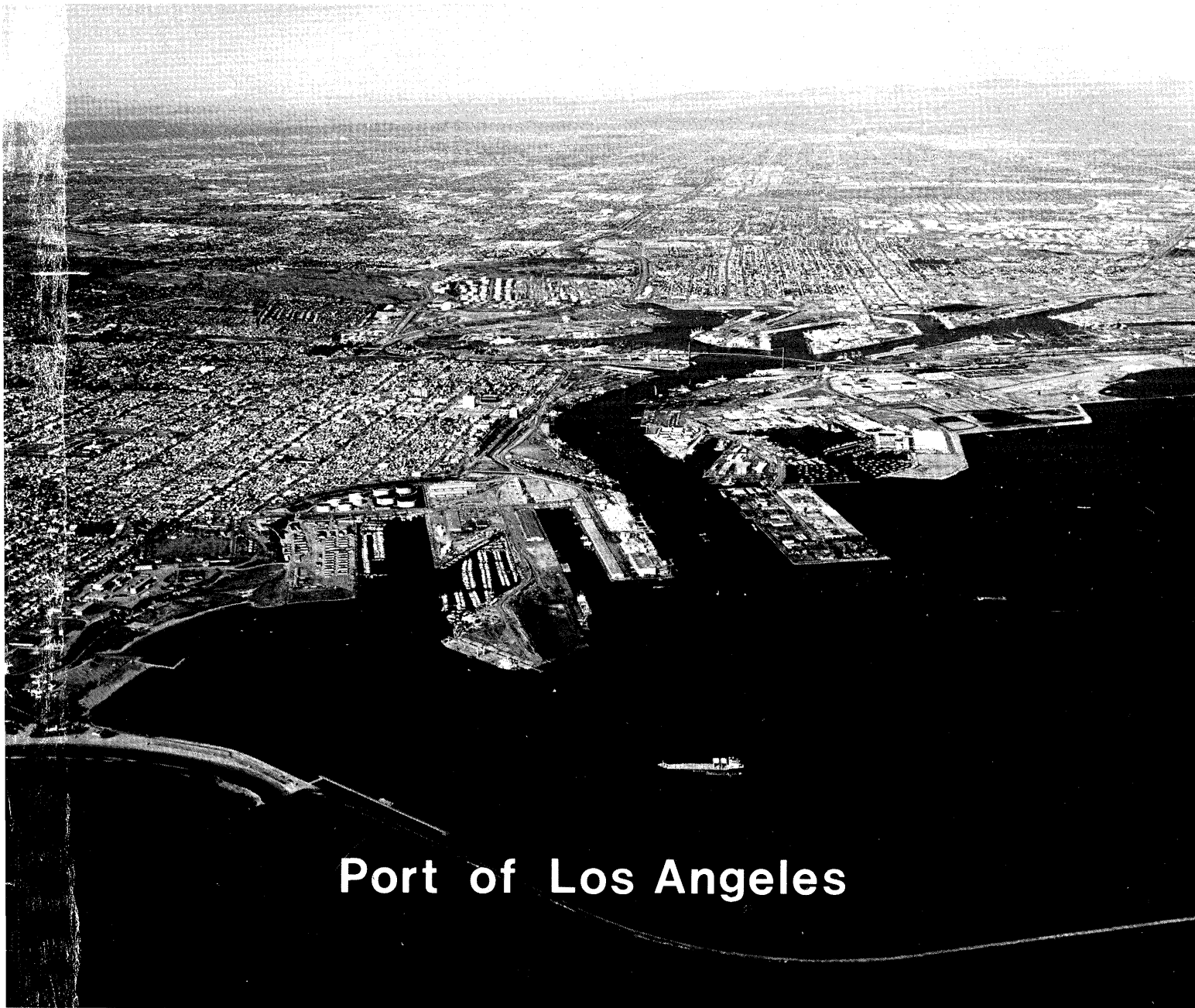


# PORTS *and* HARBORS

Jan.-Feb., 1981 Vol. 26, No. 1-2

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## **IAPH Conference Nagoya May 1981**

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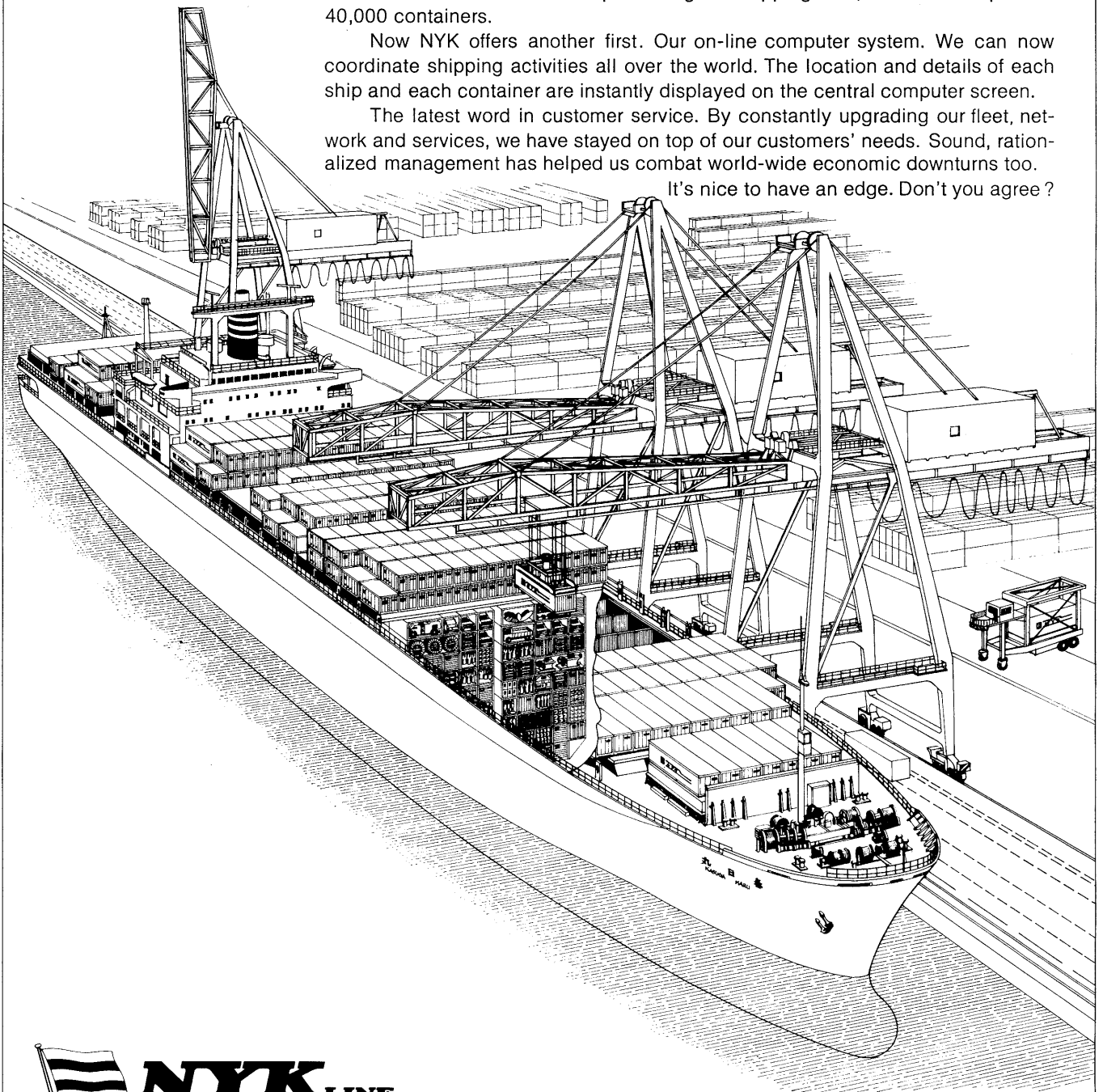
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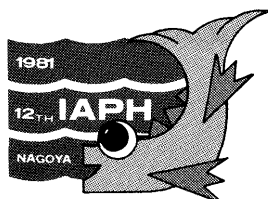
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Published monthly by

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**January-February, 1981 Vol. 26, No. 1-2**

## CONTENTS

	Page
<b>IAPH announcements and news:</b> .....	7~20
New Year's Messages—From Mr. Paul Bastard, President—From Dr. Hajime Sato, Secretary General—Welcome Messages to the 12th IAPH Conference (by Mr. Masajuro Shiokawa, Minister for Transport, Japan, by Mr. Yoshiaki Nakaya, President, Nagoya Port Authority, and by Mr. Fumio Kohmura, Conference Chairman)—Extraordinary Meeting of the IAPH Officers in Tokyo—Committee Chairmen Invite Your Participation in the "Open Symposium" (Messages from: Mr. J.K. Stuart, Chairman, Committee on International Port Development; Mr. J.M. Wallace, Chairman, Committee on Large Ships; Mr. R.T. Lorimer, Chairman, Committee on Containerization, Barge Carriers and Ro-Ro Vessels; Mr. J. Bax, Chairman, Committee on Community Relations; Mr. A. Pagès, Chairman, Committee on Legal Protection of Port Interests; and Mr. Robert L.M. Vleugels, Chairman, Committee on Trade Facilitation)—Mr. A.J. Smith reports on the IMCO Meeting on London Dumping Convention—IAPH Paper to the IMCO Meeting on the London Dumping Convention	
<b>Open forum, Port releases:</b>	
Is There A Need For A National Ports Policy? (by Mr. Sven Ullman, General Manager, Port of Gothenburg) .....	22
The impact of New shipping technologies on the handling of non-bulk cargoes in developing ports (by Ir. C. Bert Kruk, Delft) (2) .....	23
National Port Assessment 1980-1990—An Analysis of Future U.S. Port Requirement (by the U.S. Department of Commerce, Maritime Administration) .....	27
Mr. Grosse of Port of Le Havre Reports on the 4th International Conference and Exhibition on Maritime Transports Using Roll-on/Roll-off .....	30
<b>International maritime information:</b>	
<b>World port news:</b>	
Maritime Transport in Africa (by U.N. Economic Commission for Africa) .....	33
Publications .....	34
Ladies' Program's Highlights: Nagoya Conference Organizing Committee .....	50

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# IAPH announcements and news

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## New Year's Messages



**From  
Mr. Paul Bastard  
President**

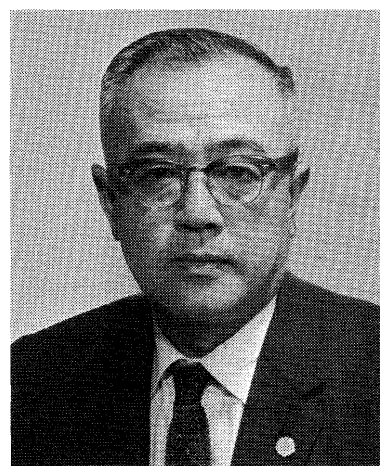
As President of the IAPH and as the new year begins, I would like to extend a hearty invitation to you all to attend our Nagoya Conference which will take place in May.

During the April '80 meetings in Brisbane, the Executive Committee thoroughly discussed many problems concerning the organization of the coming Conference. The decisions were taken in this connection that showed essential. Since the Le Havre-Deauville Conference, the different IAPH Committees have worked a good deal. Since then most of them have held several meetings in various countries of the world. The proposals they will submit in the fields related to their terms of reference will very often be of great importance to ports.

Our Secretary General in Tokyo and the Nagoya Port Authority have made the final arrangements for the reception we shall be given there with the minuteness and sense of organization you all know they have. During the short visit paid to Tokyo and Nagoya in November 1980, your President and your Vice-Presidents were able to ascertain it.

Do I need to remind you that we shall celebrate the 25th anniversary of the Association and at the same time the 30th anniversary of the Nagoya Port Authority? I wish there will be many of us to meet in May with a view to discussing all together our common problems, sharing solutions to them, exchanging information and ideas. Those of you who have attended previous Conferences will meet again with great pleasure and they will heartedly welcome the new colleagues who have lately join the Association.

For every one of our ports, the coming years are likely to be more difficult than the past ones. This is one more reason why all the ports of the world should gather their reflections and efforts, in a spirit of mutual aid and



**From  
Dr. Hajime Sato  
Secretary General**

"World Peace Through World Trade"  
"World Trade Through World Ports"

These are the words of the late Mr. Gaku Matsumoto, founding father of this Association.

At the beginning of this particular year when the Association's 12th Conference will take place to celebrate the 25th anniversary of its founding, I now call to mind these words of his.

Mr. Gaku Matsumoto always believed that world peace can only be maintained when the nations of the world, no matter whether they have abundant natural resources or not, endeavor to increase their mutual reliance in a spirit of co-existence, co-prosperity and good neighborliness and

**(Continued on page 11)**

---

reciprocal confidence and with the strong will to success.

This is the way our ports will contribute their share to human prosperity, as you know this is the theme of our coming Conference.

I am looking forward to seeing you soon in Nagoya. Bring with you your cheerfulness and your good mood. And don't forget to try in advance the handling of chopsticks.

Meanwhile, I wish everyone of you, for himself, his family, those he loves, and the activities he is in charge of, full success.



# Welcome Messages to



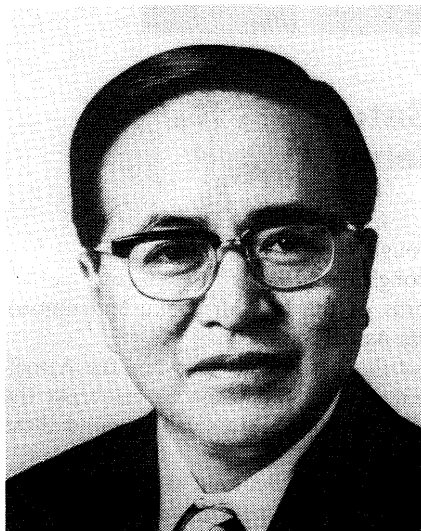
**Minister M. Shiokawa**

It is my great honor and pleasure to invite you to the 12th Biennial Conference of the International Association of Ports and Harbors which will be held at Nagoya this May.

The pleasure of holding the IAPH Conference again in Japan, following the 5th Conference held at Tokyo in 1967, is equally shared by all Japanese representatives.

I offer my hearty congratulations to you and the Association for the Silver Jubilee which you will celebrate at the Nagoya Conference.

The Association has developed remarkably and achieved



**Mr. Yoshiaki Nakaya**

The Silver Jubilee of the IAPH is going to be commended by the 12th Conference in Nagoya and no pleasure is greater than this for me.

Our Nagoya Port Authority has been a member of IAPH since its foundation and the growth of Nagoya Port in recent years has kept pace with that of IAPH.

In the course of this development, our port had, for the first time in its history, its volume of cargo handled surpassing the 100 million ton mark in 1977. In commemoration of that fact, our port ran for the candidacy of the venue of the Conference of IAPH who have given us much help and guidance throughout.

Fortunately, with the support of many people, it was



**Mr. Fumio Kohmura**

In 1977, the 10th IAPH Conference was held in Houston, Texas, U.S.A., where it was decided that Nagoya would be the venue of the 12th Conference, and the three years and eight months since then have elapsed swiftly.

We have therefore from that time been putting our utmost efforts into the preparation of this important meeting. Recently the whole program has been finalized and we have mailed it to members and non-members all over the world.

As you are well aware, the 12th Conference marks the Silver Jubilee of IAPH.

During the period of the Conference, many commemorative events are scheduled. At the same time, many meet-

# the 12th IAPH Conference

---

its present status as a world-wide organization in the maritime field by the continuous efforts of every member of the Association these twenty-five years.

I am convinced that this Conference at Nagoya will contribute to the future development of ports all over the world, and that greatly promote mutual understanding and friendly relationship among the participating countries.

May is one of best months to enjoy natural beauty of Japan and I hope you will see the presence of leading ports when you come to this country.

I wholeheartedly look forward to having the pleasure of welcoming you at Nagoya this May.

Masajuro SHIOKAWA  
Minister of Transport, Japan  
Honorary President,  
the 12th IAPH Conference

---

decided that Nagoya Port would be the host for the 1981 Conference.

To organize this convention, we set up an organizing committee in 1977 and we have been working hard on the preparations since then. The Committee is an organization made up of representatives of Nagoya Port Authority, Aichi Prefecture, Nagoya City, Nagoya Chamber of Commerce and Industry and other local bodies which extends a warm welcome to all participants.

The outline of the Conference has already been decided at the Executive Committee Meeting held in Brisbane, Australia in April of last year.

With this as the core, a detailed program was worked out

and mailed to you some time ago.

May in Nagoya is the pleasantest month of the year and we earnestly hope that as many people as possible will come and visit our city then to make the Conference a success.

Yoshiaki Nakaya  
President, Nagoya Port Authority  
Host President, the 12th IAPH Conference

---

ings have been arranged so as to include, with the theme of "Port Contribution to Human Prosperity", Working Sessions, Open Symposia, Bull Sessions (free talking with experts), Paper Presentations, etc. These events will, we earnestly hope, bring about fruitful debate and discussion.

On the other hand, during the Conference time, a visit to the Mikimoto Pearl Island noted for cultured pearls and other programs have been arranged for accompanying ladies, while an observation tour to Toyota Automobile plant (representing Japanese industry) and a cruise of our Port of Nagoya have also been arranged to complete a

fascinating week.

The friendship of the people of the world ports will, we fervently hope, become firmer and closer in Nagoya this May.

"We will see you in Nagoya."

Fumio Kohmura  
Executive Vice President  
Nagoya Port Authority  
Conference Chairman,  
the 12th IAPH Conference

# Extraordinary Meeting of the IAPH Officers, in Tokyo

To discuss various facets of the Association's activities and to finalize the details of the forthcoming 12th Conference in Nagoya, the IAPH Officers met in Tokyo for two days on November 24 and 25, 1980.

1. Present at the Tokyo Meeting were President Bastard, Mr. A.S. Mayne, 1st Vice-President, Mr. A.J. Tozzoli, 2nd Vice-President, Mr. Fumio Kohmura, Honorary Vice-President, representing the Conference Organizing Committee, Dr. Hajime Sato, Secretary-General, Mr. Toru Akiyama, President of the IAPH Foundation (Secretary-General Emeritus of IAPH) and staff members of the IAPH Head Office, and the Conference Organizing Committee.

2. Major items on the agenda of the Meeting were as follows:—

- 1) Report on the preparatory works for the Nagoya Conference
  - 2) Abolishment of the 1973 Agreement with the IAPH Foundation
  - 3) Financial prospects
  - 4) IAPH/BPA Agreement of Representation
  - 5) Present activity of the Ad Hoc Committee on Dredging
  - 6) Improvement of IAPH preparedness in international maritime issues
  - 7) Future coordination of the time & dates of ICHCA and IAPH conferences
  - 8) Events and programmes for the IAPH Silver Jubilee
3. The following are the contents and results of discussions.

## 1) On the Nagoya Conference

Mr. Kohmura explained the present situation of the preparatory works by the Organizing Committee. His report was so accepted. It was expressed by the Officers that the working session grouping should be stressed to mix people in terms of language so that delegates could mix with delegates from other parts of the world.

Also confirmed were various procedures and events at the Conference which require the Officers' attention and presence.

## 2) Abolishment of the Agreement

It was reported that the matter would be placed before the meeting of regular members, at their meeting by correspondence, to be called on December 28, 1980, following the Board Meeting on November 25.

It has thus become clear that the Agreement with the IAPH Foundation will be disengaged effective Jan. 01, 1982.

## 3) Financial prospects

Dr. Sato explained the financial prospects, quoting the current figures and trends in the international monetary situation, with particular reference to the exchange rates between the SDR Unit (with the US Dollar) and the US\$ (with the Japanese Yen).

It was reported that the devaluation of the US\$ as against the Japanese Yen since April 1980 might produce as much as a 13% negative effect to the 1981 prospect (US\$1÷JYE250, April 1980/US\$1÷JYE210, November 1980), and that the IMF would replace the present 16 currencies money basket by the 5 currencies

money basket, effective Jan. 01, 1981, thus creating uncertainty in the future financial prospects.

It was agreed that the re-examination of the financial situation under the new SDR system, should be conducted in due course.

It was also reported that the trends of the price hikes in Japan seemed to be stabilized to some extent and that the annual increase rates of 7% for personnel expenses and 8% for non-personnel expenses which were readily accommodated in the budget would be appropriate.

## 4) IAPH/BPA Agreement on Representation

It was reported, with thanks to BPA, that they were putting the spirit of the Agreement into effect, effective Oct. 01, 1980, as a trial before its formalization to be completed at Nagoya in next May.

It was advised that the remittance of the initial fund to BPA should be made in the amount of JYE 1 mil. (≐US\$4,700) to be used as rolling operative fund.

## 5) Activity by the Ad Hoc Committee on Dredging

Mr. Tozzoli explained about the recent IMCO meeting and the IAPH representation by Mr. Haar of New Orleans, and indicated the necessity of continued participation by IAPH in the IMCO debates on this matter, in the light of the obvious fact that the situation in the US was not unique but applicable to other world ports.

He warned that if the voices of world ports were not properly reflected in the so called London Convention, many ports, sooner or later, would suffer from the serious difficulty in finding measures to cope with the disposal of dredged materials which are not only necessary for securing enough depth of water but also for expanding port facilities.

He also indicated that IAPH should be prepared to take part in this issue by raising a fund, now, no matter how small. It was agreed that the matter should further be studied and discussed at Nagoya.

It was decided to hold a meeting of this ad hoc committee on May 24 (Sunday) from 11:00 to 12:00, at Nagoya.

## 6) Improvement of IAPH preparedness in international maritime issues

Mr. Bastard pointed out that the Association should study more how to increase its responsiveness to those varied enquiries raised by the members concerning problematical points in their ports i.e. administration, management, engineering, labour, environment and others, as well as the international maritime issues which required concentration of the expertise and experience accumulated within world ports.

It was agreed that the matter should further be studied by the Head Office and be reported to the Officers at the Nagoya Conference.

## 7) Future coordination for "dates & places" of ICHCA and IAPH conference

Mr. Bastard pointed out that the present practice of holding IAPH and ICHCA conferences in the same year should be reviewed because not many people were allowed to attend both conferences which were held

almost simultaneously (one week's separation).

Mr. Akiyama said that the ICHCA and IAPH originally meant to hold their conferences in the same year in order to help the attendants to attend both conferences by providing only one week's separation and by selecting the venues as close together as possible.

However, it was agreed that it might be proper to re-examine the present practice. Mr. Bastard agreed to talk with the ICHCA Secretary-General in due course.

#### **8) On events and programmes for the IAPH Silver Jubilee**

Mr. Akiyama explained details of the events and programmes at the Nagoya Conference relative to the IAPH Silver Jubilee.

Officers agreed and confirmed the suggested events and programmes.

4. Mr. B.M. Tukur, 3rd Vice-President had to give up attendance at the Tokyo Meeting, just a few days prior to the meeting, because of an urgent governmental requirement in his country.

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### **Dr. Hajime Sato—**

*Continued from page 7*

when the developed ports help the developing ports grow thus furthering mutual understanding and friendship among countries of the world.

I believe that this philosophy which Mr. Matsumoto held all his life should be the wishes for all port people of the world.

And now looking at the world today, I cannot help but admit that we are in a very difficult situation confronted with the various problems, such as energy, inflation, unemployment and also the serious problems of war and natural disasters in some parts of the world.

However, the greater the difficulties the more we must try even harder to fulfill our responsibilities as people who are the driving force for the future development of world ports and these sentiments are highlighted in the theme of the Nagoya Conference—"The Port Contribution to Human Prosperity"

Thanks to the excellent leadership of our predecessors and the cooperation of all members, our Association, in its growth and development in the past quarter century has been able to become a truly important international organization which links world ports. This has happened either through efforts to increase international understanding by the exchange of information and far seeing view thus coping with the technological innovation the world ports face, or through the activities of the developed ports in assisting developing ports.

I would like to take this opportunity to express my heartfelt and deepest thanks to each individual who has helped sustain the Association's contribution and development by giving firm support at many crucial points over the past 25 years.

I consider that the Silver Jubilee of our Association will give us the opportunity to confirm our Association's determination to continue developing into a genuine international body, which can unite world ports, and to provide for their needs over the next twenty five years.

The Nagoya Conference is now being prepared by the Port of Nagoya Authority, with great cooperation from the IAPH Foundation, and their Organizing Committee is making the utmost efforts to make the program as mean-

ingful and as attractive as possible making use of the experience of past conferences. Our host and our Head Office members now await delegates from ports all over the world to participate in this important event to be held in Japan during the beautiful month of May.

Naturally to carry out the whole program successfully we must depend on the Officers, Committee chairmen and members as well as experts for their cooperation and I am very thankful to each of them for their assured preparedness in carrying out the respective functions.

