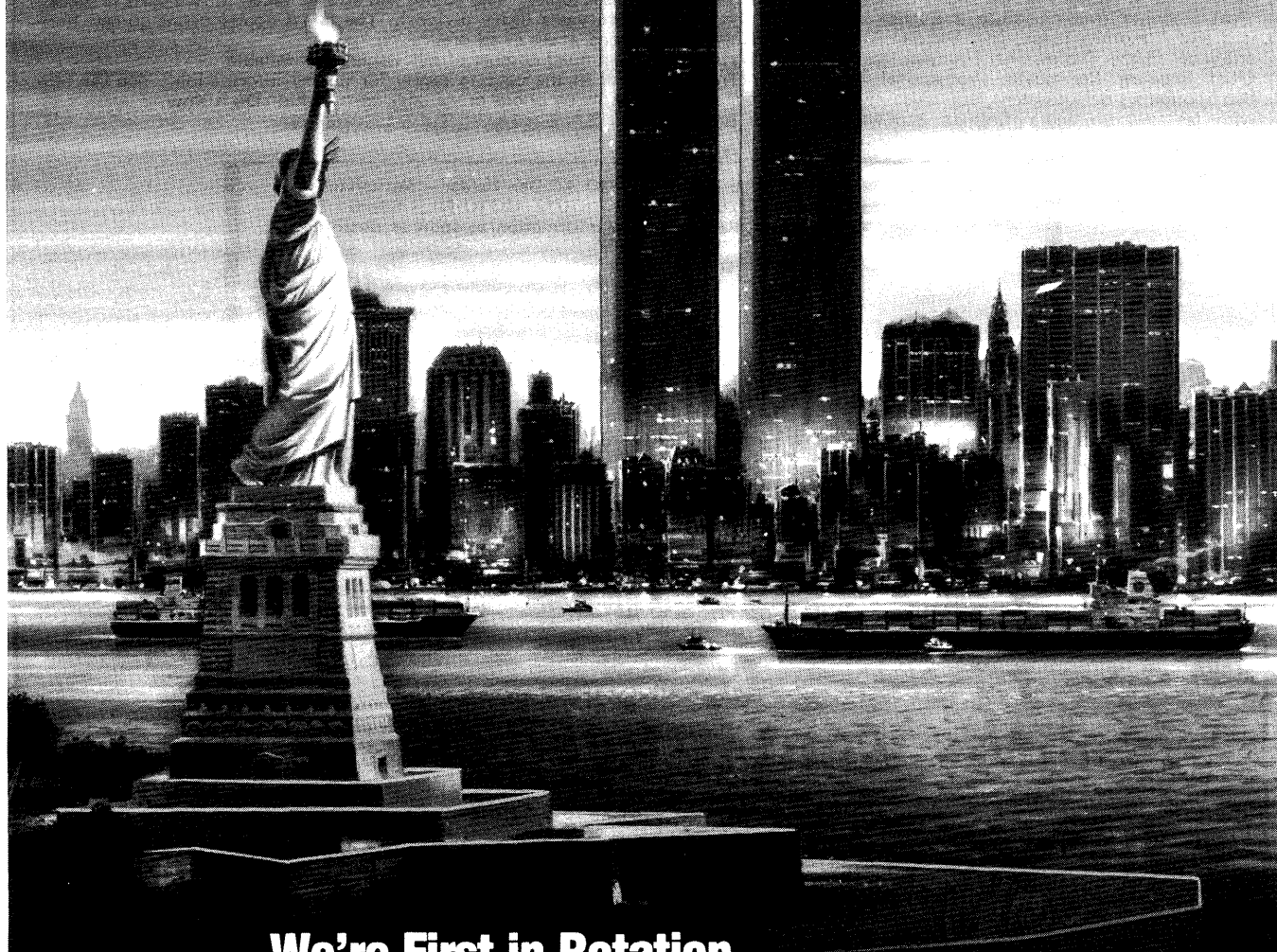
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IAPH ANNOUNCEMENTS AND NEWS

Sec'y General's Report Submitted to EXCO Abidjan Meetings

The Secretary General's Report, for submission to the EXCO Abidjan meetings, was completed by the Head Office Secretariat in Tokyo and advance copies of it were dispatched to the Officers concerned prior to the meetings which were scheduled for the last week of April 1988.

The report covers the Association's activities during the term since the 15th Conference was held in Seoul one year ago — the conference where Mr. Hiroshi Kusaka took over from Dr. Hajime Sato as Secretary General of IAPH.

Secretary General Kusaka summarises the current position of the Association in his introductory words to the Report as follows:

Secretary General's Remarks

First of all, I would like to stress that we are very happy to be able to have the meetings of both the Technical and Internal Committees of IAPH and that of our Executive Committee in the western part of Africa for the first time, thanks to the good offices of the Port of Abidjan.

I feel gratified to be here in Abidjan because all of us here, who have come from various parts of the world, can expand our ties of dialogue and the scope of our communication with our African friends, and more importantly, because this chance will enable us to see and feel more vividly the extent to which IAPH can advance mutual friendship and cooperation among us.

Activities

I would like to present a few items, of importance concerning the scope of our activities during the year that has passed since the Seoul Conference.

I would particularly like to stress with unreserved confidence and pride the fact that IAPH has indeed been very active! There is no need to go into the details as our endeavors have been reported in our journal "Ports and Harbors."

I extend my heartfelt thanks and admiration to all the IAPH people, in particular the Board and EXCO Members, Chairmen and Members of the Internal and Technical Committees, and our Liaison Officers, for their outstanding leadership, devotion and cooperation. My appreciation also

goes to all the people who have been so responsive and kind concerning my many queries and requests for consultations on various items.

At the same time, however, I would like to mention that the responsibility of IAPH in the world's maritime scene has become greater and heavier in proportion to our increasingly elevated status in the world's maritime circles. I note, therefore, that we must be prepared to respond to the increasingly great expectations placed in us.

Financial Status

The results of the settlement of accounts for 1987 show the financial status of IAPH to be apparently sound and healthy and suggest that our situation in the short term also seems viable. Detailed reports together with the auditor's certificate are included in my report to the Executive Committee.

However, when looking at our long-term prospects, I must emphasize that the situation is NOT very promising. Although decisions on expenditure had to be made in order to expand the range of activities of IAPH, the crucial element in the current budget is that our yearly expenses currently exceed the level of our yearly income. Therefore, the establishment of a more suitable financial foundation is vital and, to this end, I find it of urgent necessity to put forward a financial target. We look forward to the guidance and recommendations of the Finance Committee in this respect.

CIPD Fund

It seems appropriate to move to the topic of the IAPH's Special Port Development Technical Assistance Fund, which is normally known as the CIPD Fund. As you no doubt know, this is a fund, made up entirely of contributions by IAPH members, designed to support the IAPH Bursary Scheme and Award Scheme. The two Schemes, both administered by the Committee on International Port Development have been widely accepted by and among young port officials of member ports in developing countries and have been recognized as amounting to an international aid programme.

Looking at the current financial status of the CIPD Fund, however, I find it necessary for us to start canvassing before the fund peters out. A decision to call for funds may be taken at this Abidjan Meeting by the EXCO.

"Ports and Harbors"

Starting from the April 1987 issue, we introduced a change in the look and style of the journal of IAPH in

accordance with a decision made at the Seoul Conference. While it is only one year since the new format was introduced and the situation is constantly being reviewed for possible improvements, we feel fortunate that we have been able to receive a number of favourable comments from various sources supporting our newly-designed journal. It is the firm intention of all the editorial staff at the Head Office to continue efforts to make our journal as attractive as possible.

Miami Conference 1989

Talking about the Miami Conference next year, I am grateful for the energetic enthusiasm and devotion exhibited by Mr. Carmen Lunetta and his staff at the Port of Miami. In fact, we have been in constant contact and have exchanged views with them on many items of importance for the organization of the next Conference. I am convinced that the forthcoming deliberations will help our host advance the plans for our Miami Conference a stage further.

In summary and conclusion, I would like to ask for your advice and recommendations on helping the Association achieve the following goals:

1. The further enrichment of IAPH's activities
2. The further improvement of IAPH's position as a spokesman for world ports in the international maritime scene
3. Increasing the membership of IAPH
4. The establishment of a sound financial foundation for IAPH
5. Determining the basic policies and programs of the Miami Conference

April 1988

Hiroshi Kusaka
Secretary General

BPA Renamed British Ports Federation

At its Annual General Meeting on March 9th the British Ports Association was transformed into a new body calling itself the British Ports Federation. Unlike the BPA, the BPF will be a limited company and under its new constitution will be able to widen its membership considerably.

It is hoped that new members will include port terminal operators who are often highly significant investors within the UK's ports. In addition, specific packages of services, mainly in the form of information and consultation, will be offered to organisations throughout the world who have interests in ports. Those who take up this option will be termed 'correspondents'.

The structure of the new Federation has been designed specifically to:-

- improve the influence of its members with external audiences
- reduce subscription costs through a widening of the membership and develop revenue earning functions
- provide greater flexibility and efficiency in the Federation's ability to respond to the needs of its members
- enable the organisation to purchase freehold offices
- continue the process of establishing the Federation as the port industry's representative and distinctive voice.

Nicholas Finney, who will become Managing Director of the BPF, described the change as an "exciting development for the ports trade association."

Mr. Raven's Reports on "EDI and IAPH" and on "CCC"

Mr. Fernand Suykens, Chairman of the IAPH Trade Facilitation Committee (Port of Antwerp), who also serves as IAPH Liaison Officer with CCC, has recently sent the Secretary General two reports, which were prepared by Mr. John Raven, IAPH Reporting Expert for CCC. The reports, one entitled "Electronic Data Interchange (EDI) and the IAPH" (See Page 11) and the other dealing with CCC matters (See Page 9), will be used as working papers for the Trade Facilitation Committee's meetings in Abidjan.

Hamburg, New Orleans Stress Sea-Air Linkage

"The need for concerted action by the managements of both seaports and airports is ever more necessary. The complex of business infrastructure and expertise in international communication accumulated in the region from its role as the hub of the waterborne transport system over past years should certainly offer indispensable advantages in the promotion of airborne traffic for both passengers and cargo."

This is a summary of the comments expressed to the reporter in Tokyo by the officials of two giant ports. The two giant ports are the Port of Hamburg and the Port of New Orleans.

The officials of the seaport and airport of Hamburg were Mr. Klaus D. Fischer, Marketing and Public Relations, Port of Hamburg, and Dr. Claus Lau, Managing Director, Hamburg Airport, who were members of the Hamburg Economic Mission to Japan during its visit in the last week of March, headed by Mr. W. Rahlfs, Hamburg State Minister for Economics, Transport and Agriculture.

The experts from New Orleans were Mr. David H. Jones, President and Chief Executive Officer, the Chamber of Commerce and Industry, New Orleans and the River Region, and Mr. James H. Chubbuck, Director of Aviation, New Orleans International Airport, who were in Japan in early April as members of the City of New Orleans Trade and Tourism Mission, led by Mr. Sidney J. Berthelemy, Mayor of New Orleans.

In the case of Hamburg, commenting on the rise of aircargo at a reception held in Tokyo on the evening of March 25, Dr. Claus Lau mentioned that Hamburg Airport, coming under the Hamburg City Government, has been actively engaged in the promotion of not only passenger flights but also cargo freighters in its efforts to establish itself as the gateway to the northern part of Europe. He further explained that with Hamburg's historical advantages as a major cargo distribution center, the airport should be able to develop an image of itself as a hub of air transport and thus be able to compete with rival airports such as Frankfurt, Düsseldorf and Munich, where air space constraints are becoming more and more serious. The Hamburg state government, he continued, is taking an ever more concerted approach to achieve the ambitious goal of making Hamburg a hub of both sea and air distribution systems.

The "Herald of Free Enterprise" Tragedy As reviewed by Mr. André Pagès, CLPPI

Mr. André Pagès, a member of the Committee on the Legal Protection of Port Interests (CLPPI), has prepared an article on the accident involving the "Herald of Free Enterprise," which occurred at the Port of Zeebrugge, Belgium, on March 6, 1987. With the approval of Mr. Paul Valls, Chairman of the CLPPI (Port of Bordeaux), we are carrying the article in this issue for the benefit of IAPH members and readers. (See Page 14.) The picture accompanying the article has been made available from the Kyodo Photo Service in Tokyo.

Customs Co-operation Council Report



By J. Raven

IAPH Reporting Expert for CCC

Visitor to Head Office

On April 11, 1988, Mr. Martin Savery, Editor, Car-gonews Asia (a Hong Kong based business paper publisher), visited the Head Office and was received by Mr. R. Kondoh, Dy. Secretary General. They exchanged views on the current situations of ports and shipping.

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Changes:

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Puerto Rico Ports Authority [Regular] (Puerto Rico)

Mailing Addressee: Mr. José A. Buitrago, Executive Director
* He is serving as Director of the IAPH from Puerto Rico.
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Assistant Executive Director for Administration and
Finance: Mr. José A. Sosa
Assistant Executive Director for Operations:
Eng. José Dalmau
* He is serving as Alternate Director of the IAPH from
Puerto Rico.

Executive Coordinator: América Lameiro de Irizarry, Esq.
General Legal Counsel: José A. Rodríguez Palés, Esq.

Background

The long-standing working relationship between ports and Customs is moving into a new phase of review and adjustment.

For centuries port managers have had to adapt many of their operational practices to Customs requirements and regulations.

Today Customs in most countries are having to face up to powerful factors of change in public priorities. Protection of the revenue and implementation of trade policy controls are still major responsibilities in some economies, but elsewhere, as GATT rounds have cut general tariff levels and free trade groupings have developed, Customs receipts have dropped to levels hardly equal to administrative costs, and repression of illicit drug traffic has taken over as the key justification for continuing interventions.

There is, everywhere, a strong counter current of government interest in international trade promotion. This used to be pursued, somewhat crudely, along the commercial one-way street of export promotion. Today, however, shifting patterns of multinational companies' production and distribution, and urgent calls for diversification away from over-dependence on sales of raw materials or agricultural products, have convinced even poorer states that imports and exports are inextricably linked and have equal facilitation needs.

So Customs procedures are being simplified, paperwork is cut, controls are rationalised and computers are mobilised to handle key data flows.

Ports, facing equally traumatic shifts in transport techniques and trading habits, will be negotiating necessary mutual adjustments in international trading practices with Customs authorities, bilaterally and through hundreds of Customs and port consultative committees, all over the world.

But modern economies cannot now move forward by leisurely synthesis of an infinite variety of local adjustments. Industry, trade, transport — and indeed ports themselves — must plan investment and organisation. They want more and more information about the environment in which they have to compete and survive and they want to manage change rather than allow it to happen to them.

That puts a premium on the services and efficiency of representative organisations, such as the IAPH and the Customs Co-operation Council, which identify and define central policy issues, assemble scarce expertise to analyse

problems and negotiate solutions, and pass essential information along privileged lines of internal and external contact.

This report draws attention to three main themes in the grouping IAPH/CCC dialogue — Electronic Data Interchange (EDI), drug and fraud suppression and international trade facilitation.

Seen from both the Customs and port points of view, these forces are far from uniform in their effect on individual economies.

There are obvious gaps between the computer and telecommunications resources of developed and developing countries. Some ports are situated in drug producing regions, others in predominantly importing areas. Facilitation is easy for rich, low-tariff states and correspondingly difficult for fragile economies, where exchange controls must be tight and revenues, other than Customs duties, hard to collect.

These differences rub off on the daily activities of Customs and port managers, and neither IAPH nor the Customs Co-operation Council can afford to ignore them. So the report ends with suggestions for strengthening cohesion in the broad international on-the-ground mutual assistance between ports and Customs which is the only real justification for focal IAPH/CCC consultations.

Electronic Data Interchange (EDI)

As long as ports, Customs, traders, forwarders and shipowners kept their computers safely tucked away in the solitary confinement of in-house systems, all that showed up in daily port practice was an increasing proportion of good-quality but traditional information. Clean, accurate, print-outs replaced often handwritten pre-printed forms.

But when some of the participants, notably Customs, container operators and multinational companies, began to see the benefits of direct computer-to-computer — EDI — communications with each other, then some provision had to be made for a world in which there would be no intermediate paper at all, and, for the first time in half a century, information could move very much faster to all essential points in the international goods transit than the goods themselves.

A key requirement in this initial phase of the EDI revolution is international agreement on standards policy and, where possible, on standards. These build up, in practice, from data elements, through codes and message structures, to substantive messages.

Success in this field will be of paramount importance to every port manager. It is much easier and cheaper to deal with old fashioned documentary confusion than computerised chaos. Individual clerks can learn to handle maverick paper, but computer systems need a new add-on piece of hardware for every deviation from a standard communication agreement.

That brave new world of rapid, trouble free information handling will never come if it has to hack its way through a constantly thickening undergrowth of such devices.

Even the flexible, innovative inter-system "translation" facilities offered by Value Added Network (VAN) suppliers can only assimilate a limited number of different standards.

Fortunately the CCC has been able to mobilise its 103 member Customs administrations behind the principle of international EDI standards. Their authority and legislative power, often seen as a constraint on commercial freedom, will now work to demolish formidable, perhaps otherwise insuperable, barriers to easy electronic communication.

This has been manifested recently in a number of ways.

At a recent meeting of the CCC's Permanent Technical Committee, it was decided to ask the full Council, meeting in June, to recommend all member Administrations to adopt and promote the United Nations EDIFACT EDI standards for data elements, codes and message structure.

The same meeting, having approved earlier agreement with IATA on standard Customs/airline messages, decided to extend this work into early discussions with the maritime community — including IAPH — on the possibility of devising similar, standard messages for seaborne consignments.

These important decisions were followed by a major CCC Symposium. "EDI — The Customs Connection," at which some 16 Customs forces were represented at the highest management level, in a two-day exchange of views and strategies with their trade and transport counterparts, including IAPH representatives.

A full account of the Symposium proceedings in French and English will be made available to Head Office in due course, but meanwhile the scope and scale of the discussions are reflected in a list of major Symposium conclusions.

