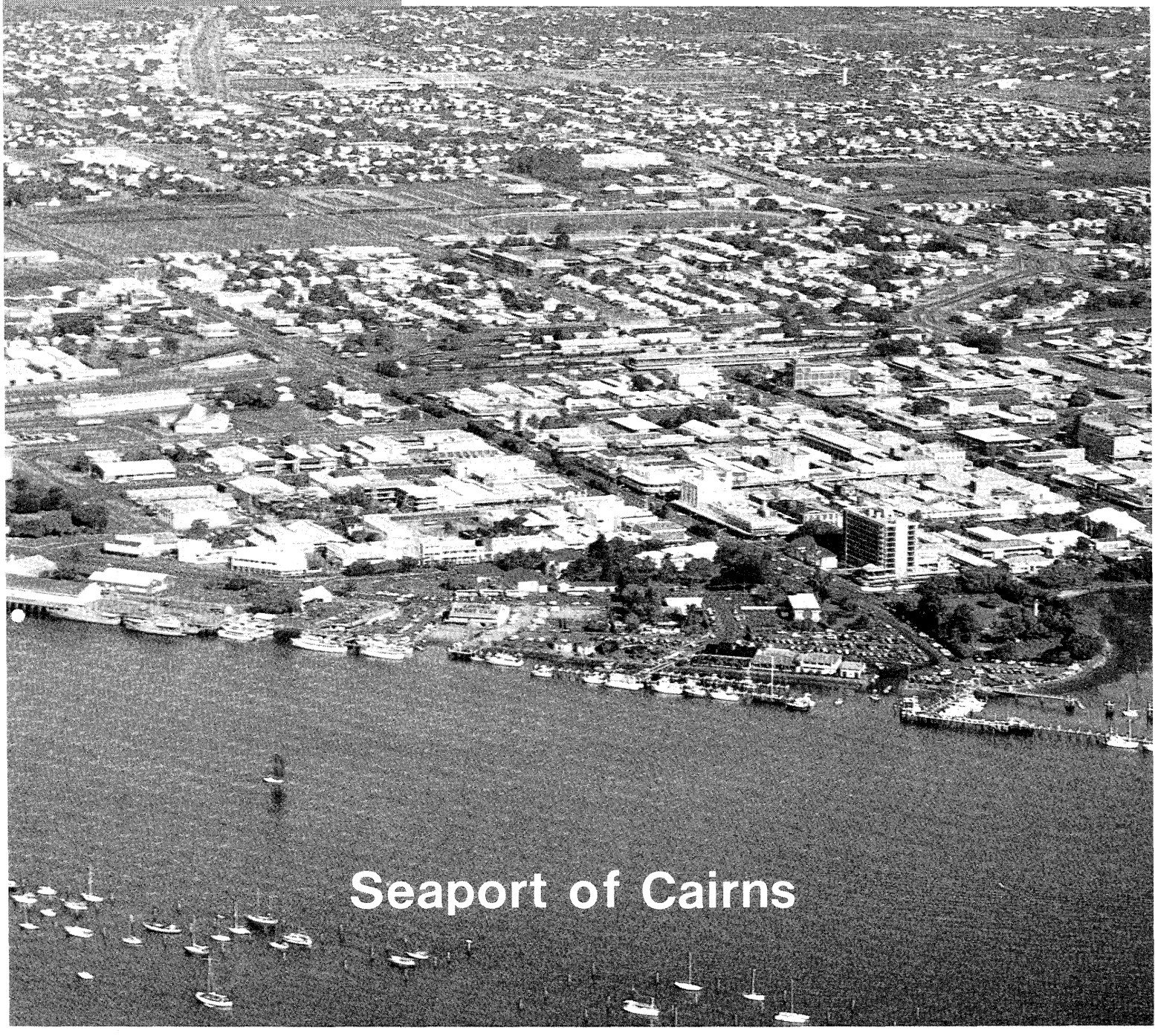
昭和44年11月15日第三種郵便物認可　昭和59年３月号　昭和59年２月20日発行　第29巻第２号（毎月１回20日発行）ISSN 0554-7555

PORTS and HARBORS

March, 1984 Vol. 29, No. 3



Seaport of Cairns

The Publisher: The International Association of Ports and Harbors

Kotohira-Kaikan Bldg., 2-8, Toranomon 1-chome, Minato-ku,
Tokyo 105, Japan

The First Banker

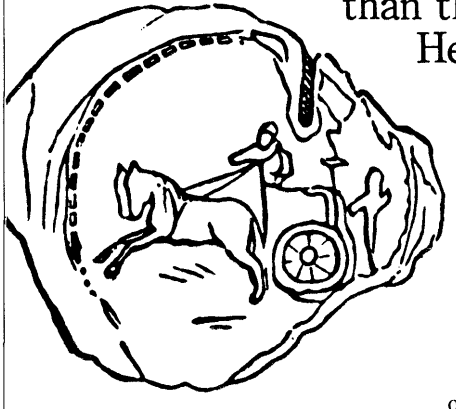
Early in man's history, he learned to specialise. A man that did his best work with a hammer became a carpenter. The one that grew the biggest vegetables became a farmer. And goods and services were traded.

When life became more complex, money was invented. It enabled trade to take place on a higher level. And it created the need for another type of specialist. The banker.

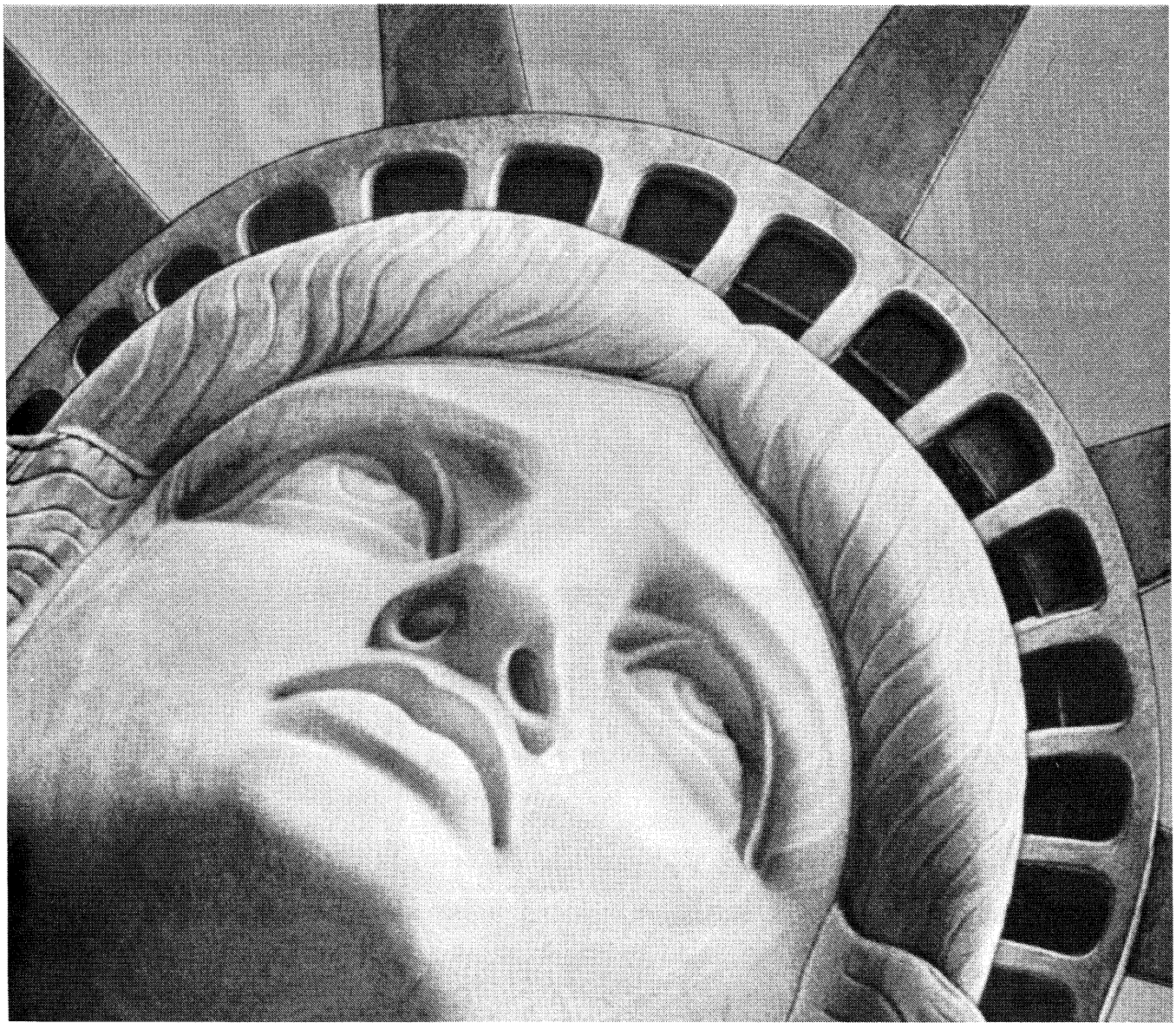
We at Fuji Bank are proud to be following the traditions of that first banker. For the past 104 years we have been assisting both individuals and corporations in all types of business transactions.

We maintain offices all over the world. And stand ready to provide both capital and financial advice to those who request our services.

Today's world is more complex than that of the first banker. He did his best to help then. We do our best to help now.



FUJI BANK
Tokyo, Japan



From the land of the free-

AN INEXPENSIVE PROPOSITION.

The statue marking the entry to the land of the free stands at the entrance of the Port of New York and New Jersey. Although nothing's free any more, you'll find that our costs are genuinely competitive.

You'll find that our security and cargo handling speed also help better your overall cost.

So before shipping, do some comparison shopping. Get the facts from our sales office.

AMERICA'S GREAT PORT.

THE PORT AUTHORITY
OF NY & NJ

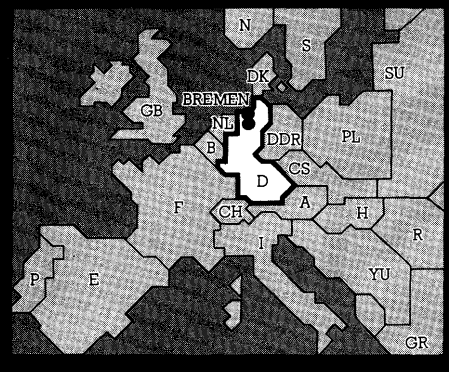
One World Trade Center 64E, New York, NY 10048
Telephone: (212) 466-8315

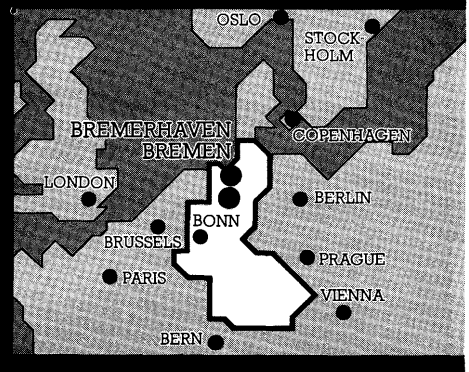
Marketing in Germany.

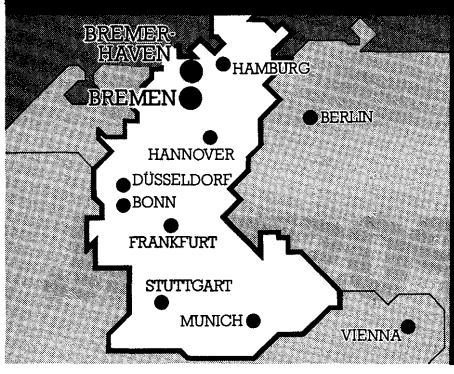
Call Mr. Tsuyama

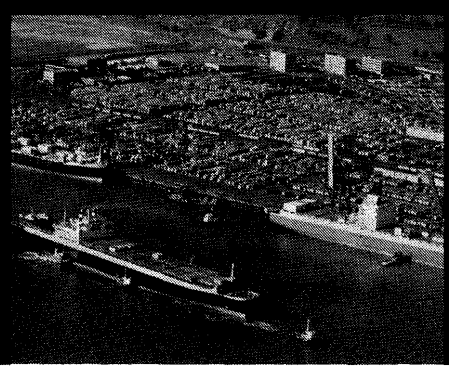
Do you want to start up business in Germany? Are you looking for someone reliable to import and distribute your goods? And is quick low-cost transport essential? Then contact Mr. Tsuyama, the representative of the Ports of Bremen and Bremerhaven and the Bremer Lagerhaus-Gesellschaft (one of the largest port operating companies in the world). He knows all the right people. In Japan. In Germany. In Bremen. Give him a ring. He'll have time to talk to you. In his office or yours. You can find him in the Sanko-Mori Building 3–1, Atago 1-chome, Minato-ku, Tokyo.

Tokyo (03) 431-8012







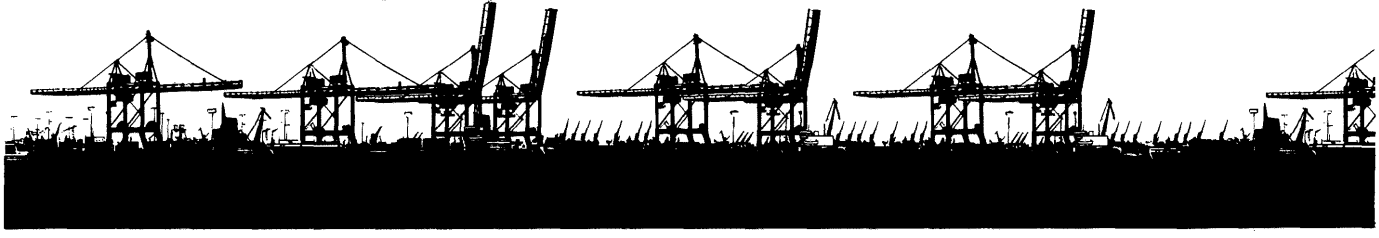


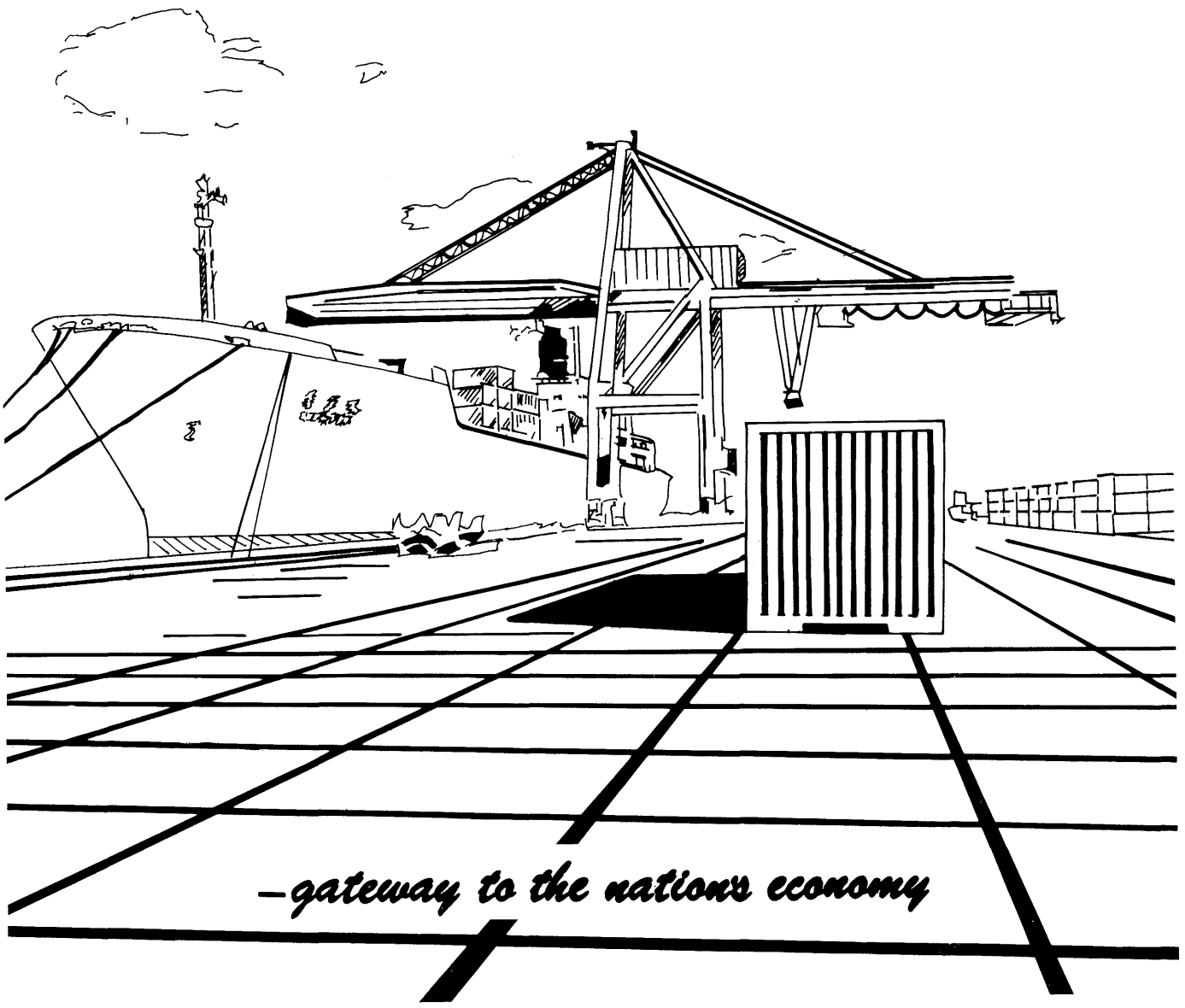
Bremen and Bremerhaven are among the most efficient all-round ports. There are 12,000 sailings a year to 1,000 ports all over the world. Ship your cargo via Bremen and Bremerhaven: it takes only one day to reach its destination anywhere in West Germany.

Fast. Safe. Economical. For your benefit.