The Nagoya Conference marks a new epoch in the Association's development. This is the conference at which the Association will achieve financial independence as a result of the unremitting efforts of the Finance Committee headed by Mr. J. den Toom, finally realizing the Amsterdam resolution. We can now move into the future on our own. I would like to express our sincerest thanks and appreciation to the IAPH Foundation and particularly to President Toru Akiyama for the generosity and extraordinary cooperation they have given to the Association until now in helping us to achieve this goal of independence.

Also, this is the year that we are going to expand our activities and coverage, as regards the IAPH's representation at IMCO, UNCTAD and other international maritime organizations, with the cooperation of the British Ports Association. Here we would like to express our thanks to the BPA and its Chairman Mr. J.P. Davidson as well as Mr. A.J. Smith (IAPH Liaison Officer with IMCO) for their support and good offices.

I and all my staff at Head Office wish to work for the future development of the Association and are determined to do our best, for which we do need the continuing guidance and cooperation of the Officers, Board and Executive, Legal Counselors, Liaison Officers, Committee Chairmen and their members, and not least, all members of the Association.

I sincerely hope 1981 will be a year of happiness and prosperity for all our members and their families and look forward to meeting as many of you as possible at Nagoya in May.

### **Committee Chairmen invite your participation in the "Open Symposium" at Nagoya**

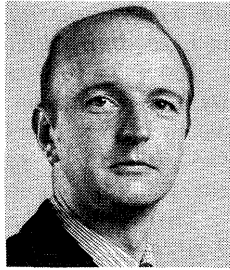
Without doubt one of the most important activities of IAPH is varied work undertaken by the respective committees. At the Nagoya Conference, as in the two preceding conferences, "Open Symposia" of the technical committees are included in the program.

On May 26th (Tue), from 14:15 to 15:45, 5 committees (International Port Development, Large Ships, Containerization, Community Relations and Legal Protection of Port Interests) are to meet simultaneously, while the Committee on Trade Facilitation will meet on May 27th (Wed) from 14:00-16:00.

In this issue (see page 12) each chairman of these committees unfolds topics to be discussed then and invites your active participation in his own symposium at Nagoya.

# Committee Chairmen Invite Your Participation

## Message from Mr. J.K. Stuart, Chairman, Committee on International Port Development



When I was invited as Chairman of the Committee on International Port Development, to consider topics for discussion at an Open Symposium at the Conference, I concluded that the theme should achieve a dual purpose by covering a topic already under discussion within the Committee while also allowing time for contributions from delegates for suggestions on ways in which the Committee can serve the interests of members of IAPH in the next two years.

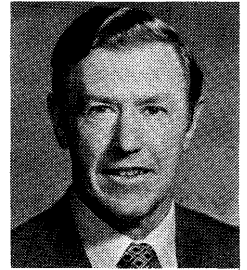
The topic chosen which is already being discussed and progressed within the Committee is that of producing in co-operation with UNCTAD a series of technical papers for the use of managers of ports in developing nations. These papers or "monographs" would be designed to be of practical assistance and cover specific topics likely to be of concern to managers, for example in planning (or maintaining) new developments to meet the needs of modern port operations. By circulation of such information it is hoped that IAPH, with UNCTAD, can help those concerned to avoid the sometimes costly results of pioneering new facilities without access to and benefit of knowledge gained by others. The monographs would also provide guidelines for efficient operation of existing facilities and effective maintenance procedures.

The open symposium should provide a forum for a detailed exchange of views on the specific topics of prime importance to members and assist in the further development and success of the idea of monographs.

Turning to the opportunity for delegates to put forward suggestions for the tasks of the Committee in the next two years, I firmly believe that the strength of IAPH lies in the wide membership of the Association and the depth of experience in both developed and developing ports. The Committee has ideas on further work for established schemes such as the bursary and award concepts together with new tasks as yet in early stages of planning. Through the open symposium we are now seeking to ensure that the future role of the Committee remains closely identified with the requirements of members of IAPH and we will welcome and seriously consider all suggestions from delegates.

Ultimately the success of the Association, the Conference and the Open Symposium rests with the members. With this in mind, I hope you will come to the symposium and give us the benefit of your views and ideas on ways in which the Committee can best achieve ever greater success in fostering international port development.

## Message from Mr. J.M. Wallace, Chairman, Committee on Large Ships



The Committee on Large Ships (COLD) is most appreciative of the opportunity to participate in the Open Symposium Session for Technical Committees during the 12th Conference in Nagoya.

As members of the Association will be aware, the Committee has been actively engaged during the past 2 years in updating its 1979 Report to produce a handbook on safety and environmental protection of ports for the guidance of Port Managers.

The report has been prepared and checked by the Committee's port professionals from many parts of the world and in addition other expert bodies such as the International Marine Pilots Association, British Ports Association, the International Association of Lighthouse Authorities and the Permanent International Association of Navigation Congresses have given valuable assistance.

It is intended that the handbook will be pre-printed for those attending the Conference and your Committee believes that the Open Symposium will be an ideal opportunity for delegates to discuss with Committee members many aspects of port administration which are currently causing concern to Port Managers throughout the world.

I believe that chapters such as:

- "Crisis Management" which covers the methodology to be used in the event of a serious accident in a port;
- "Terminal Provisions and Safe Practices" which outlines, in addition to other matters, general recommendations on the safe transport, handling and storage of dangerous substances in port areas;
- "Aids to Navigation" covering all the most modern navigation aids and techniques necessary for safe navigation in ports; and
- "Ships/Harbour Navigation Rules" which includes aspects such as recommendations on a port entry and exit check list for ships equipment which the master of the vessel is required to supply and verify prior to entry and departure from the port.

are some of the aspects covered in the handbook which will be the subject of active discussion at the Symposium.

The COLS Committee looks forward to your participation in the Symposium on 26 May 1981.



# in the "Open Symposium" At Nagoya

## Message from Mr. R.T. Lorimer, Chairman, Committee on Containerization, Barge Carriers and Ro-Ro Vessels



Papers dealing with the impact of containerization on port workers in Japan, on aspects of financing and marketing container terminals in the 1980's, and on developments in Ro/Ro services, will be included in the presentations at the May 26 meeting of the Committee on Containerization, Barge Carriers and Ro/Ro Vessels at the 12th I.A.P.H. Conference at Nagoya, Japan, May 23-30, 1981.

The meeting will be chaired by Mr. R.T. Lorimer, General Manager of the Auckland Harbour Board, Auckland, New Zealand.

The effect of the container system on port workers will be dealt with in a Paper prepared by Mr. Koji Kojima, Director (Labour matters) of the Japan Harbour Transportation Association, and presented in association with Mr. Eiichi Yamazoe, Keihin (Tokyo Bay) Port Development Authority.

Containerization, together with other technological innovations, has brought great changes in port operations, in particular to labour matters. It is therefore considered worthwhile that the process of the development of the labour situation up until the present, should be recorded.

Although conditions may differ from port to port, the information presented will be of particular interest and importance to those ports which are just meeting, or have yet to face the labour problems inherent in the development of containerization, a member of our Committee.

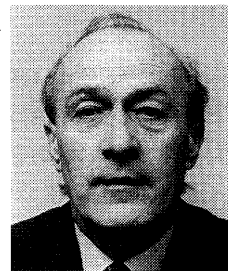
The Executive Director of the Port of Oakland, California, United States of America, Mr. W.A. Abernathy, has kindly agreed to present a Paper entitled "Consideration for Public Authorities in Financing and Marketing Container Terminals in the 1980's."

This discussion will address the issue of the rapidly increasing cost of constructing modern terminal facilities and how the marketing process relates to demand forecasting, planning, property acquisition, financing, approvals, design, and construction.

A third Paper, "Ro/Ro Services—The Deep Sea Routes" will be presented by Mr. Sjur Galtung, Managing Director of ScanCarriers Limited, Norway, and will discuss future trends in this method of transportation with particular emphasis on cargo handling systems and ports and their facilities as applied to Ro/Ro operations.

Other presentations for comment and discussion at the Symposia will include an up-date of the work of the Containerization Committee, including information on the current trends in bargaining. These subjects are wide-ranging and delegates should find the Session an interesting and a valuable one.

## Message from Mr. J. Bax Chairman, Committee on Community Relations



The Committee on Community Relations was established at the Houston Conference in 1977. So it is a rather new phenomenon within the range of IAPH activities. The Committee's main objectives were to seek ways to more actively inform the people of the port's economic and social values and having done this to create a better understanding of the port's necessary development plans and adjustments.

At the Le Havre Conference the Committee tabled a report containing a number of recommendations based on the analysis of the response to a set of questionnaires sent out to all member ports. The Committee has sent two more sets of questionnaires to get a better insight of the problems the ports are faced with and to make more definite proposals on how to overcome them. The response to our second round of enquiries is a great deal better than to the first one. Also the answers came from a more evenly spread around the globe. The Committee therefore hopes that recommendations will be even more useful to attain the proposed goals.

It is comforting to note, though, that some of the ideas of the Committee are already realized. We think of the open days for instance which have almost become a standard procedure in many of the port's public relation programs. Yet, much is to be done.

I would like to invite the delegates to the Nagoya Conference to take an active part in the open symposium of our Committee. We would like to hear from you. We do not imagine to come up with cure-alls but we can learn much more from each other than we do at this moment. The more we cooperate, the greater will be the impact on the attitudes of the people we serve and we depend on.

## "Open Symposium" At Nagoya (Continued)

### Message from Mr. A. Pagès, Chairman, Committee on Legal Protection of Port Interests



Since IAPH's Le Havre Deauville Conference the members of the Committee on Legal Protection of Port Interests have continued their work on numerous subjects. They will be pleased to present a report on it to the Nagoya Conference and to solicit your directives for the future.

— The sessions of IMCO's Legal Committee for the consideration of an International Convention on the Carriage of Noxious and Hazardous Substances by Sea have continued to examine this subject which, directly influences ports. And it would be appropriate for the IAPH to take a firm stand there to ensure that the interests of ports are protected.

The enquiry on the Legal Aspects of Traffic Management produced a very rich afflux of replies, which are in the process of being sorted through. The analysis will no doubt lead to certain positions which IAPH will have maintain both in the technical field (which will be the responsibility of Committee on Large Ships) and in the legal field.

— Lennart Bergfelt is closely following the work which UNIDROIT have been devoting to the question of the "Liability of Terminal Operators" the objective is to fill in the gap in the overall international conventions, which regulate the intermodal transport chain. And the last link in this chain to be fixed is that of the passage of freight through the ports.

The International Chamber of Commerce is currently devoting one of its sessions to the subject of international marine fraud. This is a very serious subject which concerns shippers, carriers . . . and equally ports. Eric Ellen is taking part.

Under the patronage of IMCO a session took place last September when dumping at sea and the disposal of dredged materials were discussed. This subject depends technically on the Ad Hoc Committee on Dredging. But it also includes very important legal and financial implications.

The IAPH representatives were there in strength. Colonel Haar, Alex Smith and Jean Smagghe.

A new system of cooperation is to be set up by the Secretary General with the British Ports Association, with a view to strengthening links between the IAPH and the United Nations agencies based in Europe, as well as with the other major international maritime associations. We have great hopes of being better able to defend the interests of ports.

On all of these points, we shall be pleased to exchange ideas with you and ask you for your directives for the continuation of our activities. Naturally much of our efforts will continue to be directed towards a number of the above-mentioned issues.

### Message from Mr. Robert L.M. Vleugels, Chairman, Committee on Trade Facilitation



The purpose of this session is to explore and illustrate the relationship between practical port operation and the complex information exchange with other trade participants which makes up the documentary and procedural network within which the movement of goods through ports has to be managed.

Some of the main co-operating trade participants are shippers, forwarders, customs authorities, shipowners, road and rail transport operators and banks.

It is only by the day-to-day co-operation of all these interests, not only in operating the information exchange system as it exists but in its radical reform internationally, nationally and locally that the present problems of inefficiency congestion, error and chronic delay can be reduced and eliminated.

It is already clear that the progressive application of computers to more and more of the management of this information system will be powerful weapon for technical improvement but this will intensify the need for co-operation in revising traditional paper based procedures.

The Nagoya Conference will be the first opportunity for the IAPH Facilitation Committee to provide a platform for representatives of International Chamber of Commerce, Customs Co-operation Council and the International Chamber of Shipping who will be able to explain the ways in which their organizations and the international trade activities which they represent can stimulate and encourage co-operation with IAPH, national port association and individual port managers.

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Perhaps, (and we are open, here, to your suggestions), we might be able to add some others such as, for example, a ports means of defence against the arbitrary taxes of shipping conferences . . . the re-evaluation of the limitations of liability of international conventions . . . the progress of ratifications of international maritime conventions.

# Mr.A.J. Smith reports on the IMCO Meeting on London Dumping Convention

The Fifth Consultative Meeting of Contracting Parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 22-26 September, 1980, at London

The IAPH delegation to the Meeting, led by Col. Herbert R. Harr, Jr., (Port of New Orleans) included Mr. J. Le Blanc, Jr., (Port of New Orleans), Mr. J. Smagghe (Port of Rouen), Mr. J. Clarke (Tees Port) and the reporter.

This was the first Meeting of Contracting Parties at which an IAPH delegation had participated and its outcome, from an IAPH viewpoint, can be said to have been highly satisfactory.

At paragraph 11.4 of the draft, as amended, it will be noted that IAPH has undertaken to supply information to the Ad Hoc Scientific Group on possible measures to reduce the environmental impact of the disposal of dredged material at sea. Relevant data will be assembled as a matter of urgency by the IAPH Ad Hoc Committee on Dredging which will also consider and provide an effective brief for IAPH Directors on the administrative issues arising both in the IAPH paper presented to the Fifth Consultative Meeting and the prepared remarks to the Meeting of the head of the IAPH delegation, Col. H. Harr.

The brief will facilitate discussions which it is hoped will take place between each IAPH Director and his respective national delegation to the Sixth Consultative Meeting scheduled to take place in London during the period 5-9 October 1981.

## 1. Extracts of the IMCO draft Report

1.1 The Fifth Consultative Meeting of Contracting Parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, convened in accordance with Article XIV(3)(a) of the Convention, was held at IMCO Headquarters, London, from 22 to 26 September 1980.

11.4 The observer of the International Association of Ports and Harbors (IAPH) introduced a document (LDC/V/11/2) referring to matters related to the disposal at sea of dredged material. It was pointed out that the IAPH would welcome clarification of certain matters of both a technical and administrative nature, in particular in relation to the application of the term (trace contaminants) of Annex I substances to dredged material.

Several delegations pointed out that the matters raised covered a number of administrative as well as technical issues. Some delegations pointed out that their interpretation of the Convention differed from that put forward by the IAPH in certain respects. The majority of delegations agreed, however, that the technical matters raised should be considered by the Ad Hoc Scientific Group in the light of information to be supplied by the IAPH on possible measures to reduce the environmental impact of the disposal of dredged material at sea.

The Meeting further agreed to consider administrative matters at the Sixth Consultative Meeting. Contracting Parties were invited to study these matters intersessionally and to submit any comments they may have prior to the Six Consultative Meeting.

## 2. Prepared Remarks by Col. H.R. Haar, Jr. (IAPH Delegate)

### Invitation to Contracting Parties to consider Issues relating to Disposal of Dredged Material

Mr. Secretary-General, Mr. Chairman, Members of Delegations, and Observers to this Fifth Consultative Meeting, my name is Harbert R. Haar, Jr., and I am speaking here today as a representative of the International Association of Ports and Harbors, an association of ports of 73 countries which has been granted observership status at the Consultative Meetings of Contracting Parties to the London Dumping Convention. This observership status was granted at the First Consultative Meeting based upon a determination by Contracting Parties that the IAPH satisfied the requirements of Rule 3 of the Rules of Procedure adopted by Contracting Parties.

The IAPH continues to satisfy those requirements through its function as an intergovernmental organization of ports which have a special interest in an area directly related to the objectives of the Convention: the ocean disposal of dredged material. IAPH ports are, for the most part, entities created by statute or decree of their respective States. Their responsibilities for port operations are generally prescribed by domestic law or regulation and serve recognised governmental and public interests. The IAPH does not represent simply private commercial concerns, nor is it organised merely as a lobby group.

In the course of port operations, IAPH ports are faced with a continuing need to dispose of dredged material. As a result, ports have been more deeply involved in dredging operations than any other single group. This practical experience with dredging has developed a special and technical expertise acutely related to disposal needs.

The sharing of experience and expertise with other international and intergovernmental organizations has long been a function of the IAPH. The IAPH, for example, has been an active participant in a wide range of undertaking by IMCO, including attendance at meetings, submission of working papers, and assistance in the development of work programmes. A recent example is the IAPH's continuing work with IMCO upon Resolution A-289-B, relating to the Control of Dangerous Goods in Ports.

The IAPH is pleased to have this opportunity to address this Fifth Consultative Meeting regarding certain provisions of the Convention applicable to the ocean disposal of dredged material which are of vital concern to IAPH member ports. A full statement of our concerns is set forth in the Information Document which we have submitted, LDC V/11/2.

Our concerns are based upon the effect of the Convention upon the ability of IAPH ports to carry out periodic maintenance dredging activities and needed channel and harbor improvements which are essential to continued port operations.

Article IV(a) and Annex I of the Convention prohibit the ocean disposal of wastes which contain the listed Annex I constituents as other than trace contaminants, and which are not rapidly rendered harmless upon disposal in the

(Continued on next page bottom)

# IAPH Paper to the IMCO Meeting on the London Dumping Convention

Presented by Col. Herbert R. Haar, Jr. (Port of New Orleans) to the Fifth Consultative Meeting of Contracting Parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 22-26 September 1980, at London.

## Invitation to Contracting Parties to consider Issues relating to Disposal of Dredged Material

The International Association of Ports and Harbors (the "IAPH"), through its Ad Hoc Committee on Dredging, welcomes the opportunity to attend this Fifth Consultative Meeting of the Contracting Parties to the London Dumping Convention (the "Convention") as an observer to the deliberations of Contracting Parties.

As an observer, the IAPH invites Contracting Parties to consider the concerns of the IAPH set forth in this information document relating to the application of the Convention to the ocean dumping of dredged material.



Col. Herbert R. Haar, Jr.

The IAPH is an international association comprised of ports in 73 countries. The IAPH is organized for the purpose of increasing the efficiency of ports and harbours through the development and dissemination of information useful to port and harbour administration, for furthering knowledge in the fields of port organization management,

(Continued from page 15)

marine environment. The IAPH has a very grave concern that this prohibition may be applied to prevent the ocean disposal of dredged material from maintenance dredging operations and harbor and channel improvements, when there is no feasible or practicable alternative means of disposal. Such an application of the Convention would threaten affected ports with inability to continue operations, and with port closure. We invite Contracting Parties to consider whether such a result is intended in the application of the Convention.

In the Information Document which we have presented, we note Contracting Parties' recognition of **differences** between dredged material and industrial waste, and the appropriateness of separate treatment of dredged material under Annex I.

We also note the Draft Guidelines for Classification of the Substances to Annexes I and II of the London Dumping Convention adopted by Contracting Parties at the Fourth Consultative Meeting. The Draft Guidelines describe Annex I substances as those which exhibit the characteristics of toxicity, bioaccumulation, and persistence. The Draft Guidelines also recognize that Annex II substances may contain **any or all of these same properties**. However, such substances are classified to Annex II, rather than to Annex I, because they may be safely disposed of under marine environment if special care is used in the disposal.

We invite Contracting Parties to consider whether the same might also be true in the case of dredged material. Although dredged material may exhibit Annex I properties of toxicity, bioaccumulation, and persistence, there may be appropriate circumstances under which it may nevertheless be safely disposed of in the marine environment if special care is taken. Special care might consist of such measures as:

- (1) capping contaminated dredged material with clean dredged material;
- (2) disposal of contaminated dredged material in anoxic depressions of high salinity;
- (3) disposal in exceptionally deep canyons in the ocean;

- (4) disposal in small quantities ad-mixed with clean maintenance dredged material;
- (5) selection of abiotic regions of the ocean as disposal sites; or
- (6) disposal in poorly productive areas.

We suggest a number of measures which Contracting Parties may wish to consider to address the need for ocean dumping of dredged material under these circumstances. These include.

- (1) clarification of the intent of Contracting Parties by the device of a technical Memorandum of Agreement;
- (2) use of existing consultation procedures (as, e.g., when there is doubt as to the harmlessness of a substance, or in the case of emergencies);
- (3) consideration of removal of dredged material from Annex I and its classification to Annex II in the same manner as followed in the development of the list of hazardous substances. Use of such a procedure to change the status of substances listed in Annex I is noted in the Report of the Ad Hoc Scientific Group, at LDC V/4, para. 2.3.5.
- (4) consideration of the need or desirability of amending the Convention, the Annexes, or the Guidelines;
- (5) adoption of new procedures to address these issues.

We invite Contracting Parties to consider the above concerns of the IAPH, and to further consider asking the Ad Hoc Scientific Group to review these concerns on the Agenda of that group's next intersessional meeting, with a view to recommending action by Contracting Parties at the Sixth Consultative Meeting. Such consideration might appropriately be given under action item 1 of the Scientific Group, LDC V/4/12.1.1., relating to a review of Annexes I and II, or as a separate action item.

Again, let me convey the deep appreciation of the IAPH at the opportunity to address this Fifth Consultative Meeting, and express the willingness of the IAPH to assist Contracting Parties, and the Ad Hoc Scientific Group, in every way possible in addressing these issues.

administration, operation, development, and promotion, and for advancing international friendship and understanding and the growth of waterborne commerce. The objects of the IAPH include endeavors:

- (a) To develop and foster good relations and collaboration among all ports and harbours of the world.
- (b) To facilitate the formulation of common positions, policies or plans on questions of common interest, and to present such positions at regional and international discussions.
- (c) To initiate measures designed to protect the legitimate interests and rights of Association members in inter-governmental and other international organizations in order to improve conditions and efficiency in ports on a world wide basis.
- (d) To foster by continued action the progress of ports and harbours, and the interests of waterborne transportation and marine-oriented industrial development in general, in cooperation with shipowners/shipping lines, all modes of land transportation and any other bodies concerned with waterborne transportation.

In the fulfillment of these objectives, the undertakings of the IAPH include the establishment and strengthening of relations with public and private international organizations, associations, and agencies on matters of mutual international interest, and with the purpose of maintaining more effective communication with these bodies regarding the views of this Association.

### **1. The Interest of the IAPH in the Ocean Disposal of Dredged Spoil**

1.1 The member ports of the IAPH serve vital national and international interests of their respective States in carrying on world trade and commerce and in relations with other States. Port operations are an integral part of the economic and commercial affairs and monetary structure of States and serve widespread governmental, public, and private interests. Continued port operations are essential to the on-going conduct of world trade and commerce, and to the orderly conduct of international relations between States.

1.2 IAPH member ports require periodic dredging to assure the maintenance of sufficient channel depth to accommodate commerce and trade. From time to time, IAPH member ports also require channel and harbour improvements for continued operation, and to meet growing demands and commitments of States in national and international trade and commerce. The efficient carrying out of such maintenance dredging operations and the necessary undertaking of such required channel and harbour improvements is essential. Without this work, efficient port operations could not continue and the closure of effected ports could occur—with drastic, and perhaps irreparable, impacts upon affected States and the exercise of their sovereignty, upon States' positions in the international community, upon their intercourse in world commerce and trade, and upon the well-being of their citizens.

1.3 In order to carry out needed maintenance dredging operations and harbour and channel improvements, it is necessary for IAPH member ports to dispose of dredged material. In many instances, the only feasible means of disposing of dredged material may be through ocean dumping, at an appropriate site. There may be no other practicable alternative means or methods for disposal. Under these circumstances, if ocean disposal of dredged material is not

allowed, maintenance dredging and channel and harbour improvements necessary for ports to remain open may not be able to be carried out.

### **2. The Provision of the Convention of Concern to the IAPH**

2.1 Article IV(1)(a) of the Convention prohibits the dumping of waste or other matter listed in Annex 1. Paragraphs 8 and 9 of Annex 1 provide:

“8. The preceding paragraphs of this Annex do not apply to substances which are rapidly rendered harmless by physical, chemical, or biological processes in the sea provided they do not:

- (i) make edible marine organisms unpalatable, or
  - (ii) endanger human health or that of domestic animals.
- The consultative procedure provided for under Article XIV should be followed by a Party if there is doubt about the harmlessness of the substance.

“9. This Annex does not apply to waste or other materials (e.g., sewage sludges and dredged spoil) containing the matters referred to in paragraphs 1-5 above as trace contaminants. Such waste shall be subject to the provisions of Annexes II and III as appropriate.”