The Council was asked to promote wider Customs use of EDI, develop standard messages in the surface transport area, beginning with the maritime mode, examine a possible universal Goods Declaration Message, review telecommunications aspects of EDI, including the role of VANs, study the legal and security implications of EDI for Customs, consider the application of EDI in developing countries and encourage the use of EDI standards by government departments other than Customs.

The US Customs Commissioner, William Von Raab, told the Symposium that "the phenomenon of EDI and the development of international data standards are the new revolution for Customs services worldwide". Given the close working links between Customs and ports, IAPH members may well conclude that EDI is going to be an equally revolutionary force in their own managerial future.

Drug and Fraud Suppression

The Council's Enforcement Committee has just approved the IAPH/CCC Guidelines for mutual Customs/ports action to combat illicit drug traffic, and passed them on for approval by the full Council in June.

The Guidelines contain a range of detailed, practical action to be taken by Customs and port managers in day-to-day co-operation. The full text will be published in "Ports and Harbors" after formal adoption by the CCC but, meanwhile, it may be useful for ports to consider how the IAPH/CCC agreement can best be implemented.

Co-operation has to be progressive. The overall Memorandum of Understanding is essentially a general expression of common interest, and will need no modification. But the Guidelines, though given most valuable initial scrutiny by experts from the Port of Antwerp through the good offices of Mr. F. Suykens, Chairman of the IAPH Trade Facilitation Committee, must be tested in actual operation over a full range of port environments.

At this point we may expect a number of useful reactions. Both Customs and port managers may find that some proposals are only practicable in certain port systems. Additional or alternative solutions may be suggested. Gaps and defects could be identified.

Passing these up the lines of communication to IAPH headquarters and then through to the CCC will be a valuable exercise in internal and external communication. A further IAPH activity should be the close examination of the

Guidelines and subsequent experience to see how far ports could be learning useful lessons for their own security systems.

This could be particularly valuable in building security requirements into port data-bases and EDP systems. We may also wish to consider the implications for inter-port security co-operation through EDI techniques.

International Trade Facilitation

The CCC has invited the IAPH to assist in the formulation and promotion of a handbook on Customs practices as a contribution to trade facilitation.

There may be little that the Association can add to the information already available to the highly professional Council staff, as a basis for this handbook, but there will be a strong port interest in promoting its wide circulation among port trading communities.

Ports are being seen more and more as cores and catalysts in a continuing and accelerating process of economic expansion. This role is particularly important in developing countries, where information is a scarce commodity, and there are often serious gaps in the institutional framework for inter-sectoral consultation and mutual assistance.

Port consultative committees and port participation in the corresponding Customs consultative bodies are particularly important resources in such circumstances. This modest basis can usually be expanded into much more comprehensive promotional centres, bringing together banks, traders, forwarders, carriers and port services to pool and redistribute useful information.

When the proposed CCC Facilitation Handbook is published, its promotion, in co-operation with local Customs, could be a major item in the work programme for any port promotion centre.

A further and even more significant CCC initiative in trade facilitation has been the production, after over a decade of detailed discussions, of the new Harmonised System of Goods Nomenclature. This massive revision was undertaken by the Council in response to many requests from international trade and transport bodies which, seeing that a coded numerical goods description was a compulsory item in every export and import declaration, wanted the Council to adapt what was originally a purely Customs nomenclature to a form in which it could be used, in part or whole, for a range of commercial purposes.

The new Harmonised System is now coming into use by Customs administrations in many developing and developed countries. It is not at all clear how far its potentialities for commercial use are fully understood or likely to be properly exploited and the CCC, quite naturally, is beginning to wonder whether the massive expenditure of money and expertise has really been justified.

Getting over the present inertial barrier to effective use of this important new facilitation instrument could require a variety of early practical efforts. One would be a CCC symposium on the lines of their recent EDI conference. Another would be a series of short descriptions of the potential uses of the Harmonised System, in particular commercial sectors.

The IAPH would be performing a valuable service to its members and the rest of the international trade community by supporting the CCC in any or all of these and any other means of getting the Harmonised System into use as a major contribution to traditional facilitation and the even more important EDI future.

The IAPH Remit

Adding all the above developments together, IAPH/CCC co-operation, reflected at the level of individual ports, can be seen as a very significant Association activity.

The need for decision making at the level of the Plenary Meeting or Executive Committee may be minimal, as the broad principle of IAPH/CCC mutual assistance is already strongly supported on both sides.

This could mean that the bulk of the IAPH responsibility would be to maintain contact with the CCC at the centre and extend mutual understanding of needs and problems at that level, so ensuring that the heads of Customs administrations and a wide range of senior Customs managers are brought into frequent contact with port requirements.

These contacts could be serviced through the overall communications network of IAPH headquarters and the more specialised membership of the Trade Facilitation Committee, supported by regular reports in "Ports and Harbors" and appropriate contributions to Biennial Conferences.

It is for the Trade Facilitation Committee and, eventually, the Executive Committee, to consider whether, at some appropriate juncture, it may be useful to mount regional or national seminars or symposia, in conjunction with the CCC or individual Customs authorities, to consider some of the main current issues of mutual interest, in greater depth and detail.

One possibility, to shorten lines of communication within the Association, would be for member ports to notify Mr. Suykens, as Chairman of the Trade Facilitation Committee, of their particular interest in Customs affairs generally or in any specific CCC/IAPH development in particular, so that the Facilitation Committee could respond to ascertained needs and draw on a much wider base of active Committee membership at and between Plenary Meetings.

Electronic Data Interchange (EDI) and the IAPH

By J. Raven

IAPH Reporting Expert for CCC

This paper outlines the nature and effects of EDI, describes its importance for ports, lists current developments against the background of the international consultative network and examines major practical implications for the IAPH.

Nature and Effects

Electronic Data Interchange (EDI) is now generally defined as the automatic transmission of structured messages between two or more data-processing systems.

It liberates computer resources from the solitary confinement of in-house systems to a much wider commercial and administrative information community.

It has had two main manifestations so far. In international trade facilitation it is eliminating paper documentary

exchanges to control goods and money movement in favour of much more rapid and reliable computer links between traders, forwarders, carriers, ports, Customs, banks and other functional participants.

In domestic trading, particularly in the vast US market, EDI is replacing a great variety of paper documents such as invoices, supply and payment orders and transport instructions, by a range of standard electronic messages. EDI is an essential element in "just in time" supply, production and distribution techniques.

In the European Community there is a strong political drive, backed by financial support, to exploit both these EDI functions to integrate EEC trading across national Member State frontiers in line with the "Single Market by 1992" programme.

Importance of Ports

Ports, interested mainly in international trade and transport EDI applications, have some important information-handling characteristics.

All ports are concentration points of information flows, as well as having to manage their own information systems. These flows have strong peaking characteristics.

While ports themselves have difficulties in influencing other contributors to joint information handling operations, some of these, such as Customs and banks, are well able to use legal or legislative authority to impose their own special requirements, often to the detriment of overall operational efficiency.

All these and many other factors will extend into the EDI revolution which, even though it has already acquired remarkable impetus, is only at a very early stage of potential expansion.

At the moment most EDI developments are centred on "pure" applications by relatively small-scale common interest groups, such as chemical manufacturers, automobile assemblers, reinsurance companies and port communities. But EDI will acquire totally new dimensions when these groups themselves move to intercommunicate, when American and European EDI projects integrate internationally and when the great mass of government-business data exchanges come under EDI treatment.

Such expansion will gain additional force from EDI extensions into adjacent external data-bases and such other techniques as bar coding and a full range of "smart card" applications.

Current Developments

The most important EDI policy activity at the moment is the negotiation and promotion of international standards for data-elements, codes, message structures and actual messages.

Agreement has been reached in the United Nations and ISO on data-elements and codes. The two main message structures, worked out in Europe and the USA, have been brought into eventual convergence under a general EDIFACT standard, and a range of standard messages are being produced, by European/US agreement, under the EDIFACT umbrella.

A major political thrust comes from the EEC Commission, which is backing EDIFACT standards for both business and administrative use as a powerful tool to overcome language differences, advance the cause of Community integration and stimulate the market for EEC software houses.

Commercial EDI applications have developed from early co-operative clearance schemes, between airlines, agents and Customs, such as the pioneer LACES project at London Airport, to a large number of common interest group applications, such as those already mentioned. In Europe these are tending towards a Community, rather than merely national perspective, while in the USA many remain firmly rooted in quite local sectors of the domestic market.

Numerous port-based projects, many initiated by individual port authorities, have been commissioned or are planned. Objectives range from Customs clearance and general cargo-handling co-operation to much more ambitious concepts of port-community information-sharing.

The most urgent technical activity is the construction and reconciliation, in a range of institutions, of a variety of standard EDI messages. The IAPH is being asked to participate at several points in this consultative network.

Institutional Background

United Nations Economic Commission for Europe (ECE): A Working Group on the Facilitation of International Trade Procedures, under the Trade Division of this regional United Nations Commission, was the focal point for the initial drive towards EDIFACT standards, seen primarily as an instrument of international trade simplification.

In the USA the American National Standards Institute (ANSI), with the private-enterprise Transportation Data Co-ordinating Committee (TDCC), has carried similar responsibilities for US EDI standards development, mainly in internal trading.

The ECE Working Group now provides a common meeting ground for both European and US EDI standards interests, with an additional technical co-ordinating resource in a system of EDIFACT Rapporteurs charged with the production and promotion of relevant standards including, particularly, standard messages. Some of these messages are being worked out inside the EDIFACT group, while others are being submitted to the group by such interested parties as the International Chamber of Shipping and IATA.

The IAPH is represented on the Working Party by the Technical Adviser to the Facilitation Committee. The Association has no expert EDI input to either the Working Party or the EDIFACT Rapporteurs, but some European port EDI projects have indirect working links with the EDIFACT activity.

Customs Co-operation Council (CCC): Given the daily influence of Customs practices on port operations, CCC policies in EDI development are of major importance to the IAPH, which is linked to the broad range of Council activities by the Technical Adviser to the Association's Facilitation Committee.

The Council is keenly appreciative of IAPH interest in EDI and recently invited the Technical Adviser to assist in the organisation of their very successful "EDI—The Customs Connection" symposium, as well as speak from the platform.

The Council has asked the Association to send representatives to early discussions on standard Customs messages in the maritime transport environment.

Similar invitations will probably follow, to help the Council with proposals tabled at its EDI symposium, to look at the EDI needs of developing countries and to examine Customs interests in the concept of a Unique Consignment Reference Number.

The Technical Adviser has already drawn the Council's attention to the potential advantages of using EDI techniques

to support the IAPH/CCC Memorandum of Understanding on control of drug traffic and Customs frauds.

International Chamber of Shipping (ICS): Main EDI contacts with the ICS, so far, have been as common participants in meetings of the UN/ECE Working Party, the CCC Permanent Technical Committee and the International Maritime Organisation (IMO).

Because of the unifying effects of EDI at the level of practical co-operation between ports and other trade and transport functionaries, it may be timely to intensify IAPH/ICS contacts. Such bilateral consultation could reinforce the IAPH position at future UN/ECE, CCC and IMO meetings.

Informal conversations with members of the ICS secretariat suggest the Chamber might welcome such arrangements.

European Economic Community: The EEC Commission is keen to encourage EDI developments, particularly through the use of EDIFACT standards. A number of European port-based EDI groups are in direct consultation with Commission officials, mainly on possibilities of Community support under the TEDIS (Trade Electronic Data Interchange Systems) programme. One of the projects under review is a possible follow-up to the EVHA project for inter-port communication.

The EEC is not a "neutral" international organisation. It is a regional political grouping with strong interests in external trade and transport policies. The IAPH can, quite easily, maintain informal contacts with certain Commission officers, but it would be much more difficult to work out a formal constitutional interface.

It would be possible to form an EEC-shaped group of ports within the IAPH, but this might move, under proposals from the Commission, to pursue commercial objectives quite prejudicial to some other sectors of IAPH membership.

An acceptable solution might lie in leaving EEC members of IAPH to form their own non-IAPH interface with the Commission, while retaining an option for the Association to form a European Regional group, at any time, for its own organisational purposes.

International Maritime Organisation (IMO): The IMO has a Facilitation Committee which meets annually and is attended by the IAPH European Liaison Officer. A sub-group of this Committee is currently examining certain EDIFACT-type messages, originally produced by the International Chamber of Shipping for use in its DISCO (Data Interchange for Shipping Companies) project. Some of these messages concern ports and IAPH technical participation in the sub-group's work would be timely.

International Data Exchange Association (IDEA): This Association was formed recently to provide a forum and focus for all sectors of EDI use and service supply. Consultation and co-operation with other international bodies is a major objective, and access to its regular news-sheet and other publications could be useful to the IAPH. Some port interests are already IDEA members.

Other Organisations: Given other calls on IAPH technical and financial resources, the most prudent policy might be to keep the overall institutional EDI scene under regular review and to take up extra working contacts only when they become necessary and practicable.

Present IAPH Arrangements

Official IAPH contacts with the main international EDI organisations are limited to the European Liaison Officer,

attending IMO meetings, and the Technical Adviser to the Facilitation Committee, concentrating on the ECE Working Party and the CCC, with occasional contacts with the EEC Commission on EDI developments such as TEDIS, which could affect IAPH facilitation policy.

Mr. Suykens, Chairman of the Association's Trade Facilitation Committee, has been good enough on several occasions to arrange for invaluable technical advice, at CCC EDI discussions, from a senior Port of Antwerp manager.

Main IAPH Policy and Resource Issues

Inter-reactive EDI could, in a very short time, revolutionise the functions and role of the forwarding industry, widen or narrow the wealth gap between developed and developing economies, create new functional amalgamations between previously separate trade and transport sectors, and transform time-factors in every type of international goods movement.

The traditional, focal importance of ports in international trade information handling could be reinforced or by-passed. The outcome of this and many other equally important issues will depend on the ability of ports to manage change rather than just cope with it.

In this now urgent process, their international organisation, acting in contact and consultation with a range of other private sector and intergovernmental bodies, has a major responsibility for representation and influence.

What are the most urgent needs for IAPH action?

1. To sensitise and inform the entire membership.
2. To define main EDI issues for Association Officers and relevant Committees and to obtain relevant policy directives.
3. To mobilise technical expertise for proper IAPH representation at key international EDI meetings, and to participate in relevant standard message negotiations.
4. To monitor EDI developments, keep the membership informed, obtain and interpret policy feed-back, support the proposed extra representation on other bodies and bring individual, national and regional port EDI activities into effective international focus.

The Association may, also, wish to consider possible legal implications of EDI. Formation of contract, substitutes for signatures and a range of security issues have been examined in some detail by other organisations, including the International Chamber of Commerce (ICC), the United Nations Commission on International Trade Law (UNCITRAL) and the Nordic Council. The CCC intends to look at the special legal problems of applying EDI to Customs procedures.

Most port interests could be covered by intensified participation in this work and full use, through the IAPH, of the considerable information already available.

Individual ports, however, particularly those operating under public by-laws or dependent on national or municipal legislation, may need legal adjustments in their statutes or regulations to substitute EDI for certain documentary practices. These changes are likely to be extremely specialised and the IAPH role may well be limited to helping identify the main types of possible difficulty.

The Association may also be concerned with the special information and consultation needs of members in developing economies. A copy of a paper prepared by the Trade Facilitation Committee Technical Adviser, for other uses, is attached for information.

The main practical question underlying all these tasks

is how the Association can organise itself to establish EDI policies, to brief and service the Officers, to inform and stimulate the membership and to secure, from that same membership, the necessary counter-flow of information and opinion and, most crucially, the technical horsepower, to back greatly intensified representation and co-operation.

This may appear a daunting task, with ominous financial overtones, but there are two countervailing advantages. All the necessary technical expertise is, almost certainly, available somewhere in the port industry and, if the IAPH can rise to the organisational occasion, it will move to a new level of importance for its members and the remainder of the international co-operative network.

No great structural changes are necessary. The internal and external contacts already established for the Trade Facilitation Committee by its Chairman, the European Liaison Officer and the Technical Adviser, cover most of

the relevant institutional ground and, in Europe at any rate, EDI is universally considered as a major facilitation instrument.

A strengthened Facilitation and EDI Committee, with some modest extra financial support for information and travel requirements, should be able to bring the Association and the general body of members much nearer to the centre of EDI developments over the next two or three years. But it will need clear policy objectives and much closer links with relevant EDI activities and interests in Far Eastern, North American, Australasian and South East Asian ports.

It should also co-operate with other IAPH Committees to support the EDI interests of ports in developing countries, to examine any common legal issues and to ensure that members' EDI policies enhance traditional co-operation with other sectors of the wider port community.

The "Herald of Free Enterprise" Tragedy

By André Pagès

A Member of the CLPPI

This article is intended to review the various details which have come to light concerning the disaster of the "Herald of Free Enterprise" and its effects on the future of maritime transportation and ports.

1. The Casualties

The ship capsized on 6th March 1987 at about 19.30 hrs, at the exit of the Belgian port of Zeebrugge, during a crossing to Dover.

The death toll at the end of 1987:	197 people, among which were 42 Crew Members and 155 Passengers.
Property damage declared:	Cars: 84, Lorries, trucks & trailers: 36

2. The Vessel

Built at Bremenhaven, F.R.G., in 1980; operated by the TOWNSEND THORESEN Company, which was recently taken over by P & O.