BLG

Bremer Lagerhaus-Gesellschaft
Port Operating Company
Bremen/Bremerhaven





Nigeria's Seaports are expanding – keeping pace with Industrial Development

ROLL-ON/ROLL-OFF BERTHS AT
* Tin-Can Island
* Warri

Mechanised Container Berth at Apapa

MODERN GENERAL CARGO BERTHS AT
* Apapa
* Port Harcourt
* Tin-Can Island
* Warri
* Calabar

Guaranteeing

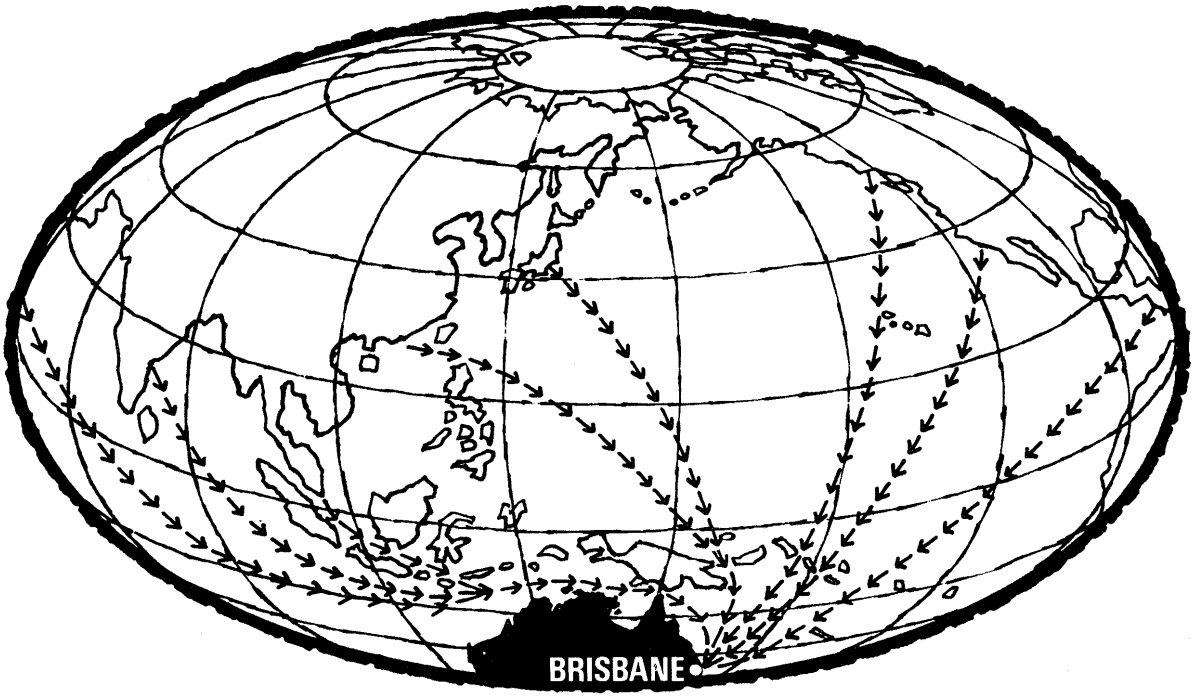
* Quick turn round
* Security of Cargo
* Provision of ancilliary Port facilities.

NPA

NIGERIAN PORTS AUTHORITY

26/28, MARINA LAGOS, NIGERIA.

Down-under?



Make your first and final stop Brisbane!

Over the past seven years, the Port of Brisbane Authority has spent $70 million developing a world class port on the Fisherman Islands, at the mouth of the Brisbane River. The islands' port now can handle the largest container and ro-ro ships afloat.

That... plus, the port's other facilities, including bulk handling... plus, the traditional port infrastructure... plus, fast rail and road connections to any place in Australia... have combined to enhance Brisbane's reputation as "the complete port".

Port of Brisbane Authority

Box 1818 G.P.O., BRISBANE
AUSTRALIA 4001
Telegraphic address: 'Portbris'
Telex: AA42780
Phone: (07) 228 9711

1297

PORTS and HARBORS

Published by

The International Association of Ports and Harbors

N.G.O Consultative Status, United Nations (ECOSOC, UNCTAD, IMO)

Secretary General: Dr. Hajime Sato

Head Office:
Kotohira-Kaikan Bldg.
2-8, Toranomon 1-chome, Minato-ku
Tokyo 105, Japan
Tel.: TOKYO (591) 4261
Cable: "IAPHCENTRAL TOKYO"
Telex: 2222516 IAPH J

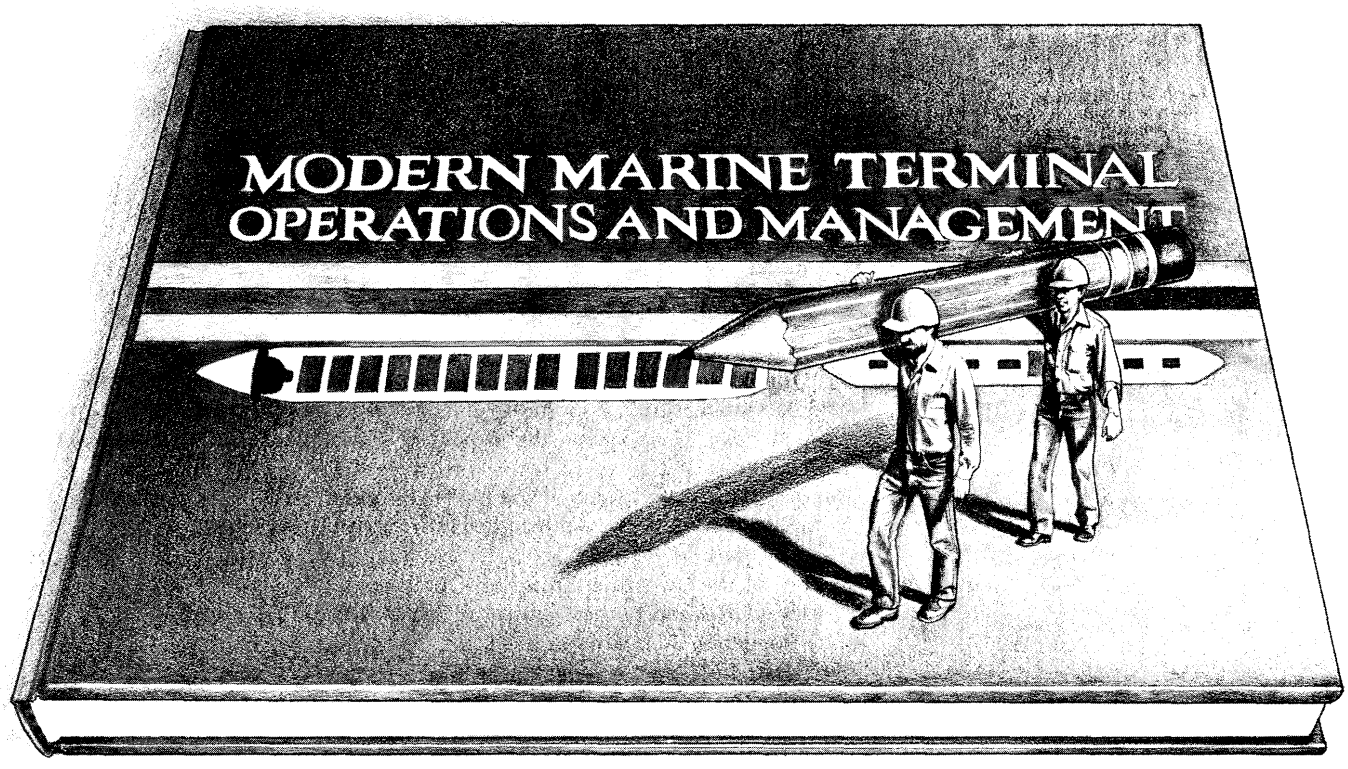
March, 1984 Vol. 29, No. 3

CONTENTS

The Cover: **Trinity Inlet and the Seaport of Cairns**

Price US $3.50 per copy
US $35.00 per year

We've done our homework. Now you do yours!



INTRODUCING THE MOST CURRENT AND COMPREHENSIVE TEXTBOOK ON PORT MANAGEMENT AND OPERATIONS.

The Port of Oakland, one of the largest, most advanced general cargo seaports in the world, has provided technical assistance and training to port administrators for years. Now, the advice and the instructional methods developed for these programs is available in a new textbook, *Modern Marine Terminal Operations & Management,* by Captain Warren H. Atkins, a senior instructor in the Port of Oakland's residential training program.

Written in cooperation with the Maritime Division of the Port of Oakland, the textbook covers every important aspect of marine terminal management, including:

- A description of the various types of terminals and the responsibilities of management
- Essential considerations when building a terminal, how to get equipment and how best to use it; how the major container handling systems compare
- An overview of the entire container cargo operation
- Terminal planning for vessel operations
- Handling of special cargo
- Training outlines for instructors, management and supervisors
- A glossary of more than 500 terms
- List of references and index.

It's the industry's only comprehensive guide to port operations and management, proven in training and assistance to more than 100 port personnel in 10 nations. It's bound to be one of the most valuable reference books you'll ever need.

Modern Marine Terminal Operations & Management. Send away for a copy today.

PORT OF OAKLAND

66 Jack London Square, Oakland, CA 94607

Modern Marine Terminal Operations & Management

The new, comprehensive text on port management and operations.

Price: $75.00 each, including handling and postage (surface mail inside U.S.), $80.00 each (surface mail outside U.S.). For shipment by air, add $5.00 each, U.S. or overseas. Please include 6% sales tax for delivery within the state of California.

Please send _____ copy/copies. I enclose a check or money order for $ _____ payable to Port of Oakland.

Name _____

Address _____

City _____

State _____ Zip _____

Phone/Telex _____

Mail to: TEXTBOOK, Port of Oakland, 66 Jack London Square, P.O. Box 2064, Oakland, CA 94604.

Volume discounts available. For details call 800-227-2726 or Telex 336-334.

IAPH announcements and news

Mr. Hisato Ichimada, Founder Member passes away

Mr. Hisato Ichimada, Founder Member of IAPH and Former Governor of the Bank of Japan, passed away in a Tokyo hospital on January 22, 1984. He was 90.

Mr. Ichimada, while he was the Governor of the Bank of Japan in early '50s, rendered great assistance to the late Mr. Gaku Matsumoto, the initiator of the Association, prior to its official establishment, wherein the embryo Association had been under the most difficult financial conditions.

In the light of his most significant services to the Association which was a key factor for the successful establishment of the Association in 1955 and to its growth to the present position, the Association at its silver jubilee ceremony held during the 12th Conference of IAPH in Nagoya in 1981, commended him with a silver medal and a scroll of honor, together with other 12 individuals of meritorious service.

President Tozzoli, upon receipt of the sad news from the Tokyo Head Office, has sent a telex of condolences to the bereaved family of Mr. Ichimada on January 27th. Presidential message follows.

Mr. Yasuki Ichimada:

The Association was saddened to hear of the passing of Mr. Hisato Ichimada, a Founder Honorary Member and a recipient of the IAPH silver jubilee commendation, on January 22, 1984 at the age of 90.

Prior to the official establishment of the Association and while under most difficult financial conditions, Mr. Ichimada while Governor of the Bank of Japan in the early 1950s rendered great efforts to aid the late Mr. Gaku Matsumoto, the initiator of the IAPH. The effort was a significant factor in the establishment of the Association in 1955 and to its growth to the present position of importance.

On behalf of the entire membership of the Association which presently encompasses 74 countries throughout the world, I express my deep sense of sympathy and condolences to you and other members of Mr. Ichimada's family.

Sincerely,

Anthony J. Tozzoli
President of IAPH
Director, Port Department
Port Authority of New York and New Jersey

IAPH publication "Port Problems in Developing Countries" sold out

The book "Port Problems in Developing Countries", written by Bohdan Nagorski and published by IAPH in 1972, has been widely read by many people in port-related fields, both in business and academic circles, throughout the world. With its comprehensive study of port development activities in the field of port planning, organization and administration, the book has come to be regarded as a "bible" by those seeking insight into the complex nature of port administration and the myriad problems that must be overcome in moving a project forward.

However, in the past decade, almost all copies in print have been sold through the five distribution centers (Houston, Oakland, New York, Le Havre, London) and the Tokyo Office. This is to announce, then, that no more copies will be available, either from the Tokyo Head Office or from any of the distribution centers, which closed their accountants for the book at the end of 1983.

We would like to take this opportunity to thank you most sincerely for your kind interest shown in the publication, and we are grateful to those who served as distribution centers for the book for such a long period.

The Association is now considering what might next be published for the benefit of its members and readers at large.

Membership Notes

New Members

Temporary Members

Canaveral Port Authority

P.O. Box 267, Cape Canaveral, FL 32920, U.S.A.
Office Phone: (305) 783-7831
(Mr. Charles M. Rowland, Port Director)

Waterford Harbour Commissioners

Harbour Office, George's Street, Waterford, Ireland
Office Phone: 051 74907/8
(Mr. Michael J. Curtin, Deputy General Manager)

Port of Everett

P.O. Box 538, Everett, WA 98206, U.S.A.
Office Phone: (206) 259-3164
Telex: 4740140 – POEUI
(Mr. John G. Belford, Executive Director)

Change of Name

Northern Territory Port Authority has been renamed "Darwin Port Authority" as of January 1984. The postal address and telex number remain as they were, and are as follows:

G.P.O. Box 390, Darwin, N.T. 5794, Australia
Telex: AA85605

Asian-African Meeting for the Proposed Revision of IMO Conventions: Members' attention solicited

As per the copies reproduced hereunder, IAPH has been invited to take part in a regional deliberation on proposed amendments to the IMO Conventions on Civil Liability (CLC 1969) and International Oil Pollution Compensation Fund (1971), at a forthcoming meeting of "Asian-African Legal Consultative Committee (Doc. 6(15)/84, Jan. 04, 1984, New Delhi, India: Mr. C. Sugiyama, Dy. Secretary General) which is scheduled to be convened in Jakarta, Indonesia, in the first week of March 1984.

In the circumstances, Dr. Hajime Sato, Secretary General circulated a letter among the members in the African and Asian regions and called for their attention towards the matters to be deliberated at the Jakarta Meeting.

Attached to his letter were IAPH resolutions related to the ports' position towards the issues in question, adopted by the Association at its past Conferences, as follows:—

- Resolution Relating to Water Pollution in Port Areas (No. 7, 8th Conference 1973, Amsterdam-Rotterdam)
- Resolution Relating to Legal Protection of Ports and Navigable Waterways (No. 8, 8th Conference 1973, Amsterdam-Rotterdam)
- Resolution Relating to Legal Protection of Ports and Navigable Waterways (No. 6, 9th Conference 1975, Singapore)
- Resolution of Enforcement of Conventions (No. 3, 12th Conference 1981, Nagoya)
- Resolution on Liability and Compensation in Connection with the Carriage of Noxious and Hazardous Substances by Sea (No. 4, 12th Conference 1981, Nagoya)
- Resolution on Extention of the 1969 Convention on Civil Liability for Oil Pollution Damage (No. 5, 12th Conference 1981, Nagoya)
- Resolution on the Review 1969/1971 Oil Convention and the consideration of a New Convention relating to the Transport of the Hazardous and Noxious Substances (No. 3, 13th Conference 1983, Vancouver)

1: AALCC's Invitation Letter to IAPH: —

Jakarta Consultations on proposed revision of the IMO Conventions on Civil Liability – CLC (1969) and the Convention on International Oil Pollution Compensation Fund (1971) in relation to compensation for pollution damage by oil tankers – March 1984.

In pursuance of the decision of the Tokyo Session of our Committee held in May 1983, we are arranging for a meeting in Jakarta in the first week of March 1984 for the purpose of having consultations on the proposed revision of the IMO Conventions on Civil Liability – CLC (1969) and the Convention on International Oil Pollution Compensation Fund (1971) in relation to compensation for pollution damage by oil tankers.

As you are perhaps aware, a Diplomatic Conference is being convened which will meet in London from April 30th to 25th May 1984 to consider the question of revision of the CLC 1969 and the Fund 1971 Convention with a view to providing higher limits for compensation for pollution damage and to determine the respective share of liability for compensation to be borne by the shipowner and oil interests. The proposals for the revisions which had been discussed in informal meetings and the Legal Committee of IMO over a period of four years have now been given formal shape in the drafts of the two Protocols prepared by the IMO Legal Committee in October 1983 (Doc. LEG/51/10) for consideration of the Diplomatic Conference.

In view of the fact that only a few states from the Asian-African region had participated at the expert level in the discussions leading to the formulation of the proposals for the revisions, the Tokyo Session of the AALCC, held in May 1983, had decided in response to the suggestions made by various interests that the AALCC Secretariat should arrange for consultations prior to the convening of the Diplomatic Conference in London. The decision of the Tokyo Session was also prompted by the consideration that several Asian and African States were gradually acquiring tanker fleets and there were a number of areas within the region where possibilities of pollution damage posed a real danger.

The meeting in Jakarta will be for a period of three days during the first week in March and the exact dates for the meeting will be fixed shortly. A Secretariat paper for the purposes of assisting in the consultations is now under preparation and will be transmitted four weeks in advance of the meeting.

In view of the need for an exchange of views on some of the major issues concerning the proposed revision of the two Conventions prior to the Diplomatic Conference, it would be greatly appreciated if your Organization could be represented at the Jakarta Meeting.

Secretary General's Circular to IAPH Members in African and Asian Regions

Asian-African Meeting for the Revision of IMO Conventions, in Jakarta, March 1984

As per the copy of the letter enclosed herein, Mr. Sugiyama, Deputy Secretary-General, Asian-African Legal Consultative Committee, has kindly invited us to take part in the forthcoming meeting of their institution to be held in March this year in Jakarta, Indonesia, for the purpose of effecting consultations on the proposed revision of the IMO Convention on Civil Liability (CLC 1969) and the Convention on International Oil Pollution Compensation Fund (1971) in relation to pollution damage by oil tankers.

I believe you are aware of the fact that the IAPH position related to the issues involved has already been expressed through its resolutions adopted by the Association at its past conferences. With this fact in mind, I have replied suggesting to him that the ports' position, which has been made clear by the Association by means of resolutions adopted at its past Conferences, should be duly reflected in the debates to take place in Jakarta.

Knowing from his letter that issues of paramount importance to the welfare of ports are to be deliberated by the people concerned in the African and Asian Regions, I would like to ask you to have the IAPH position put forward by the delegates attending the Jakarta Meeting representing port interests.