2.2 Paragraph 9 appears to recognize a distinction between sewage sludges and dredged spoils on the one hand, and other wastes containing Annex I substances on the other. Paragraph 9 appears to list dredged spoil and sewage sludge as examples of the types of wastes in which Annex I constituents would be considered as occurring as trace contaminants. It appears to establish a categorical exclusion of dredged spoil and sewage sludge from Annex I and to evidence an intent to subject dredged spoil to the relevant provisions of Annexes II and III as appropriate.

2.3 At the Third Consultative Meeting, the Contracting Parties adopted Interim Guidelines for the Implementation of Paragraphs 8 and 9 of Annex I of the London Dumping Convention, (“Interim Guidelines”) LDC III/12, Annex 6, which applied the Annex I prohibition of Article IV(i)(a) to dredged spoil.<sup>\*/</sup> In the Interim Guidelines, however, Contracting Parties appeared to recognize that as a category dredged material should be treated differently than non-dredged wastes. An exclusion from testing was provided for dredged material, where chemical characterization and knowledge of the disposal site allow an assessment of the environmental consequences of the dumping. LOC III/12, Annex 6, para. (C)(8).

2.4 At the Fourth Consultative Meeting, Contracting Parties amended the Interim Guidelines to provide a further exclusion of dredged material from testing under certain circumstances. LDC IV/3.24, Annex 5.

<sup>\*/</sup> This was apparently a departure from the Draft Guidelines endorsed in principle by Contracting Parties at the Second Consultative Meeting, LDC II/11, Appendix II, which excluded sewage sludge and dredged spoil (paragraph A.3).

2.5 In cases not covered by the above exclusions, however, if Annex I constituents are considered to be present in dredged material as other than trace contaminants and if the dredged material is not considered to be rapidly rendered harmless, there appears to be a question as to whether the prohibition of Article IV(1)(a) may still apply.

### **3. The Effect of the Convention upon IAPH Members**

3.1 The IAPH supports the purposes of the Convention



and the efforts of Contracting Parties to minimize and to prevent the pollution of marine waters by control of the ocean dumping of wastes. The IAPH also supports the continued consideration of practicable alternative means or methods for the disposal of dredged material.

3.2 However, recognizing that in many instances there may be no practicable alternative means or methods for disposal, the IAPH is concerned about any **categorical** prohibition of the ocean disposal of dredged material.

3.3 The IAPH also takes note of the Draft Guidelines for Classification of Substances to Annexes I and II of the London Dumping Convention adopted by Contracting Parties at the Fourth Consultative Meeting, LDC IV/12, Annex 2. The IAPH invites Contracting Parties to consider whether, even though dredged material may exhibit Annex I properties, in appropriate circumstances it may nevertheless be safely disposed of in the marine environment if special care is used in the disposal, as in the case of Annex II substances which exhibit one or more of the Annex I properties. (LDC IV/12, Annex 2, para. 3.1).

3.4 To strictly prohibit ocean disposal of dredged material exhibiting Annex I properties—irrespective of alternative means of disposal and without consideration of whether, in a particular case, the dredged material may nevertheless be safely disposed of if special care is taken—could result in the unintended, and unnecessary, closure of affected ports, with concomitant effects upon national and international interests of ports and States in world trade and commerce, and upon the exercise of State sovereignty.

3.5 The IAPH invites Contracting Parties to consider whether such a result was intended by Contracting Parties.

3.6 In this regard, the IAPH takes note of the following expressions of intent by Contracting Parties:

- (a) Contracting Parties' agreement to use the best **practicable** means to prevent pollution, Convention/Preamble/para. 5, and to take all **practicable** steps to prevent the pollution of the sea, Convention/Art. I;
- (b) Contracting Parties' agreement to take effective measures to prevent marine pollution caused by dumping **according to their economic capabilities**, Convention/Art. II;
- (c) Contracting Parties' desire to prevent interference **with legitimate use of the sea**, Convention/Art. I;
- (d) Contracting Parties' care to provide an exception to Art. IV in the case of **emergencies**, Convention/Art. V.
- (e) Contracting Parties' recognition at the Third and Fourth Consultative Meetings of the different treatment which may be appropriate for dredged material.

3.7 The IAPH invites Contracting Parties to take note of the above, and to consider whether further study or action by Contracting Parties may be appropriate, or necessary, to address the need for ocean disposal of dredged material exhibiting Annex I properties when there is no other practicable means or methods of disposal, as follows:

- (a) To clarify the intent of Contracting Parties regarding the need for ocean disposal under such circumstances, such as by the device of a Technical Memorandum of Agreement of the Contracting Parties;
- (b) To review the applicability of, or the need for amendment of, the consultation procedure adopted by Contracting Parties at the Third Consultative Meeting where there is doubt as to the harmlessness of a substance, LDC III/12, Annex 6 (pursuant to Annex 1, para. 8), to provide for consultation regarding disposal of dredged spoil under such circumstances.

(c) To consider the need or desirability of amending Annex I, or the Interim Guidelines to provide that dredged spoil shall not be subject to Annex I, but shall be subject to the provisions of Annexes II and III as appropriate.

(d) To consider the need for a special consultation procedure for Contracting Parties faced with a need for ocean disposal of dredged material under such circumstances.

3.8 The IAPH further invites Contracting Parties to consider whether the need for ocean disposal of dredged material exhibiting Annex I properties when there is no other practicable means or methods for disposal may be so urgent as to present an affected State with an "emergency", and may warrant further action by Contracting Parties, as follows:

(a) To clarify the intent of Contracting Parties, such as by the device of a Technical Memorandum of Agreement by the Contracting Parties, that the need for ocean disposal under such circumstances may be treated by a Contracting Party as an "emergency" under Article V of the Convention, for which a special permit may be granted following the procedures for consultation in the case of emergencies established at the First Consultative Meeting, LDC I/16, Annex 3.

(b) To review the need for amendment of Article V of the Convention, or the emergency consultation provisions in LDC I/16, Annex 3, to provide for consultation by Contracting Parties regarding the need for such ocean disposal as an emergency, and for the grant of a special permit.

(c) To consider adoption of a special emergency consultation procedure for Contracting Parties faced with a need for such ocean disposal of dredged material.

#### 4. Conclusion

The IAPH reaffirms its appreciation of the opportunity to attend this Fifth Consultative Meeting as an observer and to submit this information document. The IAPH invites Contracting Parties to give the matters set forth above such consideration as Contracting Parties may deem appropriate, and requests that this information document be inserted in the report of this Fifth Consultative Meeting. Finally, the IAPH will continue to make its expertise available to the Contracting Parties in their deliberations.

#### IAPH Comments sent to UNIDROIT

As reported previously in the Jan./Feb. 1980 issue, the IAPH Survey on the Draft Convention on the Liability of International Terminal Operators was sent to the IAPH Board Members for their reply by the end of Jan. 1980. These replies were studied and compiled by Mr. Lennart Bergfelt of the Port of Gothenburg.

Comments thus prepared were submitted to the President of UNIDROIT, assuring future IAPH participation in the study works for the furtherance of this issue to be made with CMI (Comite Maritime International), ICC (International Chamber of Commerce) and FIATA (International Federation of Freight Forwarders Association).

Secretary-General's Comments to UNIDROIT, dated Oct. 27, 1980:

Mr. Mario Matteucci  
President  
UNIDROIT

Via Panisperna 28  
00184 Rome, Italy

Dear Mr. Matteucci:

**Re: Draft Convention on the Liability of  
International Terminal Operators**

You have had the kindness to ask us for our views and comments (by the 31st of October 1980) on the Draft Convention on the Liability of International Terminal Operators. We would therefore like to give you the following information and views about this matter.

We are happy to cooperate as far as possible in the work to unify the rules and regulations for terminal operators by international convention, which could then be adopted worldwide. We have had the advantage of following the work within the working-group by our observer Mr. Lennart Bergfelt, Port of Gothenburg, who is a member of our Committee on Legal Protection of Port Interests.

We have circulated your paper to the members of our Board of Directors for their comments.

As you already know, many ports do not, or only to a limited extent, handle good or carry out terminal operations within the ports. For this reason, we have tried, as far as possible, to get views and comments from the terminal operators within our ports. Mr. Bergfelt also attended an informal Container Terminal Operators Conference held in Oakland, California in October 1979, where he disseminated information about the work on the convention and asked for advice from participants.

Generally, the results of our investigations and deliberations at this stage of work cover the following areas:—

1: In principle, it must be right to standardize by international convention the various means of transport, which all have their own different problems about liability etc, which has been regulated over many years by existing international conventions or domestic regulations.

2: The constructions of two alternatives for joining the convention—either a mandatory convention or a system where those terminal operators who apply the conditions set out in the convention are authorised to use the name International Terminal Operators (ITO) and its logotype in accordance with Article 17 must facilitate the adoption of the Convention.

3: In principle, it is right to use a model, as far as possible, the so called Hamburg-rules, which probably are going to replace the existing Hague and Hague-Visby-rules for maritime traffic.

4: A reasonable and simple limitation of liability would be convenient for all involved and facilitate obtaining insurance, which would cover all risks for a reasonable amount of money.

The limitation in Article 6 is however not fixed, but can by agreement between the terminal operator (ITO) and the customer exceed the stated limitation. (Article 6 3.) This must lessen the value of the limitation and might result in different limitations for the ITO in contracts with different customers. This must in principle be wrong.

5: Finally, it is obvious that many terminal operators are just not interested in a change in the current situation where they use the conditions of liability as a means of competition with other terminal operators. Many are also reluctant to change from the widely existing culpa clause to the reversed burden of proof in Article 5. This

was very evident at the Container Terminal Operators Conference in Oakland in October 1979.

We know that the draft convention is expected to be supplemented by standard conditions worked out in cooperation with international organizations like CMI, ICC and FIATA and would be sponsored and recommended by these organizations.

We have learned that this work is about to start under the leadership of CMI and we would be happy to take part in this work.

As we understand work on the draft convention and the standard conditions have to be seen as a whole and considered together. So we would be happy to have the opportunity to give our further views and comments later when we can see the result of the work on standard conditions. At that stage we also hope to have obtained more views, comments and advice from the terminal operators in our ports.

With my best regards,

Yours very truly,

Hajime Sato  
Secretary-General

## **UN appreciates IAPH's resolution on IYDP**

The IAPH resolution in support of the UN's International Year of Disabled Persons (IYDP) submitted to the IYDP Vienna International Centre on October 20th, was most cordially acknowledged by Mrs. Z.L. N'Kanza, Executive Secretary who expressed the IYDP's hearty appreciation for the Association's active participation in the promotion of the IYDP objectives. Also, a letter of thanks in French addressed to President Bastard arrived from the same office of the UN appreciating IAPH's sincere concern about this program and with the information that the IAPH's resolution is to be published in "IYDP News".

## **Mr. Leslie Still, Jr. retires**

Leslie E. Still, Jr., Vice-Chairman of the IAPH Legal Counselors retired November 28, 1980 as supervising Senior Deputy City Attorney for the Port of Long Beach, California. Mr. Still had served as a member of the IAPH Legal Counselors for approximately 15 years and as Vice-Chairman for the last four years. He has also served as a member of the Constitution and By-Laws Committee.



After attending Executive Committee meetings in Los Angeles and San Francisco, Mr. Still attended the biennial conventions at Melbourne, Montreal, Amsterdam, Singapore, Houston and Le Havre, as well as intervening meetings of the Executive Committee.

A member of the State Bar of California for over thirty years, Mr. Still engaged in private practice before serving as a Deputy City Prosecutor and City Public Defender for the City of Long Beach, and joined the office of the City Attorney in 1954. He was soon assigned to work with the Port of Long Beach and continued to work as legal adviser to the staff and Harbor Commission for over 25 years. He also served as chairman of the Law and Legislation Committee and the Legal Committee of the California and Pacific Coast Association of Port Authorities, and was a member of the Legal Committee of the American Association of Port Authorities.

"I will miss my long association with members of the

port and terminal industry, and especially will miss working with our many friends in the IAPH", Still said. "It was a great privilege to work with Mr. Toru Akiyama through the years, and his inspired leadership and financial assistance enabled the Association to continue and prosper", Still said, and "Dr. Sato and his dedicated staff are continuing his good work."

"I send greetings to all of our friends around the world, and wish the Association continued success", Mr. Still stated.

Mr. and Mrs. Still are now living at 1268 Bel Air Drive, Santa Barbara, California 93105.

## **Your Cooperation Needed: It's time to pay membership dues**

Head Office has sent to all IAPH member invoices for membership dues for 1981. The dues for the year are 10% up on last year, as decided at the 11th Conference held in France in May 1979.

The value on the invoice is shown in SDR Units. The SDR value of regular member is SDR730 per membership unit. For the actual payment, members may quote the exchange rate between the SDR Unit and the US Dollar as of Dec. 10, 1980, which is  $\text{SDR1} \div \text{US\$1.26068}$ , as far as the payment is to be made before the end of Jan. 31, 1981. Those remittances to be made on and after Feb. 01, 1981, members may quote the current rate available at the time of the payment.

Sec. 25 of the By-Laws provides that annual membership dues shall be due and payable in advance by each member required to pay dues for one year and shall be delinquent on and after Feb. 1 of each year, and that dues shall be remitted to the Secretary-General and costs of remittance shall be paid by each member.

Dr. Hajime Sato, Secretary-General, points out the fact that the above quoted exchange rate on the same day in 1979 was  $\text{SDR1} \div \text{US\$1.30671}$  and that this means 3.5% is already lost because of the change in the exchange rate despite the 10% increase decided by the Association. He appeals for members' understanding and asks for their cooperation in remitting the dues by the above date.

## **ESCAP Seminar in Yokohama**

An ESCAP Seminar on the Planning and Management of Modern Cargo Terminals was held in Yokohama, hosted by the City of Yokohama, for 10 days from Nov. 4, being attended by 15 participants from 11 countries in the region.

### **Visitors**

- On Nov. 6, 1980, Mr. Danko Koludrovic, Chief, Division for Shipping, Ports and Inland Waterways, UN-ESCAP, accompanied by Mr. Kisaburo Enomoto, Senior Shipping Expert, visited the head office and was met by Dr. Hajime Sato, Secretary-General, and his staff. Mr. Koludrovic was visiting Japan to attend the ESCAP Seminar on "Planning and Management of Modern Cargo Terminals", which was held from 4 to 13 November 1980, at Yokohama, and Study Tour of the Chief Executives of the National Shippers' Organization in the region.
- On Nov. 7, 1980, Dr. Ross Robinson, Staff Service for Shipping and Ports, UN-ESCAP, visited the head office and attended an informal get-together celebrating the

25th anniversary day of IAPH. Dr. Robinson was in Japan to attend the ESCAP Seminar in Yokohama.

- On Nov. 28, 1980, Mr. Washburn S. Oberwager, President of Merican Curtis and Mr. E. Saubolle, Far East Representative of Delaware River Ports Authority, visited the head office. The party then visited the Ohi Container Terminal complex to observe the facility and equipment used at the terminal.
- On Dec. 1, 1980, Mr. Jun Mori, President of Board of Harbor Commissioners of Port of Los Angeles, accompanied by Mr. E.L. Perry, Executive Director. Mr. Masami Ono, Assistant Director of Trade Development and Mr. Katsuya Yokoyama, Far East Representative in Tokyo, visited the head office and met Dr. Hajime Sato and his staff. The party was visiting the Far Eastern countries for promoting trade with the Port of Los Angeles.
- On Dec. 5, 1980, Mr. Chen, Kuo-Quan, Chief Engineer of China Port and Harbour Consultants and Mr. Tseng, Chi-Lin, Asst. Manager, visited the head office on their study trip to Japan. The party visited Matsushima Power Station of Japan Electric Power Development Co., Ltd., which is located on the Western tip of Nagasaki Prefecture, and the ports of Kobe, Osaka and Nagoya in order to observe the port facilities for coal traffic.
- On Dec. 8, 1980, Mr. and Mrs. G.W. Altvater, visited the head office and met Mr. Toru Akiyama, Dr. Hajime Sato and head office staff members. He was visiting Tokyo on a Texas-Japan trade promotion mission.

## **Membership Notes**

### **Temporary Members**

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4768, Ecuador  
Office Phone: 613111 - 610993  
Telex: 046182 APMANT  
Cable: Aportuaria  
(Ing. Antonio Largacha Anchundia, General Manager)

#### **Marine Board of Devonport**

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Telex: 58750  
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(Mr. D.J. Gown, General Manager)

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(Mr. Alexander Krygsma, Port Director)

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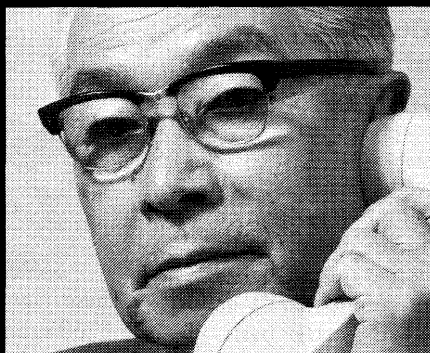
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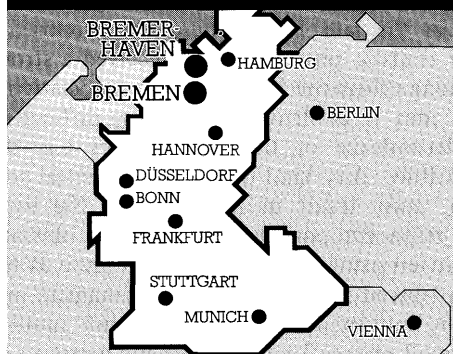
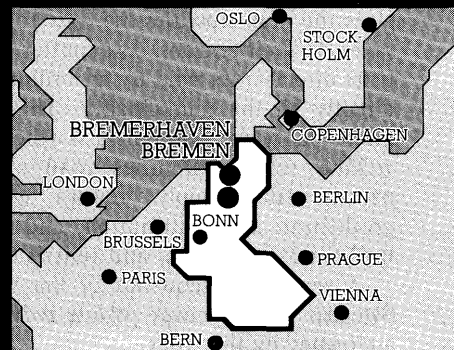
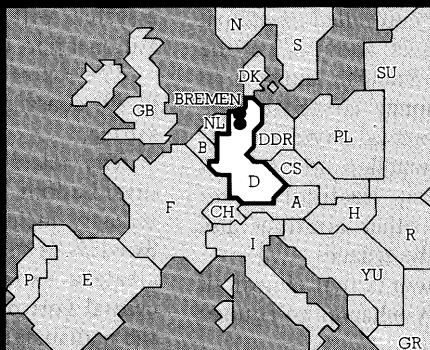
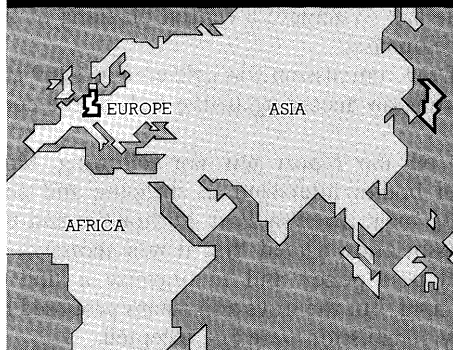
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## Open forum: Port releases:

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# Is There A Need For A National Ports Policy?

**By Mr. Sven Ullman, General Manager, Port of Gothenburg, Sweden; An Executive Committee Member, IAPH**

Although Sweden is a comparatively small nation, a population of 8 million people, Swedish municipalities are, according to the Swedish law, highly independent towards the Central Government. The respective municipalities manage their own business and activities independently and to a very high extent on a financially self-supporting basis.

This is possible because of the taxation system, which gives the municipalities the right to levy so called municipal taxes on their citizens. As a matter of fact, about 2/3 of the total direct taxes paid by an ordinary Swedish taxpayer go directly to the municipality. This money is used by the municipality for hospitals and other medical services, social welfare, schools, libraries, road construction and maintenance, water supply, sewage system, electrical power production and distribution, and all other activities and facilities for the use of and benefit to the citizens.

A certain consequence of this system is that almost all Swedish ports (except private industry wharves of course) are owned by the cities.

This fact has also another background. In the wake of the big industrialization in the beginning and middle of the 19th century followed a demand for man-made port installations. In this situation the municipalities had to take the initiative. Firstly, the municipalities were the owners of the ground necessary and available. Secondly, there was actually no one else entrusted with the power and the financial resources as well as the active interest to push the development of the port industry than the municipal body. Thus, historically, port business in Sweden is a municipal affair. There is even a relatively limited legislation concerning port construction and management.

It is interesting to notice how keen most port owning municipalities always have been and still are to stress the importance of their ports and to support the development of their ports.

We all know very well how world trade has expanded during the last decades and how this trade growth has stimulated the expansion of the port industry.

The basic independence of the Swedish municipalities e.g. as port owners, has resulted in a keen competition between Swedish ports and in a development and construction activity, which is in many cases completely unplanned.

An unavoidable consequence of these activities is that many ports are today relatively poorly utilized. An additional reason for this is of course the fact that the shipping industry and the system of international shipping lines has changed because of the technical development during the 1960's and 70's.



Mr. Sven Ullman

These facts became evident already in the beginning of the 1960's, and a parliament commission was formed with the task to elaborate and propose a national port policy and a system with the aim to achieve a central planning of the national port development.

The report of the commission was delivered in 1969 and it did contain proposals according to the task of the committee.

The reaction on the report was the following. Most organisations and bodies interested in shipping and port industry including most Swedish Port Authorities and the Swedish Ports Association agreed that it was necessary to create a national port policy and to organize a kind of central port planning, but the ways and means proposed by the parliamentary commission were not accepted.

However, the Ministry of Transport had to go on with the matter and in the late 1970's there was proposed a better and more realistic plan. This plan received a strong support from among others the Swedish Ports Association.

But now the idea is confronted with new difficulties namely the independence of the port owners e.g. the Swedish municipalities. Any kind of adequate, central port planning system, must result in limitation of the independence of the respective port owners. However, obviously no Swedish Government, who wants to continue as the Government, is prepared to propose to the Parliament any limitations of the independence of the Swedish municipalities. A very good reason for this is that the members of the parliament do not only represent their political parties but in reality, if not formally, also their local municipal interests.

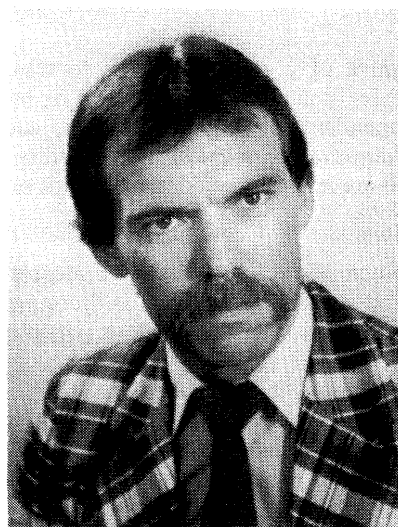
So there we are now. The current international trade development makes it still more evident that a small country like Sweden with a very large number of ports does need a national ports policy and a central port planning system. Most of the Port Authorities as well as the Ports Association do agree, but the Government and the Parliament seem to be reluctant to interfere in the municipal independence—even on a small scale. Considering the fact that in many other countries the Government and the Parliament see the need of and so create a system of central planning of the national port industry—whereas the Port Authorities want for themselves a certain independence—Sweden has got a complicated problem to solve.



# The impact of new shipping technologies on the handling of non-bulk cargoes in developing ports (2)

By Ir. C. Bert Kruk  
Delft, the Netherlands

1. Synopsis
2. Major changes in break bulk shipping since World War II
  - ULC
  - Side loading & multipurpose vessel
  - Containers
  - Ro-ro
  - Barges
  - Present state of merchant shipping
3. Description of the most important new techniques
  - Container systems—Objectives and basic conditions
  - Ro-ro systems —Objectives and basic conditions
  - Barge systems —Objectives and basic conditions
4. Description of the average boundary conditions in developing ports
  - Introduction
  - Description
5. Conclusions and recommendations



Ir. C. Bert Kruk

## 3. Description of the most important new techniques

### Container systems

#### Objectives

Full container service is directed towards the reduction of local labour, the increase of the amount of cargo handled in port (per unit of time) and towards an overall simplification of cargo handling procedures, which is optimum in case of high percentages of door-to-door transport of containers. The introduction of a full container service has often yielded a significant reduction in pilferage of cargo in a port.

#### Basic conditions

Full container services have proved to be successful when at **both ends** of the sea voyage:

- a) Containerizable return loads are available in sufficiently large quantities. The term 'containerizable' stands for cargo which, as far as its weight, dimensions and shape are concerned, can be transported in a container and the value of which justifies the container freight rates. It should be realized in this context, that the industrialized countries usually operate a freight rate system linked to the value of the commodity transported. This is usually not the case (or to a lesser extent) in countries with centrally planned economics.
- b) The costs of labour and services are high (at least at one end of the sea voyage).
- c) Efficient container terminals exist, which require:
  - c 1) A sufficiently large area with adequate lighting, surface water drainage and pavement for the transportation and stacking of containers.
  - c 2) Administrative buildings.
  - c 3) Container repair shops.