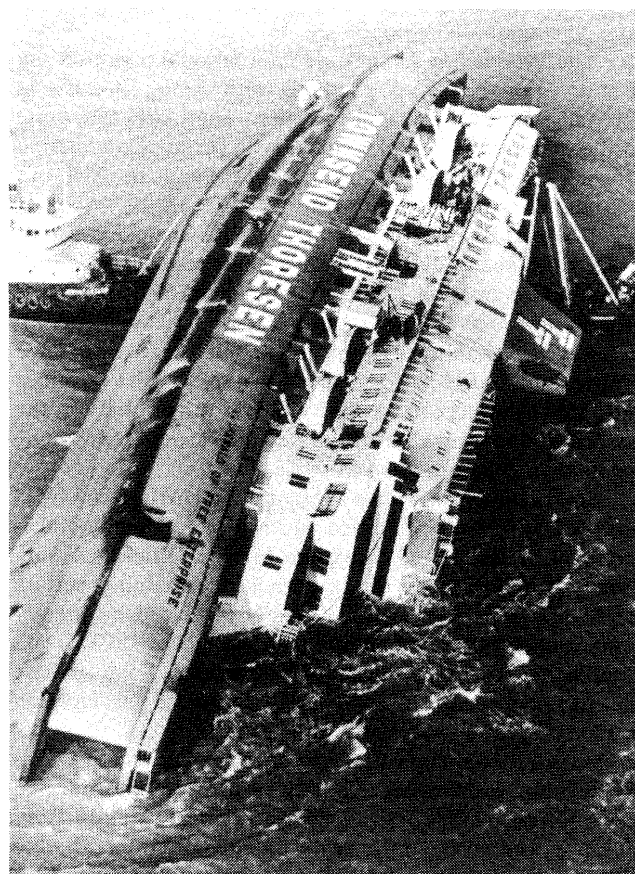
Dimensions	Overall length	132 m
	Breadth	23 m
	Draft	5.70 m
Tonnage	Gross	7,951 t
	Net	3,439 t
	Deadweight	2,492 t
	Speed	22 knots
Capacity	Berth Passengers	50
	Deck Passengers	1,300
	Vehicles: Cars or trucks	350 48 + 60 cars

Vehicle access through 2 Clam-shell bow doors and stern doors.

3. Circumstances (Supposed) of the Tragedy

3.1 The Call

The call at Zeebrugge took place at around high tide,



(Picture by Kyodo Photo Service)

with a spring tide and the bow-thruster on the shore side of the ship.

The ship had used her ballast tanks to trim her bow and align herself with the loading ramp.

In order to respect her sailing schedule, she set sail as soon as she had completed loading, without deballasting and without closing the bow doors.

3.2 The Accident

Having cleared the harbour, she left the outer harbour

and proceeded to enter the open sea at a fair speed.

Perhaps she had been put off course by the strong tide which, at more or less full tide, is present all along the coast. She thus turned to correct her course.

Under the effect of the turn she listed, because of her speed, while at the same time a bow wave was forming ahead. The crest of the bow wave therefore reached the threshold of the garage deck, which would normally be some 2 m above the water-line but which had been lowered by the filling of the ballast tanks during the call. The drop in the level was further accentuated by the listing.

Thus, the water was able to enter in mass since the bow doors had not been closed, and it flooded the garage deck. Concentrated on only one side, this completely destabilized the vessel, which within a matter of minutes turned over on her port side and sank onto the sandy bed in the relatively shallow water found in the Zeebrugge area.

3.3 The Sad Consequences for Lives and Goods

Because the vessel had turned over on her side, the lateral doors of the saloons were in a vertical position, which made normal exit for passengers and crew impracticable. Thus they remained imprisoned behind the thick glass windows and portholes.

On the garage deck, where the water had come in and which was now a vertical slope, all the vehicles — even those that had been lashed — slid down and piled on top of one another.

3.4 The Results of the Disaster

The death toll resulting from the disaster, although high, was limited by:

a) The speed and efficiency of the rescuers. While nearly 200 people died, more than 400 (some of whom were injured) were saved.

b) The fact that the call by the “Herald of Free Enterprise” took place on 6th March, which is out of the tourist season and so was only a small call commercially speaking. It was limited to only around 40% of the ship’s deck passenger capacity (around 520 out of 1,300), and with no cabin passengers since the crossing takes only about 4 hours and it was only 7.30 p.m. when she sailed. Perhaps it was for this reason that the ship did not have her full complement of 84 seafarers and cabin attendants.

c) The fact that the disaster occurred in shallow waters and not further out to sea, where she would have sunk with everyone and everything on board.

3.5 The Fate of the Wreck

The vessel was refloated, which enabled most of the bodies of the victims to be found. Having been inspected, the vessel was not considered worthy of repair or bringing back into operation. She was lost whilst under tow on her way to be demolished.

4. The Safety Context of Ro/Ro Vessels

Over the past twenty years, ro-ro vessels have been increasingly brought into service across all the seas of the world. Their safety standards have given rise to numerous accidents.

4.1 Their Poor Structural Stability

Because of the shape of the hull and the distribution of the mass, the structural stability of ro-ros is poor and leaves the ships at the mercy of the slightest list.

This weakness is accentuated in the car ferries because of the height of their superstructure, the weight of this superstructure and the vast surface that is thus exposed to the wind.

They require particular precautionary measures when docking and embarking or disembarking vehicles from the garage deck, while the lashing of the vehicles for the crossing is also necessary.

4.2 Vulnerability to Leaks

The garage decks are located very close to the waterline (2 m to 2.5 m), and have no bulkheads, either longitudinal or transversal.

Thus any uncontrollable invasion of water is catastrophic, since it will rapidly compromise the ship’s stability. It may be caused by numerous reasons such as the doors not being watertight, the ship being holed or a collision causing a breach in the plates.

4.3 Access Doors to the Garage Decks

The need for fast turnarounds demands that the access doors to the garage decks be large as well as quick and easy to manoeuvre. These doors also have to be well-built and maintained, since because of their position they are exposed to the full force of the swells when the ship is at sea.

4.3.1 Stern Doors

Car ferries and ro-ros generally have articulated stern doors which are lowered and serve as ramps.

They may be axial, angled or slewing-type ramp doors. They are frequently doubled on the inside by a separate, raisable, watertight door.

4.3.2 Bow Doors

Car ferries, in addition, are also fitted with bow doors, which may be of various types:

- lifting-type doors;
- wing doors, which slide laterally, or pivoting interlocking-type doors, known as clam-shell doors; or
- bow visor doors, where the whole front of the bow can be raised.

Whatever the type, all these doors can be doubled on the inside by a watertight bow ramp door.

4.3.3 Side Doors

These vessels normally also have side doors to provide access for the crew or for minor handling purposes.

4.3.4 Links with the Shore

Berths in ports are very varied in type, notably according to the tidal variations. The last link between the ship and shore liaison may be:

- the ship’s, if she has stern or bow ramp doors;
- or the shore’s, for vessels reliant on shore-based ramps.

Generally, such links are articulated so that they can be used after the ship has docked and opened her doors, and removed before the ship’s doors are closed and she sets sail.

However, in certain cases (such as those of a simple lifting, non-retractable gangway), the ship’s doors have to be opened during the last phase of docking. And on departure, the ship must pull back from the berth to withdraw, before closing her doors.

5. Previous Accidents Involving Ferries and Ro-Ros

Previous major accidents involving ro-ro vessels or ferries have certainly been few, in proportion to the number of vessels of this type which are in service.

They are, nevertheless, cause for concern.

The classification societies have monitored a large number since 1953, which involved:

- serious loss of life for passengers or crew, e.g. "Princess Victoria" 1953, 133 people, "Washine" 1970, 60 people, "Colo" 1978, 26 people, "Mekhanik Tarasov" 1962, 20 people, "Dona Josefina" 1986, 194 dead or missing;
- the loss of between 1 and 6 crew members in some fifteen other cases;
- and for a number of others, the ship has been lost although lives on board have been saved.

6. Elementary Measures

This situation has resulted in various warnings or comments being given or made over the past few years, among which can be counted:

- the conclusions of the International Ship Master's Association on the 23rd April, 1986 in Oslo, which drew attention to a very alarming report by Commandant Colson, who reiterated the warnings made by the Belgian Branch of the Association some 6 years earlier; and

the proposals put forward in a study to the IMO by France in 1979 (The Rocquement Report).

IMO's Maritime Safety Committee's Sub-Committee on Subdivision, Stability and Load Lines was certainly not uninterested by these concerns before the "Herald of Free Enterprise" disaster:

- A circular was disseminated in 1977 on the dangers of water getting into non-compartmented garage decks.
- The dangers of sliding on garage decks if the vehicles broke free of their lashings was stressed, and consequently the absolute necessity of ensuring correct stowage and lashing very carefully — as in the case of all other vessels.
- IMO directed all its attention to crew qualifications, with the adoption of the International Convention on Standards of Training, Certification and Watch-keeping.

IMO's Maritime Safety Committee will examine the question again in the spring of 1988, on the basis of the work done by its two sub-committees:

- the Sub-Committee (already mentioned) on Subdivision, Stability and Load Lines; and
- the Sub-Committee on Ship Design and Equipment, on the particular point of access doors to garage decks.

7. The First Measures taken in the Technical Field

The recommendations made by the British Court of Enquiry into the "Herald of Free Enterprise" disaster have already had major repercussions on the whole maritime community. They suggest a vast area for in-depth research which, no doubt, will be followed up by the IMO, and immediate measures have been proposed which can be implemented by the present ro-ro fleet:

7.1 From the Point of View of Equipment

Ships should be fitted with:

- Indicator lights and closed-circuit television, which will enable the bridge to check that the doors have been correctly closed and that the vehicles on the garage deck have been positioned correctly;
- displacement and trim indicators, intended to assist in checking the correct stowage of the load; and
- better life-saving equipment.

7.2 From the Operational Point of View

The following measures should be observed:

- Loading and unloading procedures should be respected and carried out carefully, in order to ensure that the ship remains evenly trimmed at all times.
- The doors should remain firmly closed while the ship is moving, whether at sea or in port. They should not be opened until the ship has stopped and should be completely closed before she sails.

7.3 The Consequences on Port Equipment

The report suggests that Ports:

- should be equipped with weighbridges in order to facilitate the drawing up and respect of the loading plan; and should
- modify all ro-ro link spans with fixed links in order for them to retract, if necessary, so that ships can berth or set sail with their doors firmly closed.

8. The Initial Consequences from the Legal Viewpoint

The dreadful loss of life caused by the "Herald of Free Enterprise" disaster only became known progressively. Even now, it is not certain that the full toll was definitely 197.

For a very long time the fact that passengers embarking on ferries are not listed and given boarding cards in the same way as aircraft passengers has been deplored.

The idea does not yet seem to have been accepted.

The modalities for the compensation of loss of life, injury and loss of luggage and vehicles are governed by the 1st December 1974 Athens Convention, modified by its 19th November 1976 Protocol, which came into force on 28th April, 1987. The British Government had already anticipated this by introducing the contents of the Convention and Protocol into its domestic legislation.

However, monetary erosion since 1974 is such that compensation is limited to sums which, today, seem ridiculously low, e.g. 46,666 SDR Units (Special Drawing Rights of the International Monetary Fund), or approximately £37,500 per loss of life.

Therefore:

- The shipowner — P & O — (who took over TOWNSEND THORENSEN) undertook, with the agreement of the British Government, to increase the compensation to £80,000 for loss of life.
- The British Government suggested to IMO that they give priority in their future work to the revision of the 1974 Athens Convention.
- This suggestion was adopted unanimously. But the revision of the 1976 London Convention on Maritime Claims, which deals with the global amounts of limitation of liability for the owners or operators of sea-going ships (and not with the amounts per victim), whether for injury or for property damage, also calls for priority revision, which does not seem to have been accepted with the same enthusiasm.

Now the amounts of the 1976 London Convention (which came into force on 1st December 1986) have also undergone serious monetary erosion. Any modifications made only to compensation for injury will have serious repercussions on the amounts that remain available for property damage compensation and Ports are, in this respect, often victims.

Conclusions

As far as they are concerned, Ports should:

- follow attentively all effects which the "Herald of Free Enterprise" disaster has on the construction, equipment and operation of ferries and ro-ro vessels;
- in collaboration with their users, take all necessary measures for the introduction of weighbridges and the modification of link spans so that vessels may berth or set sail with their doors firmly closed, where such measures are needed; and
- lobby appropriate national and international bodies to ensure the early revision of both the 1976 London and the 1974 Athens International Conventions.

Note: Any opinions put forward in the article are the author's personal ones and do not necessarily reflect IAPH thinking or opinions. — The CLPPI Chairman

Report by IAPH Bursary Recipient

'Port Operations and Management'

By M.J. Kurian, Secretary, Cochin Port Trust, India

My participation in the advanced course on 'Port Operations and Management' (sponsored by the International Maritime Organization and hosted by the Government of France) held at Le Havre, France, from October 20 to November 27, 1987 was supported by an IAPH Bursary towards travel costs.

The Course, intended for Senior Port Managers from developing countries, was attended by twenty officials, each representing a country. The objective of the Course was to examine and study problems of port efficiency and technology such as accommodation and efficient turn-around of ships, cargo movement, management of port facilities, and relationships with port users and the maritime community. The Course was inaugurated by Mr. C.P. Srivastava, Secretary General of the International Maritime Organization on 20th October, 1987.

The Course covered a wide range of subjects concerning port operations and management — port finance, budgeting, traffic and marine services, personnel management, data processing, computer application in cargo and customs clearance, commercial management and marketing, navigational aids and port security etc. Lectures were supplemented by field visits. While the Course helped the participants to get a general appreciation of the intricate problems facing port management, it also introduced the participants to the salient aspects of the French Port Management system with particular reference to Le Havre. The Port of Le Havre, a very progressive port in Europe

and second in France in terms of traffic tonnage, provided an ideal backdrop for the course.

In France there are two types of ports — autonomous and non-autonomous ports. Autonomous ports were created by a law enacted in 1965. These autonomous ports according to the law are state controlled bodies enjoying administrative and financial independence but answerable to the Minister in charge of Maritime Ports and subject to economic and financial control of the State. An autonomous port has a Board of Directors comprising 26 members representing trade and user, labour and government interests. The Board of Directors elect a Chairman generally from among the non-officials. The administration of the port within the ambit of the control of the Board and Government, however, is vested in the General Manager appointed by the State. There are three members on the Director Board specifically representing the State. With the Government nominees representing different departments of the State on the Board and a General Manager answerable to the Board and the State and the Chairman of the Board elected from among user agencies, the French autonomous port system strikes a balance between state control and autonomy.

Each non-autonomous port is placed under a Director appointed by the Minister for Public Works of France. Investment in non-autonomous ports is made by the State and the Chamber of Commerce of the region. Both in the autonomous ports and in the non-autonomous ports there are state subsidies for the provision of facilities. State subsidy is indeed a special feature of the French Port System. The State's contribution to port development and infrastructure is as under:

- (i) 100% of all maintenance and operational expenses for access infrastructure, i.e. maritime approach channels, depth of outer harbour, locks and protection against the sea is met by the State.
- (ii) 80% of the costs towards excavation of locks, creation and extension of maritime channels and outer harbours is met by the State.
- (iii) Construction and extension of protection walls against the sea is also the responsibility of the State.
- (iv) In addition to the above, 60% of the expenses towards creation, extension and renovation of infrastructure facilities is also met by the State.

The Port of Le Havre handles about 48 million tonnes of cargo annually, of which around 38 million tonnes account for imports and the balance exports. A major item of import is petroleum crude. Container traffic in the Port accounts for about 67% of the total general cargo traffic at the Port, the total TEU's handled per annum being around 0.57 million.

Pilotage at Le Havre and other French ports is looked after by the French Pilotage Union, a state controlled co-operative organization. Similarly, tug and board services are also provided by private organizations. The financial involvement of the Chambers of Commerce in the provision of infrastructure for ports is a novel feature of France. The Chambers of Commerce enjoy statutory status and are allowed to collect taxes from the members. The funds so accumulated are ploughed back to the community by the Chambers. In this process the Chambers assist port facilities. The Port Study Centre at Le Havre is a joint venture of the Port Authority and the local Chamber of Commerce.