Visitors

On January 23, 1984, at a Tokyo hotel, a luncheon was given by the Association for the Restoration of the Presidential Yacht Potomac. Some 30 guests representing Japanese maritime and transportation circles, including Mr. Toru Akiyama, IAPH Secretary General Emeritus and President of the IAPH Foundation, were invited.

The Association for the Restoration of the Presidential Yacht Potomac is chaired by Mr. James Roosevelt, eldest son of the late President of the United States, and its Board of Governors comprises many distinguished citizens representing major corporations, labor unions, government bodies and local communities. Mr. Walter A. Abernathy, Executive Director, Port of Oakland, serves on the Board of this non-profit organization.

At the luncheon in Tokyo, Mr. James Roosevelt gave a presentation on the project, emphasizing the need for international support for their restoration efforts. An international fund raising campaign is being planned to procure the $2 million needed to restore the yacht to its 1939 condition. According to Mr. Roosevelt, the ship will be fully certified by the U.S. Coast Guard to carry 200 passengers. A two-year restoration program is now under way which utilizes volunteers, skilled craftmen, and a group of 25 young men and women who are participating in a job-training program.

The *Potomac* prepares to take FDR from Miami, Florida pier on a fishing trip in the Gulf of Mexico in 1935.

It was also emphasized that the restored Floating White House will promote greater understanding and appreciation of the office of the Presidency. A museum will be established both on the ship and onshore in a Visitors' Center. The aim of the museum will be to emphasize maritime history and the importance of World Trade.

Mr. James Roosevelt concluded his presentation by expressing his wish that the international community participate in the efforts to restore this historic vessel and thus to assure its future, both by contributing financial assistance and by donating equipment and materials for its reconstruction.

Mr. James Roosevelt (left) and Mr. Akiyama at the luncheon.

* * * *

On the morning of January 26, 1984, Mr. Richard P. Leach, Executive Director, and Mr. Armando S. Waterland, Trade Development Director, Port of Houston, visited the Head Office and were met by Dr. Hajime Sato, Secretary General, and Mr. Toru Akiyama, Secretary General Emeritus, as well as the other Secretariat staff.

The two guests from Texas were on their way from Beijing, Hongkong and Taiwan, which they had been visiting for trade promotion campaign purposes.

The many Christmas cards the Head Office had received from its members all over the world provided the colorful background for the picture. From left to right the picture shows. Messrs. Waterland, Akiyama, Leach, Sato, Kusaka and Ms. Takeda.

Legal Group on Dumping –
(continued from page 10)

necessary that the IAPH views be included in the record as an expression of port concerns. The IAPH views *were* appropriately noted in the final report of the meeting.

7. Only limited consensus was reached at the legal meeting. The delegations agreed only that the LDC was the proper forum to discuss the seabed disposal concept and that the technique should be studied further. Under these circumstances, the Nordic resolution remains as simply the expression of views by a limited number of delegations. However, the resolution will undoubtedly be presented for acceptance at the eighth consultative meeting. At that time, it will be essential for IAPH to renew the objections which it expressed at the legal meeting. IAPH was also able to gain valuable insight into the views of many delegations regarding seabed disposal which will be helpful in developing the IAPH position at LDC 8 in support of "capping" operations and the IAPH effort to obtain an exemption of dredged material from Annex I, or perhaps its reclassification to Annex II. In these endeavors, it will be essential for IAPH to emphasize the unique characteristics and natural mitigative properties of marine sediments and the "enhancement" of these properties by "capping" operations, in contrast to the *geologic isolation* relied upon in proposals for sub-seabed emplacement of containerized high-level radwastes.

Report on the Attendance of the IAPH Observer at the Meeting of the Ad Hoc Legal Group on Dumping

12-14 December 1983, London, England

By Mr. Herbert R. Haar, Jr.
Assistant Executive Port Director
Port of New Orleans
Chairman, Dredging Task Force
Committee on Port Safety, Environment and Construction

An IAPH delegation, consisting of the undersigned and Joseph E. LeBlanc, Jr., our legal consultant, attended the meeting of the Ad Hoc Legal Group on Dumping on 12-14 December 1983, in London, England. The meeting was a significant one, and I will summarize the results of the discussions (21 nations in attendance plus 9 observers from international organizations).

1. The principal purpose of the meeting was to consider whether new techniques for "seabed disposal" of wastes are included within the term "dumping," as used in Article III of the London Dumping Convention, and are subject to regulation under *existing* provisions of the Convention. The principal focus of the meeting was upon recent proposals for the sub-seabed disposal of high-level radioactive wastes. However, the original agenda for the meeting also included the "capping" of contaminated dredged material within the "seabed disposal" concept. Although the agenda was revised to delete specific consideration of "capping," in two "Notes by the Secretariat" circulated on 11 November 1983, "capping" was still identified as a possible discussion item because of its "analogy" to other proposals for sub-seabed disposal.
2. The meeting began with the election of Mr. A. Bos (Netherlands) as Chairman. Two representatives of the Secretariat, Mr. Y. Sasamura and Dr. Manfred Nauke, then reviewed the two "Notes" referred to above.
3. An extensive technical presentation was then made by representatives of the Organization for Economic Cooperation and Development/Nuclear Energy Agency (OECD/NEA) and also by the representative of the International Atomic Energy Agency (IAEA) regarding the present status of research into sub-seabed disposal techniques for high-level radwastes.
4. The technical presentation was followed by a general discussion of the legal implications of sub-seabed disposal of high-level radwastes under the Convention, particularly with respect to whether such disposal was "dumping" under Article III. Three general positions emerged which were reflected in three resolutions that were introduced. The Nordic countries insisted that seabed disposal of high-level radwaste *was* "dumping" under Article III and was *prohibited* under Annex I. France and the United Kingdom took the position that sub-seabed disposal was unknown when the Convention was drafted and was *not* covered by Article III. These countries were willing to study the issue further, with a view to future regulation under the Convention, but they were adamant that there was no coverage now. The United States attempted to strike a "middle ground" and achieve a consensus position in support of future study and regulation under the Convention without deciding the legal issue of coverage at this time.
5. The positions taken by various delegations reflected strong views upon the use of seabed disposal techniques. The Nordic resolution was of particular concern to IAPH. In many respects, it appeared to go beyond the present provisions of the Convention in suggesting that *all* seabed disposal techniques were prohibited under Annex I and that the exceptions provided in paragraphs 8 and 9 did not apply. This was expressed in broad statements regarding the Annex I "prohibition" and in statements that seabed disposal was "incompatible" with the goals and purposes of the Convention. The Nordic resolution also required an evaluation of the need for *amendments* to the Convention if seabed disposal should ever prove feasible. This was based upon the view that the exceptions provided in paragraphs 8 and 9 would not apply. The resolution also stated that it would apply to all other wastes specified in Annex I. This would extend the resolution and its prohibitions to the "capping" of contaminated dredged material, which has been so heavily supported by IAPH.

   IAPH intervened in response to the Nordic resolution and expressed its view that appropriate reference should be made to the exceptions provided in paragraphs 8 and 9 of Annex I in connection with any statements as to "prohibition" of seabed disposal and as to the need for amendments to the Convention to allow its use. IAPH also took issue with that part of the resolution that would extend its provisions beyond the seabed disposal of high-level radwastes to all other wastes specified in Annex I. IAPH reminded the meeting that, in adoption of the revised agenda, there was apparent agreement to limit the discussions to the sub-seabed disposal of high-leved radwastes. IAPH did not feel it was appropriate for the resolution to go beyond the radwaste situation and asked that this language be deleted.
6. The IAPH concerns appeared to be well received by the Nordic countries at the time. They agreed to delete the language referring to "other wastes" and indicated that they may be willing to make reference to paragraph 8 and 9 of Annex I in the resolution. They invited IAPH to submit additional langauge in this regard. This was done. Although IAPH was advised that the Nordic resolution would be revised to take into account these concerns, when the final report was prepared the Nordic countries announced that they wished to return to the original form of the resolution. They gave no explanation as to why. In this context, it became all the more

(Turn back to page 9)

Report of the Scientific Group on Dumping Matters Related to the Disposal at Sea of Dredged Material

Submitted by IAPH

1. Introduction

1.1 The International Association of Ports and Harbors ("IAPH") is pleased to attend the Eighth Consultative Meeting of Contracting Parties to the London Dumping Convention (the "Convention") as an observer to participate in the consideration of matters relating to the disposal at sea of dredged material. IAPH ports have a deep concern with the manner in which dredged material is regulated under the Convention. Although most dredged material is innocuous, special problems have confronted IAPH ports faced with the need to dispose dredged material contaminated with substances listed in Annex I. IAPH has directed its efforts toward examining how such dredged material should be treated under the Convention from the standpoint of its actual impacts upon the marine environment.

1.2 At the seventh meeting of the Scientific Group held in London, England on 24-28 October 1983, IAPH presented two technical papers pertaining to dredged material, one relating to the Scientific Group's consideration of additional criteria for the classification of substances to Annexes I and II, and the other presenting an "update" on the use of "special care" measures for the disposal of dredged material contaminated with Annex I substances. These papers will be discussed in the report of the Scientific Group. In this submission, IAPH invites Contracting Parties to take special note of the following findings and conclusions of these studies.

2. The Development of Classification Criteria

2.1 In connection with the Scientific Group's study of classification criteria, IAPH presented "A Special Report On Application of Classification Criteria to Dredged Material with Emphasis Upon Petroleum Hydrocarbons and with Additional Consideration of Lead in Dredged Material". The report was prepared by Dr. Willis E. Pequegnat – a renowned marine scientist who serves as consultant to IAPH – and was reviewed by four other noted scientists who have worked extensively with metals and petroleum hydrocarbons in dredged material. The paper reported upon the known characteristics of sediments that mitigate the environmental effects of Annex I or Annex II substances and make them far less harmful in dredged material than when disposed in pure chemical form as a liquid waste. Based upon a survey and analysis of scientific data and knowledge gained since the Convention was drafted in 1972, the paper condluded:

- There are extremely significant differences in potential environmental effects between the disposal in the ocean of dredged material containing Annex I substances versus the disposal of the same substances in a liquid waste without sediment.
- There are known physico-chemical characteristics of sediments that make the impacting effects of Annex I substances in dredged material significantly less than the effects of these substances in their pure chemical form which was the basis of their classification in Annex I.
- The "toxicity" of a substance in a complex mixture like dredged material should be linked with *availability* for regulatory purposes. Toxic materials that are immobilized in dredged material disposed in the marine environment even though present in the immediate environment are not available to the biota; hence they have been rendered *harmless.*
- In appropriate cases, the use of "special care" measures in the dumping of dredged material can and does *enhance* the natural mitigative properties of the sediments to further sequester Annex I substances from the marine biota.
- The effects, if any, of Annex I substances in dredged material are reduced to those of *trace contaminants* and are thus no greater than the effects produced by Annex II substances in dredged material, which are allowed to be dumped under a special permit.
- The scientific data support the position that lead and lead compounds should remain in Annex II. The sequentering of lead by sediment is further justification for the position that dredged material should be granted an exemption from the provisions of paragraphs 1, 2, 3, and 5 of Annex I, or should be governed by separate criteria under paragraphs 8 and 9 of Annex I that will more realistically take into account the actual effects produced in the marine environment.
- The actual environmental effects of petroleum hydrocarbons in dredged material disposed in the ocean are considered to be ecologically insignificant.

2.2 These findings represent dramatic advances in scientific knowledge concerning dredged material since the drafting of the Convention in 1972. In recent years it has become apparent that marine sediments – indeed most aquatic sediments – possess remarkable ability to sequester or partition from the biota trace metals, including those in Annex I, as well as a host of organic compounds, including chlorinated pesticides, polychlorinated biphenyls, and the most toxic polycyclic aromatic hydrocarbons. These remarkable physical characteristics set dredged material apart in regard to the significance of environmental impact from liquid chemical wastes containing the same toxicants simply because the latter have little or no sequestering properties. In appropriate cases, these mitigative features are *enhanced* by the "special care" technique of "clean material capping", which further inhibits the release of toxicants by maintaining an anoxic environment – and provides an additional "binding" medium. IAPH invites Contracting Parties to take note of these new findings regarding the natural mitigative properties of marine sediments.

2.3 At its recent seventh meeting, the Scientific Group also decided to ask the Eighth Consultative Meeting for additional guidance as to the goals and purposes of the Convention before proceeding further with the development of criteria for the classification of substances to Annexes I and II. The IAPH study of dredged material in the context of classification criteria should be of extreme importance in connection with the guidance requested by the Scientific Group. The Convention's goal of preventing "pollution" is stated principally in terms of harm to living organisms. The General Guidelines for the Classification of Substances to Annexes I and II (LDC IV/12/Annex 2) focus upon the effects of toxicity, bioaccumulation, and persistence in regard to such organisms. The Interim Guidelines for the Implementation of Paragraphs 8 and 9 of Annex I (LDC IV/12/Annex 5) likewise determine "harmlessness" and "trace contaminants" in terms of acute and chronic toxic effects and bioaccumulation in sensitive marine organisms. These "effects" are inherently related to the "availability" of Annex I substances in the marine environment. The IAPH study demonstrates that because the natural properties of marine sediments tightly "bind" Annex I substances and render them *unavailable* to the marine biota, these effects upon marine organisms will *not* be produced in the disposal of dredged material. In this most primary sense, the goals and purposes of the Convention are satisfied.

2.4 In view of the major advances in knowledge concerning dredged material, and taking note of the goals and purposes of the Convention, IAPH believes that dredged material containing substances listed in paragraphs 1, 2, 3 and 5 of Annex I should be removed from regulation under Annex I and should be subject to regulation under the "special permit" provisions of Annex II. IAPH is attaching to this submission, as Annex I, a document entitled "A Brief Treatise on Physico-Chemical Properties of Dredged Material and Environmental Protection" which summarizes the scientific basis for this change in treatment. The paper has been prepared for IAPH by Dr. Willis E. Pequegnat for presentation to this Eighth Meeting. IAPH invites Contracting Parties to take note of this recommendation, and to act to transfer control of the disposal into the ocean of dredged material containing substances listed in paragraphs 1, 2, 3, and 5 of Annex I to the "special permit" provisions of Annex II.

2.5 In this regard, and upon receiving proper authorization and funding from its sources, IAPH will offer to consult with and assist appropriate groups of the Convention in drafting regulations and technical guidelines for the control of the ocean disposal of dredged material contaminated with the referenced Annex I substances.

2.6 Reclassification of dredged material in this manner would bring its regulation into line with current scientific knowledge and understanding. It would properly recognize that dredged material should *not* be subject to the same degree of strict control as Annex I substances in their pure chemical form. This distinction is especially important at this time of intense debate over proposals for the disposal of high level radioactive waste or matter in the sub-seabed. The strict construction of Annex I contended for many delegations in that context is unnecessary and inappropriate for dredged material. Reclassification to Annex II would allow Contracting Parties to address Annex I issues without the need for continued concern over the impact upon dredged material, and with attention properly directed to the kind and form of substances that were original basis and reason for classification to Annex I.

3. The Update of Special Care Measures

3.1 At the seventh meeting of the Scientific Group, IAPH also presented "An Updating of Special Care Measures for Safe Disposal of Polluted Dredged Material in the Marine Environment". IAPH reviewed, in particular, the growing experience and effectiveness of one special care technique, "level bottom capping". IAPH demonstrated that this technique *enhances* the already strong inherent ability of marine sediments to bind and hold natural and anthropogenic toxicants so that neither the marine fauna nor man as a consumer is placed in further jeopardy by the disposing into the sea of dredged material. The Scientific Group took note of the IAPH presentation and concluded that an interim evaluation has shown that capping *is* technically and scientifically feasible and is a useful mitigative measure that shows promise as part of a long-term management strategy for the ocean disposal of contaminated dredged material.

3.2 IAPH invites Contracting Parties to recognize the demonstrated effectiveness of the "level bottom capping" technique.

4. Action by Contracting Parties

IAPH wishes to express its appreciation at the opportunity to express these views and its hope that the IAPH recommendations will receive appropriate consideration by Contracting Parties at the Eighth Consultative Meeting.

ANNEX I

A Brief Treatise on

Physicochemical Properties of Dredged Material
and Environmental Protection

By the International Association of Ports and Harbors

For the Consideration of Contracting Parties
of the London Dumping Convention

February 1984 Meeting IMO Headquarters

London, England

Submitted by:
Herbert R. Haar, Jr.
IAPH Observer

Prepared by:
Willis E. Pequegnat, Ph. D.
Consultant

INTRODUCTION

Environmental Importance of Physicochemical Properties of Dredged Material

In recent years it has become apparent that marine sediments, indeed most aquatic sediments, possess remarkable abilities to sequester or partition from the biota trace metals, including those in Annex I, as well as a host of organic compounds, including chlorinated pesticides, polychlorinated biphenyls, and the most toxic polycyclic aromatic hydrocarbons. These remarkable physicochemical characteristics set dredged material apart in regard to the significance of environmental impact from liquid chemical wastes containing the same toxicants simply because the latter have little or no sequestering properties. Furthermore, because of discoveries made in the past few years we are now in a position to recommend that not only is ocean disposal of dredged material a safe and viable alternative, it should in most cases be considered superior to upland disposal for the reception of contaminated material. These strong and unequivocal statements are not based upon opinions or biased points of view. Rather, they are documented by the results of the application of the findings of science to the solution of problems at hand, viz., where can we safely dispose dredged material contaminated with substances listed in paragraphs 1, 2, 3, and 5 of Annex I. It is important to note at the outset that we were not fully aware of these mitigative properties of fine-grained marine dredged materials at the time that the Convention was drafted in the early 1970s.

Thrust of the Report and the Role of Capping

Naturally, the thrust of the present document asserts that there are sound scientific explanations for the observed ability of dredged material when disposed in the ocean to sequester a wide variety of toxic substances, in essence rendering them unavailable and thus harmless to the marine biota. Accordingly, IAPH proposes to provide in this document brief discussions of these mitigative characteristics of marine sediments and dredged material. Moreover, IAPH has accumulated a great deal of scientific evidence that the "special care measure" of disposal known as capping serves to enhance the effectiveness of these natural mitigative properties of marine and other sediments.