- c 4) Parking areas for trucks, trailers and private automobiles.
- c 5) Quays at relatively deep water and not too extreme tidal ranges. The quays have to be able to withstand the relatively high pressures due to containers and operational equipment.
- c 6) Adequate container handling equipment in sufficient numbers showing a minimum of downtime and handled by properly trained dockworkers.
- c 7) Workshops, manned by well-trained mechanics, for repair and maintenance of the handling equipment. The workshops should have a sufficient stock of spare parts.
- c 8) An excellently managed Container Freight Station (CFS) in the vicinity of the terminal. Good access from the terminal to the CFS and vice-versa is essential for the proper operation of both. The CFS should provide sufficient storage area for transit, as well as for empty, containers.
- c 9) Good and well-maintained connections with the hinterland, either by rail, road or inland waterways, or the possibility to reload containers on or from smaller sea going vessels (so-called feeders).
- c10) Efficient overall administrative and inspection services.
- c11) A sufficient number of slots for refrigerated containers.
- c12) Restricted areas for storage of containers carrying dangerous or inflammable goods.
- c13) Optimum service, which means that the terminal must operate seven days per week, twenty-four hours per day.
- c14) Customs regulations and service hours in coordination with terminal operation procedures.
- d) Cargoes destined for one consignee, the so-called FCL (Full Container Load), are offered for import as well as

export in relatively large quantities and at regular intervals.

- e) The stage of development of both countries has reached such a level, that consumers are able and willing to pay the container freight rates which may, at times, be higher than the conventional shipping freight rates.

### **Ro-ro systems**

#### **Objectives**

The objective of a ro-ro system is to transport break bulk cargo quickly and safely on its own or on temporary wheels, independent of port equipment, such as quay cranes. Furthermore, it provides the possibility of handling cargoes which are in excess of container loads or volumes.

#### **Basic conditions**

The basic conditions which justify a successful, regular, ro-ro operation are largely the same as those mentioned for the container operation in the previous paragraph, as far as concerns.

- Return loads in sufficient quantities
- Labour and service costs
- Administrative and inspection services
- Efficient customs regulations
- Parking areas
- Work shops

The following points could be mentioned as additional or specific requirements:

- a) When compared to a container terminal, the terminal area for ro-ro traffic should be larger when the same amount of cargo is to be handled. This is mainly because:
- Most of the cargo cannot be stacked, which is not the case with containers.
  - The basic concept of the ship is quick turnaround in port. For a successful operation this necessitates a terminal area large enough to receive a full ship's load in a few hours and an area able to accommodate the cargo to be loaded immediately after discharge.
- b) The further transportation of import cargo to the hinterland, as well as adequate supply of export cargo are more important than in the case for container services. Excellent road connections between the port and the hinterland, as well as a sufficient number of well-maintained land vehicles are therefore vital.
- c) A bottle-neck situation in ro-ro systems may easily arise. This is because export cargo has to wait for the ship and be ready when it arrives. Furthermore, non-wheeled export cargo must be provided with temporary wheels prior to the ship's arrival. This obviously calls for a sufficient stack of flatcars and/or trailers, an efficient organization and (again) a sufficiently large storage area, not too far from the ro-ro terminal.

### **Barge carrying vessel systems**

#### **Objectives**

The objective of barge carrying vessel systems is mainly directed towards the quick turnaround of the ship and her independence of quay constructions.

#### **Basic conditions**

The basic concept of the barge carrying vessel system is a further step in door-to-door or integrated transport, when compared to other systems, such as the container or the ro-ro system.

The fundamental principle of this system is that the cargo handling procedures should not be carried out in port, but the barge be transhipped by inland waterways to the consignee and handled at his premises (in the case of import) and vice-versa (in the case of export).

If this system is to be operated successfully, the following conditions must prevail:

- A sufficient amount of door-to-door cargo, import as well as export, must be offered.
- Excellent inland waterways systems must be available which:
  - (preferably) allow push convoys assembled from a certain number of barges.
  - provide access to the producer's or the consignee's premises.
- For the lift on/lift off procedures of barges a quay is not needed, since a sheltered water area with waves not higher than one meter will do, either in or outside the port area.
- The Barge Fleeting Area (BFA) must be large enough to accommodate at least one full ship's load of barges.
- At least one tug to handle the barges during loading and unloading procedures must be available.

Note: In a number of cases ports without inland waterway connections receive barge carrying vessels. In such cases the barges are often used for temporary storage of cargo. It goes without saying that the use of barges in this way does not correspond with the original idea as outlined above.

### **4. Description of the average boundary conditions in developing ports**

#### **Introduction**

Following the developments in break bulk shipping which have taken place over the last twenty-five years and the requirements for successful application of three of the new techniques in that field (container, ro-ro and barge systems), it is very interesting to consider the situation of ports in developing countries in this respect.

Up to now, many developing ports have not, or only occasionally, been confronted with modern merchant shipping techniques.

When comparing the overall situation of these developing ports with ports in industrialized countries, which created the environment for these techniques, it becomes obvious that the developing ports often consider modern techniques with reluctance.

#### **The average situation in developing ports**

The average situation in developing ports may be described as follows:

- Containerizable cargo and/or cargo fit for ro-ro transportation is either not available, or only available in relatively small quantities for export.
- Investments in container and ro-ro terminals are very high. Even if this money could be raised, the question remains whether it could not better be spent on other, very urgent, development programmes.
- Container and ro-ro terminals need large areas of land, whereas Barge Fleeting Areas need a large surface of protected water area. Looking at the average situation in most developing ports, the same picture appears, viz. a relatively small water and port area completely surrounded by the neighbouring town.

- The three techniques mentioned are directed towards the decrease of the cost of labour especially. This is because of the high wages in industrialized countries. In developing countries, wages are still relatively low, and at the same time the rate of unemployment is sometimes high. Introducing the new techniques (which are not required as far as labour costs are concerned) would result in even higher unemployment rates.
- Good connections with the hinterland either by rail, road or inland waterways are essential for the successful application of the new techniques. This has rarely been the case in developing countries up until now.
- Skilled technicians to repair and maintain sophisticated equipment and containers are often unavailable, whereas training is usually expensive and time-consuming.
- Sufficient supplies to the spare parts department create an extra financial burden.
- Full Container Loads and Full Barge Loads occur at much less regular intervals than in industrialized ports. This greatly emphasises the need for the good operation and management of the Container Freight Station and of barge loading and unloading procedures in port, as well as on further administrative matters and inland transportation. If these operations are not properly executed, the advantages of the introduction of the new techniques will not be for the port, which is left with heavy investments and more red tape and organizational problems.
- Experience has shown that customs regulations sometimes hinder the work of port managers and operators, who need smooth operations.

## 5. Conclusions and recommendations

Though most of the points mentioned in the previous chapter do not appear to be encouraging as far as developing ports are concerned, it should not be forgotten that the above descriptions refer only to average situations in many of these ports.

It may also seem as though the points above form an indication against the introduction of new techniques. This, of course, is not the case. A port manager cannot close his eyes and pretend that nothing changes around him. Changes do occur, but the decision whether or not to adopt these new techniques, to what extent and when, should only be taken after thorough consideration and consultation, as may be concluded from the guide-lines listed below.

One has to face the facts and realize that:

- a) Containers exist and are here to stay. They are expected to gain yet a further share in the amount of the break bulk cargo transported in the world: estimates ranging from 60 to 75% and even higher have been stated.
- b) The major proportion of ships transporting break bulk and/or mass break bulk cargo is still formed by general cargo and multipurpose vessels, as can be seen from Table 1.
- c) In many instances ro-ro, and sometimes also barge carrying systems are being applied quite successfully. This will, for the time being, justify attempts to conquer an even bigger share of the market.

Bearing these facts in mind, one may arrive at the following guidelines for developing ports:

- 1) More emphasis could be put on an even better performance of the multipurpose vessel. This type of vessel, capable of transporting almost any type of cargo, corresponds in many cases to the cargo to be handled in

developing ports. Studies and tests may lead to an increase in the vessel's performance in port and to the building of even more appropriate multipurpose vessels.

- 2) Recently developed port planning techniques, such as the multipurpose terminal ones, could be studied and put into practice when port extensions are planned.

The basic concepts of the multipurpose terminal are:

- Wide aprons (30 to 45 m deep)
- Berth length (preferably not fixed) ranging from 200-300 m
- No fixed concrete or more stories buildings in the vicinity of the apron of the multipurpose berth
- Deep land areas (at least potentially available) including sufficient stacking areas for containers and ro-ro cargoes
- Wide road traffic channels
- Wide doors to sheds and warehouses
- Flexible, multipurpose cargo handling equipment
- No permanent stacking of cargo on the apron.

- 3) At relatively low costs studies may be undertaken to arrive at a more adequate use of the Unit Load Concept. These studies should be undertaken in cooperation with other ports, shipping companies, consultants and international maritime organizations.

- 4) Abrupt changes in cargo handling procedures in a port, which do not link with the traditional methods will easily lead to discomfort and bottle-necks.

- 5) A port should be reluctant to introduce a very advanced, sophisticated port operation and/or administration technique in a certain section of the port or a terminal, just as long as the required investment for it could better be used for stepping up the quality of other sections and/or terminals.

- 6) Even the ports in industrialized countries have, until now, hardly been able to reach optimum throughputs of specialized terminals for containers and ro-ro operations and for barge carrying vessel operations. Extensive studies (many executed by means of computer simulation and mathematical models) are constantly undertaken. The developing ports should take steps to obtain the results of such studies, because they may form basic inputs for the solution of some of the problems of these ports. Several ports in Western Europe such as Bremen in Germany, Marseille in France, Antwerp in Belgium and Rotterdam in the Netherlands have set up special offices or departments which are directed towards direct exchange of information with developing ports. This initiative deserves to be followed by other ports.

- 7) Since containers and ro-ro operations are a reality, developing ports may well prepare themselves to accept them. This, however, should be undertaken with utmost care and preferably step-wise, so that changes in the process remain possible after an evaluation of the situation.

Although many port planners immediately think of up-to-date large terminals, supplied with the most advanced equipment, it has been shown at several instances, that, due to the boundary conditions of successful operation outlined before, these terminals appeared to be so-called white elephants.

- 8) Congestion problems in developing ports may have forced the introduction of modern techniques at an earlier date than anticipated, had the conditions been normal. Besides the failure to use generally accepted basic port planning procedures, as outlined under 2), the

insufficient effectiveness of the individual dockworker or administrator has also shown to be one of the bottlenecks in smooth port operation. Therefore, it is recommended, to establish training and educational facilities for dockworkers and administrative staff and to acquaint them with new techniques. The ultimate aim should be to train an all-round docker or administrator. It was, however, also clear in these instances, that a compensation must be awarded for the willingness of personnel to be trained.

- 9) Developing ports should follow the studies and recommendations of international organizations such as UNCTAD, IMCO, IAPH and the IBRD as close as possible. They should, furthermore, always be able to deal with these bodies in case of requests for assistance.
- 10) Since shipowners have started to combine their efforts and interests long ago and are more flexible in their operations than ports, it is obvious, that ports should try to follow a similar approach. Competition to a certain extent (national as well as international) is essential and will ultimately lead to better services, as long as this competition is not pushed too far.
- 11) Finally an administrative recommendation, based on a actual event. As one of the reasons to introduce new techniques to reduce congestion in ports is said to be found in the decreased performance of dockers, so may often also a source for congestion be found in administrative and operational matters.

Congestion is often believed to occur due to unbalance between the number of berths available and the number of ships calling at that port. This belief is not always based on reality. Studies, that were carried out in Saudi Arabia some years ago to investigate the reasons behind the serious congestion problems, showed that this congestion was mainly created by the fact, that ships stayed at the berth too long. This, in turn, was caused by the fact, that cargo could hardly be unloaded, simply because there was no place to store it. Almost all the storage capacity was filled to a maximum level. When the reasons for this were investigated, the following points were found out:

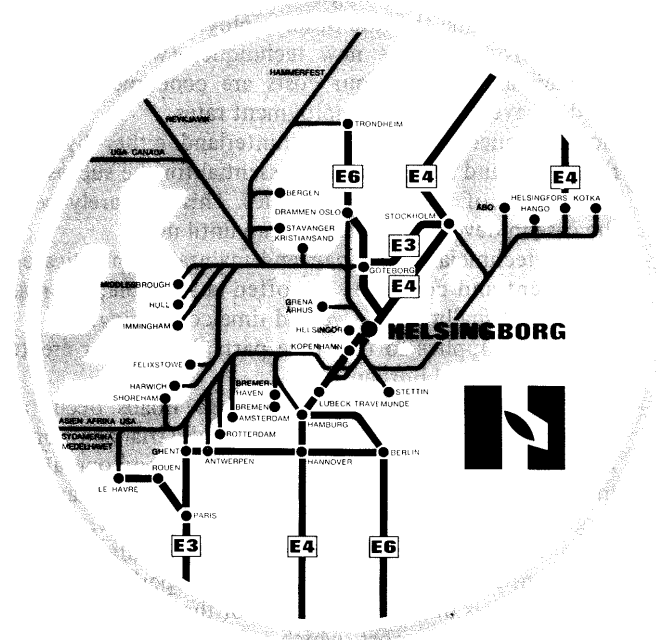
- a) There was no real limit to the dwell time of import cargo
- b) There was much red tape in customs regulations
- c) The warehousing systems proved to be rather poor
- d) Port and customs operations were hardly synchronized

Recommendations following from these findings concentrated on very strict rules concerning the dwell time of import cargoes. When these rules were not followed, the result could be either extra payments or even confiscation and public auction of the cargo. This measure soon led to a drastic decrease of congestion and in some ports even to a complete disappearance of the phenomenon.

The conclusion to be drawn of this example is, that another solution to ease the congestion, viz. the construction of additional berths and the untimely introduction of new techniques such as the ones described, might have led to the same results, but at very high expenses, which would have decreased the net return of the ports significantly.

(Concluded)

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# National Port Assessment 1980-1990 — An Analysis of Future U.S. Port Requirement (extracts)

by the U.S. Department of  
Commerce, Maritime Administration,  
Office of Port and Intermodal  
Development

## I. INTRODUCTION

Ports serve a vital role in the U.S. economy as strategic elements of our national and international waterborne commerce. The contribution that ports make to the national economy and transportation network is not merely a phenomenon of the past. The capability to handle ocean and river commerce and the vessel traffic supporting that commerce is obviously a strategic necessity and a prerequisite to sustained economic growth.

In order to handle this commerce, over \$5 billion has been invested by the public port industry since 1946 for marine terminal construction and improvements. During this same period, the Federal government also invested sizable amounts in harbor and channel dredging. Such investments by the port industry and government are necessary to take maximum advantage of changing vessel and cargo technology without which a healthy competitive trade position could not be maintained.

## PURPOSE

This report is an assessment of the marine terminal needs of U.S. ocean and inland riverports on a national scale. It is based on a demand-capacity analysis which compares the cargo-handling capacity of the existing system of port and terminal facilities with the projected flows of foreign and domestic waterborne commerce in the years 1980-1990. The facility needs determined by the study and the estimated capital improvements required are derived from this comparison of system-wide capability with system-wide commerce.

For practical reasons, the four major seacoasts of the United States are divided into six coastal regions. Accordingly, projections were made on a regional basis and consolidated nationally. The aggregated regional capacities are the sum of the estimated capacities of individual terminal berthing facilities associated with each of nine major commodity groups analyzed in the study. Therefore, facility requirements for specific ports have not been identified.

## BACKGROUND

This assessment is the first analysis of marine terminal requirements in recent years that is national in scope. Such analyses previously have been provided independently by state, regional, and local public agencies, and to some extent by private organizations. The Maritime Administration has participated in a number of unique cooperative studies with ocean and inland port interests and state and local governmental agencies on a regional basis. Although these regional studies have varied study tasks, they all utilize a common approach. Their primary purpose, how-

ever, is to estimate port capacity under current and future conditions with respect to projected cargo demands, and to analyze alternative port development plans on a regional basis.

Participation in these regional studies has enabled the Maritime Administration to expand its capability to gather uniform data on trade flows, ship activities, and marine terminal capacities, both historical and projected. This data can be employed to improve the techniques and methodologies used to estimate port development requirements. Recognizing the need for such quantitative information on a national basis, the Maritime Administration applied the knowledge and expertise gained from these regional reports to develop this national port assessment.

## APPROACH

The total national assessment study was performed in four phases and may be summed up as follows:

- Phase 1 consisted of dealing with a selected inventory of marine terminal facilities including the physical types, berthing allocations and general characteristics of existing U.S. ocean and inland riverports. The inland riverport analysis is limited to a 17-state mid-America segment of the U.S. inland waterways.

A total of 189 deep-draft commercial seaports located along the four seacoasts of the United States, including Alaska, Hawaii, Puerto Rico and the U.S. Virgin Islands, were selected for this study. These ports and terminals are aggregated into six geographical regions—North Atlantic, South Atlantic, Gulf, South Pacific, North Pacific and Great Lakes. The ports and terminals of Puerto Rico and the Virgin Islands are included in the South Atlantic regions, while Hawaiian and Alaskan port facilities are included in the South Pacific and North Pacific coastal regions, respectively.

The riverports selected for this study are those associated with the vast inland waterway system of mid-America which comprises the Mississippi River Basin including the Gulf Intracoastal Waterway and the Alabama River system. For lack of an up-to-date information base covering the inland waterway system of the great Pacific Northwest, shallow-draft riverports and terminals of the Columbia and Snake River region have not been included in this edition of the assessment. Plans for future updatings of the assessment will include a more comprehensive coverage of the entire U.S. inland riverport system.

- Phase 2 involved coastal and river region surveys of the port industry for estimating throughput capacities and representative construction costs of existing public and private marine terminals for handling the nine major cargo movements.
- Phase 3 dealt with forecasting, assembling, and analyzing the foreign and domestic trade data aggre-

gated into nine major commodity movement categories. These categories were chosen on the basis of handling characteristics, volume of cargo, and importance to the economy.

- Phase 4 involved the determination of the demand-capacity relationship between port terminal facilities and port cargo movements.

## II. SUMMARY OF FINDINGS

The results and major findings of the National Port Assessment for selected terminal facilities and cargo movements are summarized below.

### EXISTING FACILITIES

#### SEAPORTS:

- The mainstay of the U.S. deepwater port industry consists of 1,456 marine terminals, located in 189 seaports, and comprising 2,939 deep-draft ship berthing facilities.
- The above seaport facilities include 1,448 general cargo berths, 778 dry cargo berths, and 713 liquid bulk cargo berths.
- An estimated 49 percent of these berthing facilities are publicly owned, and 51 percent are privately owned. In the public sector, 25 percent are controlled by State governments and 75 percent by local governments.
- Over 42 percent of these berthing facilities are located in 15 port cities with populations of 500,000 or more; 33 port cities with populations of 100,000 to 499,999 account for nearly 29 percent of total facilities; 97 port cities with populations of 9,999 to 99,999 represent almost 25 percent of the total; and 43 port cities with populations of 2,500 or less make up only about 4 percent of the total.
- Approximately 42 percent of these berthing facilities are related to breakbulk general cargo operations, whereas container, Ro/Ro, and barge carrier facilities account for less than 8 percent. On the other hand, dry bulk facilities make up 26 percent of total ship berthing facilities and liquid bulk facilities 24 percent.
- As a national average, approximately 58 percent of total U.S. port terminal facilities are considered to be in good condition, 29 percent in fair condition, and only 11 percent in poor condition.
- In 1980, it is estimated that deepwater ports and terminal facilities will handle approximately 1.6 billion long tons (nearly 2 billion short tons) of waterborne cargo, made up of foreign imports/exports and domestic oceanborne cargo movements. Total waterborne commerce passing through these ports is expected to increase 32 percent between 1980 and 1990.

#### INLAND RIVERPORTS:

- The backbone of the U.S. inland riverports industry consists of 1,198 water terminals, located in over 94 major riverport areas, comprising 1,894 barge berthing facilities, and serving 26 navigable rivers and waterways in 17 mid-America states.
- The above riverport facilities include 386 general cargo berths, 868 dry bulk cargo berths, and 640 liquid bulk cargo berths.

- These facilities provide 21 million square feet of covered storage for general cargo, over 147 million tons of covered and open storage for dry bulk cargoes, 340 million barrels of tank storage for liquid bulk cargoes, and more than 355 million bushels of elevator storage for grains.
- In addition, these facilities have cargo-handling equipment consisting of approximately 700 pieces for general cargo operations, over 1,000 for dry bulk commodity movements, more than 300 for the handling of grains, and about 300 for transferring liquid bulk cargoes.
- In 1980, it is estimated that the inland riverports and terminals of mid-America, alone, will handle approximately 900 million long tons (over 1.0 billion short tons) of waterborne cargo. Total waterborne commerce handled through these inland riverport facilities is expected to increase 31 percent between 1980 and 1990.

### FINANCIAL COST DATA

#### SEAPORTS:

- In terms of 1977 dollars, the actual cash value of all types of marine terminal facilities in 189 U.S. seaports is estimated to be \$40.4 billion, and the estimated replacement cost is approximately \$54 billion.
- Between 1973 and 1978, a total of \$396.8 million (\$66 million average per year) was spent by the U.S. deepwater port industry for modernization and rehabilitation of existing marine terminal facilities. The largest portion of this total—over 75 percent—was for the restoration and improvement of dry and liquid bulk cargo facilities.
- Of the total spent for terminal improvements in the 1973-1978 period, about 27 percent were for breakbulk general cargo facilities. Despite the general shift towards containerization, there is an apparent continuing need for restoring and updating breakbulk handling facilities at many ports.
- Only about 16 percent of the total improvement expenditures in the above time period were allocated to specialized general cargo facilities (container, Ro/Ro, and barge ship). Undoubtedly, this is due to the relatively lower average age of these intermodal facilities.
- As a national average, annual expenditures for port maintenance and operation reportedly represent over 49 percent of total port operating revenues.
- An estimated \$194 million reportedly has been spent by U.S. deepwater ports in compliance with Federal standards (environmental protection), employee health/safety, and cargo security) during 1970-1976.
- Of this total, \$139 million was for capital improvements, and \$55 million for the increased operating costs of mandated programs.
- These mandated costs averaged \$42 million per year for the public port sector. However, future mandated costs are expected to average \$64 million per year, or a 53 percent increase.

#### INLAND RIVERPORTS:

- Since 1952, the cumulative investment represented by the siting, building, and expansion of privately owned waterfront facilities along U.S. inland waterways is estimated to be approximately \$200 billion.



- In 1977 alone, new water-oriented industrial plants or expansions along the mid-America inland riverport and terminal system represented an estimated capital outlay of \$5.3 billion.
- The \$5.3 billion capital outlay by water-oriented industries in 1977 represents an average investment of \$34.2 million per plantsite.

## FUTURE FACILITY NEEDS

### SEAPORTS:

- On a national basis, the equivalent of 247 new facilities will be needed by 1990, including 27 additional breakbulk handling berths, at least 111 more container handling facilities, 10 more grain berths, 15 new coal berths, 12 new ore handling facilities, 25 additional other dry bulk berths, 22 new petroleum berths, 6 new liquefied gas facilities, and 19 new berths for handling other liquid bulk cargoes.
- The largest portion, or about 45 percent, of the total number of estimated deepwater facility needs is expected to consist of new and expanded container terminal facilities.
- Approximately 25 percent of the total estimated facility needs is expected to consist of new dry bulk cargo berths; about 19 percent of total estimated needs will be identified with new liquid bulk facilities; and only 11 percent will be accounted for by new breakbulk handling facilities.
- The most urgent requirements for added container handling capacity in the 1980-1990 forecast period are expected to be concentrated in ports of the South Pacific, North Pacific, and North Atlantic coastal regions.
- The greatest need by 1990 for new or expanded breakbulk facilities is expected to occur in port areas of the Atlantic and Gulf coasts.
- It is anticipated that ports of the Gulf and Great Lakes regions will experience the greatest need for added grain handling facilities beginning in 1985 and continuing through 1990.
- The most significant need by 1990 for new and expanded dry bulk handling facilities is expected to be experienced in ports of the Gulf and Great Lakes regions.
- The most critical need for new and expanded liquid bulk facilities over the 1980-1990 forecast period is expected to occur in ports of the Gulf and North Atlantic regions.
- These estimated facility requirements identified by the study for 1990 may be achieved by constructing new facilities, or by expanding, improving, and increasing the productivity of existing facilities, or by a combination of all these options.