In regard to provision of modern communication sys-

(Continued on Page 23, Col. 2)

OPEN FORUM

Seikan Tunnel Commissioned After 24 Years of Construction

— The World's Longest Undersea Railway Tunnel —



*The first train emerges from the tunnel, carrying with it the hopes and dreams for the future.
(Picture: Courtesy of Japan Railway Construction Corporation)*

Introduction

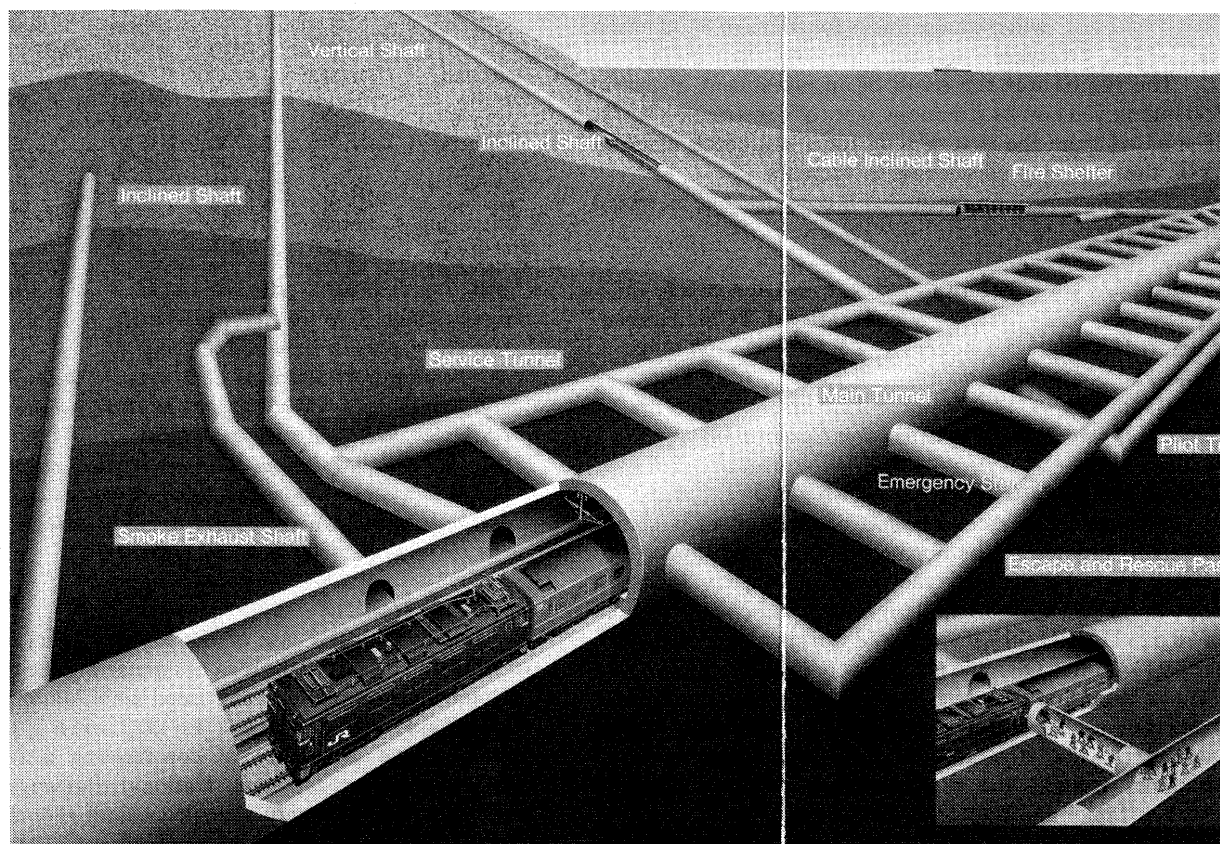
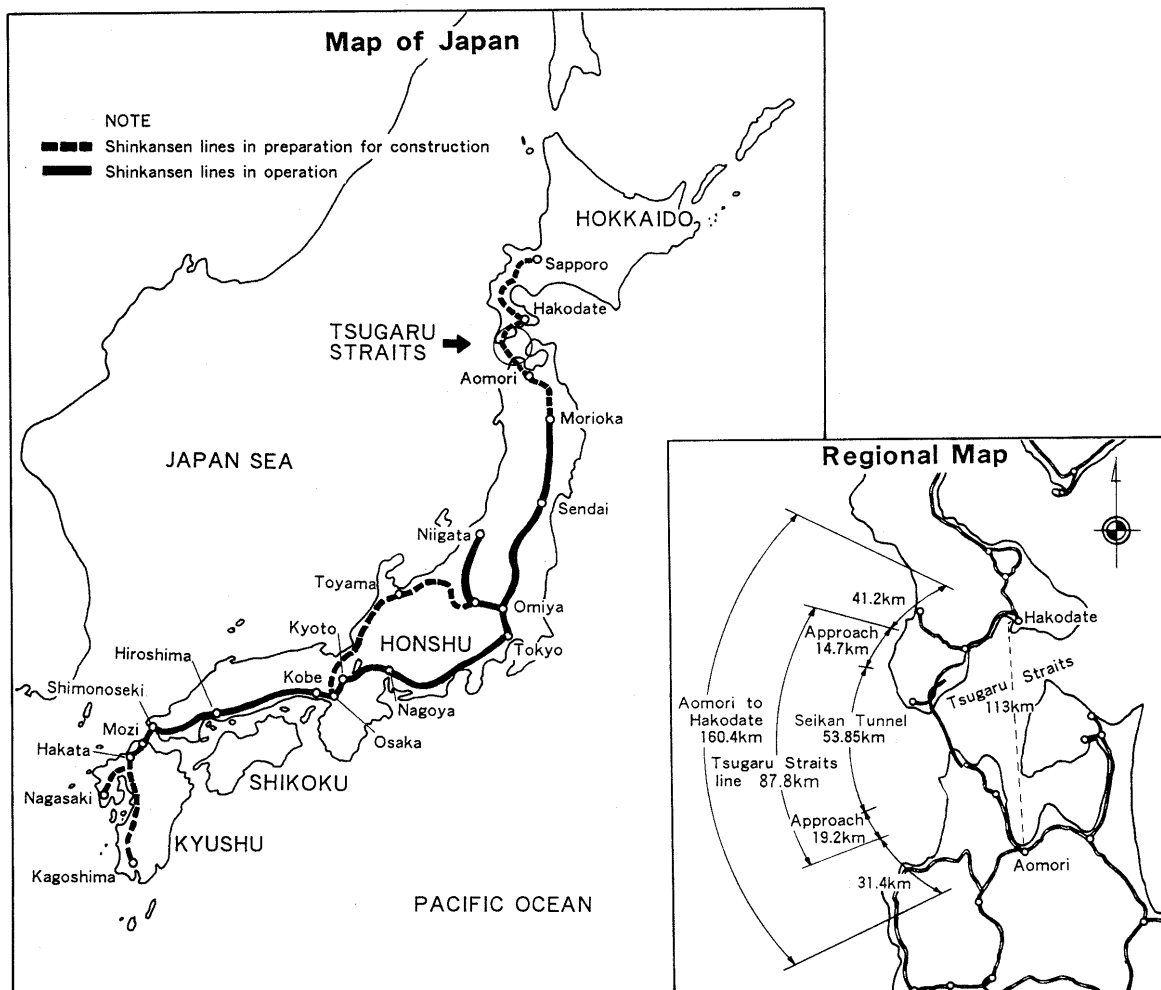
On the evening of March 13, 1988, at the ferry terminal of Hakodate Port, Hokkaido, several thousand citizens waved and bade farewell to the fully-loaded ferry-boat leaving the pier bound for Aomori on a 4-hour voyage covering a distance of 110 km. Streamers were thrown and "Auld Lang Syne" was played. At about the same time, a similar scene was taking place at the ferry terminal of Aomori Port on Honshu for another ship leaving for Hakodate across the Tsugaru Strait. It was a memorable but at the same time somewhat sentimental evening for a great many Japanese. It was the end of the 80-year history of the Seikan ferry service established by the former Japan National Railways (which became "JR" upon privatization last year) to connect Hokkaido, in the north of the Japanese Archipelago, with Honshu, the main island.

Some 750 km. south at JR's Ueno Station in Tokyo, on the same evening, a crowd was enjoying marching music and watching a colorful ceremony commemorating the departure of the express night train "Hokutosei (The Great

Bear)" (conventional, non-Shinkansen type) leaving for Sapporo. This was the first commercially commissioned train from Tokyo to go directly to Sapporo through the newly-opened 53.8 km. long Seikan Tunnel. The tunnel runs 23.3 km at a depth of 100 meters beneath the sea bed. The water depth is as much as 140 meters in some places.

1. Major Outline of the Tunnel

The course of the tunnel is described as viewed from the Honshu side. About 13.5 km. inland, the tunnel starts to dip at an angle of 12%. Going down at the same angle for 13.5 km., the tunnel comes under Tsugaru Strait and continues to descend for another 10.5 km to a point of some 23 km. from the entrance, where the angle is modified to a gentle 3 %. The tunnel continues to descend at this angle for some 10 km. At a distance of 25 km from the entrance, the tunnel reaches a point exactly 100 m beneath the bottom where the sea depth is 140 m. After passing a point 27.5 km from the start, the tunnel begins to ascend at an angle of 12% and continues to climb at this angle some 27 km.



Conceptual drawing of undersea portion

before it comes up to the ground, having travelled a distance of 53.8 km.

The undersea portion (23.3 km) of the main tunnel is connected a service tunnel on either side for ventilation and servicing at intervals of 600 meters. Each end of the two service tunnels is further connected with an inclined tunnel served by electric cable-cars for transporting servicing materials from the surface as well as for evacuation in times of need, such as during fires. Where the inclined tunnel meets the main tunnel there is a station. Therefore, there are two stations each equipped with a platform embarking and disembarking. The platforms are narrow but run for 300 meters.

The entire undersea portion of the main tunnel is served by yet another two tunnels. One is called the "Pilot Tunnel" and runs between 0 to 118 meters underneath the main tunnel. It is used for ventilation, drainage and servicing. Stale air is pumped out by a set of three vertical tunnels located at both ends of the undersea portion. The in-take of air is natural. The tunnel is earthquake-resistant, with a margin of safety to enable it to withstand tremors of greater magnitude than anything ever actually recorded in the region. A fire-detection and fire-fighting system composed of sprinklers and extinguishing equipment covers the entire tunnel. The communication and electrical systems are duplicated as a precaution against any possible failure.

Major specifications are:

Length: 53.85 km (23.30 km. undersea, 30.55 km. underground)

Minimum curve radius: 6,500 m.

Maximum grade: 12/1,000

Minimum overhead earth thickness: 100 m. (undersea)

Maximum water depth over tunnel: 140 m.

Cross section: Two tracks for conventional trains are laid, though the tunnel could accommodate wider-gauge tracks for trains of Shinkansen type.

The tunnel was the result of an investment of nearly 550 billion yen and 24 strenuous years of construction work. If counted from the first drilling for a soil check made in 1946, the time elapsed goes up to 42 years.

The time saved by the tunnel is considerable, as tabled hereunder:

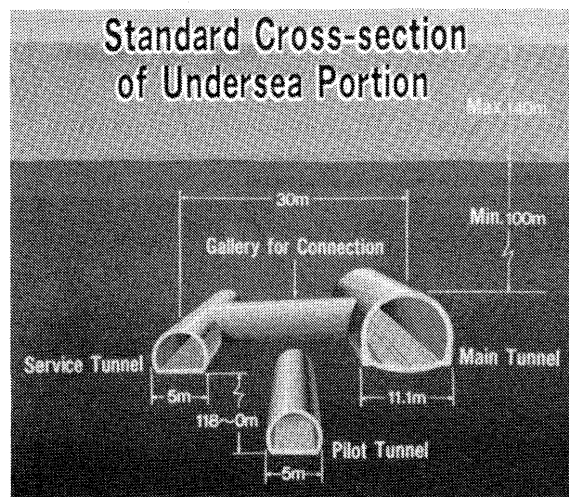
Section	Before	After	
		Conventional	by Shinkansen
Aomori-Hakodate	3.5 hours	2 hours	50 mins.
Ueno-Hakodate	9.5 hours	7.75 hrs.	4.5 hrs.
Ueno-Sapporo	14.0 hours	12.1 hrs.	5.75 hrs.

Source: Japan Railway Construction Corporation

2. General situation of Hokkaido

Hokkaido, the second largest of the four main islands of Japan, situated in the northernmost part of Japan, separated from Honshu by the Tsugaru Strait. It has a population of about 5.7 million (1985) and covers an area of 78,523 km². Hokkaido achieved worldwide renown when the 1972 Winter Olympic Games were held in Sapporo, the island's capital and largest city with a population of some 1.543 million. Separated by the Nemuro Strait, only several kilometers wide, Hokkaido faces Kunashiri Island and the Habomai Islands, the sovereignty of which is disputed between Japan and the U.S.S.R.

The economic development of the island has been hindered by its isolation from the mainland, resulting in the



Cross section of the Seikan Tunnel System

gradual decrease of its population. Air services have long accounted for most passenger traffic between Tokyo and Hokkaido, following the take-over of cargo traffic by the long-haul car-ferry services.

Agriculture, coal-mining, shipbuilding, steel manufacturing, paper production, and tourism form the mainstay of Hokkaido's economy. All of these, with the exception of tourism, have been threatened to the point of extinction by the restructuring of economic and industrial activity taking place in Japan.

The table hereunder shows the general situation of Hokkaido in relation to the other major regions of Japan.

Zone	Area (km ²)	Population (1000)	Density (persons per km ²)	Index of Individual Revenues in 1983 (Tokyo = 100)	Number of Pref- ectures Involved
Hokkaido	78,523	6,679	72.3	68.6	1
Honshu	231,072	96,687	418.4	69.9	34
Tohoku (a)	66,970	9,730	145.3	57.0	6
Kanto (b)	32,378	36,786	1,136.1	70.8	6
Tokyo	2,162	11,829	5,470.6	100.0	1
Chubu (c)	66,774	20,595	308.4	64.8	10
Kinki (d)	33,069	21,828	660.1	65.6	6
Chugoku (e)	31,881	7,748	243.0	60.8	6
Shikoku (f)	18,806	4,227	224.8	58.8	4
Kyushu (g)	42,149	13,276	315.0	56.7	8
Total	372,805	121,049	234.7	64.6	47

Source: Nihon Kokusei Zue (1987)

(a): The biggest city in the region is Sendai.

(b): Yokohama, Kawasaki and Chiba cities are included.

(c): Nagoya, Yokkaichi and Shimizu cities are included.

(d): Osaka, Kyoto and Kobe are included.

(e): Okayama, Hiroshima and Shimonoseki cities are included.

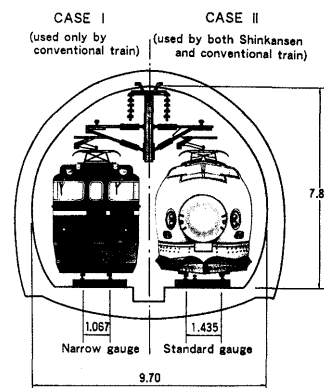
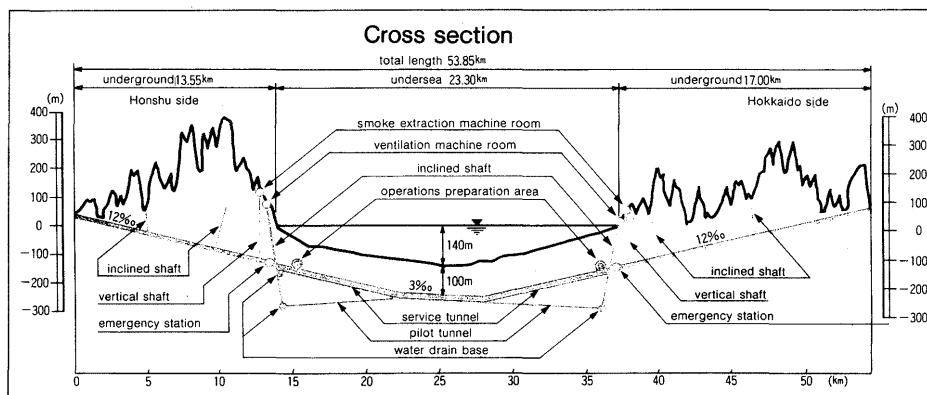
(f): Major cities are Takamatsu, Kochi, Matsuyama and Tokushima.

(g): Fukuoka and Kumamoto cities, as well as Okinawa Prefecture (for the purposes of this table) are included.

3. Background

Just as with the case of the bridge system connecting Honshu and Shikoku, the idea of connecting the two islands by tunnel has been a long-cherished ambition of the people of Hokkaido. It dates back to 1923 when a paper first discussing the possibility of constructing a tunnel was publicized. The Japanese National Railways in 1939 launched a technical study, though it was interrupted as Japan went to war and could not be resumed until 1946.

Prompted by the disastrous maritime tragedy in the



Tsugaru Strait in September 1954 involving the sinking of 5 ferry boats and the loss of as many as 1,430 lives caused by a record-breaking typhoon, consideration of the project was stepped up and it came to be treated as a matter of serious and urgent national concern. A special committee on the technical feasibility of the project was established in 1955. The Committee's interim report presented in the next year was positive towards the project. It estimated the construction period at 10 years and the cost at some 500 billion yen.

However, although the construction work was officially started with earth-breaking for an inclined shaft tunnel taking place on the Hokkaido side in 1964 and on the Honshu side in 1966 respectively, the project did not proceed as scheduled.

It was not until 1979 that a service tunnel from both ends could meet and the main tunnels from both sides could only meet in 1985. The work was interrupted many times by unexpected floodings as well as problems - admittedly anticipated - with difficult earth layers, soft ones in particular.

4. Changes in Transportation Patterns

Ironically, when the excavation of the main tunnel was started in 1970, air and a combination of rail and long-distance ferry services took over as the main medium of transport between Hokkaido and distant points. The traffic volume in 1985, broken down according to the different modes of transport for both passengers and cargo originating from and destined for Hokkaido to and from the Tokyo area, is tabulated hereunder.

Passenger traffic (1,000 passenger movements)

From/to all of Hokkaido	To/from	By
All movements	South Kanto*	
2,350,706.2	3,379.4	All Modes
	222.0	Train
	21.1	Passenger ferries
	3,136.3	Air

*: Saitama, Chiba, Tokyo and Kanagawa Prefectures

Cargo traffic (tons)

From/to all of Hokkaido	To/from	By
All commodities	Tokyo, Chiba**	
	Kanagawa	
421,599,682	6,305,338	All Modes
	792,598	Train
	5,143,692	Coaster Shipping
	369,048	Truck

**: Ports located in Tokyo Bay.

Source: Passenger and Cargo Flow Survey 1985 (Transport Economy Research Center, Tokyo, Japan)

The Seikan Tunnel Project inevitably had to go through some hard times. It was given affirmative support while the economy of Japan was on a dramatic course of expansion. However, when worldwide recession appeared on the horizon, and when the news that annual expenditure of 90 billion



The two ends of the main tunnel were connected in March, 1985. The part of the contour seen at the top (right and left) of the picture shows the rim of the main tunnel. (Picture: Courtesy of Japan Railway Construction Corporation)



Fire-fighting drill at one of the two stations (emergency stop zones) in the tunnel. A narrow side-walk is situated on both side of the tunnel for letting off passengers. (Picture: Courtesy of Japan Railway Construction Corporation)

yen or so would be necessary just to keep the tunnel operable was publicized, the voices critical of the investment in the tunnel gathered momentum. Some urged the immediate stoppage of further investment, some suggested that the tunnel should be used for the storage of crude oil, and some claimed that it should be abandoned and forgotten for good.

The circumstances prompted the Government to establish, in 1983, the Council on Issues Related to the Seikan Tunnel, which was made answerable to the Transport Minister. The Council, after one year's vigorous discussions and debates recommended in 1984 that (1) the tunnel, which might be called as the "Northern Corridor of the Japanese Archipelago", should be deemed a national asset uniting the four main island into one; that (2) it should be completed as soon as possible; that (3) every possible measure should be taken to better utilize the tunnel; and finally that (4) the

Revised PACT in Rotterdam Announced

Recently, the Technical and Managerial Port Assistance Office (TEMPO) of the Rotterdam Municipal Port Management announced a revised set-up for its regular port training programmes named PACT. PACT is an abbreviation that stands for Practical Approach Concept in Training.

The revised training programme, PACT Multipurpose and Container Terminal Operations, is particularly designed for the middle management of Multipurpose and Container terminals in developing ports.