Dredged Material Disposal Poses Serious Problems for Some Nations

It has become clear to IAPH during discussions with members of the Scientific Group on Dumping that not all LDC member nations are confronted with problems associated with the disposal of dredged material. Unfortunately, the USA and some other nations are not so fortunate. At this very moment several ports in the USA and elsewhere are constrained from needed dredging of harbor channels because of public pressures against the disposal of the dredged material in the marine environment even though alternatives are not readily available except at great expense. Unfortunately, in many instances, the objections to ocean disposal are based upon fallacious information or a lack of awareness of the great advances in dredged material technology that have been made in the last decade.

OBJECTIVES

Discussion of Physicochemical Factors

In the light of the above, we have set two principal objectives for this report, to wit: (1) to discuss briefly those advances in our physicochemical knowledge of dredged material that have been made since the drafting of the annexes of the Convention and that explain the sequestering properties of marine sediments, and (2) to demonstrate why it is that capping on level bottoms or in borrow pits serves to enhance or reinforce the inherent toxicant-sequestering properties of the clay particles found in almost all dredged material.

Exclusion of Dredged Material from Regulation under ANNEX I

Finally, after demonstrating that dredged material contaminated with substances laid out in paragraphs 1, 2, 3, and 5 of Annex I qualifies for application of the exemptions found in paragraphs 8 and 9 of Annex I, we shall at the conclusion of this document petition Contracting Parties to transfer regulation of dredged material containing the referenced contaminants under the special permit provisions of Annex II. But before delving further into the subject at hand, the fact must be emphasized that most dredged materials, especially those derived from capital dredging projects, are environmentally innocuous and exert only transitory physical effects when disposed in the ocean.

PHYSICOCHEMICAL PROPERTIES OF DREDGED MATERIAL

Relevant Properties of Marine Sediments

The major physicochemical properties of sediments that will control the interactions between dredged material and contaminants are (a) the amount and type of clay, (b) its pH (acid-base status), (c) redox (oxidizing-reducing condition), (d) the amount and type of cations and anions present (positive and negative ions, respectively), (e) its organic content (especially humic acid), and (f) to a lesser extent the salinity (salt content) of the sediment. Of these the ones that will generally determine whether or not contaminants will be released from dredged material during and after disposal are (1) its clay and organic content, (2) its pH, and (3) its redox condition.

As has been implied earlier, most dredged materials are uncontaminated and innocuous. Hence our primary concern is with those sediments dredged from wharves and channels during periodic maintenance projects that may be contaminated with Annex I substances of anthropogenic input. Fortunately, much of the dredged material removed during harbor and channel maintenance is high in clay (especially montmorillonite), humic acids and sulfide, and is often devoid of dissolved oxygen. As we shall see, these sediment conditions produce very effective immobilization of toxic metals, organochlorines, and petroleum hydrocarbons. Furthermore, subaequeous disposal of contaminated dredged material on the sea floor, particularly if it is capped with silts, favors contaminant immobilization. Let us examine the physicochemical reasons why this observation is true. In order to do this, we must explain the contribution of each of the physicochemical factors listed above. In passing, it will be useful to note and understand that upland disposal, especially in areas above the water table, favors the mobilization of contaminants, which may create severe environmental hazards that are ferquently the cause of deleterious effects on human health.

Discussion of Individual Properties

Clay Type and Content

The higher the clay content and the more finely divided the clay particles, the higher is the adsorptive (note the word is ADsorptive not ABsorptive) capacity of the dredged material for potentially toxic metals and organic chemicals. We say potentially toxic because so long as they are bound (adsorbed) to the clay they are not available (they are elctrostatically or otherwise immobilized) for intake by the biota. The exposed surface area of the particles is directly related to the fineness of the particles, and much of the bonding of contaminants to sediments is a surface reaction. The montmorillonite type clays have a high net negative charge and large amounts of internal adsorptive surfaces that make them very reactive with metal cations. This reaction capability is referred to as the cation exchange capacity of the clay, as is discussed in the next section.

Cation Exchange Capacity

This net negative charge of all clays accounts for much of the capacity of clay surfaces to adsorb or fix in an exchangeable form all positively charged ions (cations). Because most toxic metals occur in sediments as cations, this is an important property in removing these metals from solution. Essentially this is an electrostatic attraction between the positively charged metal cations and the fixed negative charges associated with the clays. Such cations can, however, be displaced by other cations, particularly when the second cation is present in excessive amounts. Also, cations can be removed from clays if the pH drops well below pH 7 (i.e., the medium becomes acid). In any event, dredged sediments usually have a high cation exchange capacity. Thus, they will remove and hold toxic cations from solution and thereby decrease their biological availability. Fortunately, some organic compounds display even a stronger cation adsorptive capacity than the clays, as is discussed in the next section.

Organic Matter

We now know that particular kinds of natural and nontoxic organic matter in dredged material account for one of the important factors sequestering toxic metals and organic compounds. Relatively undercomposed plant material is not very reactive, whereas humic acids, which are the residue of organic materials in sediment after they undergo decomposition, bind both metals and organic compounds into forms that are less readily exchanged than in the case of clays. Many ports and harbors of the USA are estuaries connected with rivers and marshes in which humus is formed. Hence port sediments have high contents of humic acids with a corresponding high capacity to remove toxic materials from a biologically active form.

This reactivity of humus with metal cations results from a net negative charge similar to that of clays, so that the positively charged cations are adsorbed in an exchangeable form at the site of the negative charge. But these bonds are more permanent because of the presence of complexing groups in the organic matter. These complexes are insoluble and not very biologically available.

Some bondings are affected by pH, as is discussed in the next section along with oxidation-reduction (redox) conditions.

Redox Potential and Acid-Base State

Neutral pH is 7.0 Anything below that is acidic (strongly so at pH 2.0), and anything above is basic (strongly so at pH 10 or above). The range of pH in surface waters is from 5.0 to 8.5, which are mildly acid and mildly alkaline. Typical surface waters contain some dissolved oxygen and range in redox potential from 300 to 600 millivolts (mv). Sediments on the sea floor on the other hand are reduced, having a range of redox from 100 to –400 mv, levels that are moderately to strongly reducing. The pH of such reduced sediments generally ranges from 6.5 to 7.5, which is clearly near neurtral. Both of these conditions of reducing potential and neutral pH favor the sequestration of toxicants by clays and humus. In addition, any marine sediment containing either sulfide or pyrite, which are reduced sulfur materials, will remain nonacid so long as it remains in a reducing state. This state is typical of dredged material placed in a mound on the sea floor. If, however, sulfide-containing sediments are placed on land exposed to oxygen, the sulfide is oxidized to sulfate with a consequent lowering of pH and immediate mobilization of metals and other toxicants. Moreover, metals bound as insoluble sulfides will be transformed to soluble forms. Fortunately in some case, they may then be immobilized by reactions with hydrous iron oxides, as is discussed in the next section.

Iron and Manganese Oxides

Another important chemical property of dredged material that will affect its behavior after being dredged and disposed is its content of reactive iron and manganese oxides. In most case, iron oxides react with toxic metal cations to remove them from soluble forms. Even though iron differs from toxic metals in that it is mobilized in reducing conditions, it is still effective as a trace metal adsorbent. Manganese responds and acts in essentially the same way as described for iron. The quantities of both metals available for adsorption of metals far exceed the quantities of soluble toxic metals in dredged material. Hence this is a very important second line of defence against mobilization of toxicants in dredged material on the sea floor.

TOXICANTS OF PRINCIPAL CONCERN

Potential Toxic Metals

It is at this point instructive to demonstrate how the factors that we have just discussed affect the availability of toxicants found in Annex I of LDC.

Cadmium

Cadmium is very definitely immobilized when present in dredged material on the sea floor. That is to say, pH and redox potential and sulfide strongly influence the availability of cadmium. It is immobilized by reducing conditions (–400 mv) and near-neutral or slightly alkaline pH (pH 7 to 8). It is also easily precipitated by formation of cadmium sulfide under reducing conditions. These are precisely the conditions that exists in a mound of dredged material on the sea floor. On the other hand, consider the fact that cadmium is mobilized by oxidizing conditions, acid pH, and being freed from sulfide in the presence of sulfate. These are the conditions that often develop when marine dredged material is deposited on land and undergoes dewatering and oxygenation.

Mercury

In the case of mercury one must consider both its inorganic form and its methylated organic species. Inorganic mercury exhibits the strongest affinity for clays among the

important toxic metals. Mercury is also very strongly bound by humus organics as well as by sulfide. Thus, at dredging sites where the sediments contain humic acids and sulfides very insignificant amounts will be released during disposal operations. Methylmercury is more readily accumulated by many organisms and is more toxic in lower concentrations than inorganic mercury. However, it appears that methylmercury formation is minimized in sediments containing sulfides and displaying reducing conditions. Again, we note that these are typical conditions found in mounds of dredged material from ports and harbors.

Lead

Although lead is in Annex II, we shall include it in this discussion because of the recent interest expressed by some delegations to the Convention in transfering it from Annex II to Annex I.

Lead tends to be very immobile and unavailable to organisms under most conditions that exist in marine sediments. Its mobility is strongly affected by pH and redox. Lead is immobilized in reduced sediments having neutral pH and sulfides. Naturally occurring organics also bind it very effectively. As might be expected then, lead becomes available if the pH lowers to acid conditions and the sediments are oxygenated. It is important to note, however, that hydrous ferric oxides (found with high redox) will effectively scavenge and bind dissolved lead. Thus, the release of lead from dredged material is moderated when changes in redox occur by virtue of its affinity for organics and sulfide under anaerobic conditions and its immobilization by ferric oxides under oxidized conditions. Nevertheless, in very strongly acid conditions the mobility of lead is increased substantially; hence the disposal of dredged material contaminated with lead and other metals by upland application should be discouraged. In summary, the disposal conditions that favor lead immobilization are near neutral pH and strongly reducing redox states.

Chlorinated Hydrocarbons

Chlorinated hydrocarbons of concern when they do occur in dredged material are polychlorinated biphenyls (PCBs) and various chlorinated pesticides, such as DDT, DDE, aldrin, chlorance, etc. Although manufacture and use of many of these compounds have been banned in the USA, they are still a matter of concern inasmuch as they are still produced and used in other countries, and some of them are still in storage or persist in the environment.

Fortunately most organochlorines tend to be chemically inert and not very soluble in seawater. Even of greater interest is the fact that the chlorinated hydrocarbons are strongly bound to particulates, especially the clays, in dredged material. As a result, the release into the water of harmful concentrations of dissolved forms from typical fine-textured dredged material simply does not pose a problem. Therefore, in quiescent waters, release of chlorinated hydrocarbons from contaminated sediments to the water column does not occur. Moreover, capping of such a mound of dredged material on the sea floor with clean silts ensures that the binding particulates will stay in place long enough for some of the degradable compounds to be detoxified.

Petroleum Hydrocarbons

There is no doubt that some petroleum hydrocarbons are toxic to marine animals. Recent studies show, however, that the toxicity of both crude and refined oils appears to be related primarily to concentrations of the mono-and diaromatic petroleum hydrocarbons. Many of the more complex aromatics tend to have very low solubilities in seawater; hence they are relatively innocuous. But the important consideration in this document is simply that the environmental threat posed by typical levels of petroleum hydrocarbons in sediments of ports and harbors is insignificant.

Ample documentation is now available in the scientific literature to permit the conclusion that petroleum hydrocarbons in marine sediments do not represent a long-term threat to the quality of surface waters. Here again we must emphasize the concept of availability to the biota. In this case, as in others discussed earlier, we are observing the nonavailability of toxicants when they are present in dredged material. This is because marine sediments and thus dredged material have a high affinity for petroleum components. In the case of the typical silt-clay dredged material derived from maintenance dredging projects, the petroleum hydrocarbons in usual concentrations will be tightly bound to the solid phase. It is important to note also that petroleum hydrocarbons in most ports and harbors will very likely have undergone some physicochemical degradation so that the more toxic aromatics will no longer be present.

SUMMARIZATION

We may now summarize in a succinct manner some of the essential points that we have put forward in the preceding paragraphs, as follows:

1. In the latter half of the decade since framing the LDC and Annexes I and II, we have learned not only that marine sediments in dredged material sequester toxicants but also we now understand the underlying physicochemical mechanisms involved.
2. As a result of the functioning of these mechanisms, there are very significant differences in environmental effects between the disposal in the ocean of dredged material containing Annex I substances versus the disposal of the same substances in a liquid waste without sediment.
3. The "toxicity" of a substance in a complex mixture such as dredged material should for regulatory purposes be linked with its availability to the biological components of the ecological system. Toxic materials that are immobilized or sequestered in dredged material disposed in the marine environment even though present are simply not available to the biota. In very practical terms, they have been *rapidly rendered harmless.* In fact, as a result of the binding of toxic metals or organic compounds or both on clay particles or on humic acid molecules, and given the usual pH and redox potential of dredged material on the sea floor, only *trace amounts* of the toxicants will be in equilibrium with pore waters.
4. For solid scientific reasons the use of such a "special care" measure as capping in the disposal of dredged material containing Annex I substances (paragraphs 1, 2, 3, and 5) ensures that the Annex I substances will be held in a harmless state.
5. Taking note of the above, it is concluded that the effects, if any, of Annex I substances in dredged material are reduced to those of trace contaminants and are thus no greater than the effects produced by Annex II substances in dredged material, which are allowed to be disposed in the ocean under a special permit.
6. All of the above characteristics should warrant a separate treatment of dredged material under the annexes.

(continued to next page bottom)

IMO Reports by Mr. A.J. Smith

IMO Marine Environment Protection Committee

The nineteenth session of the Marine Environment Protection Committee was held at IMO Headquarters from 5 to 9 December 1983 under the Chairmanship of Mr. Emil Jansen (Norway).

The session was attended by forty-one representatives from Member States and Twenty-two observers from specialized agencies, inter-governmental and non-governmental organizations, including IAPH.

MARPOL 73/78

On 2 October 1983 MARPOL 73/78 entered into force – a major event in the history of the Organization. MARPOL 73/78 has now been ratified by 25 States representing approximately 70% of the world's merchant tonnage. The number of acceptances, approvals or accessions concerning the Annexes to MARPOL 73/78 are as follows; twenty-five for Annexes I and II with a 67.52% tonnage; seventeen for Annexes III and V with 33.11% tonnage; and for Annex IV sixteen with a 28.56% tonnage respectively.

The importance of the Optional Annexes of MARPOL 73/78 in the prevention of marine pollution from ships was also stressed with the injunction that every effort be made to bring these Annexes into force.

It is interesting to note that the Optional Annexes had been ratified by the requisite number of States to bring then into force but were lacking the necessary percentage of the world's merchant tonnage.

MEPC noted that the 13th Assembly had emphasized the continuing significance of Resolution A.500(XII) and had requested MEPC, together with the Council and other Committees, to keep the agreed long-term work plan under review in the light of developments in the work of the Organization, bearing in mind the directives contained in Resolution A.500(XII).

Report of the Sub-Committee on Bulk Chemicals

In the MEPC's discussion of the report of the Sub-committee port interests would mainly have regard to:

(i) *Mandatory pre-wash scheme*
The scheme had originally been referred to by Sweden who had proposed the introduction of a mandatory pre-wash system in unloading ports. This was supported by the delegation of USA. The Netherlands delegation expressed the urgent need for solutions to this problem. There will be a detailed evaluation of the pre-wash scheme at the Sub-committee's thirteenth session.

(ii) *Carriage of mixtures of Annex I and Annex II*
It is recognized that there are problems that might arise when oily mixtures containing chemicals are discharged to Annex I shore reception facilities. The Norwegian and Netherlands delegations expressed the view that much work had still to be done on this issue and more information was needed on adequate treatment processes of such slops in shore reception facilities.

Members were asked to submit to the Sub-Committee on Bulk Chemicals any information available on the treatment and ultimate disposal of Annex I products containing Annex II components in shore reception facilities as there was an urgent need for some decisions.

(iii) *Difficulties encountered by ships in carrying out crude oil washing*
The Committee noted a statement made by the Swedish delegation that difficulties continue to be encountered by ships in certain ports of the world due to restrictions being placed upon crude oil washing operations even when internationally agreed standards developed by the Organization were being followed. An appeal was made for Members of the Committee to assist in resolving such problems when such restrictions were known to exist in their ports. IAPH members, in turn, should make a point of liaising with their respective Governments on this matter.

Guidelines for a Mandatory Reporting System under MARPOL 73/78

This was a complex subject.

Recognizing that Protocol I to MARPOL 73/78 is now in force and contains reporting requirements which may present implementation problems, particularly because of the obligations to report any spillages occurring anywhere in excess of the limits permitted by the Convention, there appeared to be three options:

1. to retain Protocol I as it is and develop guidelines to provide uniform interpretation; or
2. to amend Protocol I of MARPOL 73/78 to amalgamate the provisions of the Guidelines; or
3. to simplify Protocol I and to provide supplementary guidelines.

After detailed discussion by a Working Group the Committee agreed that future amendments of Protocol I should follow the outlines of Draft Guidelines for Reporting Incidents Involving Harmful Substances and that all references to harmful substances in packaged form be deleted from the proposed amendments.

(continued from page 15)

RECOMMENDATION TO CONTRACTING PARTIES

It is recommended that Contracting Parties, having taken note of the above considerations, act to transfer control of the disposal into the ocean of dredged material containing substances listed in paragraphs 1, 2, 3, and 5 of Annex I under the special permit provisions of Annex II.

OFFER OF ASSISTANCE FROM IAPH

Furthermore, should Contracting Parties favor such action in principle IAPH, upon receiving proper authorizations and funding from its sources, will offer to consult with appropriate groups of the Convention in drafting regulations and technical guidelines on the control of the ocean disposal of dredged material contaminated with the referenced Annex I substances.

Technical Assistance in the Field of Marine Pollution

The Committee noted with satisfaction the completed, ongoing and planned IMO projects for technical assistance in the field of marine environment protection and expressed its gratitude to the United Nations Development Programme and other funding agencies for their generous support of IMO's technical assistance programme.