### INLAND RIVERPORTS:

- By the year 1990, an estimated 492 new and upgraded riverport terminal facilities will be needed to handle projected waterborne commerce.
- Of this total, 423 are expected to be completely new facilities, while it is anticipated that 69 will consist of expanded or upgraded facilities.
- These estimated facility requirements include general cargo, grain, coal, ore, other dry bulk, petroleum (crude and products), liquefied gas (LNG and LPG), and other liquid bulk terminal facilities.

- It is estimated that these new and expanded facilities will require 5,432 additional acres of land for development purposes.
- The most urgent need for added terminal facilities and increased cargo-handling capacity in the 1980-1990 period is expected to be experienced in riverport and terminal areas of Louisiana and Alabama, followed by Arkansas, Mississippi, Tennessee, Illinois, Kentucky and Missouri.

## FUTURE CAPITAL REQUIREMENTS

### SEAPORTS:

- Nationally, the total capital requirements for the development of all types of marine terminal facilities in 189 U.S. deepwater ports during the decade of the 1980's are estimated at over \$5 billion.
- Liquefied natural gas (LNG) terminal facilities will require the largest commitment of capital over the next few years. If additional LNG facilities are to be constructed, the estimated cost will total nearly \$1.5 billion.
- Aside from LNG facilities, the major terminal development costs anticipated in the 1980-1990 period will be for new and expanded container handling facilities. The cost to provide these facilities is estimated at approximately \$1.4 billion.
- The other major port terminal development costs anticipated in the forecast period will be an estimated \$1.6 billion for providing all types of new and upgraded dry bulk handling facilities.
- Additional capital outlays will be required over the next 10 years to provide an estimated \$244 million for petroleum facilities, \$225 million for breakbulk facilities, and \$69 million for miscellaneous other liquid bulk facilities.
- The greatest share of the estimated \$5 billion capital outlay required for seaport terminal development in the forecast period is expected to be spent by ports of the North Atlantic (\$1.3 billion), Gulf (\$1.2 billion), and Great Lakes (\$990 million), followed by ports of the South Pacific (\$662 million), North Pacific (\$500 million), and the South Atlantic (\$380 million).

### INLAND RIVERPORTS:

- The total capital requirements for the development of inland riverports and terminals of 17 states of mid-America during the decade of the 1980's are estimated at over \$4.8 billion.
- These capital outlays will be required to provide new and upgraded facilities for handling general cargo, grains, coal, ore, other dry bulk cargoes, crude petroleum and petroleum products, liquefied gases, and miscellaneous other liquid bulk commodities.
- Approximately one-half of the \$4.8 billion capital expenditure will be for facilities to handle energy cargoes such as coal which alone accounts for about 40 percent of the projected terminal capacity deficiency.
- Other commodity movements such as cash grains, fertilizers, and chemicals also will require large capital outlays for the construction of cargo-handling facilities.
- The largest portion of the estimated \$4.8 billion capital outlay required for riverport and terminal

development in the forecast period is expected to be spent in the States of Louisiana (\$1.9 billion) and Alabama (\$701 million), followed by Arkansas (\$488 million), Illinois (\$387 million), Kentucky (\$360 million), Mississippi (\$331 million), Missouri (\$200 million), Tennessee (\$141 million), Ohio (\$89 mil-

lion), West Virginia (\$64 million), and all other of remaining seven states (\$134 million).

## SHIPPING TECHNOLOGY

### SEAPORTS:

- During the decade of the 1980's, no significant changes are anticipated in cargo handling or shipping technology to appreciably influence seaport terminals and their operations beyond present trends toward increased ship size.
- There should be little technological change in break-bulk general cargo terminals or shipping in this period.
- It is not expected that containerships during this period will increase in size much beyond 3,000 TEU capacity.
- If supertankers (6,000-10,000 TEU) should ever become a reality, the automation of many container terminal facilities would have to be increased significantly. Vertical storage and stacking structures of considerable height and capacity are possible innovations.
- Tankers and dry bulk ships during the 1980's are expected to continue to increase in length and draft. Hence, this will be a stimulus to improve the size and capability of existing terminal approach channels, loading berths, and storage facilities.
- Existing and planned LNG import terminals on each coast all incorporate plans for accommodating LNG carriers of approximately 125,000 cubic meters capacity.
- It is not expected that there will be any significant technological developments in miscellaneous liquid bulk terminal operations for the period 1980-1990. Regarding deep-draft chemical tankers, the size and draft of these vessels have not increased as dramatically as oil tankers.
- The accent on development of slurry systems may introduce many new applications for bulk handling of dry cargoes in liquid form via pipeline pumping systems aboard ship and at shoreside terminals.

### INLAND RIVERPORTS:

- The barge fleet will continue to be composed of deck, hopper, and tank barges in the 1980's.
- The tank barge fleet is expected to grow slowly in this period, primarily as specialized parcel compartments and independent tank-style barges are built and delivered.
- Towboats are expected to continue to be produced at a rate of between 90 to 110 vessels per year, with an average horsepower (hp.) of approximately 4,000.
- An estimated 40 of these annual towboat deliveries will be exclusively major river line-haul vessels exceeding 10,000 hp.
- It is anticipated that towboat crew size will only be slightly reduced during the remainder of the century. Certain efficiencies should result from improved lash-up devices and the use of larger barges.
- It is possible that medium-speed diesel engines will be used aboard lower Mississippi line-haul towboats, but not before the year 1990.
- In the 1980-1990 forecast period, it is expected that bow boats will become increasingly dependable and particularly common on line-haul integrated tows.

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# **Mr. Grosse of Port of Le Havre Reports on the 4th International Conference and Exhibition on Maritime Transports Using Roll-on/Roll-off Monte Carlo 15-17, April, 1980 (extracts)**

## **SOLUTION TO PROBLEMS RAISED BY THE RECEPTION OF ROLL-ON/ROLL-OFF INTO PORTS**

There is currently great uncertainty regarding the future distribution—in terms of general cargo traffic—between containers and roll-on/roll-off.

In other respects, we note a great diversity even within the group of ro-ro ships. Their breadth, only to mention this criterion, can range from 13 to 32 meters, which means that the ramp axis can differ from ships to ships by 9.50 m with respect to the mooring front.

Generally speaking, it is really hard for port managers to design facilities capable of accommodating the greater part of the ships bound to call at the port.

That is the reason why the Mac Gregor Corp. has applied itself to designing very versatile facilities.

The facilities established in Hong Kong, Zeebrugge, Harwich, Bremen, Montreal and Dundee clearly show the style of the solutions to which we can come.

The solutions are advantageous in that they do not cost a lot. The cost of such a facility is often about the same as that of one single container crane, and sometimes it is lower; it can be favourably compared to that of a ramp serving a ship or at the very most two.

The alternatives have a high productivity, i.e. by 50 to 60 p.c. higher than that which can be obtained through the use of on-board handling equipment.

Lastly, these solutions include moveable equipment that can be moved from place to place within the port area or that can even be sold if they are of no more use.

## **ROLL-ON/ROLL-OFF IN SOUTH EASTERN ASIA**

A number of worldwide well-known economists strongly believe that by the end of the century South-Eastern Asia will be one of the most important economic centre in the world. Here are the reasons for this belief:

- the wealth of natural resources in this area (energy, tropical wood, rubber, to name but a few),
- liberal economic system with the Government fostering fast expanding industrialization
- very large, busy and enterprising population
- located on one of the biggest trade routes of the world.

Ocean navigation plays quite obviously a great part in this development for a country that includes some 14,000 islands.

Containerization has been fairly slow if compared to industrialized countries. However over the past few years a noticeable and quick growth was recorded; each country has now at least one port capable of handling containers for international shipping services. Besides, the amount of cargo from local trade that can be containerized is still

very low.

Generally speaking, one may say that ports of South Eastern Asian countries have kept pace with the development of their economic systems and have adjusted to present requirements.

Roll-on/roll-off is not very developed in South Eastern Asia; you can hardly find some international, regional shipping services or coastal trade in between their originating islands. The reasons are as follows:

- Shipping companies in this area are somewhat conservative. New systems such as ro-ro appear as too much sophisticated to them, allowing for the technical know-how.

Besides their low investing policy showed in the past its profitability and they are reluctant to try new systems.

- The Marchant Marine and ports pursue their natural developments. No such upsetting has occurred as strikes, port congestion, wage increases that would have led them to change.

- ro-ro requires a road basic equipment that does not exist in most countries of South Eastern Asia.

In the years to come, roll-on/roll-off will develop in two ways:

- on the one hand, small-sized ro-ro ships will gradually replace the present sailing boats in the in-between island coastal trade.
- on the other hand, services which we can call local between big ports will also be carried out by ro-ro ships.

It is not easy to forecast when the changes will occur. However it is to be expected that they will happen before long under the natural pressure of the area's economic condition and not because of outside forces.

## **ROLL-ON/ROLL-OFF MARKET IN THE CARIBBEAN**

The development of roll-on/roll-off in the Caribbean took place during the last decade. The development is really noticeable and the traffic recorded by the port of Miami gives a good notion of it. The number of trailers loaded in Miami reached 10,000 in 1970, in 1978 it amounted to 37,000. The number of loaded containers rose from 0 to 33,000 over the same period.

In the Caribbean the biggest service is that to Porto Rico. Porto Rico is not only a big market, it is also a big centre for transshipment of goods.

As far as the countries of the northern coast of South America are concerned it is worth mentioning Venezuela.

A European shipping company has little chance of breaking into the roll-on/roll-off market in the Caribbean. All shipping services are indeed suitably equipped for the moment and on the short-term there is no noticeable expansion being contemplated, except perhaps Mexico. This is due to various factors like for instance the very poor network, concerning Colombia.

However that may be, the possibility for a European shipowner of putting a roll-on/roll-off ship on the Caribbean market under the joint venture system with a local shipping company will be higher than the mere time-charter.

Concerning the Caribbean, the ideal ship can be defined as follows:

- 100 trailer-capacity
- speed: 15 to 17 knots
- internal handling by ramps rather than by elevators.

For short services, any ship provided with the same characteristics, however with a 60 trailer-capacity only is better suited.

## **VERSATILITY OF RO-RO SHIPS IN RESPECT TO CARRIAGE OF GENERAL CARGOES FROM/TO INDUSTRIALIZED COUNTRIES TO/FROM INDUSTRIALIZING COUNTRIES**

Owing to their versatility ro-ro ships are quite well suited for trade between industrialized and industrializing countries.

At the present time ro-ro ships more particularly assigned to ocean navigation are far from being used to the best of their possibilities. The 80's should see a noticeable development of the ro-ro concept.

Ro-ro ships offer tremendous advantages to the shipping lines that usually serve industrialized and industrializing countries.

As far as the Johansson group is concerned, ro-ro ships constitute the basis of their fleet for the carriage of general cargo.

In the early 70's, regular lines between industrialized nations were increasingly operated by specialized container-ships. Conventional ships seemed to be destined to ensure regular lines between industrialized and industrializing countries.

After 1973, as the "purchasing power" of under-developed countries was noticeably increasing because of the rise in oil price, their ports suddenly showed themselves having a capacity by far lower than that required to cope with the volume of imports.

As everyone knows ro-ro has solved this problem by being able to work at conventional berths at rates hardly equaled by containerships.

The Middle-East, to begin, then COA started to see these strange ships in ever increasing numbers.

In the Middle-East, oil incoming have permitted in the following years the establishment of container terminals in ports and specialized containerships became the ships of trade with the Middle-East. However since all the cargoes can't be containerized, the residual traffic is a case for ro-ro ships.

High handling rates are reached through a thorough organization of work. The goods to be exported are loaded as they arrive on to flats or platforms, whose dimensions are usually those of a 20' container.

Loading on to flats can be easily carried out, since there is no obstacle on their sides. As to loading on to platforms it can be done by the four sides.

As the ship arrives, a turnaround of trailers coupled with tractors starts. Flats or platforms are loaded on to trailers by fork-lift trucks; on board the ship other fork-lift trucks unload the trailers and stow flats or platforms.

For shorter routes than the voyage Europe-Middle-East, it is the trailer itself that is shipped. This is however not economical in the case of the Middle-East.

In addition to the space available on car-decks ro-ro ships have also the cargo-deck where to load containers.

Conventional ships are eventually doomed to disappear. In industrialized countries their cost-price is prohibitive and they are replaced by specialized containerships or ro-ro ships; in industrializing countries, the use of containers often involves problems; ports have neither enough space nor the adequate handling equipment or they comply with none of both requirements.

Roads and rail are quite often inadequate and containers have to be stuffed or stripped in the port; this being so, ro-ro ships are the only ships that can replace conventional ships, while ensuring a profitable operation to the ship-owner.

The shipowner's requirements are as follows:

- 1 - ships have to be capable of making quick turnaround times by reducing call costs and by minimizing the ship's stay at port, thus making as many as possible voyages per year,
- 2 - ships must be attractive as well for the export trade of industrialized countries as of industrializing countries,
- 3 - ships must suit the trade on a world-wide basis and their operation must be profit-earning on various lines,
- 4 - Ships must suit conventional berths and not be dependent upon specialized facilities that are limited in number and consequently bring about waiting time in the roads.
- 5 - ships must not be over expensive neither concerning their building nor concerning their maintenance.

## **ROLL-ON/ROLL-OFF TERMINALS FOR INTENSIVE USE AND OTHER OPERATIONS**

There are many and very diversified ro-ro ships.

In 1980, there are 942 ro-ro ships, to which are to be added 483 car-ferries. 211 other units are on order as well as 63 car-ferries.

In this fleet, the height above water of the ramp pivot ranges from 0.60 to 4 meters; ramps are 5 to 10 meters or more long and 3 to 26 meters wide, etc. . . .

The standardization of ship's ramps and of land-based ramps is a topic that has been dealt with over the past few years by several international bodies. Their end is that the standards applied to ports and to shipyards lead, say within 20 years, to a situation where almost all the ships could use any port facility.

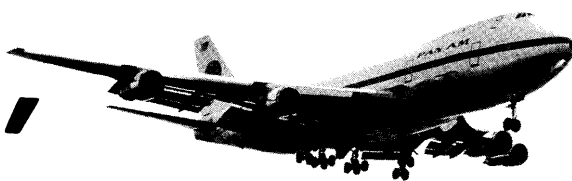
The findings of an analysis carried out on 424 ships are that standard-models of fixed ramps proposed up to now could only be used by a very low part of them. On the other hand, adding to these standard models a section of adjustable ramps would rise the percentage of suitable ships to 80 p.c.

However it stands to reason that a standardization of land-based ramps only would be completely ineffectual if ships were not complying with some standards, especially with respect to the length of their ramps and to the height above water of their pivots.

In short the work carried out by the International will only be profitable to port authorities and to shipowners if both parties make use of the findings to which they will

(Continued on page 30 bottom)

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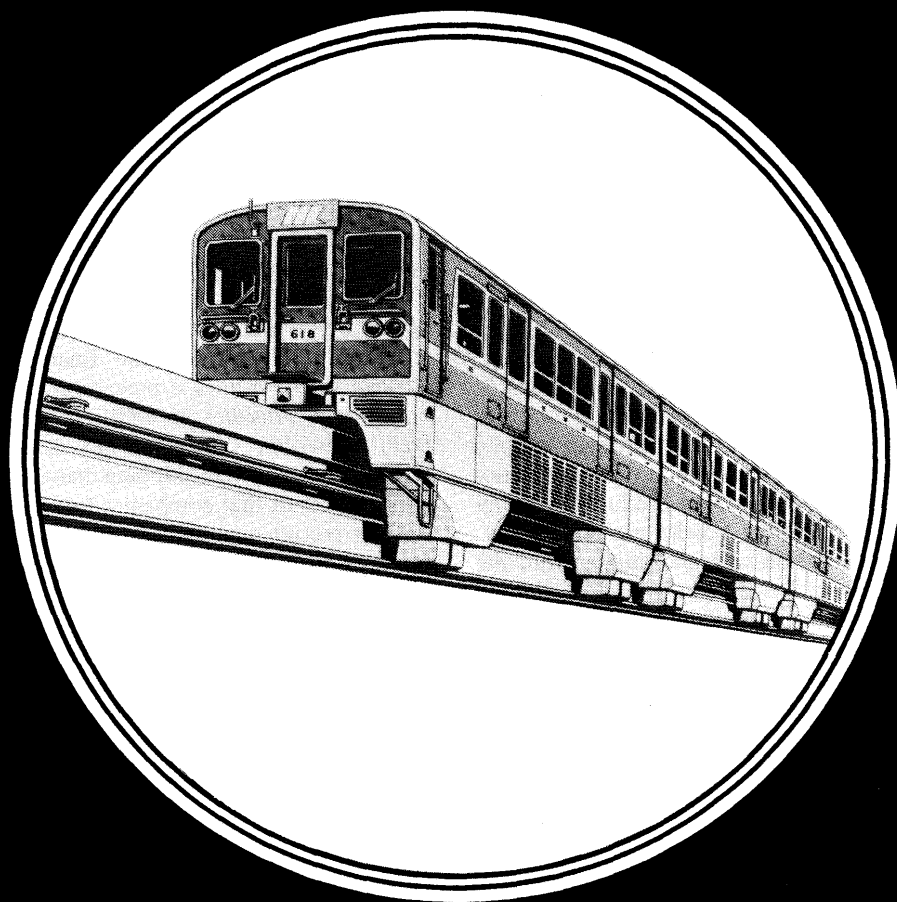


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## International maritime information: World port news:

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### Maritime Transport in Africa

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**Extracted from "Global Strategy and Plan of Action, First Phase, 1980-1983" by United Nations Economic Commission for Africa (Transport, Communications and Tourism Division)**

#### General background

The African region consists of 49 countries, seven of which are islands (Seychelles, Cape Verde, Sao Tome and Principe, Equatorial Guinea, Madagascar, Mauritius and the Comoros) and 13 have no direct access to the sea (land-locked). Nine of the countries lie on the East African seaboard and 18 are on the west coast. Four of the land-locked countries (Mali, the Upper Volta, the Niger and the Central African Empire) use ports on the west coast, while six (Malawi, Burundi, Rwanda, Uganda, Zaire and Swaziland) use east coast ports and two countries (Chad and Zambia) use ports on both coastlines. Lesotho and Botswana are served by South African ports.

Current estimates indicate that 95 per cent of Africa's international trade is carried by sea and that up to 97.5 per cent of this is carried by foreign owned vessels, leaving only 2.5 per cent to African-owned vessels. Statistics also reveal that Africa owns only 0.7 of one per cent of total world merchant fleet capacity compared to its share of 13.7 per cent of world maritime trade traffic in 1975.

The over-all organization of shipping companies is conducted in the context of non-African liner conferences which have shared the whole of the continent among themselves in areas over which they exercise a near monopoly, fixing freight rates for the various products by themselves and determining transport conditions unilaterally, with scarcely any concentration with the shippers and the countries. Each "conference" is in fact a kind of "closed club" determined to maintain its privileges and numerous advantages at all costs, and it uses all kinds of means to limit the intervention of the countries it serves. Thus the Code of Conduct for Liner Conference prepared under the auspices of UNCTAD is encountering the opposition of many developed maritime countries. This Code of Conduct, which is very favourable to the developing countries, enables them to ship 40 per cent of their maritime freights by their own facilities and to leave 20 per cent to the shipping companies of third countries.

(Continued from page 28)

have come.

The ISO committee deals also with adjustable ramps for ports characterized by a high tidal range. There are many possible arrangements and the field of action of standardization is consequently more limited.

But even when the Code is ratified by all the Members of the United Nations, its application will require developing countries to have their own vessels, technicians and administrators to manage, administer and operate their shipping services themselves.

#### Shipping

By the end of 1978, the African national ocean-going merchant fleet had attained nearly 6 million tonnes dead-weight, involving 298 units. The world tonnage as of 1 July 1978 was 641 million tonnes, and the share of the developing countries was 51 million tonnes.

In spite of the fact that Africa's demand for shipping exceeds supply by the ratio of about 1:4, no major action is being taken by African countries to improve the situation. Instead major advances in shipping technology and the addition of capacity continue to be made by the developed nations, so that Africa's future share of both total world merchant fleet and international trade traffic carried are actually likely to decrease in the absence of concerted collective action.

Most of the shipping companies in sub-Saharan Africa are relatively small in size and operating from one to a maximum of about five vessels. In view of their small sizes and limited financial resources, the management structure of these companies is usually very simple and in most cases devoid of expertise and management skills in shipping. Thus it is only natural that the financial situation of most African shipping lines is precarious and most of them exist on national subsidies. In addition, there are only few good facilities within the region for training professional and technical personnel in shipping management and operations, with the result that companies find it difficult to train their staff or recruit qualified and competent staff within Africa. In fact only co-operation among African fleets with respect to purchases and trade will enable them to defend their position.

#### Ports

The African coastline contains more than 80 sea-ports, of which some 49 are major international ports. Only a few of these ports are well managed and efficiently operated, whereas most of the ports suffer from serious deficiencies in their operations.

It must also be pointed out that several African ports have a regional function because they provide shipping services for the land-locked or semi-land-locked countries. These ports are:

- In West Africa: Dakar, Abidjan, Lomé, Cotonou, Port Harcourt for the following land-locked countries—Mali, the Upper Volta, the Niger and Chad.
- In Central Africa: Douala, Pointe Noire, Lobito for Chad, the Central African Empire, Zambia and Zaire.



- In East Africa: Mombasa, Dar-es-Salaam, Nacala, Beira, Maputo for Uganda, Rwanda, Burundi, the east of Zaire, Zambia, Botswana, Lesotho and Swaziland.

It is therefore apparent that the general efficiency of maritime transport partly depends on the efficiency of African port operations and not entirely on the construction of more berths.

#### Goals and objectives (Maritime Transport and Ports)

(a) Special emphasis must be placed on the development and improvement of African ports. One of the difficulties if not the most pressing problem in maritime transport, is inefficient port operations; poor management; poor transport interface at the ports, as well as poor radio links between ships on the high seas and the ports. It is important to distinguish between the inadequacy of physical facilities and the inefficiencies in port operations in designing solutions to reduce the turnaround time of vessels.

(b) Consideration should be given to matters relating to the adoption of advanced unitized forms of transporting cargo and development of multimodal transport and cabotage.

(c) During the Decade, special attention should be drawn to the maritime transport requirements of developing land-locked countries of Africa.

(d) Further subregional and regional centres for the training of maritime personnel should be established.

(e) The establishment of regional and/or subregional shipping companies should be encouraged to enable the countries to apply the provisions of the Code of Conduct for Liner Conferences. The setting up of a maritime transport enterprise equipped with a fleet and technical and administrative personnel requires very substantial investments and hence presents considerable risks; the profitability of such investments is closely dependent on how they are managed and the volumes of goods transported, since below a certain threshold of cargo tonnage transported, the vessels usually operate at a loss. This fully justifies the countries pooling their resources and their technical facilities and setting up multinational companies which, by carrying the quotas of several countries, will certainly be profitable.

(f) Administrative port and customs formalities should be harmonized and identical nomenclature adopted by all the countries. This will make it possible in particular to harmonize port statistics which should assist in establishing a data bank and facilitating rational planning and operational analysis.

(g) During the Decade every effort should be made to discourage investment in open registry vessels, and conversely to encourage the development of national regional shipping lines.

(h) African Governments be urged within this period to adopt the international maritime conventions negotiated under the auspices of UNCTAD and IMCO.

(i) Assistance should be given for the development of national maritime codes, including those in marine insurance. This could best be done through technical assistance projects.

(j) Marine pollution has become a serious problem on a world-wide basis with severe economic and social implications. Little or nothing has been done at the national or regional levels to develop marine pollution measures in Africa. Under its regional seas programme, UNEP carried out a survey of 14 countries around the Gulf of Guinea and adjacent coastal areas in 1976. The mission made proposals for the development of a convention to protect the marine environment against pollution and guidelines for the prevention and abatement of marine pollution. In order to set up subregional marine pollution control centres, advantage should be taken of the expertise and collaboration of IMCO and UNEP.