During the larger part of the four-week programme, all participants will attend lectures and practical exercises such as:

- port management simulation game (computer-assisted) at the Rotterdam Port and Transport College, and
- introduction on the use of computers in port operations.

During the one-week practical, detailed training will be executed at either multipurpose or container terminals, according to the specific wish of each individual participant.

The course fee for the PACT programme is Dfl 3400 (approx. US\$1,800), also covering handout material, health insurance, expenses due to technical visits and lunches and refreshments during working days.

The dates set to execute the PACT programme are as follows:

1988: August 22 — September 16

1989: May 22 — June 16

1989: August 21 — September 15

For further information or application please write, telex or fax to:

Rotterdam Municipal Port Management

TEMPO

P.O. Box 6622

3002 AP Rotterdam

Telex No: 23077 EUROT

Fax No: (0) 10 - 4778240

Note: Since the processing of applications and possible bursary requests requires a considerable time, TEMPO advises you, in case you are interested, to contact them as soon as possible, but certainly not later than two months before the starting date of each programme.

costs for construction should be totally borne by the Government. In line with the recommendations, the Government resolved to complete the tunnel by March 1987 and decided that the tunnel be used both for conventional passenger trains and freight trains.

A further complicating factor was the dissolution and subsequent privatization of the Japanese National Railways in 1987 due to the astronomical figures of deficits accumulated over the years. It was decided that the Seikan Tunnel would be owned and operated by JR Hokkaido, one of the six regional railway operating companies formed as a result of privatizing the system.

5. The current situation

At the moment, counting both north- and south-bound services, some 30 local trains (Named "Kaikyo" which in English means "Strait".), 4 express runs between Tokyo and Sapporo, 2 express trains between Osaka and Sapporo and 14 freight services run through the tunnel daily.

People wishing to take a look at the undersea tunnel can take a specific morning train from one of the two ends, whereupon the train will drop them at the first undersea station, and the next one will pick them up one hour later and take them to the surface on the other side.

In a telephone interview conducted from this office, an official of Aomori Station, JR East Japan, commented that the opening of the tunnel had apparently created far freer and more frequent communication among people than previously expected and had given a real boost to the people of the region. He was convinced that new patterns of touristic travel involving the tunnel would emerge, contributing to an increase in the number of travellers coming to both Aomori and Hakodate throughout the year, as well as stimulating the development of the local economies. He was even afraid that the capacity of the tunnel might be stretched in terms of train scheduling before too long.

The report must end here, as little more than a month has elapsed since the tunnel opened and events have yet to unfold. However, it is hoped readers will find this presentation to be of some relevance and use.

(Acknowledgement: This office thanks the Japan Railway Construction Corporation for the pictures and materials provided for this article.)

Hamburg Messe to Assist China Portex

PORTEX — the international port exhibition — was pioneered successfully in Hamburg in 1981. It was held again in Hamburg in 1985, in conjunction with the conference of the International Conference of Ports and Harbors, and in 1987, PORTEX put in a first-time appearance in Shanghai, Hamburg's partner city.

In Shanghai, the exhibition was opened by Qian Yongchang, Minister of Communications of the People's Republic of China. When cutting the red ribbon during the opening ceremony, he stressed China's endeavours to expand and modernize its ports. CHINA PORTEX '87 drew more than 30,000 experts in transport and port technology from all over China.

PORTEX SHANGHAI carries on the tradition and is scheduled for September 22-27, 1989 with the sponsorship

of the Ministry of Communications, the State Council's Port Authority and COSCO. It will be jointly organized by Hamburg Messe und Congress GmbH, responsible for international participation, and CCPIT and the China Ports and Harbours Association — responsible for Chinese participation.

Two major events create the ideal backdrop and climate for PORTEX SHANGHAI '89; the 13th Party Congress in October 1987 confirmed China's reform course and second, in 1987, China showed a positive foreign trade balance — a turn-around after several unsatisfactory years.

Therefore, PORTEX SHANGHAI — this major port equipment and management exhibition — will provide excellent opportunities to enter the vast Chinese market by introducing modern technologies to the right people. It will provide a forum for discussing cooperation projects and advanced planning.

Shanghai is China's most important industrial, trade and financial center, accounting for one fifth of China's total foreign trade.

It is the world's eighth largest port and the largest in China, where it is responsible for one third of the country's coastal ports' throughput.

The initial PORTEX success in China in 1987 will make PORTEX SHANGHAI in 1989 a major event. It has the support of the Chinese government and it will have a major impact on all industries related to shipping, ports and harbors, as well as such areas as finance, planning and management consulting.

The exhibition is designed to provide new impulses and to speed investments in infrastructural development in China to bridge the gap between China's growing foreign and domestic trade and its inadequate transport facilities.

ESCAP Port Seminar In Yokohama, Manila

The ESCAP's third Seminar-cum Study Tour on Port Development and Evaluation Policy was held in Yokohama from 22 to 27 March, and in Manila from 28 to 31 March, 1988, respectively. The local host of the event was the Bureau of Port and Harbour, City of Yokohama, with the co-sponsorship of the Ministries of Foreign Affairs and Transport.

It was participated in by 16 delegates from ten countries comprising Bangladesh, Burma, China, India, Indonesia, Malaysia, Pakistan, Philippines, Sri Lanka and Thailand.

The keynote speaker, Dr. Yuzo Akatsuka, Director, Asian Development, Manila, the Philippines, delivered a speech entitled "Seven Key Areas to be addressed in formulating port projects." Among the participants were: Mr. M.A. Matin Issker, Dy. Secretary, Ministry of Shipping, Bangladesh, Ms. Iuo Yun Qin, Vice General Economist, Planning Bureau, Ministry of Communications, China, Mr. Yogendra Narain, Joint Secretary, Ministry of Surface Transport, India, Mr. Anastacio Baleva, Assistant General Manager, Planning and Engineering Services, Philippine Ports Authority, Mr. K.S.C. de Fonseka, Managing Director, Sri Lanka Ports Authority, and Ms. Parichat Kotcharat, Chief, International Cooperation Sub-Division, Ministry of Communications, Thailand.

This seminar, according to an official of Yokohama Port, was a follow-up to the previous one convened in

Bangkok in 1983 and was intended to study more about the systems of port development largely employed in Japan. At the previous seminar, the existence of marked differences in the systems for port development between the European and Japanese approaches was widely felt by the participants. The point was that in Europe at large, the basic assessment of port development is placed on the rate of return on the investment to be made, while on the other hand in Japan the emphasis of investment in ports is on advancing the improvement of social infrastructure to enhance the regional economic development.

Among the speakers from Japan were: Mr. Michio Morihira, MOT, speaking on "Coordinated Regional Port Development in the Tokyo Metropolitan Area", Mr. M. Sakai, MOT, lecturing on "The Process of Formulating Port Plans in Japan," Mr. H. Kayahara, MOT, delivering a speech on "The Comprehensive National Land Development Plan" and Mr. K. Midorikawa, Port of Yokohama, discussing "Major Development Projects in the Port of Yokohama."

The speakers at the Manila session included: Mr. Maximo S. Dumlaog, Philippine Ports Authority, speaking on "Structure and Process of Port Development — the Philippines' case," Mr. Cesar Valbuena of the National Economic and Development Authority, lecturing on "Ports within the National Transport Plan," and Mr. A. B. Baleve, Philippine Ports Authority, discussing "Integrated Port Development in Practice."

Report by IAPH Bursary Recipient

(Continued from Page 17, Col. 2)

tems and electronic aids for navigation, the Port of Le Havre is well ahead of several European Ports. An integrated data processing system for the follow-up of ships and cargo supported by video-tex systems helps speed up ship and cargo movements. Customs clearance of goods has also been linked to a computer system making quicker clearance of cargo. The Port also has a sophisticated psycho-technical unit for personnel selection. Special psycho-technical equipment enables a proper assessment of the reflexes and complex reactions of persons to be selected for operation of port equipment and to eliminate those with accident prone tendencies. The personnel so selected are subjected to periodic psycho-technical tests so as to decide on their continuance in their respective jobs.

Another novel feature of the Port is the thrust given by the Port Authority in developing a major industrial zone around the Port. The Port has a vast industrial zone spread over an area of 8,000 hectares where a large number of port-related industries have been set up. Free trade warehouses put by the Port help international marketing.

In the area of privatization of port facilities, French Ports have generally been following a cautious approach. Although three container terminals are being operated by private agencies in the Port of Le Havre, the entire infrastructure has been provided by the Port. Private participation is largely limited to operations using dockers from conventional dockers pools although the private agencies concerned do provide smaller equipment like fork lifts and straddle carriers.

The Course was guided by personnel drawn from French institutions as well as international organizations such as the World Bank and the International Maritime Organization.

International Maritime Information **WORLD PORT NEWS**

OAS: Training on Port Administration Vital

"Port administration and organization" is identified as the number one training priority among ports in Latin America and the Caribbean region in a report just released by the Organization of American States (OAS) in cooperation with the U.S. Maritime Administration's Office of Port and Intermodal Development. The report, prepared by PREINVEST, Inc., of Bethesda, Maryland, outlines a recommended port training program for senior and mid-level port professionals from OAS member countries based on a survey of port training needs for the period 1988-1992. The survey of 31 port authorities and related agencies in 24 countries elicited a 60 percent response rate.

A complete ranking of port training priorities derived from the survey is as follows:

- 1 Port Administration and Organization
- 2 Terminal Operations—Containers and Ro/Ro
- 3 Safety (Equipment, Personnel & Hazardous Cargo)
- 4 Port Equipment
- 5 Management Information Systems
- 6 Terminal Operations—Breakbulk General Cargo
- 7 Port Facilities Maintenance
- 8 Terminal Operations—Bulk Cargo
- 9 Strategic Planning
- 10 Physical Planning

OAS plans to use the report's recommendations as the basis for an expanded training program to be implemented for member states through its Permanent Technical Committee on Ports. OAS now conducts one-week technical seminars for member countries on port safety and security, with technical assistance and coordination from the Maritime Administration.

(AAPA Advisory)

Vapour Control Systems

(Paper submitted to the Maritime Safety Committee of IMO by the United States)

1. Control of vapour emissions given off in the loading and ballasting of tankships and tank barges is presently being considered in the United States. The purpose for controlling these emissions may be either to reduce the amounts of volatile organic compounds released to the atmosphere in order to improve air quality or to reduce personnel exposure to substances such as benzene which are known carcinogens. In the United States, the decision to control marine vapour emissions for air quality reasons rests with regional air quality districts. At present it is anticipated that only vessels loading oil and gasoline will be impacted by such requirements. However, research studies conducted by the United States Coast Guard have shown that overexposure to carcinogenic and other toxic cargoes are occurring during certain operations. Industry will have the option of choosing engineering controls such as a vapour control system or operational controls such as respiratory protection equipment in order to meet the exposure levels set.

2. In studying the risks associated with vapour control, certain potential safety hazards have been identified. The three main hazards are fire and explosion, tank rupture due to overpressure and underpressure and spills. Based on recommendations of a Coast Guard funded National Research Council Marine Board Committee on Control and Recovery of Hydrocarbons Vapors from Ships and Barges, the Coast Guard is proceeding with the development of national safety re-

quirements applying to ships and waterfront facilities engaged in marine vapour control. We are striving to complete these regulations by February 1990.

3. Due to the manner in which requirements for vapour control will be applied and the nature of the United States bulk liquid trade, initial requirements for vapour control are at this time expected to have a minimal impact on foreign ships coming to the United States. However, we believe that before requirements for vapour control become more widespread, it is appropriate to begin developing international standards for vapour control. We, therefore, recommend that this issue be placed on the IMO agenda. There are aspects of this work that pertain to both the Sub-Committees on Bulk Chemicals and Fire Protection. The United States recommends that the Sub-Committee on Bulk Chemicals be tasked as the lead Sub-Committee on this item. We would envision that this item would be considered by a working group under the Sub-Committee on Bulk Chemicals and that experts from the Sub-Committee on Fire Protection would be invited to participate. The Sub-Committee on Fire Protection would be kept informed of the progress made and invited to provide comments as appropriate.

2 New-generation APL Ships Christened

American President Lines (APL) on April 15 christened two giant, fuel-efficient container-carrying ships of a radically new design, the first of five that will be phased into the company's Pacific Basin cargo distribution system this year. The C10-class vessels, each capable of carrying the equivalent of 4,300 twenty-foot containers, have an efficient new "wide-body" hull design and are propelled at a fast 24 knots

by the largest, most powerful diesel engines ever built.

Mr. Bruce Seaton, chairman of California-based American President Companies (APC), APL's parent organization, said the C10s will become a key component in the company's complex land and sea distribution system. Designed to meet the "just-in-time" delivery requirements of manufacturers and retailers in North America and Asia, this system includes fast container ships, trucks and the largest network of double-stack container trains in North America.

The new ships are named after U.S. presidents, continuing a longstanding APL tradition. During a ceremony in Kiel, Hannelore Kohl, wife of West German Chancellor Helmut Kohl, christened the *M.V. President Kennedy*. The *M.V. President Truman* was christened by Joyce Seaton, Bruce Seaton's wife.

The C10 ships are the first contain-

er-carrying vessels to have a "post-Panamax" beam, meaning their width exceeds the limitations of the Panama Canal. As with the development of wide-bodied aircraft, the increased capacity and efficiency requirements for these vessels led to the new design concept. APL President Timothy J. Rhein said the company's focus on the Pacific Basin and Indian Ocean regions, coupled with American President's extensive intermodal (rail and truck) service to the midwestern and eastern regions of North America, made it possible to design ships unconstrained by the canal's dimensions.

"These are the first ships to be designed specifically for trans-Pacific service," Rhein said. "By removing the limitation on the ships' beam (width), we were able to significantly increase their capacity, while optimizing their speed, fuel efficiency, and stability."

The 129-foot beam makes it possible to load containers 12 rows across, below

deck, and 16 rows across, above deck, compared with a maximum of 10 rows below deck and 13 rows above deck for ships of a traditional "Panamax" design. The greater stability achieved as a result of the wide beam also enables APL to stack containers five-high above deck, while eliminating the need to carry excessive water ballast during trans-Pacific voyages — a drag on vessel performance. It also means the ships can be loaded and unloaded more quickly, because containers can be stowed on the basis of logistical efficiency, with less regard for weight.

Each C10 is propelled by a 57,000 horsepower, 12-cylinder diesel engine — the most powerful internal combustion engine ever built. Designed by Sulzer of Switzerland, and manufactured in Korea, these power plants meet APL's high service-speed requirement with a single propeller, eliminating the need for less fuel-efficient twin-propulsion systems.

World VTS Guide

Circular letter from Captain F.F. Weeks, SEASPEAK (Ref. 6-3/5/A)

Dear Sir,

World VTS Guide

1. Following prolonged technical discussions between the three associations IALA, IAPH and IMPA and the publishers, Pergamon Press, you will no doubt be aware that a contract to produce the Guide has been signed.

2. This office has the task of producing all the diagrams and printed material necessary to construct the Guide, and we have now moved from the task of producing 'samples' to the production of the actual material ready for publication. The slight delay resulting from equipment delays is now over, and we are now fully ready to accept materials and information from your VTS Centre. If you have been kind enough to supply us with materials already, rest assured that is now being processed for the first edition of the Guide.

3. May we remind you of some of the salient features of the Guide. These are:

- 3.1 Entries are designed to be contained in a single high quality loose leaf binder, supplied to each participating ship upon returning registration slip.
- 3.2 Each pictorial page has a facing page of clearly presented information.
- 3.3 Correction is by page replacement.
- 3.4 The Guide removes the necessity for individual

Centres to issue their own guides, thereby saving money.

3.5 Information is supplied direct by the Centre (or its management) to us, in response to a detailed request.

3.6 Costings are low.

3.7 Format is fully compatible with eventual electronic display.

3.8 All symbols are to IHO standard, and format is as agreed by the joint IALA, IAPH, IMPA Technical Committee.

4. In accordance with the terms of the IALA, IAPH, IMPA/Pergamon contract:

4.1 Each participating VTS Centre will receive 2000 free sets of the entry relating to its area.

4.2 Further quantities will be provided at cost.

4.3 In the event that a VTS Centre requires an extra edition of one or more of the Guides in a language other than English, the VTS Centre will be responsible for providing all wording in the required language and Pergamon will provide the required quantity at cost.

4.4 Further quantities and/or updated versions will be provided at cost. That cost would be that involved in re-drafting, printing and circulating the page(s) concerned, and would be necessary only when major revisions take place.

4.5 Pergamon undertakes to consult annually VTS Centres about amendments to the Guides and furthermore to use its best endeavours to disseminate within three months of being notified by VTS Centres any substantial changes involving safety. This service is FREE.

4.6 Each free set relating to a VTS area will have enclosed a registration slip. This will enable each participating ship to receive a binder and updated versions of a VTS entry direct, that update having been produced

at the expense of the VTS Centre, as mentioned at 4.4.

In accordance with the letters received by you to date, the cost to you will be £1250 for the first double page (one page diagram, one page print) and £1000 for each subsequent double page (one page diagram, one page print).

In accordance with the terms of the contract, you will be asked to confirm that you agree to make the above mentioned payment when you approve the outline drafts of your entry. Payment will become due on delivery of your completed copy to you.

Many VTS Centres have already indicated their willingness to participate, and we hope that you are amongst these. The sequence is as follows:

- a) receipt of this letter by you
- b) despatch of information concerning your VTS by you to us
- c) completion of diagrams and information sheets by us, and despatch to you
- d) inspection and approval of format and contents by you
- e) return to us, for modification
- f) supply to graphics department to produce proper diagrams (NOT CHARTS)
- g) return to you of diagrams for final approval
- h) return to us for print readiness process
- i) print

and as amplified on the enclosed pro-forma. If you are already participating, we do assure you that your supplied documentation is being processed, after the delays mentioned at the beginning of this letter.

Whether you are already participating, or wish to participate, we ask that you complete the enclosed pro-forma, and return it to the above address as soon as possible. To achieve the maximum speed in this operation, we ask that you supply as much information as you can with your first reply. We shall be very pleased to assist should you have any queries.