Regional Anti-Pollution Arrangements

The representative of UNEP stated that his Organization warmly welcomed the initiative of the Committee to enable experts from developing countries to benefit from an exchange of information on the development and operation of regional anti-pollution arrangements. This coincided with UNEP's desire to promote the development of inter-regional co-operation in environmental assessment and management, which will be the subject of a series of inter-secretariat and inter-agency meetings to be convened by UNEP in 1984.

Anti-Pollution Manual on Spillages other than Oil

Progress was reported on a revised draft Section of the Anti-Pollution Manual on Spillages Other than Oil.

During a preliminary consideration of the revised draft Section several delegations brought forward comments. The Norwegian delegation emphasized the need to make the Manual a practical one. The various proposals were summarized as follows:

1. the Section on Spillages Other than Oil should cover spillages at sea from both chemical tankers and ships carrying packaged goods, with lesser emphasis given to spillages from land into coastal waters;
2. the target group to be addressed should be in particular those persons tasked with external response, rather than ships' crews who should be aware of the relevant response methods and should also have undergone training for such purposes; and
3. the duplication of available publications (e.g. ICS Tanker Safety Guide) should be avoided, but references should be made to such material.

It was requested that every effort should be made for the completion of the work during the twentieth session of the Committee.

Provision of Reception Facilities

In all probability, this matter has the most direct interest to ports of all the matters discussed.

An IMO/UNDP project is looking into the provision of adequate reception facilities in the Mediterranean Sea Area.

The Committee took note of the recommendations of the Meeting on Reception Facility Problems, organized by the Regional Organization for the Protection of the Marine Environment (ROPME) and held in Kuwait in October 1983 (MEPC 19/INF. 3). Details of these recommendations can be supplied on request.

The Committee also took note of information submitted by Norway concerning legal, administrative and technical arrangements relating to port facilities for the reception of oil residues. Charges for reception facilities for example were calculated so as to cover the costs incurred (including fixed costs) but that no profit from the operation of facilities was allowed.

MEPC then received reports on the availability of reception facilities from the seven Baltic Sea coastal States. The outcome had been published in booklet form in 1979. Additional information now being available, the question was raised as to whether this information should be published as a supplement to the IMO publication. The Netherlands delegation proposed to simplify the format for providing the information on shore reception facilities, with a view to improving its usefulness. A number of delegations expressed their support for the Netherlands proposal for a new questionnaire and a working group with IAPH present was asked to consider the type of publication which would be most effective. The proposal was to have an 'initial' phase to be followed by a more searching survey later. The initial questionnaire would be simple and straightforward and would be designed to cover

1. are facilities available for receipt of a) waste oil, b) sludge, c) ballast etc.
2. who should be contacted and where (Telex No.)
3. whether charges were involved
4. what period of advance notice for use of the facilities in the port is required etc.

Such data, although not explicit as to capacity and receiving rate, would enable information on facilities to be readily ascertained by shipping companies or their representatives.

The Committee agreed that any future information on reception facilities in ports should be submitted by both Contracting Parties and other Members of the Organization in the context of Article 11(1)(d) of MARPOL 73/78 according to which Contracting Parties are obligated to communicate such information to IMO.

MEPC also received reports of inadequate reception facilities from the ICS. Referring to the survey undertaken by ICS the observer from the IAPH pointed out that even allowing for ICS's own reservations on the data presented it seemed wrong that ports the world over should be categorized as having inadequate reception facilities on what must be construed as rather subjective comment by certain Ship's Masters. In this context, IAPH would have preferred that ICS had provided an opportunity for the ports listed, either in the context of the questionnaire or in another way, to comment on the allegations which had been made.

MEPC then agreed that States study the data, and that any comments from administrations or port authorities on specific entries be passed to the International Chamber of Shipping, 30-32 St. Mary Axe, London EC3A 8ET, for transmission to the owner of the ship from which the report originated.

ICS may issue a new questionnaire in 1984.

Certain problems appear to arise due to the lack of reception facilities in the Mediterranean area. Particular concern was expressed by the OCIMF observer with regard to tankers engaged on voyages within special areas, where, due to lack of dirty ballast reception facilities in oil loading ports, there was considerable confusion as to the proper course of action to be taken by tanker operators. The INTERTANKO observer was not, however, in agreement with OCIMF, pointing out that in recent years the industry had developed technical and chartering provisions to meet the requirements of MARPOL.

After a lengthy discussion the Committee agreed that, under the Convention, it was not legally possible to grant any waiver from the requirements of Regulation 10(2) of Annex I to MARPOL 73/78. The Committee, however, recognized the problems which might arise as a result of

reception facilities not being available or adequate and expressed concern.

Therefore, the Committee agreed:

1. to urge Governments of States which had not already become Parties to MARPOL 73/78 to do so at the earliest possible date;
2. to urge Parties to MARPOL 73/78 or OILPOL 54/69 to do their utmost to ensure the provision of adequate facilities for the disposal of oily residues from ships;
3. to urge Parties to MARPOL 73/78 to promote, in accordance with Article 17 of MARPOL 73/78 and Resolution 22 adopted by the 1973 Marine Pollution Conference, technical assistance with respect to reception facilities;
4. to reconfirm the principles underlying MEPC/Circ, 102 entitled "Courses of action for ensuring the availability of adequate reception facilities for oily wastes" and to urge governments and industry to adhere to these principles;
5. to update MEPC/Circ.102, taking into account the entry into force of MARPOL 73/78 and in the light of decisions taken by the Committee after the Circular was issued, and to request the Secretariat to issue the revised Circular.

Date of Next Session

The Committee confirmed its decision to hold its twentieth session from 3 to 7 September 1984.

My experiences from a 2-week attachment to the Port of Gothenburg to study issues on port planning

Transfer of technology from ports in developed countries to ports in developing countries

by Daphne Phinopoulos, Cyprus Ports Authority

(Report on Port Training by Recipient of IAPH Bursary Scheme)

The transfer of technology from developed to developing countries is one of the aims of the programmes encouraged by IAPH and indeed of a number of institutions. One of the ways of achieving this is through attachments, as was my case when I visited the Port of Gothenburg in August-September of this year for two weeks. Often one wonders about the usefulness of such programmes as they are of short duration and the extent to which the recipient port can benefit from experiences of other ports, bearing in mind the differences in port structures, traffic mix and in socioeconomic environment.

Looking casually at these parameters and comparing the two countries, Sweden and Cyprus, and their ports, it is very easy to spot all the dissimilarities.

The Port of Gothenburg has 20 km of quays where as Cyprus ports have 2 km of quays. The traffic through the Port of Gothenburg amounted to 22.7 million tonnes in 1982, out of which 15.5 million comprised mineral oil. Dry cargo was 85% containerized, while 30% of the traffic was ro-ro.

By comparison, traffic through Cyprus ports was 4.6 million tonnes, out of which 1.3 million consisted of mineral oil. Dry cargo was 35% containerized, while less than 3% of the traffic was ro-ro.

The dissimilarities in the ports do not stop here. The size of ships calling at the two ports and the areas of trading are different. Larger ships, usually belonging to well established companies operating liner services, conduct Sweden's trade, mostly in the North European and American regions. The situation at Cyprus ports is quite different: Ships are usually of a smaller size, a significant number of calls is made by ships not operating a liner service and the trade is usually with the U.K. and the Adriatic and Arabian countries.

The differences in port labour arrangements are even more striking. At the Port of Gothenburg there is only one Stevedoring company, whereas at the Cyprus ports, port labour is employed on a rotation basis from a pool of licensed workers by the shipping agents, acting as Master Stevedores.

One has to look closer for the similarities in the experiences of the two parties.

The Port of Gothenburg is a municipally owned and operated port with jurisdiction over all the activities in the port. This is contrary to the 'landlord" role of other public authorities. With the merging of the Stevedoring Company and the Port Authority into one municipally owned company, the new 'Authority' will have more control over port activities. This puts the Authority in a position to offer help in all aspects of port organization to Authorities like the Cyprus Ports Authority, a semi-government organization, that are entrusted with the efficient running of the ports.

- The Port of Gothenburg has to finance its own operations. This is the position in Cyprus as well, and is in accord with World Bank recommendations against cross subsidization.
- The labour arrangements now in Cyprus are similar to those that existed at the Port of Gothenburg two

decades ago. Thus we are hoping to draw from their experience so as to speed the process of change, while at the same time avoiding treacherous grounds.

– Problems that the Cyprus Ports Authority is facing now are problems that the Port of Gothenburg faced earlier and managed to solve successfully. Although the same solutions may not be readily available for the Cyprus ports, the techniques and methodology used in analysing the situation and arriving at recommended courses of action are applicable.
  Examples are:
  (1) the use of long-term planning, for earmarking land for port development and understanding the underlying factors affecting port development; and
  (2) the use of strategic planning – a methodology for planning for uncertainty.
– The factors affecting ports worldwide are the same. Ports are on the receiving end of technological changes promoted by transportation companies.

To maximize the benefit out of attachments of a short duration, organization is required both on the part of the recipient port and of the 'host' port.

The Port of Gothenburg, for its part, sent a preliminary programme together with information on the port activities. The C.P.A. indicated its special subjects of interest which were planning-methodology and techniques with the introduction of a shift-work system at ports as a special case. This enabled the Port of Gothenburg to prepare a "tailor-made programme".

The highest benefit of an attachment to a 'developed port' is the chance to talk to people

(i) who have been instrumental in bringing about changes; and
(ii) who are directly involved with the various aspects of the subject under study.

The Port of Gothenburg had devised a programme that gave me the chance to talk to these people both within the Port of Gothenburg Authority as well as outside i.e. Stevedoring Company, Shipping Companies and the University of Gothenburg.

It is of course important to have clear goals in mind. It would be folly to try and discuss all types of issues that arise out of port activities during such a short visit. It is advisable to limit the number of subjects to be covered and to cover them in detail. In doing this I was able to return to my country with suggestions as to how to go about solving some of the problems at our ports. Without a clear goal I might have returned with small bits and pieces of information on a variety of subjects, while being unable to proceed with any one of them.

In closing, I would like to thank the Port of Gothenburg and IAPH for making it possible for me to visit Gothenburg and observe the way the Authorities there go about solving their problems, and to see how they have managed to overcome so many of them.

I hope such programmes will continue, enhancing the relationships between ports. The Port of Gothenburg is an authority that can offer help in most aspects of port activities and is in a position to organize programmes that tap these experiences so as to help ports at an earlier stage of development to develop along a smoother path.

Programme of visits/discussions at the Port of Gothenburg

Monday 22

1. a.m. Mr. A. Olofsson, Research Secretary, Port of Gothenburg.
   Introduction. Discussion on the aims of the visit and on the programme
   General information about the Port of Gothenburg and Sweden.
2. 13.30'. Port tour by boat. Mr. L. Carling, Information Manager.
   Information of port traffic, activities and facilities of each part of the port.

Tuesday 23

a.m. Mr. A. Olofsson – Research Secretary.
How planning methods and techniques developed at the Port of Gothenburg.

a.m. Mr. B. Weide, Planning Manager, Port of Gothenburg.
How the need for long term planning arose; Use, value and problems.
Medium and long term planning.

13.00 Mr. G. Lindgren, Assistant Personnel Manager.
Organization, working hours, recruiting procedure, training programmes, health scheme etc.

Wednesday 24

Visit to the Gothenburg Stevedoring Company
Programme coordinator: Mr. Sven Sandström

09.15 Mr. Jan Wallander, manager, Skandia South. Mr. Roy Listermark, operations manager, Älvsborg East.
Facilities, traffic, method of working.
Discussing implementation of a double shift system.
The impact on manpower, administration etc.

13.00 Mr. Ake Olausson, manager, Inner Harbour.
Discussing demands and relations from/with customers – shipowners regarding a double shift system.

14.00 Mr. Nils Birgander, technical manager.
The impact of a change in working hours on machinery and organization of technical department.

15.30 Mr. Kjell Ödman, negotiating secretariate.
Historical survey of the changes in the system of work. Factors in the negotiations with trade unions.

Thursday 25

a.m. Mr. A. Olofsson, Research Secretary.
Planning methods, forecasts. Sources of data, techniques.
Examples of how to approach certain issues.

14.00 Mr. S. Zetterstedt.
IAPH and the ports.

15.00 Mr. A. Olofsson, Research Secretary.
Continued on planning.

Friday 26

9.30 Mr. J. Tursten.
Mrs. I. Hernsborger.
Port dues, charges, Pricing policy.
Statistics, method of collection, output.

p.m. Mr. A. Olofsson.
Review of progress in the programme and discussion of specific issues on planning.

Monday 29

Mr. A. Olofsson.
Planning methods – discussion of the elements of a case study with special reference to the possible introduction of Shift work at Cyprus Ports.

Tuesday 30

a.m. Mr. B. Weide.
Discussion on planning.

a.m. Mr. O. Euren, Marketing Manager.
Discussion on contacts with port users, especially shipping companies.

14.00 Mr. L. Nordström. Ass. Professor. University of Gothenburg.
Mr. B. Holmgren.

Information on transportation research. Discussion of actual project, near completion, on future port structures.

Wednesday 31

Visit to the Swedish Orient Line.

8.30 Introduction – Mr. Yngre Beroggren, Finance and Analysis.

9.00 Mr. Leif Wahlqvist, General Manager.
Shipping today, in future.
The situation in the Mediterranean.

9.15 Mr. Lars Lovén, Marketing Manager S.O.L.
Organization S.O.L. Fleet.

9.45 Mr. Bill Johnson.
Liner Service.

10.15 Mr. Ch. Steineck.
Cargo/Ships – planning.

11.00 Mr. Yngre Berggren.
Port and stevedoring operations in Limassol.
Despatch/production.
Costs.
Comparison with other ports.

15.00 Visit to Melship. AB – Shipbrokers, Liner Agents, Forwarding Agents.
Mr. Staffan Wennerby – Director.
Discussing standard of service offered at Cyprus Ports.

Thursday 1.9

a.m. Visit to Stevedoring company.
Mr. Tage Lindborg – Development and Planning Dept.
Mr. Sune Jacobsson – Marketing and Operation Manager.
Discussion on bonus system introduced lately, as an incentive for higher labour productivity.

p.m. Mr. A. Olofsson.
Discussion of queries arising from visits.

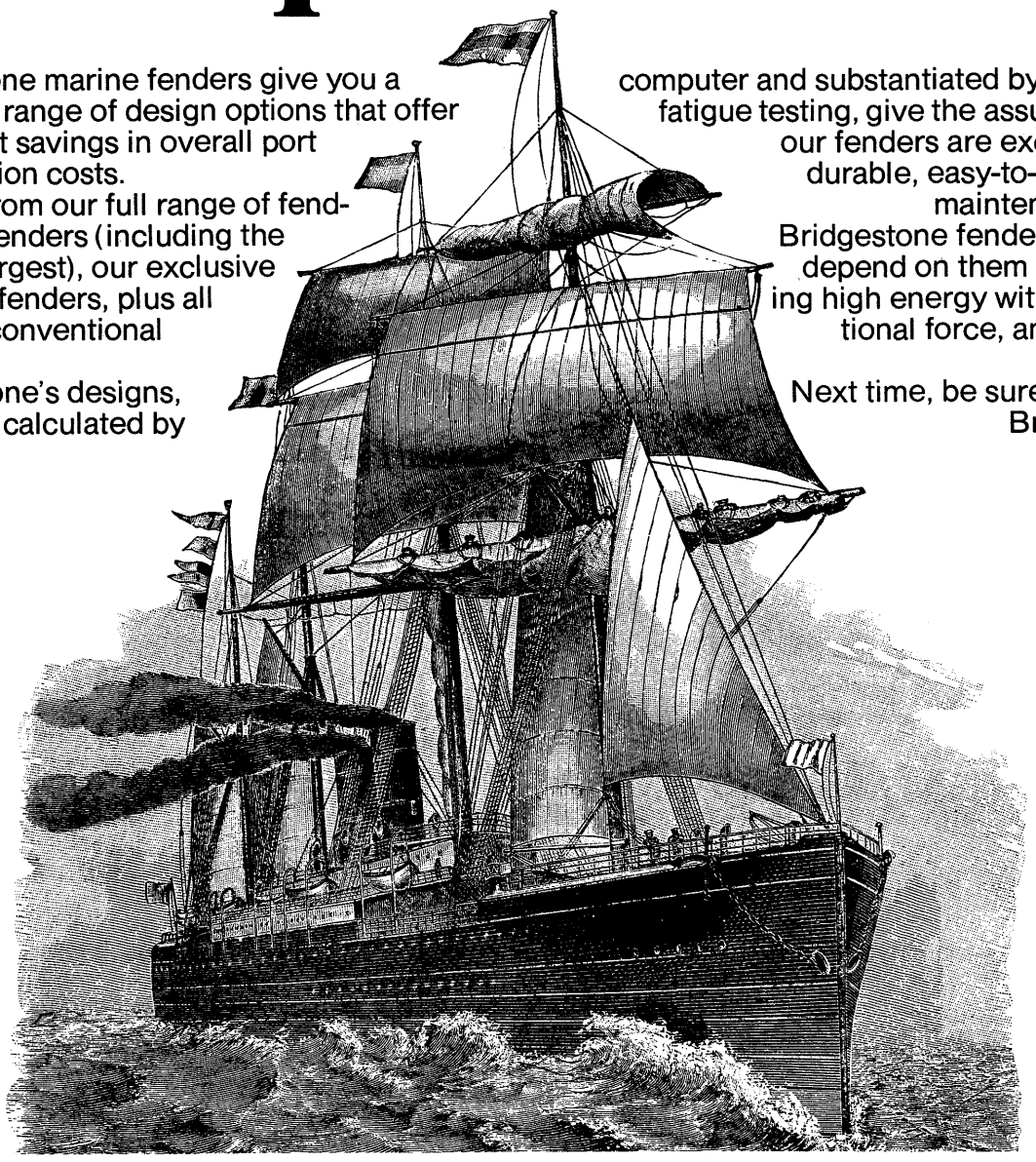
Friday 2.9

Mr. A. Olofsson.
Summing up of assignment and discussion on the reports to be submitted.