#### Publications

1. "SAFETY RECOMMENDATIONS ON THE USE OF PORTS BY NUCLEAR MERCHANT SHIPS"  
Sales No. 80.09.E Price £1.25  
IMCO Secretariat, Publications Sections,  
101-104 Piccadilly, London W1V 0AE
2. "The Tonnage Measurement of Ships"—A Guide to the new Convention and its effects  
Price £9.00 UK, £10.00 Overseas  
Fairplay Publications Ltd, 52-54 Southwark Street, London SE1 1UJ
3. "THE CODE—THE NEXT FIVE YEARS" by S.G. Sturme  
Contents: Introduction, What is a Liner Conference, Council Regulation No. 954/79, The Position of Non-Conference Lines, Freight Rates, The Enforcement Problem, The Developing Countries, Concluding Remarks.  
57pp, Price DM 15.00 plus postage  
Institute of Shipping Economics, Werderstrasse 73, D-2800 Bremen 1
4. "UK International Freight: Forecasts to 1988. Volume I: Foreign Trade, Commodities and Countries"  
250pp, Price £75 (£80 overseas)  
National Ports Council, Commonwealth House, 1-19 New Oxford Street, London WC1A 1DZ
5. "FIATA Code of Abbreviations"  
Part I: Transport and Forwarding Terms; Commercial Terms (including Incoterms); International Conventions.  
Part II: International Organizations.  
Price sfr. 5.00 per copy (minimum despatch two copies)  
International Federation of Freight Forwarders Associations, POB 177 CH-8026 Zurich, Switzerland

#### Corps civil works FY 1981 appropriation

The U.S. Army Corps of Engineers' Civil Works appropriation totals some \$2.9 billion for FY 1981, up slightly from last year's \$2.8 billion. The appropriations bill, Public Law 96-367, was signed by President Carter on October 1, 1980.

The appropriation for navigation only comes to \$1.15 billion, compared to \$1.01 billion for FY 1980 and \$882 million for FY 1979. Of the FY 1980 total, some \$255 million is allocated for construction on the Tennessee-Tombigbee Waterway and Lock & Dam 26 projects. The following is a comparative breakdown of the FY 1979 and 1980 navigation appropriations.

	1980	1979
General Investigations	\$ 16,115,000	\$ 13,963,000
Advanced Engineering & Design	5,765,000	4,461,000
Construction	583,616,000	495,176,000
Operations & Maintenance	545,400,000	496,748,000
<b>TOTAL</b>	<b>\$1,156,896,000</b>	<b>\$1,010,348,000</b>

(AAPA ADVISORY)

## Navigation cost allocation studied by U.S. Corps

The U.S. Army Corps of Engineers has completed a study on the feasibility of identifying Corps expenditures made exclusively for commercial inland navigation. The report, **Navigation Cost Allocation Study — A Feasibility Case Study**, summarizes the results of three case studies involving the Pittsburgh, St. Paul, and St. Louis districts. The product of the eight week study, this report was inspired in part, by the evident cost-recovery intent of the Inland Waterways Revenue Act of 1978 which imposes a tax on commercial towboats operating on the inland waterways.

On the basis of the findings, the report concludes that it is possible to perform an allocation of cost between user categories for navigation projects and work functions. It identifies eight user categories or beneficiaries of navigation projects, namely, commercial navigation, power, recreation, flood control, water quality, water supply, fish and wildlife, and environmental quality. Most significant perhaps, is the finding that "Corps districts incur substantial non-commercial navigation costs in the construction, operation, and maintenance of navigation projects." Non-commercial navigation costs appear to average as much as 25 to 30 percent of the total "navigation" expenditures. (AAPA ADVISORY)

## Energy, environment and economy were focus of attention: AAPA

At the 69th annual convention of the American Association of Port Authorities meeting, the overseas shipment of coal, and a controversy over whether or not coal ports should get priority for federal funding of dredging projects highlighted a lively panel discussion on "The New Reliance on Coal — The Role of the Ports," and addresses by The Honorable Henry Owen, U.S. Ambassador at Large and Special Representative of the President for International Economic Summits, and U.S. Senator from Virginia, The Honorable John W. Warner.

Ambassador Owen said the U.S. was assured by foreign coal missions that increased purchases of U.S. coal would continue over long periods of time, and that the government has a policy to simplify the procedures for coal handling in the ports and dredging permits, a program of coal to overseas markets, and a policy to get out of the way of the private enterprise system.

Senator Warner raised a controversy with AAPA members by announcing to the convention that he would press for emergency legislation to speed channel-deepening of American ports to enhance coal exports.

Warner said he was concerned that the U.S. had the ability to meet world coal demands in the face of growing

oil crises, and that there were national security implications.

AAPA members expressed their concern directly to the Senator that priority in federal funding of dredging for those few ports that handle coal would be detrimental to other ports, some that have waited as long as ten years for channel dredging projects to be approved by Congress.

"The federal government must look at the needs of all the ports in America when considering appropriations for dredging. International trade is as important to the world's economy and the U.S. national security as providing coal exports. Streamlining the process for dredging permits and funding is vital to all our ports, and should be made without preference to one segment of the export industry," according to Ron Brinson, Executive Vice President of the Port Association.

"The requirement to dredge coal port channels to 55-foot depths has competitive implications by introducing "superports" in selected areas to the detriment of neighboring general cargo ports," he added.

At the panel discussion, Carl E. Bagge, President of the National Coal Association said increased exports of coal had important near and long-term benefits for the U.S. in the oil-dependent free world. He said the expressions of interest in U.S. coal was taken seriously by the coal industry, but the U.S. government has not followed through with policies that would encourage increased demand for coal.

The industry, he said, expanded its production at the rate of 6½% per year, while the demand has grown at less than 3% per year during the period from 1973-1979. Beginning in early 1979, he said, the demand for coal in the United States, particularly from the electric utility industry, increased by an average of 5% per year.

Luther H. Hodges, Jr., Deputy U.S. Secretary of Commerce, predicted a doubling of waterborne commerce in the United States by the end of the century but warned that the country, economically speaking, is no longer the preeminent force it once was.

Hodges said "our rate of productivity is actually declining. Our commitment to research and development is quite skimpy ... and our international trade deficit plagues us as we try to cope with new energy realities."

The U.S. is not necessarily, not automatically, "number one," Hodges said. "We are learning that choices have to be made," he said. These choices include:

- the king of transportation system to be developed in the face of new energy needs.
- the extent to which the environment is protected in the face of declining investment.
- the nature of government regulations in the face of declining productivity.
- the effect of inflation in the face of declining competitiveness internationally.

## Traffic made easier for containers: Port of Santos

(From "Portos e Navios") Work is well advanced on Brazil's first specialized container terminal, being built on the left bank of the port of Santos, state of São Paulo. The Santos Container Terminal, designed to handle two 35,000-ton container ships simultaneously, covers an area of 300,000 sq. meters, and will eventually be able

to handle 140,000 containers a year. In the first year of full operation — 1981 — it is anticipated that 80,000 containers will be handled. The Brazilian port authority, Portobrás, is responsible for the construction.

The new container terminal at Santos is only the first phase of development on the left bank. On both sides of the first terminal there is land available for a similar terminal of identical size. One sector has already been earmarked for a roll-on-roll-off terminal, which will bring an increase of trade with neighboring countries, notably Argentina. This business is already growing fast, with the addition of a second roll-on-roll-off ship on the Rio de Janeiro-Santos-Buenos Aires run. Other Brazilian ports, notably Rio de Janeiro, Manaus and Salvador, are making preparations for the container revolution as well, with special areas being reserved at existing ports.

### **Nanaimo Commissioner heads Canadian ports group**

Mr. Donald Rawlins, Chairman of the Nanaimo Harbour Commission, is the new president of the Canadian Port and Harbour Association.

Mr. Rawlins was elected at the association's annual meeting held recently in Halifax, Nova Scotia. He succeeds Gordon Moulard, Director of the Port of Saint John, New Brunswick.

### **New port record comes early: Nanaimo Harbour**

The boom year predicted for the Port of Nanaimo has already been confirmed with three months of the year still to come.

Bob Chase, Marketing and Public Relations Manager for the Nanaimo Harbour Commission, has released third quarter figures for 1980 which show exports through Nanaimo so far this year are well in excess of total 1979 figures which set a record year for the port.

At the end of 1979 the Port of Nanaimo had shipped out a total of 580,950 metric tons, but figures now show that exports to the end of September 1980 were up to 605,065 MT, guaranteeing a new record figure even though the year is not yet over.

Chase commented that the port exceeded all his expectations so far this year, except in exports of paper pulp which so far are below his anticipated projection of 75,000 MT. However he said that the target would be easily reached in the remaining three months of the year.

Lumber exports at the end of the third quarter are up to 333,943 FBM, 11,443 FBM above projections, and other general exports totalled 29,876 MT, exceeding expectations by 7,376 MT.

### **A promising area: Port of Québec**

The geographical boundaries of the Québec region are outlined by the St. Lawrence River. As a provincial capital, Québec City is an important commercial, industrial and cultural center. The city lies in the vast economic area of Northeastern United States and does play quite an important part since it has all the characteristics necessary to sustain industrial development.

#### **The Port of Québec**

- The Port of Québec is the only deep-water port which is open all year round and which can handle 100,000

dwt vessels at more than 1368 km inland. Moreover, the port is part and parcel of the city which offers a vast labor force, a completed and exceptionally efficient intermodal transport system and the biggest shipbuilding yard in Canada. Also available are all specialized services related to the field of transportation.

- While only a few hours away from the big and rich American centers, the Port of Québec lies closer to Europe than any of the great ports on the East coast of the United States.
- It offers an important industrial port site.
- A port of transit, a terminal and shipping port, Québec is a privileged distribution center for the whole North-east and Midwest regions of the American continent.

#### **Industrials areas**

- Québec region's 43 industrial areas are divided into 28 industrial zones and 15 industrial parks. They cover more than 1908 hectares, half of which are still available. They are endowed with well established infrastructures on both the transportation and commercial services levels, a considerable asset for all types of new industries.

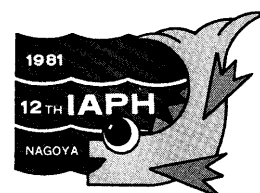
#### **Intermodal transportation**

- Added to the advantages of harbour installations are well established rail, air and road networks linking Québec City to all major Canadian and American centers.
- The transcanadian railway companies, the Canadian National and the Canadian Pacific, assure an efficient freight service fully integrated with the vast North American rail network.
- A national airport located at less than 20 km from downtown Québec thus cutting down on travelling time.
- A deep-water port navigable all year round, located in the heart of the Québec City region. It is indeed a major transition point between transatlantic and coastal sailing.
- In addition to being linked to other major North American urban centers by a network of modern autoroutes, Québec City has more than 150 km of rapid transit highways.

#### **Symbol Mark**

of

#### **The Nagoya Conference**



Nagoya has been prosperous for many years as a large castle town. Mounted on the roof top of its castle are a pair of fabulous golden sea animals "Shachi", which glitter brightly in the sunlight. The citizens hold a strong sense of loving attachment to them. The symbol for the 12th IAPH Conference on Nagoya expresses a warm welcome to port related people with a golden "Shachi" cresting the seas joining North & South America, Europe & Africa and Asia & Oceania.

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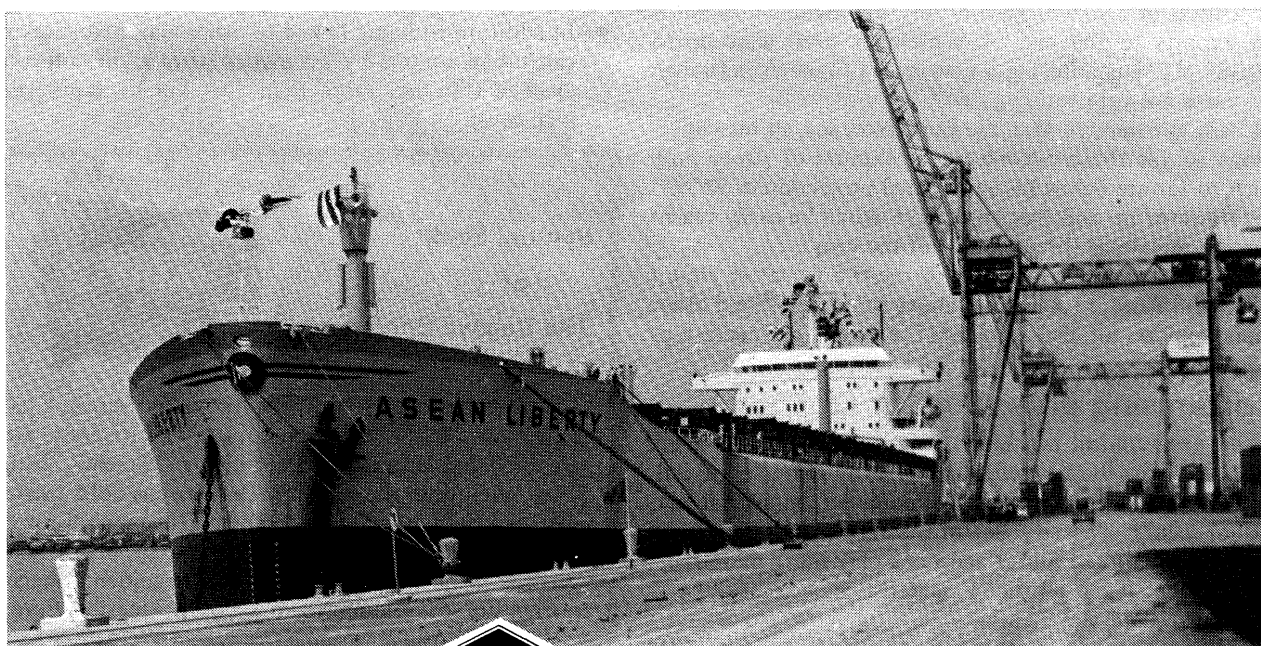
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## Roberts Bank expansion starts: Port of Vancouver

The long-hoped-for development of the Port of Vancouver's Roberts Bank Outer Port is under way, with three contracts let for preliminary work on the \$50 million expansion expected to be completed for operation by the spring of 1983.

The way was cleared for the expansion program late in August when B.C. Industry Minister Don Phillips and Federal Transport Minister Jean-Luc Pepin signed an agreement which will permit an immediate doubling of the present site and may lead to a tripling of its capacity.

Under the agreement the B.C. Government will transfer the administration and control to the National Harbours Board of an area adequate for the dredging of an enlarged vessel turning basin and for the creation of additional terminal sites. The Province retains ownership of the causeway linking the terminal areas with the mainland.

Project management and design is the responsibility of Swan Wooster Engineering Co. Ltd. and the company is now working on design and specifications. The reclaimed land on which cargo handling facilities will be constructed is being provided by the NHB. Also provided by NHB will be the dredged basin to handle large ships, and utilities to service the terminals. The cargo handling equipment, docks and ancillary structures will be supplied by various tenants.

Railroads are being provided by the B.C. Harbours Board.

In order to meet environmental concerns, a model study has been launched by Western Canada Hydraulic Laboratories, to check the impact of changes in currents, water quality and other implications of the proposed expansion on underwater habitat. Final design of the expansion will be dependent upon the results of this study.

## The Twins — Yokohama, Vancouver

Formal "twinning" of the seaports of Vancouver and Yokohama will be completed at a ceremony in Japan in 1981, port officials announced after a recent visit to Vancouver of an official delegation from the Japanese city.

This friendly and practical linking of two of the world's major ports will complement the long-standing sister city relationship between the two communities.

It was agreed that the official ceremony marking the affiliation will be held in Yokohama, Japan's largest port located on the Bay of Tokyo, during May of 1981, possibly when Mr. Spoke is attending the biennial conference of the International Association of Ports and Harbors which is being held in Nagoya.

Mayor Michikazu Saigo of Yokohama writes that "the newly cultivated partnership will give impetus to exchange programs in areas of our reciprocal endeavours."

He sees the two ports making "cultural and economic capital out of the affiliation to ensure our citizens the better lives they deserve."

Mr. Spoke has pointed out that the relationship will, indeed, be more than symbolic. "It will involve the exchange of technical, operational and promotional information — and probably full-scale seminars every two or three years."

## Historical event for PACECO cranes



Little was it known in 1959, when the first-ever container handling crane was erected at Encinal Terminals in Alameda, California that the scene would be duplicated nearly twenty two years later. So be it!

Recently when a new Paceco Modified 'A' Portainer® crane was erected alongside the "original" Paceco Portainer crane, an event in Containerization history literally took place.

The new Portainer crane, with a 35 Long Ton lifting capacity, is one of Paceco's most modern designs. It has design features which are characteristic of the most up-to-date and innovative Paceco container handling equipment in the world, featuring high-speed electric motor and controls. A Paceco Telescopic Spreader makes the crane capable of handling 20 and 40 foot containers.

## Argentine Ports Registered 10% increase in 1979

According to annual report for 1979 by AGP (Administración General de Puertos, Buenos Aires), the total tonnage handled at ports of Argentine totalled 88 million tons, including either general & bulk cargoes, and import & export, a 10% increase over the previous year. The rate was highest in the last fifteen years, the report said.

## Peruvian Ports Marked 7.4% increase in 1979

According to ENAPU annual report 1979, the total tonnage handled at all Peruvian ports both general and liquid bulk in 1979 was 25.4 million tons, marking 7.4% increase over the previous year. But, the report said, the tonnage handled at ENAPU Ports (Empresa Nacional de Puertos) was 11.8 million tons (out of the above), and this was 8.6% decrease over the previous year.

## 1980 record-breaking year for MASSPORT

The Massachusetts Port Authority, New England's largest independent public authority, experienced "the strongest financial year in the agency's 21-year history, with revenues topping \$100 million," according to David W. Davis, Executive Director of Massport.

In a report released recently, Davis cited the Authority's performance as "unprecedented" with new records established in every area of Massport's activities.

Massport operates Logan International Airport, Hanscom Field, the Tobin Bridge, Port of Boston's marine terminals, the Boston Fish Pier, and various properties in the Port of Boston.

Davis said that international air passengers had increased 12 percent over 1979, export cargo in the maritime sector grew 26 percent, while more than 500 million pounds of air freight had been handled at Logan Airport.

In addition, Massport, which is a bond revenue authority supported and operated without benefit of public tax dollars, launched plans for \$30 million in major development projects in the Port of Boston, Boston Fish Pier, and Logan Airport.

These investments will create more than 10,000 new jobs during the 10-year-development period and pump at least \$100 million annually into the New England area economy.

Davis also pointed to two development projects underway in the Port of Boston in fiscal 1980, saying that "our multi-million dollar development projects at Castle Island and at the Marine Terminal will transform both properties into vital contributors to the long-term health of this region. I have every faith that these two projects — the first major seaport development projects undertaken in the Port of Boston since 1972 — will put Boston back on the map as a vital and growing New England Port."

In February, 1980, construction began on a container-port addition to the Castle Island Marine Terminal. The \$15 million facility will allow Massport to unload and load an additional 180,000 tons of containerized cargo each year. Construction work on the Massport Marine Terminal at the former South Boston Naval Annex began in September, 1980. The project, which will take 10 years to complete, will increase by 40 percent the general cargo acreage in the Port of Boston, and will generate nearly \$2 billion worth of seaport commerce for the New England region.

In other development activities, Davis said the agency had completed Phase I of a 3-year modernization of the Boston Fish Pier, a project that will stabilize 1,300 fishing industry jobs, add 800 new jobs on the Pier, and trigger an additional 2,000 fishing related jobs throughout the region. The Boston Fish Pier, located on Northern Avenue in South Boston, is the oldest working Fish Pier in the country.

Since the Fish Pier revitalization project began in 1979, fish landings at the Pier have increased 50 percent, more than \$10 million in private investments have been committed to support the project, and fishing-related job opportunities have opened up in and around the Pier.

## Tax Commission replies to appeal by SCA

The South Carolina Tax Commission recently replied to the appeal by the South Carolina State Ports Authority concerning tax assessment of its property by Charleston County.

The three-member commission decided that the leased operating terminal lots in question are exempt from taxes. SPA Executive Director W. Don Welch was gratified with the commission's decision since it protects the port's vital operating areas.

The commission in its conclusion stated that: "the property of the South Carolina State Ports Authority that is leased or its use licensed to others for use in the business of actually moving or storing goods for transportation in commerce is used exclusively for a public purpose. Any private benefit would be incidental."

"We further conclude that property that is owned by the Authority and leased to others and not actually used in moving or storing goods for transportation in commerce is taxable."

Left subject to ad valorem tax is a limited number of miscellaneous properties. The SPA must now decide whether to appeal that portion of the decision through the courts.

## Huge gas turbine shipped through Charleston: South Carolina State Ports Authority

General Electric Co. has shipped through Charleston the largest gas turbine ever exported to the international electric utility market. It also was the biggest of its type ever built by GE.

The 210-ton, heavy-duty unit was loaded in a Combi Line LASH barge for transport to Kirchleugern, West Germany. The barge with its valuable cargo then went aboard the mother ship, M/V Bilderdyk, for the trans-Atlantic crossing.

It took five years of planning and about \$100,000 in railroad improvements to prepare for the turbine's movement from Greenville to Charleston. Actual construction required the equivalent of 10 percent of the Greenville plant's 1,000 factory employees working around the clock for eight months.

A specially-designed rail car was used for the 250-mile journey of the giant unit to the SPA's Columbus Street Terminal. The turbine's dimensions are 34 feet long, 15 feet wide and almost 21 feet high. It was lifted by "The Monster", SPA 400-ton, shear-leg crane.

Along the rail route, utility wires were raised, trees were trimmed and tracks were lowered and reinforced in places. Train speeds never exceeded 15 miles per hour because of the load's high center of gravity. The trip, via Seaboard Coast Line Railroad to Columbia and Southern Railway from there to Charleston, cost approximately \$20,000.



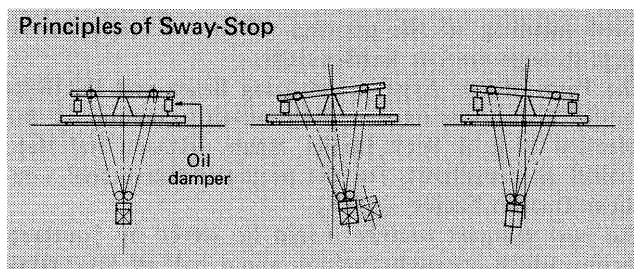
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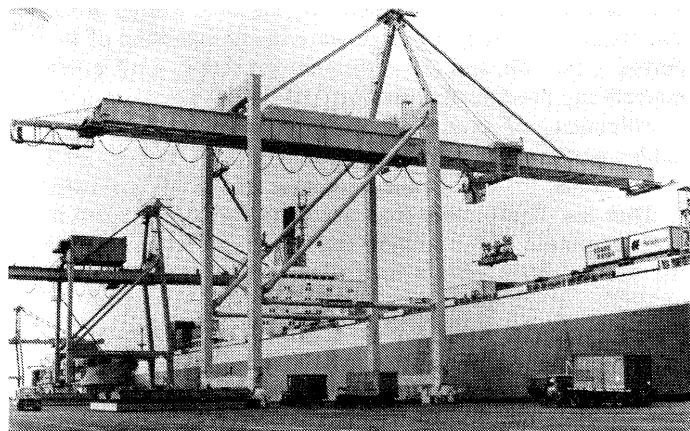
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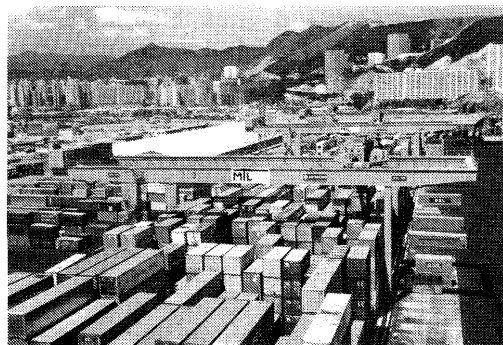


*Quay Crane*

## YARD CONTAINER HANDLING SYSTEM

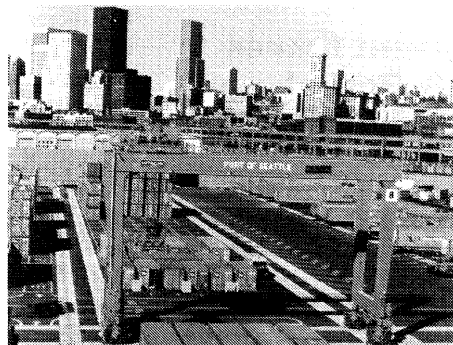
- Automatic Crane Positioning System
- Automatic Container Chucking System

### FOR HIGH EFFICIENCY



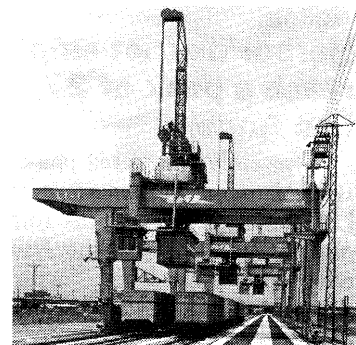
*Rail-Mounted Transfer Crane*

### FOR HIGH MOBILITY



*Rubber-Tired Transfer Crane*

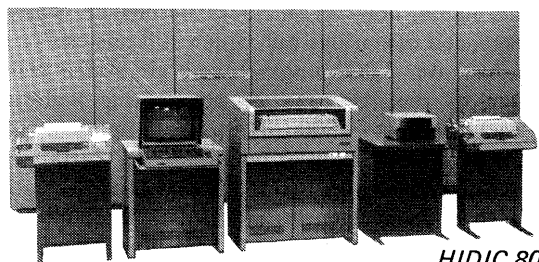
### FOR FREIGHT CAR SERVICE



*Rail-Mounted Transfer Crane*

## CONTAINER TERMINAL CONTROL SYSTEM

- Communications System (Inductive Radio System)
- Control Computer System (HIDIC 80 Series)
- Data Processing Computer System (HITAC M, L Series)



*HIDIC 80*



Hitachi, Ltd., Heavy Industry Dept., International Sales Div. I, No. 6-2, Otemachi 2-chome, Chiyoda-ku, Tokyo 100, Japan  
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## General Cargo increases by 20%: Port of Houston

General cargo moving through the Port of Houston during the first three quarters of 1980 has increased by 20% compared to the amount handled in the same period a year ago, indicating the national recession has been little felt on the Houston waterfront.