Yours faithfully

Captain F F Weeks

WORLD VTS GUIDE

On behalf of the* Authority,
I agree to participate in the Guide YES/NO

I understand that charges and conditions are as contained in the letter Ref 6-3/5/A, and that I shall formally agree to confirm my willingness to pay the agreed sum on approval of draft entries by me YES/NO

I anticipate that my VTS Centre** double page will require entries to describe it adequately

I enclose charts and diagrams to describe the area of my VTS Centre

* Insert name of VTS Centre/Authority

** Insert number of double pages

NAME AND ADDRESS OF VTS CENTRE

Return to:

Captain Fred Weeks
Seaspeak Project
Institute of Marine Studies
Plymouth Polytechnic
Drake Circus
PLYMOUTH PL4 8AA
ENGLAND

WORLD VTS GUIDE

CALL FOR INFORMATION

In order to facilitate the production of the Guide in accordance with our letter of Ref 6-3/5/A, please supply the following information, at your earliest convenience.

1. Any existing plan showing the complete coverage of your VTS system, at such a scale that it will fill a page space 263 mm x 164 mm.

This plan need not show navigational detail, but should be capable of providing coastline and other major feature detail, and also of taking additional information as required.

2. Any existing plan originating from local navigational authority or Government source capable of being scaled to fit 263 x 164 mm.

3. Full details of the following, in written form, with the purpose of producing a page or pages:

- a) Pre-entry requirements. Time. Place. Format. Contents. (Please see Paragraph 6 for an extended explanation)
- b) Pilotage requirements. Optional and compulsory limits.
- c) Health requirements.
- d) Tankers and dangerous cargo.
- e) VHF requirements (watch times and frequencies (VHF channels)).
- f) Limits of Radar coverage.
- g) Locations of VTS Centres.
- h) Availability of Radar Assistance to Navigation.
- i) Main Fairway positions and directions.
- j) Permitted and prohibited anchorage areas.

4. Any other information which you regard as essential

for a "single sheet" entry for VTS Centre concerned.

Extended explanation: The minimum number of pages that a port or VTS centre may utilise is two. The two pages consist of one page of tabulated detail, and a one page diagram, both on A4 paper. The work is always arranged so that the written detail appears opposite the diagram of the area. This two-sheet combination constitutes a "single entry" in the VTS Guide.

5. Please specify how many pages are required for your VTS. To clarify, a "single entry" is a one page diagram and one page of information. This may not be sufficient for your needs.

Extended explanation: A large port area may need more than one diagram to adequately illustrate the amount of detail required. Similarly, precise detail of anchorages may not be appropriate on a sea-approaches diagram.

Any port or VTS may choose to have more than the minimum single diagram, and, if necessary, help will willingly be given in making this choice.

Similarly, extra pages of written information may be required, and this also can be arranged. However, we advise that diagrams are far more efficient than text in transmitting essential information.

6. Paragraph 3 (a) Pre-entry requirements. Time. Place. Format. Contents.

Extended Explanation: Pre-entry requirements: The information required by the Port or VTS before a ship enters the operational area of the system.

Time: The time at which the information is required.

This will normally be specified as a number of hours before the ship is due at the port or VTS. For example: "24 hours before arrival".

Place: The place at which the information is required (as an alternative to time). This may be specified as a distance off a boundary, or close to a specific point. For example: "Two miles before arrival, eastbound, at a line joining Cape Trafalgar and Cape Espartel" or "At arrival at U2 buoy".

Format: The type of message presentation preferred by the port or VTS. For example: "IMO standard reporting system".

Contents: The precise information required by the port or VTS. For example: "IMO Standard Reporting System items A, B, C, O, P."

7. In explanation of items 1 and 2 in this letter. It is obvious that any plan must be of a suitable scale, and that large reductions or increases in scale must increase the work involved. Your co-operation would be appreciated.

Captain F F Weeks

World VTS Guide

The Americas

Québec Maximum Draft Increased to 15.5 Meters

The Corporation of Lower St. Lawrence Pilots has officially increased the maximum draft for vessels navigating on the St. Lawrence River's North Channel, leading to the Port of Québec, from 15 to 15.5 meters and possibly more during high or "spring" tides.

The North Channel, located east of Orleans Island downstream from Québec City, is the only stretch of the river between the Port and the Atlantic Ocean where shipping is subject to draft restrictions.

According to Mr. Jean-Yves Roy, President of the pilot's corporation, "our experience with the growing number of deep-draft vessels which call at the Port of Québec enables us to make these modifications while maintaining the highest standards of safety and efficiency."

The South Korean ore carrier *Daeyang Honey* was allowed to sail through the North Channel in August of 1987 with a draft of 15.65 meters. The ship delivered its cargo of 118,000 tonnes of iron ore to the Beauport solid

bulk terminal without difficulty, thanks to the expertise of the two pilots on board. "This trial run was conclusive," adds Mr. Roy.

A deeper draft for vessels on the approach channel to Québec is very good news for port officials. Deep water is a key aspect of the Port of Québec's marketing program, since freight rates decline as more cargo is loaded per vessel. A bulk carrier such as the *Daeyang Honey* loads 100 tonnes of cargo for every extra centimeter of draft. When the pilots confirmed that .65 meters could be added to the depth of the ship below the waterline, the *Daeyang Honey* was able to carry 6,500 additional tonnes of iron ore to the Port of Québec.

"The potential for handling bulk commodities at the Port of Québec is obviously considerable and we will do everything possible to contribute to the deep water advantage we have here," says Mr. Jean-Yves Roy.

Bay Area Group Wants Computerized Links

Computerized links with U.S. Customs' data banks can increase productivity and efficiency at Bay Area sea and airports, help them offer better service to shipping and air carriers, and

improve the Bay Area's competitiveness with southern California and the Pacific Northwest.

The Bay Area foreign trade community—importers, exporters, freight forwarders, customs house brokers and others—wants such capability and is willing to pay for it.

These are among the conclusions of a year-long study released recently by the Golden Gate Ports Association (GGPA). The \$152,000 study was funded jointly by the GGPA, consisting of the port authorities of Oakland, Redwood City, Richmond, San Francisco, Sacramento and Stockton, and the U.S. Maritime Administration (MarAd). It was conducted by the research arm of Price Waterhouse, the national accounting firm. The study is the first attempt by a regional ports group and the Federal government to cooperatively address Customs processing issues, according to Mr. Alexander Krygsman, executive director of the Port of Stockton and GGPA president.

Other key findings of the study are:

The Bay Area trade community is highly automated. More than 89 percent of the firms polled in the study use computers. Half of those computers are mainframes, and more than half are at the respondents' sites.

Since most customs house brokers,

importers and related organizations already use some form of automated broker interface (ABI), there is little demand in the trade community for that feature in a new, port-based Customs release system.

Features of a release system highly favored by the trade community include: access to Customs' automated manifest system (AMS); cargo status reporting; vessel schedule reporting; ability to communicate under electronic data interface (EDI) standards; and electronic mail.

These findings helped shape the conceptual design of the community cargo release system (CCRS) submitted by Price Waterhouse as part of the study. Named RACERS, for Regional Automated Cargo Expediting and Release System, the design is intended both as a blueprint for the Bay Area and as a generic model, available through MarAd, to other port regions in the U.S. Northern California was an ideal partner for MarAd in the project, said the GGPA's Krygsman, because the region's ports are specialized to handle a wide variety of cargoes. "Our ports, because they vary in size and operational characteristics, and are both operating and landlord agencies, represent a microcosm of the American port industry," Mr. Krygsman explained.

The GGPA soon will issue a request for proposal (RFP) to develop RACERS further, Mr. Krygsman said. Aims of the additional research are to test the market demand for key system functions, estimate costs more precisely and obtain commitments of support from the regional trade community.

The research will also survey major warehouse and distribution center operators and trucking companies in inland California as well as the Reno/Sparks, Nevada area to consider broadening the system's user base, Mr. Krygsman added, and export applications also may be explored.

This effort is expected to be completed by the fall of 1988, Mr. Krygsman said, with full development of the system to be under way as early as January 1989. Full-scale operation would occur by the spring of 1990. Oakland, as the port with the most extensive data processing experience, is expected to take a lead role in future system development, Mr. Krygsman noted.

Port of Long Beach Sets New Tonnage Records

A record 60.6 million metric revenue tons (MRTs) of cargo crossed the piers of the Port of Long Beach in calendar year 1987, the most total tonnage ever recorded at a West Coast port. This is a 2.6 percent increase over the same period last year.

Containerized cargo showed steady growth, increasing from 22,730,831 MRTs in 1986 to 23,802,678 MRTs in 1987. Of that total, outbound container cargo jumped an impressive 8.5 percent to 4,839,332 MRTs, indicative of the recent upsurge of U.S. exports to markets around the world. Meanwhile, inbound containerized cargo maintained a solid lead with 18,963,346 MRTs, an increase of 3.8 percent.

In terms of actual containers moved, the Port registered 1,460,287 TEUs (Twenty-foot Equivalent Units) during the 12-month period, up 4.7 percent over 1986's figure of 1,394,453 TEUs. Of these, 785,557 were inbound boxes and 674,730 were outbound. Outbound container counts gained 5.8 percent and

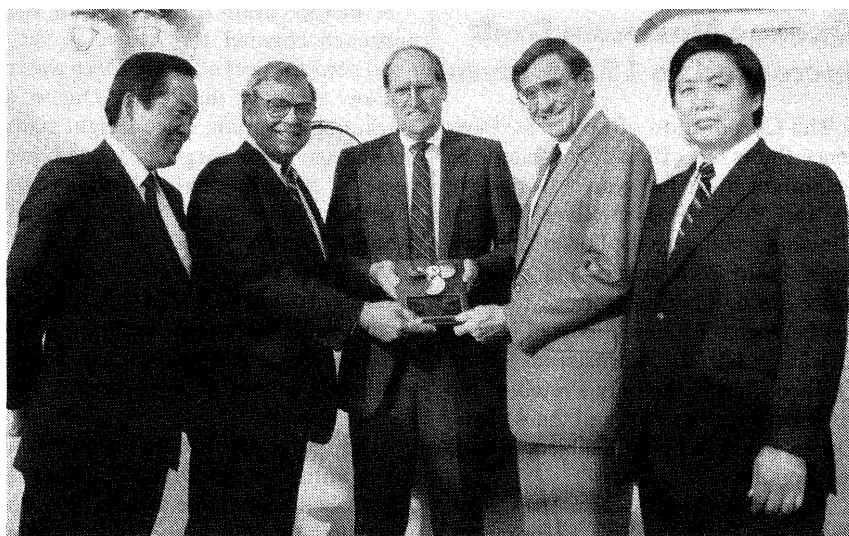
inbound 3.8 percent.

Shipments of general cargo through Long Beach, including containerized cargo, registered 22,494,076 MRTs inbound and 6,348,164 MRTs outbound for a record 28,842,240 MRT total, a 6.4 percent increase.

Petroleum and liquid bulk tonnage hit 18,797,831 MRTs inbound and 6,949,128 MRTs outbound for a 25,746,959 MRT total, virtually unchanged from 1986. Dry bulk cargo saw 4,409,611 MRTs exported via Long Beach while 1,597,247 MRTs entered the Port. Most of the dry bulk exported was petroleum coke and coal.

During 1987, 3,066 cargo vessels called at the Port's 65 deep water berths, while 1,582 more dropped anchor in Long Beach harbor to take on fuel, water, and supplies.

The Port of Long Beach continues to establish record tonnage statistics, as Pacific Rim nations such as Japan, Taiwan, Korea and Hong Kong increase trading activity with the United States. One of the world's 10 busiest container ports, Long Beach provides goods for Southern California and exports goods for the world.



100TH BULK CEMENT SHIPMENT ARRIVES AT PACIFIC COAST CEMENT TERMINAL IN LONG BEACH — Officials of Pacific Coast Cement Corporation recently reached a milestone in the 6 1/2-year history of their dry bulk cement import terminal in the Port of Long Beach with arrival of the *M.V. Radiant Venture*, the 100th vessel to call at the Pier D facility. Demand for finished cement is currently high in Southern California and the terminal is now receiving 25 ships a year, with Korea, Japan and France being the chief suppliers. Pictured at Port presentation ceremonies aboard are, from left, Mr. K.M. Ahn, Manager of Ssangyong (U.S.A.), Inc.; Pacific Coast Cement President John W. Sweetland; Mr. Paul E. Brown, Acting Port Executive Director; Pacific Coast Cement Board Chairman Lawrence J. Ramer and Mr. Shigetaka Mori, General Manager of Dry Cargo Operation for Sanko Steamship Co., Ltd. in Tokyo.

Baltimore Handled 24,932,000 Tons in 1987

An 11.6 percent fourth quarter increase in general cargo pushed Baltimore's yearend 1987 foreign waterborne commerce volume to 24,932,000 tons. This portwide quarterly increase followed a six-month period of general cargo gains at marine terminals controlled by the Maryland Port Administration and enabled Baltimore to keep pace with the 24,976,000 tons of foreign trade it handled in 1986.

During the fourth quarter, Baltimore handled 1,338,896 tons of general cargo. It handled just 1,199,245 tons for the same period in 1986. This increase brought the port's yearend general cargo volume to 5,215,767 tons, a virtual replay of the 5,229,090 tons handled in 1986.

"The Port of Baltimore proved its ability to attract and keep cargo in 1987," said Mr. David A. Wagner, Executive Director of the Maryland Port Administration. "The statistics confirm the fact that Baltimore's cargo base is solid. It is a base that is not easily eroded by competitor ports."

Baltimore's cargo performance in 1987 was supported by a substantial general cargo gain at MPA marine terminals during the second half of the year, an increase that has continued into 1988. General cargo handled by MPA facilities reached 3,790,375 tons for the period July 1987 through February 1988. This was a 5.3 percent jump over the 3,598,714 tons of general cargo handled by these marine terminals for the same period the previous year.

"There can be no disputing the fact that the Port of Baltimore is entering 1988 on an upswing," said Mr. Wagner.

"We are in a strong position to begin to mark long-term cargo growth."

Import automobile cargo remained a leading commodity for Baltimore in 1987. The port handled a record 441,635 vehicles for the year. This was an 8.9 percent jump over the 405,550 foreign cars that were handled by the port in 1986. Of the yearend 1987 import car volume, a total of 338,329 vehicles were unloaded at the MPA's Dundalk Marine Terminal. The remainder were unloaded at privately owned facilities — the Chesapeake Terminal and the Atlantic Terminal.

"Baltimore should feel proud about its ability to continue to attract record import automobile cargo volumes," Mr. Wagner said. "Import cars are labor intensive cargoes. Our port's success in this area speaks well for our longshoremen. They are the people whose commitment to damage free vehicle-handling is the criteria by which foreign car manufacturers judge our port."

General Cargo Trade Declines at NY&NJ

After three consecutive years of record volumes, foreign oceanborne general cargo handled at the Port of New York and New Jersey has finally ebbed, Port Authority Chairman Philip D. Kaltenbacher reported in an analysis of foreign trade for 1987 released recently by the bi-state agency.

Foreign oceanborne general cargo trade retreated from the record highs of 1984, 1985 and 1986, reaching 13,046,335 long tons, down 6.1 percent from the all-time high of 1986. However, the value of this cargo remained steady at \$44.6 billion, the same as the

preceding year, which itself was a record.

Both general cargo imports and exports sustained losses. Imports declined 6.9 percent to 10,304,025 long tons, accounting for 79 percent of the Port's total general cargo. General cargo exports were down 2.6 percent to 2,742,310 long tons, accounting for 21 percent.

"All things considered, our imports held up remarkably well in 1987," said Chairman Kaltenbacher. "The topping out of this Port's six-year cyclical rise in general cargo imports reflects the continuing impact of the dollar's decline as well as a slowdown in regional consumer spending."

"Import prices rose significantly in 1987 after a period during which foreign suppliers accepted reduced profit margins rather than raise prices," he stated.

Comparatively, the Port's general cargo loss exceeded the North Atlantic Ports' 0.8 percent decline and trailed the 5.2 percent United States ports collective gain. As a result this Port's share of North Atlantic oceanborne general cargo trade slipped to 42.6 percent, while its share of United States foreign trade dipped to 9.4 percent in 1987.

Europe remained this Port's leading general cargo trading partner accounting for a 40.2 percent share, the Far East was second with 32.0 percent and South America a distant third with 12.6 percent.

Chairman Kaltenbacher further noted that the New York/New Jersey Port handled a total of 53.8 million long tons of oceanborne foreign trade, general and bulk cargo, a slippage of 5.7 percent from the previous year

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NY&NJ Committed to Preserving Its Position

The Port of New York and New Jersey is the primary load center of the North Atlantic—a position it must fight to keep. Seaports as far south as Miami and as far north as Montreal continue to invest millions in hopes of siphoning off portions of this port's shipping. West Coast ports seek to attract Asian cargoes bound for the Northeast United States.

Facts of contemporary maritime competition include the volatility of the shipping industry and the increased size and capacity of modern containerships, which any major port must accommodate efficiently and economically to stay in business.

Last year saw increasing cooperation between the Port Authority, the industry and labor to meet these competitive challenges. The stakes to be defended in this port are high: well over \$14 billion annually in economic activity and nearly 200,000 port industry-related jobs throughout the bistate area.

The Port Authority, fully committed to preserving the port's preeminent position in the maritime world, plans to spend more than \$500 million by the year 1991 on port commerce projects. Significant construction progress was made during 1987:

- Capital expenditures in the amount of \$76 million for port improvements went into three key accomplishments — the inauguration of channel deepening in the harbor, the start of work on one new marine terminal, and the opening of a second new terminal.

- After a long fight to win Congressional authorization, Phase I of a \$145 million Port Authority/U.S. Army Corps of Engineers program to deepen from 35 to 40 feet the port's major shipping channels got under way in midsummer with the start of channel dredging in the Kill Van Kull and Newark Bay. Plans include a later phase involving Howland Hook Marine Terminal on Staten Island. For the first time in history, local port agencies must share the cost; the Port Authority's share of current NY-NJ Port dredging project costs is \$50.8 million, or 35 percent.