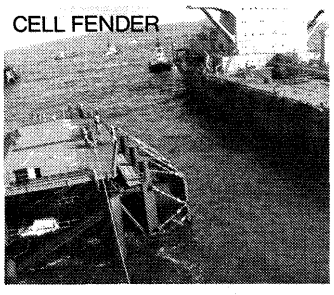
Mr. Bjurstrom, General Manager.
Discussion of the Situation in Cyprus and developments at Gothernburg.

Tender loving care for the ships of the world.

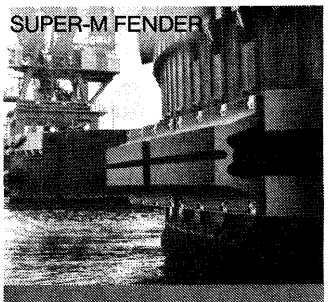
Bridgestone marine fenders give you a complete range of design options that offer significant savings in overall port construction costs.
Choose from our full range of fenders: cell fenders (including the world's largest), our exclusive Super-M fenders, plus all types of conventional fenders.
Bridgestone's designs, precisely calculated by computer and substantiated by relentless fatigue testing, give the assurance that our fenders are exceptionally durable, easy-to-install, and maintenance-free.
Bridgestone fenders. You can depend on them for absorbing high energy with low reactional force, and superior durability.
Next time, be sure to specify Bridgestone.

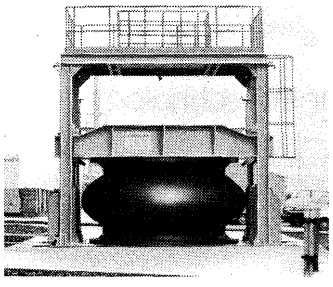


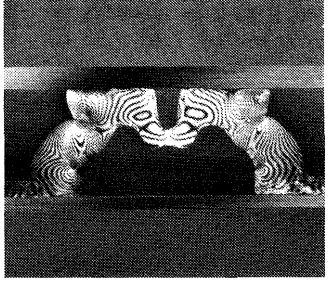
CELL FENDER



SUPER-M FENDER





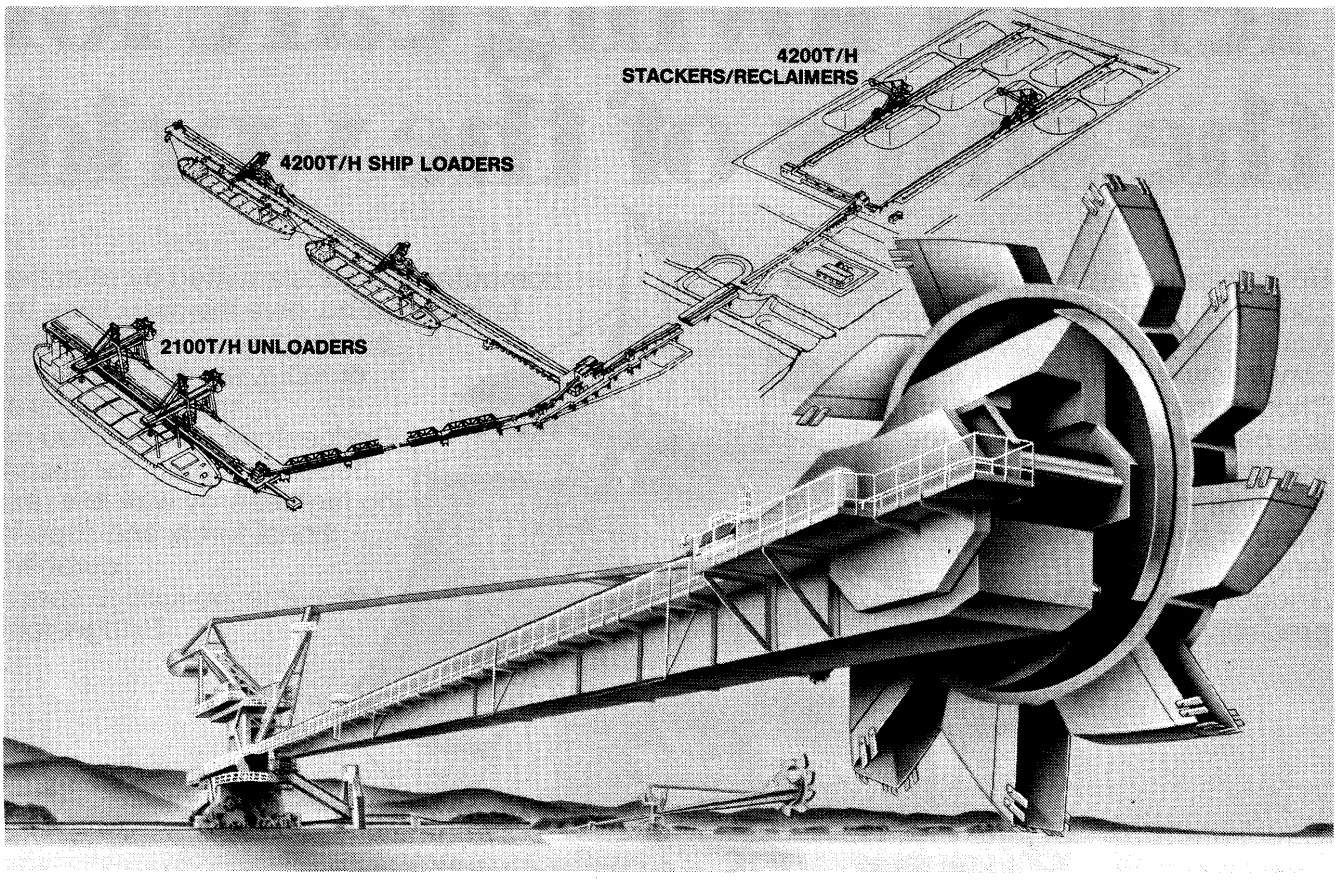


BRIDGESTONE MARINE PRODUCTS
Marine Fenders • Marine Hose • Oil Fences • Dredging Hose • Others.

For further information, please write or call:

HEAD OFFICE Bridgestone Tire Co., Ltd.	10-1, Kyobashi 1-chome, Chuo-ku, Tokyo, Japan Phone: 567-0111 Cable: "BSTIRE TOKYO" Telex: J22217, J23207, J23227 BSTIRE
EUROPE Bridgestone Tire Co., Ltd. London Office	4th Fl., West End House, 11 Hills Place, London W1R 20R, England. Phone: 01-734-2804 Telex: 885495 BSTIRE G
MIDDLE EAST Bridgestone Tire Co., Ltd. Bahrain Office	P.O. Box 45, Manama Bahrain c/o Yusuf Bin Ahmed Kanoo Phone: 230010 Telex: 8215 Kanoo BN.
SINGAPORE The Borneo Company Pte. Ltd.	Inchcape House 450/452, Alexandra Road, Singapore 5, Singapore Phone: 625388 Telex: BORNEO RS 21400
MALAYSIA The Borneo Company (1975) Sdn. Bhd.	P.O. Box 1080, Jln. Semangat, P. Jaya, Kuala Lumpur, Malaysia Phone: 773744 & 775722 Telex: BORNEO MA 30334
NORTH AMERICA Lord Kinematics Lord Corporation	1635 West 12th St., Erie. PA. 16512 U.S.A. Phone: 814-456-8511 Telex: 0914438 LORDCO ERI

BS BRIDGESTONE



Who would you call for a complete facility capable of transhipping 10 million tons of ore per year?

This steel-maker called on Hitachi. And for reasons that went beyond a competitive bid.

Hitachi is a world leader in "Total Technology" — a concept that benefitted this purchaser in several ways.

As a major manufacturer of bulk materials handling equipment, Hitachi was able to supply all the important hardware: two ship loaders, two unloaders, 3,000 meters of conveyer, and two "Hitaclaimer" combination stackers/reclaimers — a Hitachi innovation.

But Hitachi's involvement didn't stop, or start with the manufacture of this equipment. Their experts supplied needed advice at every stage, from feasibility studies to layout planning to construction and maintenance.

In addition to Hitachi's depth of experience in bulk materials handling, this steel-maker was aided by Hitachi's great width of expertise in many fields, especially that of microelectronics and computers.

For example, by integrating a computer into almost every operation in this facility, Hitachi engineers were able to improve inventory management, maximize operating efficiency, even program maintenance schedules!

The total story.

As impressive as this large-scale working model of mecha-tronics is, it's just one example of how Hitachi is working to advance existing technologies and at the same time pioneer new ones.

Hitachi tries to apply this same "Total Technology" thoroughness to every one of their 20,000-plus projects and products. And it seems to be successful. More and more people are calling on Hitachi.

HITACHI

A World Leader in Technology

Hitachi, Ltd., Heavy Industry Dept., International Sales Div. I, No. 6 Kanda-Surugadai 4-chome, Chiyoda-ku, Tokyo 101, Japan
Telephone: (03) 258-1111 Cable: HITACHY TOKYO Telex: J22395, J22432, J24491, J26375 (HITACHY)

Open forum:
Port releases:

Ours Is A People's Business

By Fernand Suykens
Deputy General Manager
Port of Antwerp

(The following is the paper presented by Mr. Fernand Suykens to the Annual Conference "Shipping and Port Operations Specialist Group", sponsored by Gray Mackenzie Overseas Ltd., 1 November 1983, Waldorf Hotel, Aldwych, London WC2)

When some time ago Mr. Hiltzheimer, President and Chief Executive Officer of Sea-Land, paid a visit to Antwerp and we had an opportunity to exchange ideas about the container revolution (this took place after a visit to a container terminal using every type of modern installation and equipment such as gantries, straddle carrier transtainers, chassis and containers but where there are almost no workmen to be seen) he declared: "Ours is a people's business."

In his judgment even the manager of a large container firm must in the first place have the mentality of a "trucker". In essence this boils down to the fact that boxes must be transported from one place to another as quickly and as cheaply as possible, which requires perfect control of the boxes. Whether they are transported by old or new, large or small vessels, by road, rail or barge, is of secondary importance. The overall activity has to be supervised and coordinated as well as sold, and for this you need salesmen and managers, in other words well trained people. Modern technological innovations, by which so many people are obsessed, together with the enormous capital which they require, have not altered this fact.

This fact is constantly being confirmed in our own ports. In spite of the gigantic investments required for a *modern container terminal* c. 50% of the running costs are accounted for by labour (23% manual labour, 18% techncians, 9% administration).

If containers have to be stripped or stuffed in the terminal, then this percentage quickly rises to 60% or more. It can thus easily be understood why more or less everywhere in the world attention is being paid to the training of the people who have such a leading role to play. It is not my intention to give a complete survey of everything that is going on throughout the world in this respect, but only to give a survey of what is being done in Antwerp. You will perhaps find in it a few facts which will inspire new ideas. However, I shall not go so far as to assert that in Antwerp everything is for the best in the best possible of worlds. On the contrary. It is a situation which has gradually evolved, largely on the basis of local conditions, traditions and mentality, which is an essential factor in all problems regarding training.

Take, for example, the *training of dock workers.* According to many studies, as far as cargo handling is concerned Antwerp by far and away achieves the highest productivity of all West European ports. This was illustrated in the *"Port Performance Comparison Study: General Cargo in Conventional Ships"*, published by the General Council of British Shipping, the British Port Association and the National Ports Council in 1978.

This study showed that productivity in ports – including British port – varies greatly but irrespective of whether it is calculated on the basis of deadweight tons per net man hour, or per net gang hour, or per hour at berth, Antwerp with regard to both incoming and outgoing traffic heads the list with a sometimes considerable lead over the other continental ports. Although such data have to be interpreted with the necessary caution, nevertheless another recent American study (Jan Owen Jansson and Dan Shneerson, *Port Economics,* M.I.T. Press, Cambridge, Mass. and London 1982, p.16) has confirmed that, expressed in tons per gang hour, Antwerp's break bulk handling capacity (18 ~ 25 tons) is some 50% greater than, for example, that of New York (12 ~ 18 tons), or that of Long Beach or San Francisco (10 ~ 15 tons). The picture has also been confirmed with regard to *container traffic.* A representative of the Scandinavian *Maersk Line* recently (1983) stated that in Antwerp, calculated on the basis of all calls over one year, an average 31 containers are loaded/unloaded per hour as oppose to 21 in Rotterdam. Only the port of Kobe in Japan surpassed Antwerp (with on average 32 moves per hour per gantry).

In the light of these variations in productivity it seems at first sight quite logical to think first of the influence of the dock work factor.

Although this reaction would be understandable, it must nevertheless not be forgotten that the technical equipment of a port, i.e. the material with which the docker works, is also of great importance. It possible to achieve greater efficiency with rapid heavy-duty cranes and with numerous powerful fork-lift trucks than with obsolete equipment. However, investments in equipment increase the cost price so that an optimal balance between higher productivity and the introduction of new material has always to remain a prime objective.

Moreover, many cargo-handling firms and some ports have in the light of the growth of container traffic concentrated their investments in this new sector and restricted those in their break-bulk sectors, with the result that the latter are affected by obsolescence, which has led to a decline in cargo-handling productivity with regard to traditional types of port traffic.

However, the container is no panacea and considerable quantities of general cargo in the form of unit loads, palettized goods or uniform cargo systems (bagged cargo, cars and trucks, fruit etc.), which are nowadays called neo-bulk cargo, are still being shipped.

The *lay-out* of a terminal also plays a great role. Seagoing vessel are steadily increasing in size and more and

more space is require beside the quays in order to collect the cargo together for loading or to store it temporarily while unloading. Old "finger piers", or narrow general cargo quays, make it difficult to handle large quantities of present-day general cargo in a rational way.

But no matter how important all of this is, the *dock worker* remain a significant factor as it is he who has to operate all the technical equipment and work at such quays.

A considerable number of studies devoted to this subject have been published over a great many years.

For *Great Britain* there is the Devlin Report of 1965, or the early studies of Brysson Cunningham: Cargo Handling at Ports, Port Administration and Operation, Port Studies (1928) and of Stephen Hill: The Dockers. Class and Tradition in London (1976), etc.

For *Antwerp* there is K. Van Isacker's book: Meesters en huurlinge 1962 (Masters and Hirelings), De Antwerpse do kwerker, 1966 (The Antwerp Dock Worker), Afscheid van de havenarbeider, 1967 (Farewell to the Docker), or that by H.J. Helle: Zur Soziologie der Antwerpe ner Hafenarbeit, 1963 (On the Sociology of Work in the Port of Antwerp).

For *Rotterdam* there is the well-known study by Dr. P.S.A. Ten Hoeven, Havenarbeiders van Amsterdam en Rotterdam. Sociologische Analyse van een arbeidsmarkt, 1963 (Dockers in Amsterdam and Rotterdam. Sociological Analysis of a Labour Market).

For *Germany* there is the study by M. Abendroth et al.: Vom Stauhaken zum Container (From Cargo Hook to Container) as well as H.J. Helle: Die unstetig beschäftigen Hafenarbeiter in den Nordwesteuropaische Häfen, 1962 (The Casual Employed Dockers in North West European Ports).

There is an (incomplete) study at *E.E.C.* level by H. Grellet, Aperçu des phases de travail, de repos et de salaires dans les ports de la Communauté Européenne, 1980 (Survey of Work and Rest Periods and Salaries in the Ports of the European Community).

In the *USA* Budd Schulberg's film "On the Waterfront" even won many prizes.

Typical for the developing countries is M. Van den Bogaert's Trade Unionism in Indian Ports (1970).

In these works stress is repeatedly laid on the sociological aspect of work in a port. Brysson Cunningham once said that in many ports workers who are unfit for other trades flow down to the docks just like effluent does to ever lower levels.

It is undoubtedly true that in some ports dock work is a temporary phase for those who have been forced out of agriculture and who only remain dock workers until they can find socially and financially better rewarded employment in industry. From this point of view it is easy to understand the motive for the establishment (e.g. in *Rotterdam*) of a port professional school which can enhance the prestige of the profession – the docker then becomes a skilled worker. The inauguration of an impressive port professional school in Hamburg in 1983, i.e. at a time when the problem of redundancy among port workers is becoming acute in all ports, must be viewed in approximately the same light: a port worker ticket (Hafenarbeiterbrief) makes the docker a skilled worker who enjoys more rights and advantages in the case of unemployment.

There has been less of a need for a *training centre for dock workers* in Antwerp where port wages have for over a generation been superior to those paid for comparable work elsewhere and where priority is given to sons of dockers in the recruitment of labour. When a centre was finally established it had a dual purpose:

a) to increase safety
b) to train specialists such as fork-lift drivers, crane drivers etc.

It is a matter of urgency to increase safety in ports. With a work force of roughly 10,000 dockers there are each year on average 7 fatal accidents and about 3,000 other accidents at work which result in at least one day off work.

This latter figure is perhaps a little high because one or two days sick leave are fairly generously granted, but the average period of incapacity for work as the result of an accident amounts to no less than 24 days. As a result dock work is in Belgium after coalmining but together with the building and iron and steel industries the most dangerous sector, much more dangerous, for instance, than the chemical industry or nuclear energy.

The principal causes of accidents at work are traffic accidents and collisions (c. 1,000), people falling (c. 500), objects falling (c. 450) and being crushed between a moving and a stationary object (c. 460).

There are in fact few accidents caused by failures or faults in equipment being used. The cause is almost always human error. The solution is to try to alter the dockers' mentality and this is now being done by providing a three week long course for aspiring docks where they learn not merely how to work but above all how to work in safety. This is followed up by the publication of small pocketbooks entitled "Safety at Work", which deal with specific topics such as dangerous substances, port vehicles, storage material etc. From this point of view a training centre for port workers still meets a requirement even at a time when the *number of dock workers is falling rapidly.*

Indeed, at the present time the number of port workers is declining very rapidly in all ports throughout the world. If I am reliably informed, the number in Great Britain has decreased from 70,000 to 20,000 in 15 years and various larger ports want to make still more dockers redundant.

In Antwerp the number of dockers has fallen from 14,000 in 1962 to 9,203 now (1982) in spite of an increase in cargo traffic over the same period from 41 million tons (1962) to 84 million tons (1982). General cargo traffic grew over the same period from 15 million tons in 1962 to 25 million tons in 1972 and then 30 million tons in 1982.