Total general cargo tonnage for the period increased from 6.5 million tons in 1979 to 7.8 million tons this year. Import tonnage was up by 28% and exports by 9% for an overall increase in general cargo foreign trade of 19%.

Overall tonnage was down by about 10%. That, however, is good news because it indicates the United States is progressing toward the achievement of national energy goals; the major declines in tonnage were in the handling of imported crude oil and of petroleum products, with crude imports and product exports both off sharply.

Shipments of crude oil declined from 21.8 to 17.6 million tons and of petroleum products from 34.6 to 29.2 million tons, for a combined decrease of 9.5 million tons.

That last figure more than accounts for the decrease in overall tonnage of 8.6 million tons, from 89.3 million tons last year to 80.7 million tons for the first three quarters of 1980.

## Port bonds sold: Port of Houston

Commissioners of the Port of Houston Authority posed recently following the successful sale of \$10 million in general obligation bonds. The bid was awarded to a syndicate headed by First City National Bank of Houston on a low quotation of 7.29524% effective interest rate. The bonds were part of a \$50 million issue authorized in 1979. The Port sold \$15 million of the bonds in August of 1979 for a net interest cost of 5.4588%. Executive Director Richard P. Leach said the bond funds will finance improvements to the Bulk Materials Handling Plant and other facilities.

## Harbor district employment figures reach a peak of 27,889: Port of Los Angeles

A recently completed phase of the Port of Los Angeles Risk Management Report reveals that the harbour district job market includes a peak total of 27,889, with only 600 directly employed by the Harbour Department. Los Angeles is a "landlord port," with some 325 tenants and local government agencies comprising the Port community's primary employers.

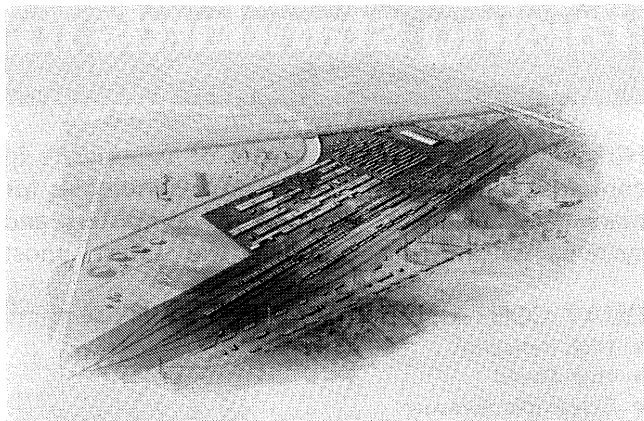
The largest group of employees, with almost 12,000 working at peak levels, were the shipyards and boat works. This figure, however, includes Bethlehem Shipyard which suspended operations but which still possesses a valid lease.

Just over 3,000 longshoremen are available for employment at the Port and its neighboring harbour at Long Beach. Almost 6,800 others are employed at the commercial fishing facilities while another 1,100 work at the Port of Los Angeles' container and general cargo terminals.

Government agencies at the Port account for 1,300 in personnel, in addition to the Harbour Department's 600.

These employment figures do not include the hundreds of construction workers brought in by independent contractors for various harbour-related projects. In a random survey from November 1979 to April 1980, for example,

## Ports, railroad announce joint study: Port of Los Angeles



Consultants have been hired to plan a new 114-acre railroad yard near the Wilmington waterfront in a joint effort to speed handling of the growing volume of containerized cargo through the Los Angeles Basin.

The Ports of Los Angeles and Long Beach and Southern Pacific Transportation Company recently announced the selection of H.M. Scott/Daniel, Mann, Johnson and Mendenhall as consultants for the proposed Intermodal Container Transfer Facility (ICTF).

The new rail-port venture would be served by Southern Pacific, which currently handles about half of the "mini-bridge" container traffic by rail between the two ports and East and Gulf Coast ports. It would be built on a 114-acre parcel of Port of Los Angeles land, located roughly between Sepulveda Boulevard and the San Diego Freeway on the City of Long Beach border.

The growing need for the ICTF as a joint endeavor for the two harbors and Southern Pacific has become evident with the increase of container traffic diverted through the West Coast harbors from the Panama Canal all-water route. Mini-bridge traffic from the Far East to the U.S. East and Gulf Coast ports through the Ports of Los Angeles and Long Beach is recognized as more economical and faster than the more traditional canal route.

more than \$10 million in independent engineering contracts were awarded by the Harbour Commission. Last August, the Los Angeles District of the U.S. Army Corps of Engineers awarded its largest dredging contract in history — a \$61 million contract to a Missouri firm. The contractor and its subcontractors will bring in some 200 personnel for the 30-month Main Channel Deepening Project, further increasing local employment related to the Port.

## Record increase in total revenue tons: Port of Los Angeles

For the three-month period from July 1 through September 30, 1980, general cargo showed a 1.3 million ton increase to 4.6 million tons from 3.3 million. At the same time, oil tonnage decreased to 5.8 million tons from 6.6 million last year.

Port managers point out that this represents a significant shift in the mix of cargo through the Port. Last year, first quarter figures showed that general cargo represented approximately 32% of the total cargo. However, in con-

trast, this year's first quarter totals indicate that general cargo comprised over 43% of total cargo.

Before revenue sharing, the general cargo wharfage rate averages over \$3 per ton while oil wharfage is 22¢ per ton. This shift in cargo mix is, therefore, partly responsible for a 20% increase in total operating revenue for the quarter, from \$12.5 million in 1979-80 to \$15 million in 1980-81.

Net income for the period also increased to \$10.7 million from \$7.7 million for the same quarter last year.

## **Foreign Trade Zone business continues to rise: Port of New Orleans**

Foreign Trade Zone #2, which occupies nearly 19 acres at the foot of Napoleon Avenue, has been in operation longer than any other foreign trade zone in the United States except the one in the Port of New York. It is also one of three foreign trade zones out of 54 in the U.S. operating in the black.

Robert Dee, manager of Foreign Trade Zone #2, explained that location was a major factor in the foreign trade zone's success.

"The Port of New Orleans is one of the largest ports in the nation and has enough foreign commerce for the zone to get a large volume of business. Other zones may not get this volume of business," he said.

Foreign Trade Zone #2, which has approximately 350,000 square feet of open space plus approximately 300,000 square feet occupied by a 52-compartment warehouse and a vacuum fumigation plant, is used both for storage and manipulation or light manufacturing.

Dee said the foreign trade zone is used extensively for storage because many of the bonded warehouses in the Port of New Orleans are privately owned.

"We run a general purpose warehouse in this area for anyone needing bonded facilities," said Dee. Goods stored in the foreign trade zone can remain there indefinitely and are not subject to import duties unless they are entered into the commerce of the United States. Finished goods assembled from American and foreign components will only be charged duties on the foreign parts.

A second foreign trade zone at a different location in the Port of New Orleans is presently being considered because there is no room for expansion at the present location. Dee said emphasis will be placed on manufacturing rather than storage at the new zone.

"It will probably be an industrial park type area. The new type of zones are geared toward this kind of operation."

While the concept of foreign trade zones is new to other Gulf cities like Galveston and Panama City, (two cities which only recently received permission to establish a foreign trade zone), Foreign Trade Zone #2 has been operating since the end of World War II providing jobs for New Orleanians and helping American companies compete with foreign manufacturers.

## **New Orleans Port encourages increased waterway traffic**

Once again the nation's great midcontinent waterway system — the Mississippi River and its tributaries — stands ready to rescue shippers and industries stranded by rail service shortcomings.

The areas most affected are the river-served states of

Nebraska, Iowa, Kansas, and Missouri; and the crisis in transportation was brought about by the financial problems of the Rock Island and Milwaukee railroads, the general abandonment of branch lines, and a continuing shortage of rail cars.

Recognizing the urgency of developing alternate transportation methods, Governor Charles Thone of Nebraska called a conference on "Increased Use of the Missouri River" aimed at promoting development of barge traffic on the Missouri and beyond. To implement the plan officially Governor Thone also instigated a four-state compact among Missouri, Iowa, Kansas, and Nebraska. Full ratification of this compact is expected.

Impetus to the governor's conference was provided by his visit to the Rhine River to observe movement of vessels in that important European waterway. He noted large volume barge traffic, despite the channel's shallow draft, sharp bends, and other physical difficulties requiring traffic lights, traffic towers, and special pilots. Similar problems exist on the Missouri, Gov. Thone said, but many people also do not use river transport simply because they are unaware of the cost-effectiveness and energy-efficiency of water transportation. "We estimate that the waterway could carry as much as 20 million tons of traffic a year if there were adequate economic incentives and sufficient equipment available," he said.

Also addressing the conferees on wider use of inland waterways was Col. Herbert Haar, associate port director of the Port of New Orleans, who is chairman of a steering committee for a Mid-America Ports Study. This study was done for the U.S. Maritime Administration as a joint venture between that agency and 17 states served by the Mississippi River and its tributaries.

Findings of the study were that total waterborne traffic on inland waterways will double by the year 2000, from the 1976 volume of 440 million tons to more than 900 million. By the end of the century cargo volume is expected to exceed present cargo-handling capacity by nearly 700 million tons.

Plans were formulated at the governor's conference for formation of a task force whose purpose would be the development of a proposal for increased usage of Missouri River. The task force includes representatives of the four Missouri River states.

## **Record sum for Howard Terminal Projects: Port of Oakland**

Soon to take shape in a 42-acre area known as the Inner Harbour of the Port of Oakland will be a modern, three-berth container terminal that will further enhance the Port's premier position on the U.S. Pacific Coast.

Demolition of existing facilities will be accomplished soon, followed by construction of a dike, wharf and large container facility and the installation of two container cranes.

The Oakland Board of Port Commissioners recently approved the award of two major contracts totaling \$23.3 million for work on the project, the Charles P. Howard Container Terminal, named in honor of the 93-year-old shipping pioneer who began work on the Oakland waterfront in 1904.

"The award of these substantial contracts for the expansion of the Port of Oakland's container facilities is an ex-

pression of the Port's intention to keep pace with the needs of the future," said Ted Connolly, President of the Oakland Board of Port Commissioners.

"As the largest container port on the Pacific Coast, the Port can expect to gain a wider share of the growing container traffic in the region. And one way of achieving this is to expand and improve our terminal facilities to attract greater use of the Port," he said.

The Charles P. Howard Container Terminal will occupy the site of the former Grove/Market Street Terminal as well as adjacent Port property.

The new terminal is scheduled for completion in late 1981 at an estimated cost of \$44 million.

### **Embarcadero Marina project to open up Oakland shoreline**

A waterfront area restored and redeveloped by the Port of Oakland, the Embarcadero Marina has retained the character and vitality for which it was known during the turn of the century.

The Port is now moving forward with plans to further develop the Embarcadero Marina following the support it has received from two government agencies.

The new development has been approved by the San Francisco Bay Conservation and Development Commission. The Port has also been granted a loan of \$1.5 million for the project from the Department of Boating and Waterways. The loan represents the first of a two-phase loan amounting to \$2.5 million from the department.

The proposed development will include recreational boat berthing and related facilities, access road, parking lot, restaurants and commercial fishing facilities. There will be 17,400 square feet of public access shoreline walkway with park benches and drinking fountains, as well as public restrooms with facilities for use by the handicapped.

### **Brunswick bulk expansion: Georgia Port Authority**

Construction of a second bulk storage warehouse is proceeding on schedule at the Port of Brunswick. The new facility will provide an additional 60,000 square feet of covered storage for miscellaneous bulk cargoes. Total capacity of the 71 foot high structure will be 35,000 tons, divided into two separate storage bins. Completion is expected in March 1981.

The second structure adjoins the existing 50,000 square foot warehouse, which represented the commencement of GPA's long range development of bulk handling capabilities at its Brunswick Terminal. Future plans call for erecting additional warehousing in the near future, as well as construction of a major multiproduct facility on nearby Colonel's Island.

### **CONTAINERPORT Savannah expansion**

Construction is proceeding on schedule on the fourth berth at Georgia Ports Authority's CONTAINERPORT in Savannah. Scheduled for completion in mid-1982, the new berth will measure 1,200 lineal feet and will be backed up by 40 newly paved acres of storage area. Two additional container cranes will be purchased to handle lifting chores. Total cost for the project will be \$22.5 million.

Upon completion of the fourth berth, the CONTAINERPORT will be an impressive facility indeed. The four berths

will total some 3,600 feet in length. The six container cranes will be able to traverse the entire margin permitting placement of three cranes at any berth. These highly efficient cranes can load and unload boxes at an average cycle time of 90 seconds, or 40 per hour. Paved area for stack and chassis storage will total some 200 acres. A fleet of six transtainers and ten toplifts move containers in the field area. Stuffing and stripping of containers will be accomplished in the existing 200,000 square feet of container freight station space.

### **Hinterland communication routes stimulate Antwerp Port traffic**

Cargo traffic showed a positive trend during the first half year of 1980 with an overall increase of 13.1% in the port of Antwerp.

This overall increase is equally spread over incoming traffic which rose by 2.3 million tons and outgoing traffic: plus 2.6 million tons.

During the first six months of 1980 the gross registered tonnage of the vessels calling at the port as well as their number have grown. As a result by the end of June 42.64 million tons of maritime cargo were loaded or discharged in Antwerp into or out of some 9,000 seagoing vessels.

The overall increase is almost entirely attributable to the increasing **traffic of bulk cargo** (+21.1%). Apart from a 13.4% increase of incoming traffic especially the outgoing traffic of bulks showed a large growth of activities (+41%), more particularly in the oil sector: +55.1%, the coal sector: +140.4% and the grain sector: +82.2%.

Together these 3 sectors with 8.33 million tons, 3.04 million tons and 4.84 million tons respectively accounted for 60% of the total bulk cargo traffic, amounting to 28 million tons.

Ore traffic on the contrary was on a level with last year's result (6.69 million tons as against 6.81 million tons in 1979).

**Traffic of general cargo** just rose above last year's mark by the fact that incoming general cargo traffic increased by 8.2% while outgoing general cargo traffic decreased by 3.4%.

In all 14.61 million tons of general cargo were transhipped. A remarkable result has been achieved for the traffic of forest products (timber, logs, woodpulp, paper) which after the first half year amounted to over 1 million tons (+21.5% as against 1979).

The number of containers handled in the port increased by 8%, while Ro/Ro traffic grew with another 10%.

This favourable evolution is due for a large part to the excellent communication routes between the port and its hinterland via inland navigation, road and rail.

#### **Inland navigation**

Inland navigation is the most important inland carrier for the port, especially for bulk cargo and neo-bulk goods. Nationwide the port is linked to its hinterland via an extensive network of canals which is almost entirely adapted to the so-called European type of vessel of the 1,350 tons class.

The most important of these inland waterways is the Albert Canal. Every year over 33 million tons of cargo is transported via this canal. Half of this amount is direct hinterland traffic, i.e. bound for, originating from or handled in Antwerp. At present this canal is being adapted

for push-convoys up to 9,000 tons as they are in use on the Scheldt-Rhine link.

Every year more than 65,000 units navigate on this link, accounting for important tonnages to and from the Dutch and German hinterland, often bound for or originating from the port's Belgian hinterland.

#### Road transport

Located on the crossroads of the E10, E3 and E39 motorways, Antwerp offers excellent road connections with the whole of Belgium and a large number of European countries, linked to the port by more than 300 regular road services.

In 1978 more than 6.2 million tons were discharged in the port from lorries out of other countries and over 5.2 million tons were loaded on lorries with a foreign destination.

More than 1,200 road haulage companies are established in the province of Antwerp, meaning 15% of the total for Belgium. Their capacity, however, accounts for 23% of the total number of commercial vehicles operated in Belgium. With regard to road infrastructure, a number of public works will further improve the existing road facilities.

First of all there is the opening of the L. Craeybeckx-tunnel, scheduled for the end of 1981, which will provide a direct connection between the E10 and the ring road (E3) around Antwerp. Other works include: the widening of part of the E10, the construction of a tunnel under the Rupel to facilitate the traffic on the Antwerp-Boom-Brussels axis, and the planned third tunnel under the Scheldt linking both banks near Lillo, involving an estimated cost price of 12,800 million B.F.

As far as the combined rail/road transport is concerned, the capacity of the existing T.R.W. terminal (Transport Route-Wagon S.A.) in Antwerp will be brought from 10 lorries daily to 120 units.

#### Railway connections

In Antwerp, railroad facilities are strongly integrated in the port lay-out. Via 800 km of tracks all quayberths, sheds and all industrial settlements are linked to the national rail network. Railway infrastructure is thus being constantly adapted to the growing port area. On the right Scheldt-bank the N.M.B.S. (Belgian National Railways) will construct rails to and over the new bridges crossing the Van Cauwelaert- and Boudouin locks. Nevertheless, the most important extension concerns a completely new railway infrastructure at the Delwaide dock, which i.a. includes a direct electrified connection to the headrails for the bulk terminal at the north quay side of the Delwaide dock.

At short notice the marshalling yard Antwerp-North will be modernized to enable a completely automatic shifting of goods-trains.

On the left Scheldt bank new tracks are planned to connect possible settlements to the network serving the already existing industrial complexes.

Anyway, the port remains an important source of traffic for railroad transport in Belgium: one third of the total goods traffic of the N.M.B.S. is handled in Antwerp.

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Telex: "278 MAWANY ADEN"  
Telephone: 22666/22667/  
22668.

## NPC forecast no growth in UK international freight traffic until after 1983

New forecasts of the tonnage of UK international freight are published recently by the National Ports Council. Total non-fuel trade is expected to be only 120 million tonnes in 1983, a drop of 3 million tonnes on the peak level reached in 1979. Within this total, export tonnages are likely to remain close to the 1979 level of 41 million tonnes, but imports will drop from the 82 million tonnes recorded in 1979 to 79 million tonnes in 1983. This fall off in imports is accounted for by a reduction in the trade of agricultural products and ores.

Looking further ahead, the recovery from the current recession should lift traffic levels back to the 1979 peak and reestablish a longer term growth. Total non-fuel trade is estimated to reach 130 million tonnes by 1988.

Traffic with the EEC will continue to expand throughout the 1980s so that these countries' share of the UK total

will increase to 40 per cent by 1988 compared with 36 per cent in 1979. The accession to Greece, Portugal and Spain to membership of the Community, will increase the EEC share to 44 per cent in 1988. Growth in this area is in direct contrast to that predicted for the Deep Sea trading countries. In 1979, 50 million tonnes of non-fuel freight was traded Deep Sea. This is forecast to fall to 47 million tonnes by 1988. During the 1980s, therefore, total non-fuel freight tonnage with the EEC will surpass that on the Deep Sea routes for the first time. It is interesting to note that at the beginning of the 1970s, the Deep Sea countries accounted for 47 per cent of the UK total and the EEC only 23 per cent.

The National Ports Council's report includes detailed forecasts covering the whole of UK international trade, measured in tonnes, by individual commodity and overseas country for exports and imports separately. They are set out in over 200 tables showing also past trends, supported by full descriptions of markets and the economic assumptions behind the estimates.

## TENDERS OF THE REPUBLIC OF TOGO

Prequalification for the Tenderings of the Construction Works for the Second Pier of the Port of Lome (Togo).

### I. Subject of the Services

- Section I: construction works and equipment for the second pier, effective length approx. 250m, width approx. 140m with driving of sheet piling, reinforced concrete, earthwork and dredging works.
- Section II: approx. 85,000m<sup>2</sup> of open storage areas and paving the pier surface, water and power supply, surface drainage, road and railway connections, smaller buildings.

### II. Requested Financing

- Section I: \* Federal Republic of Germany  
Kreditanstalt fuer Wiederaufbau (KfW)  
\* European Investment Bank (BEI)
- Section II: \* The Saudi Fund for Development (FSD)

### III. Documents for the Prequalification

The applications must be accompanied by all relevant documents, in French and English, so as to enable the client to judge the firm's or joint venture's aptitude to execute the project, and particularly:

- a statement of intention to participate in one of the tenderings (Section I or II), with indication of the name and address of the applicant.
- information concerning the legal status and belonging of the firm or of the members of the joint venture to other companies, and bank references.
- technical and administrative references on their experience in the execution of water front works, constructed in the last five years, with the following data:
  - \* client and financing sources.
  - \* name and address of the consulting engineer.
  - \* a brief description of the project with type and volume of the works, the start and completion of the construction.
  - \* the share of work of the applicant in these projects, the type of his work and the range of his responsibility.
  - \* the total cost of the project and the sum of the works performed by the applicant.
- information on the organization and disposal of personnel and equipment for the second pier project of the port of Lome.
- in case of a joint venture, data on the distribution of responsibilities and duties between the members of the joint venture, and on the pilot firm.

- a bank check as equivalent for the tendering documents (3 sets), in the amount of:

- \* Section I: 110.000,- CFA-francs or 950,-DM
- \* Section II: 121.000,- CFA-francs or 1050,-DM
- \* Section I and II: 231.000,- CFA-francs or 2000,-DM

Made out to "Prof. Dr. Lackner & Partners, Consulting Engineers GMBH & Co. KG, D-2820 Bremen 70" and drawn on the applicant's bank.

Applicants, who are not admitted to the tenderings, will have their check returned to them.

### IV. Submission of Documents

Applications for admission must be sent by registered post, and must arrive at the following addresses at the latest on March 2nd, 1981, 12:00 a.m.:

- A) Monsieur le President de la Commission Consultative des Marches, Presidence de la Republique, Lome/Togo/Afrique de l'Ouest (original of the application documents).
- B) Prof. Dr. Lackner & Partners, Consulting Engineers, GMBH & Co. KG, Lindenstr. 1A, D-2820 Bremen 70/West Germany (complete copies of all application documents).

The following note must be written in the upper left corner of the envelope:

"Preselection des Entreprises, Deuxieme Mole du Port de Lome".

### V. Selection of Applicants

The applicant is not entitled to any appeal against the decisions reached by the Commission Consultative des Marches.

### VI. Admitted Applicants

Any change whatsoever in the composition of the allowed joint ventures, will result in the exclusion of all the firms comprising the joint venture from participation in the tendering.

On the other hand, it is left to the discretion of the admitted individual firms and of the joint ventures, to combine among themselves for a joint submission of bid.

### VII. Tender Documents

The dispatch of the tender documents has been foreseen for the beginning of 1981.

In the name of the Republic of Togo

B.M. Barque

Minister of Public Works, Mines, Energy and Hydraulic Resources



## Spain via Plymouth: BTDB report doubling of capacity

The British Transport Docks Board's Millbay Docks system at Plymouth is fast becoming a major export/import terminal for trade with Spain.

Spanish business through the port includes regular year-round roll-on/roll-off services as well as conventional cargoes. Millbay's services to and from Spain made a substantial contribution to the port's increase in tonnage last year.

Roll-on/roll-off services to Spain are provided by Brittany Ferries, who offer four sailings a week to Santander in Northern Spain in the summer, and two a week in the winter.

The geographical attractions of the Plymouth-Santander route translate directly into cost savings. The savings come mainly from lower fuel bills, but additional bonuses are the avoidance of any need for vehicle permits for driving through France, and the fact that lorry drivers can take their statutory rest period on the overnight sailing.

Vessels using the Plymouth Ferryport berth in Millbay Docks' tidal outer basin, which means that sailing schedules are unaffected by tidal restrictions, so that ferries can come and go at any hour of the day or night.

As well as the ferry traffic, substantial volumes of other cargo move between Plymouth and Spain. The ships use both the tidal outer basin and an enclosed inner dock.

What of the future? Peter Stewart, BTDB's Commercial Officer at Millbay Docks, believes that this already healthy

business with Spain will continue to flourish. "With EEC entry, and with increasing industrialization, I am looking for growth in several different areas," said Mr. Stewart.