- The groundbreaking was held in September for a \$31 million automobile

Marine Terminals		
	1987	1986
All Terminals		
Ship Arrivals	3,282	3,587
General Cargo		
(Long Tons)	18,656,399	21,170,115
Passengers	392,414	407,355
New Jersey Marine Terminals		
Ship Arrivals	2,638	2,748
General Cargo		
(Long Tons)	17,867,145	18,182,272
New York Marine Terminals		
Ship Arrivals	446	588
General Cargo		
(Long Tons)	789,254	2,987,843
Passenger Ship Terminals		
Ship Arrivals	198	251
Passengers	392,414	407,355
Cumulative PA Investment In Marine Terminals		
(In Thousands)	\$772,900	\$702,300

importing and processing facility at the Port Authority-owned Port Jersey and Greenville site on the Jersey City-Bayonne waterfront. The new 145-acre Port Authority Auto Marine Terminal, built to handle some 300,000 autos a year, will strengthen the port's competitive position in the growing market for vehicle imports.

- The Port Authority's Fishport at the Brooklyn waterfront's Erie Basin opened its newly completed fish-handling hall and auction room and held its first fresh fish display auction in December. A potentially job-intensive business, Fishport is an important development for the Brooklyn waterfront; it provides the opportunity for commercial fishing vessels to return to New York City for the first time in a quarter of a century.

- Two veteran Elizabeth-Port Authority Marine Terminal tenants — Atlantic Container Line and Maher Terminals, Inc. — renewed their long-standing commitments to the port with new long-term leases that included major upgrading of their facilities. Atlantic Container Line's new 13-year lease includes its agreement to make substantial improvements to its terminal while the Port Authority undertakes general terminal modernization improvements. Under terms of Maher's new 25-year lease for more than 200 acres at its Fleet Street Terminal, this major terminal operator and the Port Authority have committed to creating

a state-of-the-art container terminal complete with new cranes, deeper wharves, and facilities that meet the needs of the port well into the twenty-first century.

(Comprehensive Annual Financial Report 1987, The Port Authority of NY & NJ)

Historic Alber's Mill Buildings Demolished

The historic Alber's Milling Company buildings, landmarks on the Oakland waterfront since 1918, are being leveled to make way for a \$40 million, 38-acre state-of-the-art shipping terminal. Demolition of the huge 300,000 square foot main building and the silo began on April 6.

Located at the corner of Seventh and Terminal streets, the multi-story structures originally were built to process and store cereal grains arriving in Oakland from the Middle West. The main building was built in 1918 and the silo in 1940.

When Alber's went out of business, the site was taken over by the Carnation Company, manufacturers of dog and cat food. Three years ago, when Carnation consolidated its operations, the main building's office was taken over as temporary quarters for the United States Customs Service.

Now the property will become a modern marine terminal, helping meet the expansion demands of Pacific Rim shipping for the Port of Oakland. Present plans call for the rerouting of Seventh street to the southern extremity of the parcel and for construction of two new berths along some 900 feet of waterfront.

Two 100-foot, 30.48-meter gauge container cranes are scheduled to be located on the terminal when it is placed in service early in the 1990s. The configuration of the site allows for flexibility and for the use of alternative container handling systems. The terminal also has the potential for an on-site intermodal container transfer facility.

The new Carnation Terminal will mean, for the first time, a continuous container terminal capability for the entire Oakland Outer Harbor waterfront. The Carnation/Alber's Mill site was the only Outer Harbor site not

devoted to maritime use.

Development of the new terminal is part of a marketing strategy of the Port of Oakland that envisions the doubling of its container volume by the year 2000.

In that context, the Port recently purchased two huge post-Panamax cranes, with a reach of 150-feet and as tall as a seven-story building. Three more of the giant cranes, designed to service the largest container ships in the world, are being installed by American President Lines at their Oakland Terminal.

Additionally, APL, the Port of Oakland and the Union Pacific Railroad are each investing \$5 million in a joint venture to expand 30 tunnels through the Sierra so they can handle the largest double-stack train loads.

The Port is leasing 120 acres of land from the Oakland Naval Supply Center, adjacent to the Union Pacific tracks, to improve rail intermodal capability and to expand warehousing capacity.

Also, the Port is deepening both the Inner Harbor and Outer Harbor channels from 35 to 42 feet in order to accommodate 950-foot-long container ships that are currently under construction.

Harbor Deepening at Charleston Benefits All

(Reprinted from Port News, Port of Charleston)

By W. Don Welch

Executive Director

Let's consider the importance of the Port of Charleston to the South Carolina economy.

In calendar year 1986, the total value of general cargo trade through the Port of Charleston was \$8.0 billion. This cargo moved on more than 1,400 vessels to and from approximately 109 foreign countries. Roughly, 30 percent of it originated or terminated in the State of South Carolina.

Each dot on the map right illustrates one of the nearly 500 state manufacturing firms who regularly import and export through the Port of Charleston. Combined, these firms employ over 115,000 workers. This only begins to explain the significant impact which the Port's operations have on the entire state's economy.

Without a viable port system, the state's manufacturing firms and shippers would be forced to use alternative ports outside the state at higher transportation costs because of greater inland distances of cargo movement.

These cost increases would be passed on to customers in the form of higher prices for imported goods and for domestic goods produced with imported materials. State manufacturers would find their export goods to be less competitive in foreign markets because of higher transportation costs. These firms save an estimated \$40 million-plus, per year, in overland transportation costs by shipping through state ports.

In order to increase and even maintain our market share, the ports must respond to the demands of the lines for more efficient and productive facilities. One of the major demands, at Charleston, is for a deeper harbor because current channel depths are no longer adequate to handle the new generation of large deep-draft container vessels which are serving the world's trade routes. The trend toward ships with deeper drafts will continue.

In November 1986, President Reagan signed into law the Water Resources Development Act of 1986 — the first water resources measure to receive Congressional and Administrative approval in over a decade.

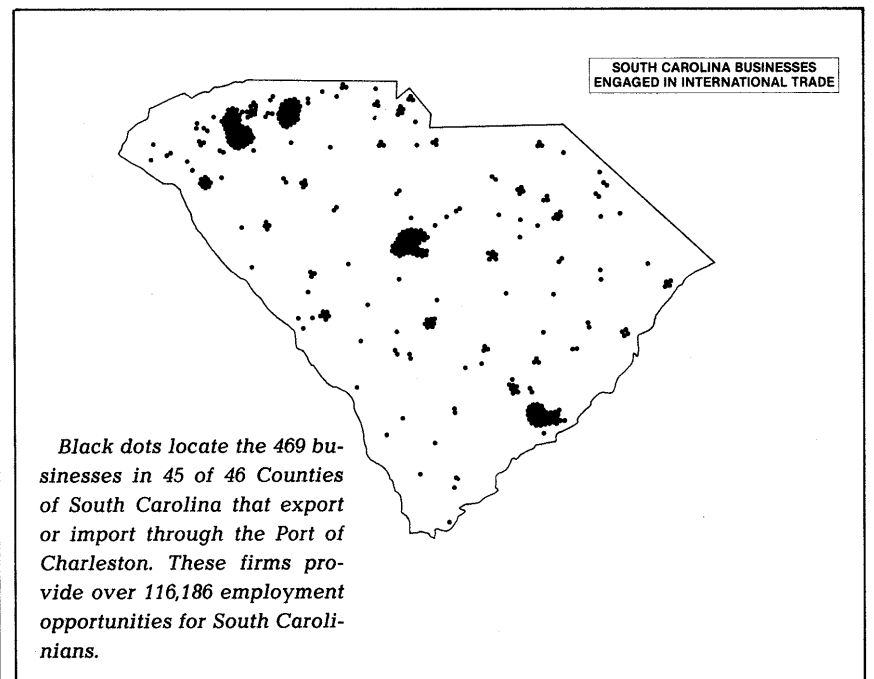
Through this act, South Carolina

was authorized to deepen the shipping channel from 35 to 40 feet. The approval of this much-needed and long-sought-after improvements has been somewhat overshadowed, however, by the realization that the local share (of the total estimated project cost of over \$115 million) would be approximately \$40 million over the next eight years.

For most port-projects in the United States, state funds are being provided to cover the non-federal cost sharing requirement.

Why should the state cover the cost of the harbor deepening? The beneficiaries of the harbor deepening project, including the many maritime businesses and port-using industries throughout the state; the variety of private terminal operators located along the Cooper River; Charleston's large U.S. Navy contingent; and, in general, the citizens of South Carolina.

While more than 1,400 commercial vessels come into the State Ports Authority's terminals annually, the Navy accounts for at least 925 additional vessel calls in Charleston. Also, activity at the 11 private terminals operated by the oil companies, by Westvaco, et al, amounts to 200 to 300 vessels per year. Each of these private terminals fills a specialized need and directly supports a South Carolina industry. All of these interests require a well-maintained harbor and channel for their operations.



Container Crane Added At Columbus Terminal

A 40-long-ton container crane is being added at the Port of Charleston's Columbus Street Terminal. It is the Port's 11th container crane and the third at that terminal.

The \$1.2 million crane is the second Paceco container crane to be installed at the terminal. It stands 131'10" tall and has a height of 82'2" under the spreader, an outreach of 118'6" and backreach of 58'7". It has a lift speed of 160 FPM (feet per minute) under full load, 385 FPM empty.

Installation of the crane was preceded at Columbus Street Terminal by an extension of the terminal's container crane rails into the Berth II area, and by installing shoreside electrical power to augment that of the crane's built-in diesel generator.

Columbus Street Terminal, the seaport's only facility handling both breakbulk and containerized freight, currently processes an estimated 19 percent (495,725 tons) of the Port of Charleston's total annual container traffic.

Now the busiest container port in the U.S. South Atlantic seaport range, the Port of Charleston is constantly expanding its container facilities to stay ahead of demand.

Mr. Failor Elected AAPA Chairman

Mr. Gary L. Failor, general manager and seaport director for the Toledo-Lucas County Port Authority, was elected to serve as chairman of the board of the American Association of Port Authorities (AAPA) for the 1988-89 activity year.

Mr. Failor was elected during the Spring Conference meeting of the association's Board of Directors in Washington, D.C. He will assume the chairmanship this fall at the organization's annual convention which will be held in San Francisco, California, September 11-15.

The AAPA represents virtually all of the United States port authorities, as well as the major port agencies of Canada, South America, Central America, and the Caribbean.

Africa/Europe

Rotterdam Management: 900 Million Guilders For Improving Service

(Reprinted from "Rotterdam Europort Delta")

The Rotterdam Municipal Port Management will be investing almost 900 million guilders in the development of the port of Rotterdam in the period up to the end of 1992. A major part of this money is earmarked for experimental initiatives aimed at improving the service to customers. "More important than the size of the sums involved is the fact that the plans are a reflection of a new mentality," says Mr. Henk Molenaar, director of the Port Management. "Our customers demand that the port should be a world concern, and that we should have control of the entire transport chain, from producer to receiver, in whatever part of the world they may be."

The Port Management's plans are the outcome of years of thought and consultation. As Mr. Molenaar explains, "The original stimulus came from Professor Poeth and Professor Van Dongen in the early eighties. They worked out the way that international transport would develop, and warned us to watch our step. That set us thinking. Two reports were issued, one by the Albada Committee and one by the Rotterdam Urban Development Subcommittee. What we have done is to put flesh on the bones of the ideas contained in these reports. In this pattern, we also see a clear reflection of the spirit of the times. There has been a shift away from strengthening the weak towards strengthening the already strong. The port of Rotterdam is a strong factor in the Dutch economy, and we want to exploit the strongest aspects of the port in order to consolidate our position in the world even further."

Infrastructure

Improvement of the infrastructure is an essential part of this. Existing bottlenecks, whether on the roads, on the waterways, in the air or in pipelines,

must be eliminated. The city cannot do this alone. Outside the city limits, it requires the cooperation of the national government, both financial and in terms of policy. Collaboration with outside parties is a must in the overall investment picture. This is, for example, the case when it comes to planning more extensive use of the railways. In future, Rotterdam must become more important as a railhead port. This can be done by introducing unit trains to such destinations as Austria, Switzerland and Southern Germany. They would mean a speeding up of container transport. Another idea aimed at making Rotterdam more attractive as a railhead port is the transport of 100-tonne axle loads by rail (100 tonnes of cargo per wagon). This would mean that Rotterdam, which is already the major port for the German steel industry, could offer bulk cargo customers a second cheap system alongside push barges. Firms which are not accessible by boat could then opt for Rotterdam as the port of entry. In order to realise these plans, it is necessary to work together with the railways at home and abroad, and with the business community.

Information Technology

Telecommunications and the electronic processing of data are essential components of the infrastructure of the port. It is not for nothing that telecommunications is called the fifth transport channel. It makes it possible to deliver goods to the addressee's door at exactly the right time. The tremendous advantages this has in terms of container transport, for example, are obvious. Every year, three million containers (TEUs) pass through the port. 30 percent of all Japanese containers and 43 percent of the USA containers destined for the Northwest European market go through Rotterdam. This is a huge volume, but it is by no means assembly line work. Many customers want made-to-measure service, efficient, accurate, fast and affordable. Thanks, among other things, to a sound approach to information technology, Rotterdam can deliver.

The International Transport Information System INTIS plays an important role here. More than fifty companies are linked to the system, which has now been operational for

about a year. It is a definite hit. Other new initiatives are currently being developed in Teleport in collaboration with PTT Telecommunications. At the moment, for example, the possibility of applying modern electronics to Rhine traffic is being studied. If this goes through, supplies to the hinterland via Rotterdam will be so precisely controlled that you will be able to set your watch by them. This regulating role lends a whole new dimension to port operations.

If a port is in a position to exercise perfect control over distribution, it can also offer ancillary services goods assembly, for instance. In the future, the image of the port will be defined in part by distribution parks, where assembly companies, among others, will be located. From the same standpoint, there is a need to provide a stimulus to finishing and refining industries. In Rotterdam this sector already plays a major role in the petrochemicals industry, where petrol is refined from crude oil. But it could also be of value in the grain sector (bread). And what is to stop a timber port from producing newsprint?

Agri-port

Another facet is the significance the port could acquire as an agri-port. The Netherlands is world-famous for its agriculture. Dutch knowledge and expertise is called upon to set up agricultural and horticultural projects all over the world. Dutch produce is eaten everywhere. Just a stone's throw from Rotterdam is the Westland, a market garden region which is very export-oriented. It goes without saying that the port plays a role here. But this role could become much more important. The transit volume of horticultural produce is increasing. Within the foreseeable future Rotterdam, which already occupies a strong position in the transit of so-called "agri-bulk," will become an international service center in the transport of fruit and vegetables, both on the import and export side. This will primarily be due to the quality of the services it can offer. High-grade storage facilities and stock control are absolutely essential for these often vulnerable products. This is true of Dutch and foreign fruit and vegetables alike. The authorities want to stimulate activities which promote quality and

Investments up to end of 1992

Gen. facilities	Dfl. 240M	27.5%
Gen. Nautical	Dfl. 36M	4.1%
<hr/>		
Total General	Dfl. 276M	31.6%
Branch unit full container	Dfl. 120M	13.8%
Branch unit other general cargo	Dfl. 220M	25.2%
Branch unit coal and ore	Dfl. 100M	11.5%
Branch unit grain	—	—
Branch unit other dry bulk cargo	—	—
Branch unit crude oil	Dfl. 56M	6.4%
Branch unit other liquid bulk cargo	—	—
<hr/>		
Total branch units	Dfl. 496M	56.9%
Information technology	Dfl. 100M	11.5%
<hr/>		
	Dfl. 872M	100%
=====		

service: a fruit centre, the auction, specialised storage facilities, packing, wholesaling, distribution.

Anyone who invests in the future must also be very aware of the quality of life and the environment. Rotterdam is therefore investing many millions of guilders in the Rhine clean-up project. As we all know, the viability of the river and the North Sea is under threat from pollution caused by the dumping of waste materials. Rotterdam

is confronted with the enormous problem of disposing of ten million cubic metres of polluted silt every year. A solution has been provided in the medium term with the construction of the Slufter depot. The estimates are that it will be full by 2002. And then what? Then the Rhine must be clean. Then the pollution must have been stopped at the source. This is of vital importance to future generations, and Rotterdam wants to make its contribution.



New Linkspan in Service at Southampton

The new linkspan bridge at Berth 25 in Southampton's Empress Dock is now fully operational. The new facility will service the port's growing business in roll-on/roll-off traffic, particularly the import and export of new vehicles.

Ford has been taking advantage of the additional ro/ro handling capability and has recently increased the number of motor cars it imports through Southampton. The recent discharge of 620 Spanish-built Ford Fiestas from the *Jarama* inaugurated the new roll-on/roll-off facility, completed in March at a total cost of £750,000.

The high capacity linkspan bridge is capable of handling large ro/ro ships and will improve ship working flexibility in an area where ABP's policy is to secure further port business.

Southampton's port director, Dennis Noddings stated:

"Roll-on/roll-off trade is a particular target area for new business at Southampton, and major capital investment by ABP fully demonstrates confidence in the port's great potential."

ABP Holdings: 46% Up In Pre-tax Profits

Port services and property activities contributed in equal shares to Associated British Ports Holdings' £38.1 million pre-tax profit for the year ended 31st December 1987 — a 46% increase on the previous year's profit of £26.0 million.

Profits from the Company's port operations amounted to £19.3 million after severance costs of £6.0 million. Property activities also contributed £19.3 million. Earnings per share increased from 22.4p to 29.6p.

The severance costs reflect the Company's progress in reducing manpower levels. These have fallen during 1987 from 6,252 staff to 5,809.

The Directors are recommending a final dividend of 5.0p per share which, together with the interim dividend of 2.5p per share declared on 10th September 1987, makes a total of 7.5p net per share in respect of 1987, an increase of 25% on the 1986 dividend of 6.0p per share.

In his statement on the results, the Chairman, Sir Keith Stuart, comments: "I am pleased to report a highly successful year for the Company which has seen continued growth in

the port operating sector of the business and a dramatic increase in the contribution to profits from property development."

ABP's 19 ports handled a record total of 90 million tonnes of cargo during the year.