This illustrates amongst other things the enormous growth in productivity, although not only as the result of containerization. This does not mean that we have no problems in Antwerp. However, these are mostly in the sector of municipal personnel who are permanently appointed. It is well known in many ports that decasualization which leads to lifetime employment can sometimes also lead to a casual attitude towards work. However, it is difficult to change this by any form of training.

It has been said that the strength of an army is determined to great extent by the quality of its non-commissioned officers. This is why in Antwerp, where perhaps less stress has been placed on the training of dockers, attention has been increasingly focused on the *Professional Institute for Port Employees*, which was set up immediately after the Second World War in order to fill

the gap left by the war years. The institute still exists and has an average of 300 to 350 enrolments per annum. All courses are given after office hours. The students first follow a general two year course on shipping and forwarding which provides general basic training. The course includes national and international transport, freight forwarding, maritime transport, insurance, book-keeping, languages etc. After this there is a choice between five specializations: chartering, air transport, road transport, rail transport and Rhine and inland navigation transport. Each student chooses his own subjects. The timetable is so drawn up that it is possible to follow several specialization courses at the same time. However, specialization courses can also be spread over several years of study. There are also a number of optional courses available such as customs and excise, English and French, which can be attended separately from the basic programme.

After completion of this technical professional training it is possible to attend a three year advanced course which is intended to enable students to undertake many different tasks at a responsible level. The diploma of this advanced course is awarded after the submission and defence of a dissertation.

A characteristic of the teaching staff is that it is largely composed of specialists of port firms who place their experience at the disposal of their younger colleagues or customers. This ensures that the instruction meets the requirements posed by business. At the same time this creates personal links which in later professional careers enables many problems to be solved directly. If an official of the customs or the port authority has taught you, you not only obtain an insight into the interpretation of many laws and regulations but links are also created which enable you to contact directly those responsible if any difficulty should arise.

Many kinds of *evening classes* are organized in Belgium both by public and private educational institutions, and even by trade unions, which provide many possibilities for further education and can even lead to university degrees.

The Professional Institute for Port Employees is, however, completely financed by the professional associations in the port, who supply a large number of specialist teachers, and the Institute's specific aim is to form middle-management executives. It was and remains a success.

Naturally there are also day-schools and institutes in Antwerp which train people for employment in the port sector. Thus one educational institution (St. Lodewijk's) organizes graduate courses (i.e. a two year course following secondary education) which are specifically aimed at the sectors of freight forwarding and shipping, while other schools (e.g. St. Eligius' and the Municipal Institute for Higher Economic Education) specialize in courses in foreign trade or book-keeping and data-processing, in which aspects characteristic of the port and freight forwarding firms are dealt with.

University education is a separate chapter. For over one hundred years there were two Commercial High Schools in Antwerp which awarded degrees in Commercial and Maritime Sciences. Today these Commercial High Schools have become University Faculties of Applied Economics (the State University Centre of Antwerp and the University Faculties of St. Ignatius, Antwerp), both constituent parts of the University of Antwerp. After three years of general economics there is a fourth year of specialization. Here the options include "Transport Economics" with courses on general transport economics, land transport, air transport, maritime transport, port economics and freight forwarding, transport law, maritime law etc. This option "Transport Economics" is in fact a continuation of the former maritime sections of the Commercial High Schools but its scope has been broadened since the labour market for graduates with a licence in applied economics (roughly the equivalent of a British or American Master's degree in applied economics) is somewhat restricted in the port sector in the strict meaning of the term, and in addition it is also useful for anyone who will later occupy a leading position in the port to have a clear picture of the entire transport sector. Since a short time ago it has also been possible for those at work to pursue such university studies at the "open university" and obtain a candidate's degree (more or less the equivalent of a bachelor's degree) and a licence (roughly a master's degree) by studying in the evenings.

Finally we must mention the special diploma in *maritime and inland navigation law* awarded after a one year course by the University Faculties of St. Ignatius. (Students are mostly young lawyers who wish to specialize or maritime officers with a master's certificate who are looking for a job on shore). The courses include transport law, maritime law, maritime insurance, inland navigation law, international law of the sea, freight forwarding, maritime transport, ship technology and port economics.

Nowadays it is no longer enough to train people with a view to meeting the requirements of one's own port or country. There are more and more requests from *developing countries* to organize short-term training courses or to train specialists. For this purpose the non-profit-making organization APEC (Antwerp Port Engineering and Consulting) was set up. The organizers include the municipal port management, the university faculties, the Higher School of Navigation and the various professional associations in the port (cargo handlers, shipowners, shipping agents, freight forwarders, Chamber of Commerce and Industry etc.)

Each year a whole series of courses and traineeships are organized. Thus there are *short-term courses* lasting 15 weeks which are given alternately in English (spring) and French (autumn) (it is typical for Antwerp that virtually all the courses can be taught in both French and English). These courses are intended especially for the middle management of large ports or the top management of small ports in the developing countries.

The programme has been greatly influenced by the Port Management Seminars which are regularly organized by UNCTAD in various African, Asiatic and South American countries. In-depth visits are arranged to every type of port installation, not only in Antwerp but also in neighbouring ports.

While the aim of these courses is to pass on Antwerp's port knowhow to the developing countries, we are perfectly well aware of the limitations imposed by a period of 15 weeks. The primary aim is to make the participants aware of the various problems and possible solutions. A visit to another port is always of interest to a port manager. A stay of 15 weeks for a period of study can give a better picture but is insufficient to train all-round port administrators.

The courses taught cover more or less the entire spectrum of the activities of the port authority such as transport and shipping economics, port planning, berth throughput, port productivity and port performance indicators, modern

cargo handling techniques, port administration and operation, port finance and statistics, port labour organization, public and industrial relations etc.

In addition to this general 15-week course taught in English and French, which is aimed at a restricted number of students (15 to 20) from as many different countries as possible, a similar course has been arranged for trainees from *Chinese ports.*

This is not because these ports have to face particular problems specific to them, but because the Chinese students speak extremely fluent Chinese but have a little more difficulty with their English.

Finally, with the cooperation of APEC and UNIDO a specialist seminar is organized on ship-repairing and with the cooperation of APEC and UNCTAD another on *container terminal management.* Every other year the seminar is taught in English or in French. This year it is English.

This seminar is designed to assist senior officials of Government agencies, port authorities and private companies with present or future responsibilities for planning, managing or operating container terminals in running these specialized facilities efficiently.

The participants are expected at the end of the seminar to be capable of passing on the knowledge acquired to their colleagues and subordinates, and hence to contribute to improving terminal operations. Ultimately, the aim of the seminar is to allow the participating countries to obtain the maximum economic and social benefits from these highly capital-intensive facilities.

These objectives are embodied in the seminar programme, which includes lectures, panel discussions and case studies devoted to the following subjects: container terminal layout for different types of operations, administration of container terminals, organization of labour, planning of container operations, container terminal information, operational problems in container terminals related to security, terminal liability and equipment maintenance and container terminal traffic.

An outstanding feature of the seminar is the two weeks of practical training which follow the classroom segment of the seminar and allow participants to be actually involved in the operations of four major container/Ro-Ro/multipurpose terminals in the Port of Antwerp.

Participants have come from the following countries: Argentina, Bahrain, China, Cyprus, Egypt, Honduras, India, Iran, Jamaica, Kenya, Libya, Malaysia, Malta, Oman, Panama, Republic of Korea, Saudi Arabia, Sierra Leone, Singapore, Sri Lanka, Sudan, Tanzania, Thailand, Turkey.

Personally I like this seminar very much as here theory and practice go hand in hand and attention is concentrated on one particular – and in this case very forward-looking – subject.

It is my hope that one day we shall be able to start a similar seminar devoted to port equipment maintenance. Here too theory and practice will go hand in hand. Here too it is a question of a subject which is of essential importance for all developing countries.

Finally, for students who have already obtained a university degree in their own countries a year long programme has been arranged – in alternate years in English or French – which leads to the degree of *Master in Port Administration.*

(Continued on next page bottom)

Emerging Trends in Technology— Industrial Relations in Major Ports

By Y. Pardhasaradhi
Deputy Chairman
Paradip Port Trust
India

(Reprinted from INDIAN PORTS Vol. XVI No. 1)

An attempt has been made in this paper to identify the areas which require immediate attention for achieving more satisfactory Industrial Relations in the context of Technological changes taking place in Cargo Handling Operations in Major Ports. The views expressed herein are purely my own and not that of Paradip Port Trust authorities nor the Government of India. I could not present a more comprehensive and detailed paper supported with specific illustrations or statistics for want of time and opportunity. The views expressed herein are only projections on a general basis regarding certain aspects of human resources management which have not been given due emphasis both by management and Unions during the last decade of development of Ports. My endeavour here is to kindle a thought on the "EMERGING TRENDS".

Port transport industry being labour intensive, the problems connected with man-management and maintaining peaceful industrial relations are complex and intricate. The multiplicity of the employers, the hazardous nature of work and traffic fluctuations create special type of problems requiring a dynamic approach to tackle them. The chequered past, surplus man-power and certain restrictive practices make man-management problems more acute in the Port industry. Technological Changes in Cargo Handling Operations have become imperative for the survival of the Port industry. The technological changes in the Port as anywhere else necessarily lead to significant and often far-reaching changes in the design and structure of the organization in general and human resources development and management in particular.

Many efforts have been made in the past to meet the changing situations through legislation and otherwise. Constant attempts are also being made to change the character of Port administration from a static and rigid type to that of a dynamic and professionally oriented service organization. In the Indian context, because of the important role the major ports play in the national economy, they have to serve not only the commercial and economic interest but also social and public interest. The unions in the Port industry and their leadership have been responsible to a large extent to the dynamic changes taking place in the Port industry and their contribution has been quite significant. Because of the persuasion by the Unions and their Federations, many committees have been constituted by the Government in order to review and rationalize the pay structure and service conditions connected with the Port and Dock workers to suit the growth and changing trends in the Port industry. Special mention may be made of Chaudhuri Committee, Classification and Categorization Committee, Central Wage Board for Port & Dock Workers (which evolved a wage structure of Port Employees de-linking with the pattern of pay scales of Central Government Employees) and Wage Revision Committee for Port and Dock Workers. Besides, Committees were also appointed to go into the scales of Marine and Non-Marine Port Officers. There were also settlements by the Federations at Government and Ports' level to define and re-define certain aspects of wage structure, rectification of anomalies, introduction and revision of incentive schemes etc. Probably, there will be a dialogue between the Federations, Ports and Government shortly, regarding the future Wage Revision.

While the above measures have been of great importance and contributed in a significant manner to certain amount of stabilization of the pay structure and working condition of the Port and Dock workers, there is still a wide area which has to be covered to keep pace with the speedy technological changes that are taking place in Cargo Handling Operations – in the area of bulk loading and unloading operations, containerization of break bulk cargo, use of sophisticated handling equipment and craft. It is time to grapple with certain of the fundamental problems still existing in order to achieve greater productivity and to stand the competition in the international field than to have a limited exercise for wage adjustments to compensate and neutralize increasing cost of living. Unless this is attempted, satisfactory industrial relations which can yield higher productivity and higher standard of living for the workers cannot be achieved. I beg for your indulgence to focus attention on the following areas which, to my mind, are of paramount importance.

1. After the Jee Jee Bhoy Committee and a few settlements thereafter between the Federations and the Ports, there was no serious effort made for the classification and categorization of various posts in the Port

(Continued from page 26)

The programme is divided into four major sections:

a) economics
b) management theory and techniques
c) transport economics
d) port management and operation

A one year programme allows many subjects to be studied in depth and the fact that the course leads to a university degree obliges the professors to examine in more detail the theories which lie at the basis of every aspect of port operations.

In this way there is a whole range of training courses available to colleagues from overseas. We are well aware that this only satisfies a small proportion of the demand for knowledge which exists in this specialist area. We trust and expect the students who have enjoyed the privilege of studying in Western Europe to pass on their knowledge at the local level. To a great extent knowledge is best imparted by fellow-countrymen to fellow-countrymen since they know both language and mentality best. The final aim must surely be for all people to help each other as "this world is increasingly becoming a large village where we must all act in solidarity one with another".

and Dock industry. The subsequent committees had shown disinclination to go into this important aspect. The Port administrations on their part have also not made any significant effort to make a detailed study nor the Federations have given sufficient thought to this important aspect. In the context of technological changes and emerging trends, the present classification and categorization of posts in the Ports have become out-moded and have become a disincentive both for productivity and job satisfaction. The present classifications do not provide for sufficient mobility and career opportunity for the Port and Dock workers. Sufficient flexibility is also not available. Normally, after a period of every 10 years an exercise in this direction would be helpful to achieve greater productivity and career satisfaction. In many industries over the World, the concept of "Task Group" to do a particular job and providing mobility within the group is gaining momentum. Therefore, it is imperative to have a fresh look at the existing classification and categorization of posts in the Ports and Docks.

2. Another area requiring immediate attention is manning scales. The changeover of Port industry from labour intensive organization to a technologically advanced organization requires a thorough look into the existing pattern in order to evolve a scientific and job-oriented manning scale to suit the developing trends and to take advantage of full utilization of both machine and man-power. In this area, all along, there has been a hesitation to plunge into action and face the facts. There may be problems connected with redundancy of labour. But problems have to be faced and remedies are to be found by re-training the workers.
3. Datum and Incentives:
   There has been a periodical revision in the incentive schemes matched with the Wage Revisions taking place from time to time. But seldom an effort was made to examine the Datum on a scientific basis to match the work requirement and productivity goals. The full utilization and benefit from a new technology in cargo handling operation cannot be derived unless it is accompanied by a scientific approach to the manning scales and datum of work.
4. Professional approach:
   The Port administrations, particularly, Industrial Relation Wings of the Ports have to bring in a fresh approach to solve human resources problems on professional lines. The bargaining processes should be evolved both at the local and national level. There should be a clear demarcation as to what constitutes a local problem and what is to be settled at the local level between the Unions and management of the individual Ports. Every settlement at the local level and national level should be more comprehensive so as to include not only the benefits to the workers but also what the management should expect from the workers.
   The Port administrations have to be re-vamped by developing professionally oriented Port cadres on an All India basis which would help to develop a greater dynamism in the administration of Ports.
5. Multiplicity of Cargo Handling Agencies:
   The Commission on Major Ports, 1970 observed that "the principal difficulties arising out of the present set up for employing labour are (i) the problem of co-ordination and (ii) proper utilization of labour force. Because of the conflicting interests of the various employing agencies and their respective labour groups, the multilateral pulls make co-ordination difficult.

** **

The cumulative effect of the deficiencies in the present system cannot be overcome except by consolidating the employing agencies and their labour groups." (Para 16.65).

The Chatterjee Committee observed that "if the problem is approached with the aim of ultimately achieving completely integrated cargo operation, we think the time has already come to make a positive beginning." (Para 18.7).

The Wage Revision Committee has stated that "we have, in the preceding paragraphs indicated by way of illustration, how our recommendation would facilitate inter-changeability on the introduction of a unified cargo-handling agency." (Para 11.21)

The emerging trends and technological changes of the cargo handling operations could achieve greater benefits if a serious attempt is made to develop an Unified Cargo Handling Agency in place of functioning by multiple Agencies. When once we are convinced of the necessity of a single Agency for cargo handling for better co-ordination and efficiency, it is undesirable to procrastinate as it would make the matters more complicated by passage of time.

Quality of working life:

The quality of work life in the form of availability and security of employment, adequate income, safe and pleasant working conditions, reasonable hours of work, equitable treatment and speedy redressal of grievances will go a long way in involving and motivating the workers to contribute their best for higher productivity. The Port work with its characteristics such as casual employment, disparity in working conditions, irregular earnings, multiplicity of cargo handling agencies and the hazardous nature of work requires special attention both from the management and the Unions to achieve a more satisfactory quality of work life. It appears that Work Organization is getting modernized though the worker is retaining traditional characteristics which make the workers adjustment to modernization more difficult. It is hoped that by focusing the attention on this aspect, both the Management and the Union would gain. In this area the Union and the Management at the local organizational level should be able to play an important part.

Training:

The importance of training of Port and Dock employees need not be overemphasized. For a smooth changeover to new technology and operational systems, a well planned and continuous training effort is essential. Each Port should create a Department to attend to the various training needs of its workers. It will be advantageous to have regional centres to cater higher training needs of a group of Ports to avoid duplication of effort and expenditure. It is heartening to note that the importance of these training aspects have been recognized at Government level and a serious effort is being made in this direction.

Port of Dunkirk

The Port of Dunkirk and its development

Dunkirk, now the most important French port on the North Sea, has been an object of sharp disputes throughout its eventful history. Its creation is attributed to Saint Eloi in the seventh century. Originally a fishing hamlet, it was enfranchised in the twelfth century. Its Flemish name, which means "church of the dunes", reminds one that it is a town of Flanders that Flemish is still spoken there and that its first sovereigns were the Counts of Flanders. Later, it passed successively under the domination of the Dukes of Burgundy, then of the Houses of Austria and Spain. In 1658 it became English, after a curious transaction whereby England had accepted to ally herself with France against Spain in exchange for the promise of Dunkirk, which was conquered by Turenne: thus, by a political hazard, Dunkirk woke up Spanish one morning, became French at noon and ended up English that very evening.

Louis XIV bought the town back from England four years later, in 1662, and France's second Chamber of Commerce was founded there in 1700. In 1713, however, Great Britain demanded that Dunkirk's fortifications (built by Vauban) be dismantled and its port filled in; a British representative remained in Dunkirk until 1783 to ensure that these terms were observed.

The port did not begin to prosper until the latter part of the nineteenth century, after a railway line had been built to it in 1848. But the first world war hit Dunkirk hard and the second brought even more destruction. In 1945, Dunkirk was the last French town to be freed: once again its port had to be recreated from a state of total ruin.

Today it is France's third port for total traffic and the leading port for goods other than hydrocarbons, in particular bulk (ore and coal), sugar, metallurgical products and textiles. But the persisting world wide economic slump had adverse affects on traffic in most ports and Dunkirk proved no exception.

A close study will now be made of the port and industries of Dunkirk.