"There is tremendous potential for increased trade in manufactured goods, but we also intend to ensure that Plymouth gets its fair share of more traditional trades — for example, importing wine in tankers, and importing fresh produce," he added.

## BTDB place civil engineering contract for £1¼ million coal terminal at Garston

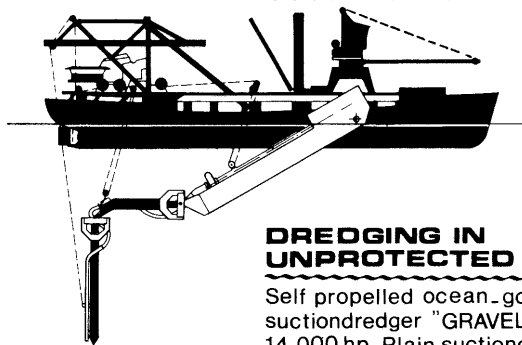
The British Transport Docks Board have placed the civil engineering contract for Garston's new £1¼ million coal terminal with Balfour Beatty & Co., Ltd. of Stretford, Manchester.

The terminal is being built under an agreement between the British Transport Docks Board and the National Coal Board, and is scheduled for completion in the late spring of 1981. It will have a capacity of one million tonnes of coal a year, and will supply the NCB's important markets in Northern Ireland, the Irish Republic and the Isle of Man from pits in the North Midlands, Lancashire and Yorkshire.

Special rail facilities will be installed to serve the terminal, so that most of the coal passing through Garston will arrive by rail, avoiding about 100 return lorry journeys a day.

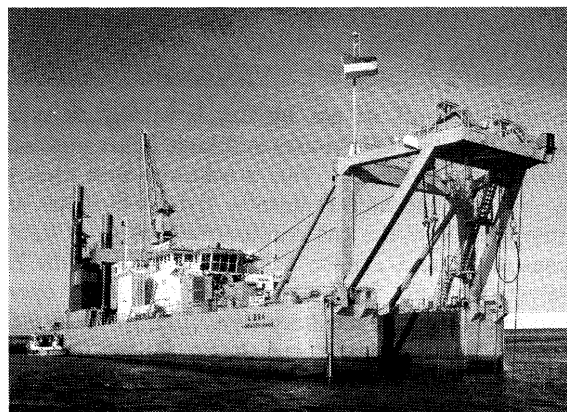
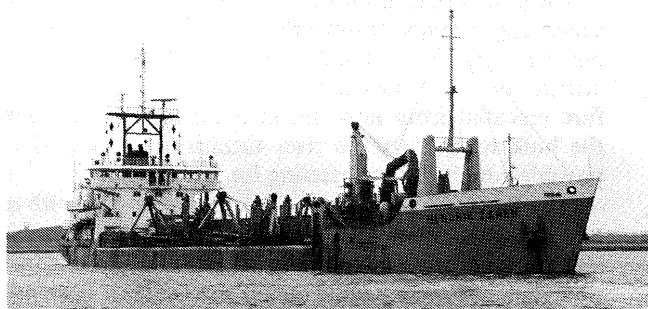
Mr. Tony Winfield, BTDB Docks Manager at Garston, said that "The new terminal is the first major port development for the export of domestic coal in the last fifty years.

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Self propelled ocean-going rock cutter dredgers  
Total 17,500 hp installed Power on the cutter 3000 hp

### PUMPING ASHORE

"HENDRIK ZANEN"  
Trailing suction hopper dredger (5750 m<sup>3</sup>)

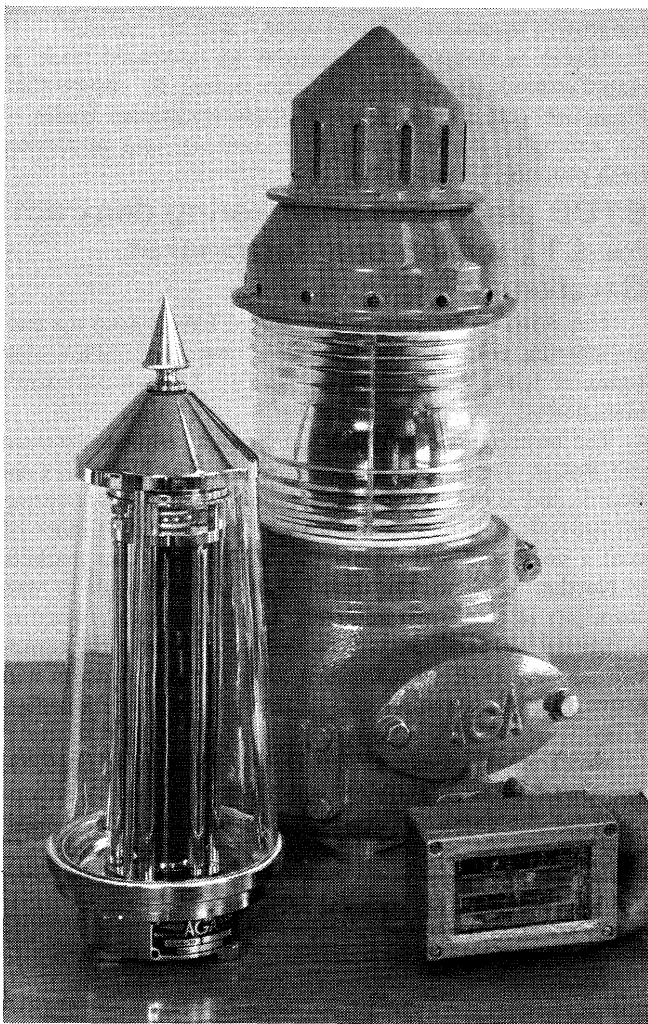


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## AGA sunvalves for gas lanterns



Automatic shut-off of gas by day is usually an essential economy in major lighthouses and large lights powered by acetylene or propane gas. This is achieved with utter reliability by the mechanical sunvalve (left) which has an indefinite life. Now the gas consumption of small lights on beacons and buoys can be cheaply reduced by the ELVS sunvalve (righthand foreground) which is battery operated and solar charged. It has been developed by AGA Navigation Aids, Brentford, and was shown for the first time at the Lighthouse Authorities Conference at Tokyo in November last. This small rectangular unit will bolt into the side of the base of a lantern such as that in the background. It can be tailored to fit an existing access hatch and need only be removed for battery change after about 8 years.

Its construction highlights the resurgence of 'King Coal', and we are proud that the NCB chose Garston as the location for such a significant development."

## New face for Bassens: Port of Bordeaux

The proposed construction of a bridge over the Garonne, opposite the Place des Quinconces, will lead to the disparition of maritime traffic between the Place and the Stone Bridge (Pont de Pierre). The cargo handled across the quays there will have to be transferred to other facilities, which are to be built over the now unused quays of Bassens-amont.

The new prospect has led the Port of Bordeaux Authority to completely "remodel" the face of Bassens. Were this not the case, it would mean that new general cargo facilities would have been alongside those already used for heavy bulk. The resulting disparity would hardly be conducive to rational operation, the more so since some general cargo is also handled at Bassens-aval and therefore there would have been a number of isolated general cargo berths scattered along the quays of both sectors.

A further reason was to be found in the evolution in the size of bulk carriers and the sub-soils at the different berths. The Bassens-aval facilities (where it is possible to deepen the berths and excavate a turning basin for very large tonnages), are much more suited to bulk cargo, whereas Bassens-amont could be more readily adapted to provide good facilities for general cargo, which is transported in vessels drawing between 8 and 10 m.

### THE BULK TRADES AT BASSENS-AVAL

Bulk carriers today are rapidly becoming larger and enable maritime transport costs to be reduced. For example, a cost per ton of carrying bulk in a 40,000 tdw vessel of around \$24 drops to only \$12 in a 120,000 tdw ship, which if she arrived only half laden, would only increase the lower price per ton by \$2. In addition, the ability to accommodate large vessels, even partially laden enables larger cargoes to be received. Thus for a 10.5 m draught, where a 60,000 tdw ship can carry 45,000 t of cargo, a 120,000 tdw carrier, lightened to the same draught would bring in 65,000 t.

This phenomenon of larger vessels has already been seen at Bassens where lightened vessels of 60,000 tdw, with lengths of up to 230 m have been calling more and more frequently. This trend is expected to increase with coal imports because supplies come from far distant countries: Australia, the United States, South Africa.

Until such time as major industry implants at Le Verdon, generating a major throughput of millions of tons, it will not be possible to build a terminal there which would attract the trade now passing through Bassens. It is therefore essential from now on, in order to keep and develop the bulk trade, that the river facilities can offer the best possible conditions for catering for this traffic.

The berths able to accommodate long vessels with medium draughts, after lightening in another port or at Le Verdon (the 3rd gantry crane, at present under construction, will be able to handle bulks), are those of Bassens-aval. In addition to strengthen this argument, facilities already exist there for grain and bulk handling for agro-food products generated by Bordeaux-Oléagineux.

The heavy bulk trade will therefore be transferred, in mid 1981, to the present container terminal and the berth located in front of shed 95, which is to be converted for

the storage of various bulk products, notably oil cake. Five CERETTI e TANFANI cranes backed up by large capacity quick flow hoppers will ensure particularly high throughput rates.

#### TIMBER TRANSFERRED TO BASSENS-AVAL

A new timber terminal is to be developed at Bassens-aval. It will replace the one at Bassens-amont, which is having occasional operating difficulties due to a lack of space. The whole zone between shed 95 and the air conditioned shed is to be prepared for timber storage following the demolition of the small sheds which will start this month. In addition, the re-routing of the CD 10 (the ambès road), undertaken by the Gironde "Département" will give a depth of land behind the quays of 400m for the stock yard.

To resume, it could be said that the timber trade will profit from port facilities twice the size of the present by using the new quays, as well as four times the present storage area. These facilities will be progressively brought into service from the beginning of 1981.

#### GENERAL CARGO CONCENTRATED AT BASSENS-AMONT

By catering for timber and bulks at Bassens-aval it will be possible to re-group facilities suitable for general cargo handling at Bassens-amont, thereby providing a better throughput and greater flexibility than would have resulted from keeping the various berths scattered along the three kilometer long Bassens quays.

The transfer is to be made in successive stages, once the installations, currently used by the timber trade have been moved, in early 1981. The concentration of general cargo at Bassens-amont (where a shed is to be built in 1981), will definitely improve facilities for the trade, whether carried in mixed carriers or in containerships.

Thus, with its new face, Bassens will more than ever before provide the efficient complement to the throughput at Le Verdon.

#### Dunkerque to build a new bulk terminal

Bulk traffic has been growing fast for the last 20 years, from 50,000 T in 1961 it went to 19 MT in 1979. 10 MT of ore destined for USINOR steel plant alone and 9 MT of ore and coal intended either for USINOR coke plant or for steel works in Lorraine and Saarland or for the E.D.F. power plants or for HBNPC power stations and coke plants.

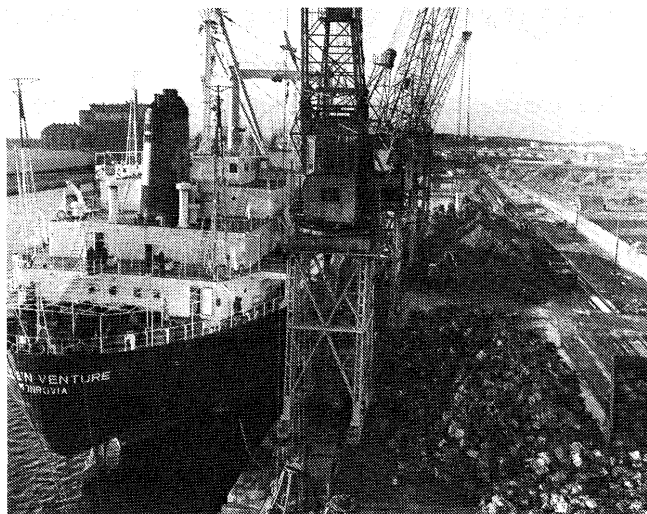
Confined to ships of the 100,000 T dwt class Dunkerque eastern harbour can no longer compete on equal terms with Rotterdam.

The terminal plan for 1982 at Dunkerque western harbour will cater for ships of 175,000 T dwt to begin with and up to 250,000 T dwt after completion. It will have two gantry cranes a storage area with a capacity of over 1,000,000 T and loading facilities.

The government will contribute to the financing of the scheme estimated at £25 M. This was announced by President Giscard d'Estaing during his visit to the port on the 9th October 1980.

This new equipment will enable Dunkerque to cope with a growing coal traffic used by power stations and coke

#### Barry Exports Record Scrap Metal Cargo



The m.v. "Golden Venture" seen here being loaded with 15,000 tonnes of scrap metal, the largest single cargo ever to be exported from a UK port.

#### Port of Southampton



The world's largest roll-on/roll-off cargo ship, the 22,325-ton "Boogabilla" at the Port of Southampton discharging a cargo of 4,300 tonnes of timber railway sleepers from Australia.

plants as well as by industry. The competitiveness of the port will thus be increased and this will enable Dunkerque to claim a fair share of bulk traffic of North-West Europe.

# Ladies' Program's Highlights: Nagoya Conference Organizing Committee

The coming 12th IAPH Conference leaves only four months before its opening.

The Organizing Committee in Nagoya is, for making the conference a great success deserving the Silver Jubilee and bearing rich fruits, pouring its utmost efforts.

The program of the conference has already notified you with our first circular letter, however, its Ladies' Program which is offered to allure and entertain ladies during the conference period, our Ladies' Program Committee has worked are present the following.

May 25 (Mon)	Noritake and Nagoya Castle
14:00-17:30	
May 26 (Tue)	Pearl Island and Ise Grand Shrine
07:50-16:00	full-day excursion
May 27 (Wed)	Forestry Center and Ceramics Museum
10:00-16:00	
May 29 (Fri)	Demonstration of "Mock" Wedding Ceremony and Japanese Culture (You can try-it-yourself)
09:00-13:30	

Here, its highlights are introduced; Noritake, Pearl-Island in Toba and the Ise Grand Shrine.

## Noritake

Noritake, already known throughout the world as a prime manufacturer of fine china, has now expanded its product line to include the "total tableware" concept. Calling upon 70 years of dedicated craftsmanship, it now produces glassware, melamine-ware, enamelware and cutlery, as well as superb china.

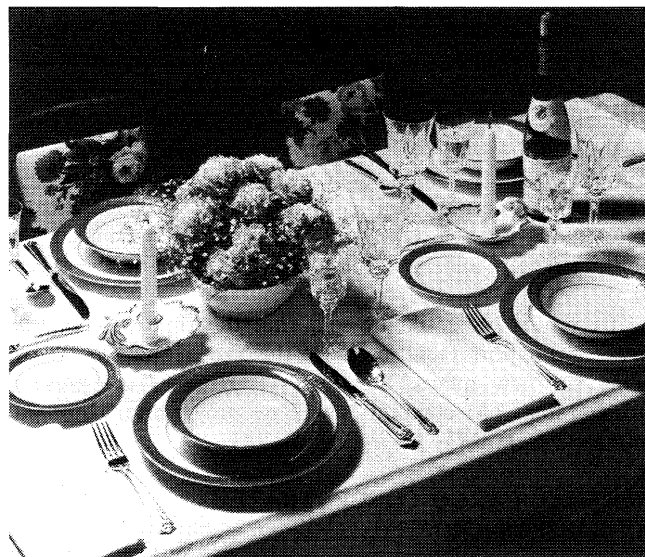
Moreover, as a result of its long experience in the ceramics field, Noritake has developed grinding wheels, abrasives and other related products which are highly valued and widely used.

Certainly, tableware, grinding wheels and abrasives are the mainstays of Noritake production.

In addition to its renown for fine quality products, Noritake has won worldwide acclaim for its manufacturing techniques. Relying on its experience and high technological standards, Noritake has developed and manufactured its own machines and other equipment for ceramic production. And highly skilled engineers are constantly improving and refining production techniques. Noritake prides itself that everyone of its products in its entire production line is manufactured under optimum conditions in the most modern factories.

In the electronic ceramics field, as well as in the area of environmental equipment, clay pipes and other related industries, Noritake is manufacturing and distributing products to ever-expanding markets.

Noritake's unparalleled experience in the ceramics industry has given it an excellent reputation for quality and reliability. A large number of inquiries have been received from overseas countries, and Noritake is actively engaged in exporting engineering and technical know-how as well as finished products.



## National Park Ise-Shima

"Pearl and Ama — girl diver —" are so famous that they are used as a synonym of Ise-Shima.

Intricate coast-line (Rias type) and a mild weather all the year round, which are the major characteristics of this district, are raising a variety of marine products abundantly. The Queen of them is, surely, the pearl. Because of its softly shining beauty, the pearl is lovingly called as "a tear of an angel" or "a star's dew". The pearl is believed to the most flattering gemstone a woman can wear.

The scenic beauty of this district are worthy enough to be considered as the birthplace of the pearl.

The sapphire sea and the scattered small islands, crowned with old pinetrees, are playing joyfully together. The countless pearl rafts are drawing the splashed patterns on the sea. And the pearl divers are making the rippling on the mirror-like surface of the sea. They make a fine picture.

Don't you come here, and take a couple of fine photos yourself?

## Toba City

Toba city is a small town sandwiched between mountain and sea. Once, it was a prosperous castle town, and also known as the port to wait for a favorable wind. Now, not only Toba is the important transportation center of this district both for land and sea, but it is serving as the base for tourists as well. Sight-seeing ships, ferryboats, and small fishing boats are going in and out the port without a break. And the departure and arrival of electric trains, busses and motorcars are very busy.

Naturally, it has many facilities for tourists. For instance, hotels, Ryokan (Japanese style), and restaurants where serves very delicious sea foods or Western dishes are standing side by side.

As to the other highlights, world-famous Pearl Island, the Aquarium, Dolphine Land are within a hailing distance.



This is quite a bustling town, all day long, all the year round!

## Pearl Island

A small island of circumference about 1km, Pearl Island is a rare institution that reveals the full story of the Mikimoto pearl. The Memorial House of Kokichi Mikimoto, Father of cultured pearl; the Pearl Museum; the Pearl Shop; and demonstration of pearl divers... all of them will give you the intimate knowledge about the pearl. One of the features is the working process to make up the raw pearls to the brilliant necklaces, for instance. You'll be surprised and fascinated by the delicately skillful handwork of the trained workers.

Now, you are invited to the Souvenir Shop, where the the choiced pearl products are displayed gorgeously in the show cases.



The scenery of Shima Inland sea and rafts for cultured pearls

## Toba Aquarium

This is one of the few Aquariums which is authorized by the Education Ministry. You can see many forms of life living in the water, and their modes of life. A monster octopus which has 56 legs, and other very rare living things of all kinds are collected in one corner. Feeding of big whales, demonstration of Ama divers, also, will arouse your interest. This is a very informative and cheerful Aquarium to everybody regardless of age or sex.

## Ise-Shima Sky-Line Highway

This is the toll road for drivers with 16km distance from Ise-city to Toba city through the ridge of Mt. Asamayama (553 meters above the sea).

From the observation spot near the mountain top, you have a very wide and exceptionally beautiful view over Ise Bay. The wide expanse of waters... slowly navigating ships and boats... the glittering wave crest in the span... and the scattering small islands... The grandeur of its panoramic view is too magnificent for description.

An ancient Temple "Kongo-Sho-Ji" enshrined in the neighborhood being nestled among the thick woods.

## The Grand Shrine of Ise

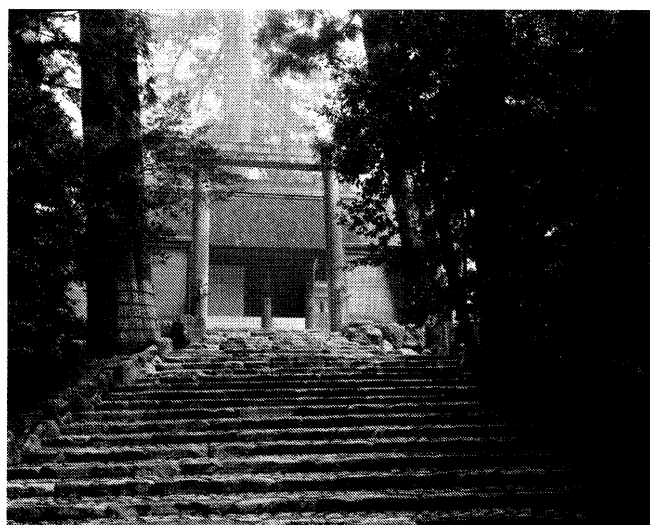
The Grand Shrine of Ise is a generic name which includes two Shrines. One is the Inner Shrine (NAIKU), the other is the Outer Shrine (GEKU), the former is sacred to the Imperial Ancestors, and the latter is devoted to the Goods of Farming. It is the only shrine which has direct relationship with the Imperial Family.

The yearly regular functions, feasts, and the style of shrine buildings which won the highest praise from Bruno Taut, a noted German architect, have been in every respect taking over the oldest Japanese rites.

In the immense precincts of the Shrine, countless Japan cedars of several hundreds years old grown so thickly that they intercepts the light of the sun, and creating in the vicinity a solemn atmosphere of God's Home.



The Uji Bridge upon holly River Isuzu—main gateway to the Ise Grand Shrine



The sanctuary of the Ise Grand Shrine

## Delicacies of Toba

After all, delicacies of marine products impress very deeply upon sophisticated people. Naturally, each place has its own proud dishes. So, visitors have a very wide choice according to their tastes.

Genuin prenier; an ear shell steak, a dish of fresh-roasted lobster, fishes, and shell-fish; a dish of oysters cultured germ-free; purely local dish of sea foods...

And other countless fresh and delicious menus are awaiting for you to be tasted.

Come, and have them mouthful! You'll be satisfied!

## Ama—Pearl Divers

An indispensable feature in the scenery of Shima would be their coquettish figures of Amas—the girl divers for pearls. They wear plain, long-sleeved white cotton dresses that cover them from throat to knee. Each carries a wooden bucket.

The history of Ama is as old as about 2,000 years. So is their fishing methods. Their intention is to keep the balance between the hawl and the natural growth. This would be their wisdom taught by experiences to maintain the marine products in abundance.

In spite of their hard work, their average age is unexpectedly high... not a few of them are over 60 years old. They are light-hearted and full of vigor... may be the sunny and mild weather have given them such a grace.

Their main catches are ear shell, sea cucumber, agar-agar, and top shell, etc. The season they enliven the beaches are from the early spring to autumn.



AMA—Girl Divers

## Cultured Pearls

Softly shining beauty of pearl is a symbol of grace and great worth. The pearl is one of the most prized of all gems. And it is the only gem that is created by a living creature.

What is a pearl? Pearls are made by certain kinds of bivalves such as an oyster. They are called mollusks.

When a piece of broken shell, a parasite, or a tiny grain of sand happen to enter into shell of an oyster, it irritates the oyster. To keep it from being an irritation, the oyster keeps layering a material onto the particle. This material is mother-of-pearl. And as many layers of mother-of-pearl are built up, a pearl is made.

Cultured pearls. After bitter trial and error, Kokichi Mikimoto and other leaders in Japan learned how to treat oysters to produce "cultured pearls". It took them for more than 20 years.

The oysters that are chosen for making cultured pearls are taken to pearl "farm". Then they are cleaned, and graded according to their age, size, and health to eliminate unsuitable oysters.

Treating the oyster. After the shells of the oysters are cleaned of any sea growth and parasites, skilled workers cut into the fleshy, glandular area. Then they set in the core bead of mother-of-pearl.

The treated oysters are placed in cages that are suspended from rafts, then down in the sea. About 3 years after treatment, the oysters are removed from the rafts; and their pearls are taken out. These are sorted according to their shape, color, size, and luster. Only a very few are of truly fine quality.

The cultured pearls are less expensive than natural ones, but only an expert can tell the difference between them.

The care of pearls. A pearl is a soft gem that is easily scratched. Care is needed to keep its rich luster. Cosmetics, perfume, dust, and perspiration that remain on pearl can harm them. So, after each wearing, pearls should be wiped clean with a very soft cloth.

## Record cargo discharge at Port Khalid

Port Khalid, Sharjah in the United Arab Emirates completed the discharge of over 12,000 tons of steel in a record breaking 57 hours.

Using only two cargo hooks the port's specialist stevedoring crews unloaded a total of 12,220 tons of steel slabs from the m.v. Falcon, on charter to M.T.O. Lines of West Germany.

The cargo bound and destined ultimately for transshipment is currently being stored within Port Khalid's Free Trade Zone.

The port's Freezone offers a duty free in-bond environment in which private sector companies can establish manufacturing, transshipment or distribution operations.



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