Since the end of the year, the Company has expanded its port interests by the acquisition of the main operating companies at the ports of Teignmouth and Colchester — The Teignmouth Quay Company Ltd and the Colchester Dock Transit Company Ltd.

On prospects for 1988, Sir Keith comments:

"The year 1988 has started well for the Company, and there is no evidence of any adverse change, arising from the recent problems of world financial markets, in the ports or property sectors in which we are operating. While it would be unrealistic to expect that the rate of increase in profits seen in 1987 can be repeated in 1988, there are good prospects of a further useful improvement in our overall financial performance during the current year."

Associated British Ports Holdings PLC and Subsidiaries Preliminary Announcement of Results for the Year ended 31st December 1987

	Notes	1987 £m	1986 £m
Turnover	1	196.7	157.1
Profit before interest and taxation	2 & 3	39.0	26.8
Interest payable (net)		(0.9)	(0.8)
Profit on ordinary activities before taxation		38.1	26.0
Taxation		(12.3)	(7.9)
Profit on ordinary activities after taxation		25.8	18.1
Minority interests		—	0.1
Profit attributable to shareholders		25.8	18.2
Dividends	4	(6.6)	(5.1)
Retained profit transferred to reserves		19.2	13.1
Earnings per share		29.6p	22.4p

ANALYSIS BY ACTIVITY

	Turnover		Profit before interest and taxation	
	1987 £m	1986 £m	1987 £m	1986 £m
Port Services	158.1	150.6	19.3	20.3
Property	37.8	6.2	19.3	6.4
Other	0.8	0.3	0.4	0.1
	196.7	157.1	39.0	26.8

NOTES

1. Turnover for 1986 has been restated to include the amount relating to the property activity.
2. The Group's profit before interest and tax includes a consolidated profit of L13.4m for Grosvenor Square Properties Group and its subsidiaries for the period from the date of acquisition in January 1987.

	1987 £m	1986 £m
3. After voluntary severance	6.0	3.7
4. Interim dividend of 2.5p (1986 — 2.0p) per share Proposed final dividend of 5.0p (1986 — 4.0p) per share (payable 27th May 1988)	2.2 4.4 6.6	1.6 3.5 5.1
5. The above statement is an abridged version of the full accounts upon which the auditors have given an unqualified opinion. The full accounts will be filed with the Registrar of Companies in due course.		

Residential Marina at Plymouth Millbay Docks

Associated British Ports Holdings PLC has joined forces with Dean and Dyball Properties Limited to build a residential marina at Plymouth's Millbay Docks.

Phase I of the development covers some 6-1/4 acres of land and water comprising Millbay Pier, part of the east quay, Princess Royal Pier and Trinity Pier. It will include the establishment of a marina basin for 100 craft and the construction of 100 residential units ranging from 1, 2 and 3 bedroom flats to 2, 3 and 4 bedroom houses, each with a permanent berth. These will be available for sale on a 999-year lease. Also included in Phase I is the refurbishment of the former police house, an attractive hexagonal stone building.

Work has already started and properties were released for reservation at the April Plymouth Boat Show. Guide prices are from £70,000 to £300,000.

"Lord Nelson" Visits PLA's Tower Pier

A recent visitor to the Port of London Authority's Tower Pier was the Jubilee Sailing Trust's three-masted barque, *Lord Nelson*. The 400-ton, steel-hulled *Lord Nelson* is an offshore sailing vessel in which physically handicapped and able-bodied people can face the challenge of crewing a tall ship at sea. The vessel was in the Pool of London as part of the Jubilee Sailing Trust's fund-raising programme to which the Port of London Authority assisted by waiving all its charges. The Trust, established in 1977, took delivery of the vessel late in 1986. In 1987 the *Lord Nelson* was named by the Duchess of York after the Trust's patron, her husband the Duke of York.

In 1987 the *Lord Nelson* took 1,016 people to sea on voyages of up to 10 days. Nearly half were physically handicapped and of these 184 were permanently confined to wheelchairs.

In 1988 *Lord Nelson* is undertaken a full season in the UK and Northwest Europe where she will carry out a series of winter cruises for able-bodied and physically handicapped voyage crews including those from the United States and Canada.

The Trust needs to pay off the remaining building loan for the *Lord Nelson* and provide funds to ensure that she is maintained to the highest standards of safety and seaworthiness to enable the good work to continue. The PLA was pleased to welcome the *Lord Nelson* to the Port of London.

Asia/Oceania

Sharp Increase of Imports at Nagoya

Surrounded by a world prominent auto and machine industry, Nagoya has developed as an import base of raw materials and export base of the manufactured products. Its foreign trade cargo volume has always been at the top among major ports in Japan. However, since the G5 meeting of September 1985, the rising value of the yen caused great changes to the conventional trade structure.

The most noticeable is the sharp

increase of imports including the products made by the Japanese-capital overseas plants as well as those by the foreign manufactures. Especially the container import in 1987 showed unprecedented growth, a jump of 30% from 1986 figure. Along with the import of agricultural, forest, marine and mineral products, industrial products also increased greatly. As shown in Table 1, the rate of product import value to the total import value was 26% in 1984, when the yen was not yet strong. In 1987 it soared to 40.5%, an increase of 14.4%.

The volume of export cargo, on the other hand, decreased considerably in 1986 (see Table 1), but the container export continued to grow by 10 to 20% over the past several years owing to the active supply of parts to overseas plants centering on auto industry.

Ship Arrivals, Cargo Traffics in Volumes and Value

Year	Ship Arrivals					
	Overseas Route		Domestic Route		Total	
	No. of Vessels	Gross Tonnage	No. of Vessels	Gross Tonnage	No. of Vessels	Gross Tonnage
1983	7,569	102,575,030	40,500	27,358,564	48,069	129,933,594
1984	7,603	107,388,013	41,668	28,133,507	49,271	135,521,520
1985	8,124	117,571,987	40,925	25,919,416	49,049	143,491,403
1986	7,795	123,386,402	41,128	26,740,464	48,923	150,126,866
1987	8,089	131,239,971	39,964	26,545,267	48,053	157,785,238

Year	Cargo Volumes					Foreign Trade Value (¥ million)		
	Foreign Trade		Domestic Trade		Total	Export	Import	Total
	Export	Import	Export	Import				
1983	21,150,092	35,056,939	18,103,088	26,992,248	101,302,367	3,676,473	1,726,078	5,402,551
1984	23,464,264	38,987,573	20,639,346	29,086,717	112,177,900	4,292,352	2,007,529	6,299,881
1985	25,910,350	40,278,907	18,989,907	27,646,228	112,825,392	4,536,940	1,975,148	6,512,088
1986	22,983,737	39,111,783	18,421,702	27,226,240	107,743,462	3,686,278	1,339,333	5,025,611
1987	23,543,267	42,017,194	18,028,418	26,007,410	109,596,289	3,644,645	1,506,740	5,151,385

(Nagoya Port News)

Too cope with the sharp increase of container cargo and larger container-ships, the port has set forth constructing deep-draft container berths (depth: 14 to 15 m, length: 350 m per berth).

In addition, the entry to the port for containerships was extended from

November 10, 1987. Ships that pass the hightide breakwater by 12 p.m. (formerly 11 p.m.) now can enter the port and immediately start handling. This has been highly welcomed by shipping companies as well as shippers and consignors.

Geelong Port, Workers OK Joint Stevedoring

The Port of Geelong's reputation for industrial harmony has been further enhanced through a partnership between the Authority and the Waterside Workers Federation, to create Federal Stevedoring Geelong (Pty Ltd).

Geelong is only the third port in Australia to enter into a joint stevedoring agreement with a maritime union.

Secretary of the Geelong branch of the W.W.F., Mr. Michael O'Leary said joint ventures in the Ports of Mackay (Queensland) and Stanley (Tasmania) had resulted in immediate cost savings of 35 and 60 percent respectively.

Mr. O'Leary said the closer worker-management relationship in non-capital city ports made it easier to enter into such ventures, which help to ensure their continuing viability and competitiveness through reduced shipping costs.

"It generates co-operation between all parties through greater job satisfaction and worker input into decision making.

"The concept of joint management of stevedoring in Geelong dates to the 1950s, but this has extended and formalised the co-operation," Mr. O'Leary said.

The venture involves the 116 W.W.F. members in Geelong and is fully supported by the national office of the Federation, which will monitor its success for the possible extension to other Australian ports.

PGA Chairman, Mr. Neil Samuels said the Authority is pleased to be a joint venture partner with the W.W.F. Geelong branch, and confidently predicts that the further strengthening of the relationship will result in higher standards of service to customers and increased trade through the Port.

"At a time when the ports of Australia and the stevedoring industry which operate in those ports are under detailed scrutiny from many agencies, it is encouraging to see the W.W.F. prepared to accept the need for change and to actively implement new innovative working arrangements," Mr. Samuels said.

Table 1: Import Trade Value at the Port of Nagoya

Year	a. Total import value (\$ million)	Ratio to previous year (%)	b. Product import value (\$ million)	Ratio to previous year (%)	Product import rate b/a (%)
1984	8,487	85.6	2,210	116.1	26.0
1985	8,234	97.0	2,153	17.4	26.1
1986	7,851	95.3	2,799	130.0	35.7
1987	10,371	132.1	4,204	150.2	40.5

Table 2: Foreign Trade Cargo Volumes at the Port of Nagoya

Year	Export cargo volumes (ton)	Ratio to previous year (%)	Import cargo volumes (ton)	Ratio to previous year (%)
1985	25,910,356 (4,725,049)	110.4 (120.3)	40,278,907 (2,557,220)	103.3 (119.8)
1986	22,983,737 (5,295,049)	88.7 (112.1)	39,111,783 (2,984,084)	97.1 (116.7)
1987	23,543,267 (6,118,536)	102.4 (115.6)	42,017,194 (3,871,448)	107.4 (129.7)

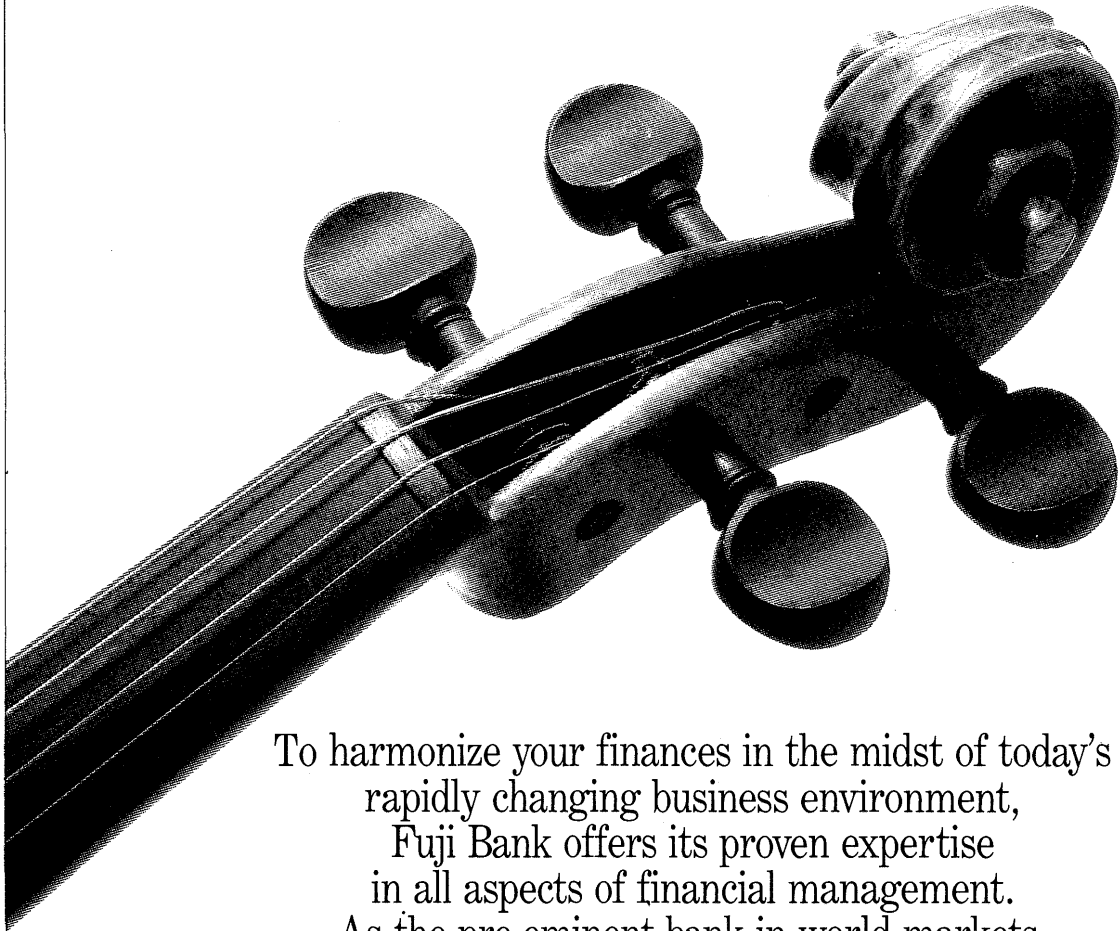
Values in () are those of container cargo

Port of Tauranga: Results in Brief

(Extract from 'Annual Report 1987, Bay of Plenty Harbour Board')

	1987	1986	% Change
Cargo tonnage in	1,439,636	1,518,347	(5.2)
Cargo tonnage out	2,095,373	1,881,629	11.4
Total cargo tonnage throughput	3,535,009	3,399,976	4.0
Total arrivals and departures of vessels	1,030	1,029	0.1
Main wharf occupancy	60%	59%	1.7
Turn-round time per ship	5.40 days	4.87 days	(10.9)
Port operations revenue	\$17,869,468	\$15,390,904	16.1
Total revenue	\$19,884,161	\$17,482,082	13.7
Net revenue for Port development and loan repayments	\$5,687,857	\$2,820,144	101.7
Port development capital expenditure	\$5,991,713	\$4,525,647	32.4
Total assets employed	\$97,484,490	\$88,526,471	10.1

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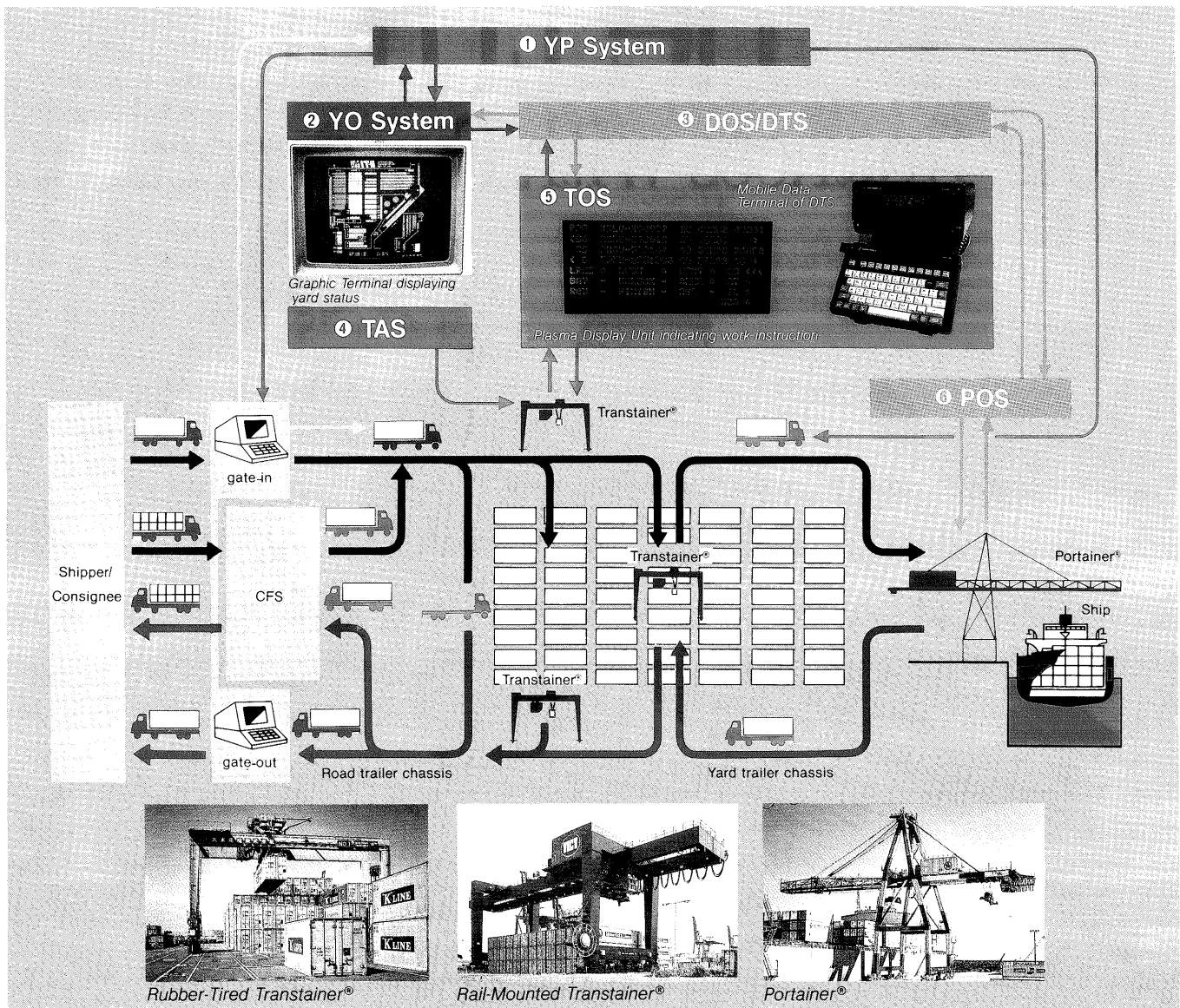
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- ① **YP System:** Yard Plan Computer System
- ② **YO System:** Yard Operation Computer System
- ③ **DOS:** Data Transmission & Oral Communication System (Inductive radio)
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- ④ **TAS:** Transtainer® Automatic Steering System
- ⑤ **TOS:** Transtainer® Operation Supervising System
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