The assets of the Port of Dunkirk

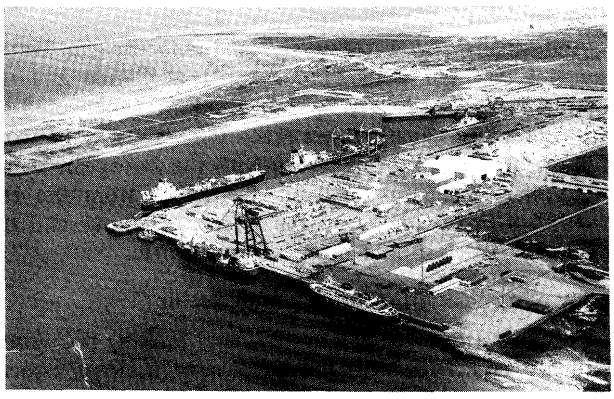
As it can be observed, some twenty years ago, Dunkirk turned decidedly to expansion. All the conditions were in fact gathered for that: a first class maritime location; a nature of land very favourable to major public works, and last but not least: a hinterland including extensive economic potentialities.

Today, Dunkirk enjoys a very enviable place:

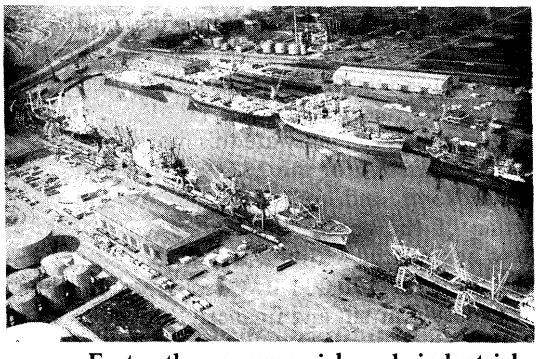
- on the French coast line:
  third port – even the first, should we disconsider hydrocarbons –
- and in a wider scope of North West Europe, where Dunkirk ranks at the fourth place.

In fact, Dunkirk appears as a first class tool to serve international trade:

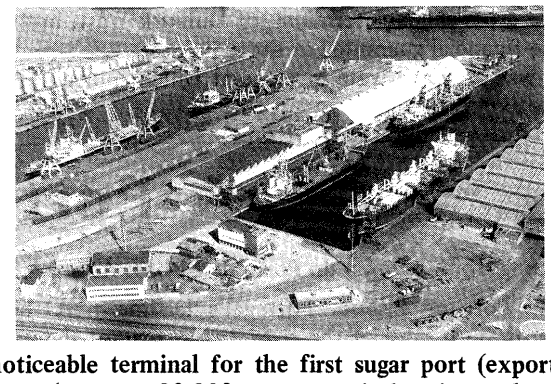
- on one hand, to the East, a commercial and industrial port, including a series of specialized terminals,
- on another hand, to the West, deep waters and the availability of land have allowed the construction of a vast port complex, including a 560 ha outer harbour, accessible in the best nautical conditions to 22 m draft vessels. Cross-channel facilities and deep-sea container facilities have been commissioned in the first tidal dock, open to traffic in 1976 (container traffic rose by 17% last year: 71,382 T.E.U. of which 46,281 at the western port)



West of Dunkerque: the depth of the sea and the land available made it possible to build a vast port complex with, especially, cross-channel terminals and facilities to handle deep-sea container ships.



Dunkerque East: the commercial and industrial port. Basin 6 has outstanding equipment and numerous railway sidings on the quayside which offers customers ample facilities for transhipment of goods received or to be exported.



A noticeable terminal for the first sugar port (export) in Europe (storage: 83,000 t; automatic bagging and string; 2 gantries with spiral chutes).

8,000 ha are concerned by this development scheme, of which 4,800 will be allocated to industries.

Three means of transport link Dunkirk to its hinterland and beyond. First by rail: as a matter of fact, the sheer density of the inner network is striking. Finally electrified sources to Paris, Eastern France, Switzerland and Italy are also substantial assets. Then, the road. A road freight

centre ensures the best possible reception for hauliers and a network of motorways links Dunkirk to Paris, Lyons, Marseilles, Brussels, Cologne, Frankfort etc. Without one single red light.

And finally the waterways. The Franco-Belgian waterway link via the Bergen-Mons canal at Conde and the Pommerroeul canal now ponts Dunkirk (connected to the wide gauge canal) within reach the waterway network of the Nord/Pas-de-Calais region with the European waterway system (Belgium, Holland, Germany) from the end of 1984 a link-up between the western Harbour and the waterway system should generate more traffic.

Policy of association with the private sector

For now a few years, a more liberal looking policy was gradually launched, with the purpose of a closer association of the private sector than in the past, and involving all the parties concerned by the chain of transport.

The Port of Dunkirk Authority have shouldered different private initiatives, adding-according to the case, its own financial participation or guarantee.

The result was not only to secure the existing flows of traffic, but mainly to generate and spur new ones through a constant adaptation of the facilities to the new needs arising.

Many examples can illustrate this move:

- **the modernization of the 25,000 T grain silo,** by a pool of stevedores and forwarding agents and, this year, starting of the construction of a new 50,000 T grain silo to be financed with the private sector.
- **a dry-dock for 170,000 dwt vessels,** built without any State subsidy at all, and financed through an association of the industrialists concerned (shipbuilding and ship-prepairing yards) and the Port Authority.
- **a steel terminal** in association with the steel industry, the port users, the French Railways, and the Port of Dunkirk Authority.
- **the cross-channel terminal,** of Dunkirk West, built with the financial guarantee of the main user.
- it was also a private investment which spurred in 1979 the export of **coke,**
- **a sugar terminal,** unique in Europe, as joint venture between a local forwarding agent, a specialized rail transporter, and the Industries concerned. It had already been extended to a capacity of 85,000 T and got in 1982, a second spiral chute.
- in the same way, with the financial involvement of private firms, a terminal specialized for **various agricultural bulks and cattle-feeds** will be brought into service in the next few weeks,
- and finally, the joint efforts agreed by the State, the Port of Dunkirk Authority and a few private firms made it possible to achieve this year the construction of a **new bulk cargo terminal,** to enable Dunkirk to hold its own and keep its leading role as far as the supply of iron ore and coal is concerned. This new berth can accommodate bulk carriers of the 200,000 T dwt class, and later of 300,000 dwt.

On another hand, through, particular contracts, so-called **"contracts of programme"**, the Port of Dunkirk Authority have successfully experienced a procedure aiming at a real involvement of the port users for a better and more efficient use of the facilities.

The result of this move was the laying down of new relations based on more solidarity between the Port Authority and the different Port Users, making up this "Port Community".

Marketing and Public Relations Policy

The local port community showed its own dynamism and cohesion through the many commercial drives and a very active public relations policy.

Public relations are jointly promoted in very close and careful association with the Chamber of Commerce and Industry of Dunkirk and the local Federation of Ports Employers (gathering all the port users).

As regards more particularly the Port Authority, its commercial policy was strengthened over the last years; visits to clients were multiplied with a view to have a deeper knowledge of the hinterland and to meet always better the expectations of our shippers and forwarders.

Port of Lisbon

(Extracts from 'Boletim do Porto de Lisboa, Ano. XXXII)

The Port of Lisbon, Portugal's leading port, has its docks on both sides of the river Tagus. One of the world's finest harbours, the Tagus estuary is a water area of 32,500 hectares with a length of 25 km and widths varying between 2 and 14 km.

A natural minimum depth of 14 m is available at low water spring over the bar at the Tagus entrance. Comprised of sandy material, the bar could be deepened by dredging if necessary.

On account of its geographical position near the south western tip of Europe and its natural advantages, Lisbon serves as a very useful port of call for both cargo and passenger vessels sailing on the international routes between North and South America, the Mediterranean and Africa.

The management of the port is undertaken by the Administraçao-Geral do Porto de Lisboa (AGPL) – Port of Lisbon Authority – a public body with full juridical rights and administrative and financial autonomy.

The turnover of cargo in the Port of Lisbon in 1982 was practically the same as in 1981, as is shown by the following figures, given in million tons:

	1982 mn. t.	1981 mn. t.
Liquid bulk	5.0	5.2
Dry bulk	5.3	5.5
General cargo	2.8	2.8
	13.1	13.5

The number of ships entering the Port in 1982 was 4,282, slightly lower than in 1981 (4,464). The corresponding tonnage for the years referred was 25,521,000 grt. in 1982 and 30,378,000 grt. in 1981, respectively.

The container traffic has improved 11.9 per cent in relation to the previous year. 99,700 containers were handled in 1982 (119,700 TEU) corresponding to a cargo tonnage of 1,010,000 tons (about 36 per cent of the

general cargo handled in the port).

As it has occured with all ports that were born and have grown up next to large cities, Lisbon and the Tagus have, over the centuries, always worked hand in hand in spreading progress. The Port has encountered difficulties as regards space needed on the north bank, to keep pace with the technological innovations that have so rapidly been introduced in sea transport during the last two decades.

However, on the south bank of the Tagus estuary, the Port of Lisbon has very favourable conditions as regards water depths, nautical characteristics and availability of land that is ideal for industry – all of which are essential conditions for any future port.

Studies that have been carried out show that a large modern port complex can be set up on the south bank. It would fit harmoniously into the planning of the region and would benefit from the geographical situation of the Port of Lisbon, at the Atlantic gateway to Europe, as a convenient port of call for the great shipping lines.

As regards the new Lisbon port silo (grain terminal) to be run by EPAC – Empresa Publica de Abastecimentos de Cereais, in Trafaria, the works are currently in procedure and are expected to be completed during 1984. This grain silo is planned for a capacity of 200,000 tons and the terminal wharf will have an 18 metre water depth, which will be sufficient for the largest grain carriers. Transhipment traffic is also planned for this terminal.

On the north bank of the Tagus, the outstanding expansion work on the Alcantara-Rocha wharf is already in operation.

The conclusion of the enlargement work, whose cost amounted to over 1,000 mn Excudos, is an important step in bringing the infrastructures of the Port of Lisbon up to date, since it means a new wharf that can at ease handle all vessels, whether conventional shipping or deep sea ro/ro ships. This new landspace available with close water depths of 10 to 13 metres, also enables the Port to offer an efficient transit service to international trade.

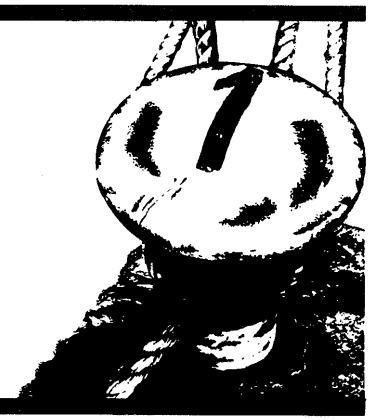
The Santa Apolonia container terminal is now fully operating along the 860 meters wharf available, where water depths are between 8 to 10 metres. The equipment in the Santa Apolonia container terminal includes three container cranes of 35 tons capacity. The container storage park, with a capacity for 140,000 TEUs, has, among other modern and efficient equipment, 5 rubber tyred gantries (transtainers), for the straddling and stacking of containers in the parking area.

The total length of wharves in Lisbon reaches 13 kilometres on the north bank with close water depths varying between 4 metres and 13 metres, but mainly 8 metres. On the south bank, the wharves total 2.5 kilometres, with depths of water between 3 metres and 13 metres.

As regards the future development of the Port, an ironworks terminal at Seixal is under project. The yearly traffic will be 3 million tons of coal and ore and 1 million tons of general cargo. In the initial phase, ships of up to 45,000 g.r.t. may be handled and, in the second phase, by means of additional dredging, the berthing of ships up to 70,000 g.r.t. will be possible.

WORLD PORT DEVELOPMENT

CONFERENCE & EXHIBITION



There is a risk in the world in which we live, that the more developed countries will tend to work together, and the less developed countries can become integrated only with great difficulty. One way in which we can help is technology, and in relation to ports there is a great deal of expertise available. There are also financial means available which need to be explored. With all these things, I believe the developed world has a lot to offer the developing world. The aim of this conference is to review the ways in which the transport and ports can be developed.

Who should be the participants of the conference? We hope that they will be from both sides. From the side which requires port development and from the side which has the experience. The United Nations, the World Bank and various other international organizations will all be supporting this conference. We will bring together Port Authorities from all parts of the world, representatives of organizations involved in planning, financing, operating, maintaining and training as well as members of international lending institutions, United Nations and other international organizations involved in port development.

The conference is a practical effort to develop more effective trading relationships between North and South. Unless we get down to the practical things such as the port conference, we are not really going to be able to solve the problems of those countries which are still in economic difficulty.

Lord Ezra of Horsham
Chairman of the Advisory Committee

Conference

The primary aim of the conference is to develop better understanding between developing and other nations in order to facilitate the exchange of know-how on the subject matter of the conference.

The conference will consist of opening and closing Plenary Sessions and three parallel Study Sessions:

Session A:
Port Project Requirements

Session B:
Economics, Planning and Financing

Session C:
Operations, Maintenance-Management and Training.

Exhibition

An exhibition of services and equipment used in port development will be held in the foyer area of the Rai Congress Centre.
All conference delegates will have free access to the exhibits, and **will be actively encouraged** to view the displays during the session breaks.
For more information please complete and return the attached reply-card:

2-4 May 1984
Rai-Amsterdam

Organizers:

Industrial Presentations

Industrial Presentations (Europe) B.V.
's-Gravelandseweg 284-286
3125 BK Schiedam
The Netherlands
Tel.: 010-158244 Telex: 21423

WORLD PORT DEVELOPMENT
CONFERENCE & EXHIBITION

Reply Coupon

PH5

Please send me details of the World Port Development ☐ Conference ☐ Exhibition.
(Tick where applicable)

Name: _____

Title/Position: _____

Company/Organization: _____

Address: _____

City + Code: _____

Country: _____

Tel.: _____ Telex: _____

Official Carrier
KLM

2-4 May 1984/RAI Centre - Amsterdam

Please send in sealed envelope to: Industrial Presentations • 's-Gravelandseweg 284-296 • 3125 BK Schiedam • The Netherlands

Plenary Sessions

Wednesday 2 May 1984 - Morning

Official Opening
Minister of Transport for The Netherlands

Plenary Session
Chairman:
Lord Ezra of Horsham

Keynote Presentation 1
Minister Habibie
Minister of Technology for Indonesia

Keynote Presentation 2
Professor E. Frankel
World Bank, U.S.A.

Keynote Presentation 3
Mr. J.K. Stuart
Chairman
Associated British Ports, U.K.

WORLD PORT DEVELOPMENT
CONFERENCE & EXHIBITION

Friday 4 May 1984 - Morning

Summaries Sessions A/B/C

Plenary Closing/ Session
Chairman:
Lord Ezra of Horsham

Session A - Port Project Requirements

Session Co-ordinator:
Dr. D. Hilling -
Bedford College

Wednesday 2 May 1984 - Afternoon
"The Port Planning Problem"
Chairman: Sir Peter Austin
Vice-Admiral

Mr. Danko Koludrovic
Chief Shipping Ports and Inland Waterways Division,
ESCAP

Dr. Fayed Badr
President,
Saudi Arabian Ports Authority
Saudi Arabia

Mr. Hashir H. Abdullah
Director General,
Kelang Port Authority
Malaysia

Thursday 3 May 1984 - Morning
"Development Constraints"
Chairman: Mr. G.R. Govan
Man. Dir./Babcock Moxey Ltd.

Mr. K.K. Uppal I.A.S.
General Manager,
Bombay Port Trust,
India

Mr. S. Ngann Yonn
General Manager,
Ports of Cameroon

Dr. Arno Q. Markus
President,
Portos do Brasil,
Brazil

Thursday 3 May 1984 - Afternoon
"External Influences"
Chairman: Mr. A.C. Frood
Man. Dir./Crown Agents

Speaker from Korea to be announced

Mr. J.D. Mturi
Managing Director,
Kenya Ports Authority

Mr. A. Stone
Vice President Engineering,
International Engineering Co. Inc.,
San Francisco,
U.S.A.

Session B - Economics, Planning & Financing

Session Co-ordinator:
Mr. J.F. Toppler -
PRC Engineering Inc.

Wednesday 2 May 1984 - Afternoon
"Economics"
Chairman: Mr. C.E. Dean
Director Petroleum Economics

Dr. Esra Bennathan
Economic Adviser
Transportation Dept.
World Bank,
U.S.A.

Mr. E.E. Pollock
Economist
Associated British Ports,
U.K.

Dr. J.M. Serrao
Ports of Sines,
Portugal

Thursday 3 May 1984 - Morning
"Planning"
Chairman: Mr. P. Soros
President - Soros Associates

Mr. Loewy
Sir William Halcrow & Partners,
U.K.

Dr. J.E. Ricklefs
PRC Engineering Inc.
U.S.A.

Mr. J. Rommerskirchen
Port of Hamburg Authorities.
W. Germany

Thursday 3 May 1984 - Afternoon
"Financing"
Chairman: Member of the Board
Algemene Bank Nederland

Mr. Frank F. Martin
Vice-President,
Capital Markets Group
Citibank N.A.
New York
U.S.A.

Mr. D. Suratgar
Director
Morgan Grenfell & Co.,
U.K.

Mr. Roberto Salvorani
European Development Fund

Session C - Operations, Maintenance Management & Training

Session Co-ordinator:
Ir. C. Stigter -
Hydronamic B.V.

Wednesday 2 May 1984 - Afternoon
"Operations"
Chairman: Mr. J.T. Warburton
Secretary General I.C.H.C.A.

Mr. Yan - Runtian
Director of the Bureau of Port Management of Shanghai
P.R. of China

Mr. Wong Hung Khim
General Manager
Port of Singapore Authority

Mr. P.T. van der Tol
General Manager Marketing,
Multi-Terminals Rotterdam B.V.
The Netherlands

Thursday 3 May 1984 - Morning
"Maintenance Management"
Chairman: Mr. J.H. Sargent
General Manager,
Boskalis Westminster Ltd.

Mr. Fouad B. Hashem
Chairman of the Board,
United Arab Stevedoring Co.,
Alexandria,
Egypt

Mr. D. Allison O.B.E.
Managing Director,
Purfleet Deep Wharf and Storage Co. Ltd.,
U.K.

The Maritime Committee
(speaker to be announced)

Thursday 3 May 1984 - Afternoon
"Training"
Chairman: Mr. S.J. Reeves
PRC Engineering Inc.

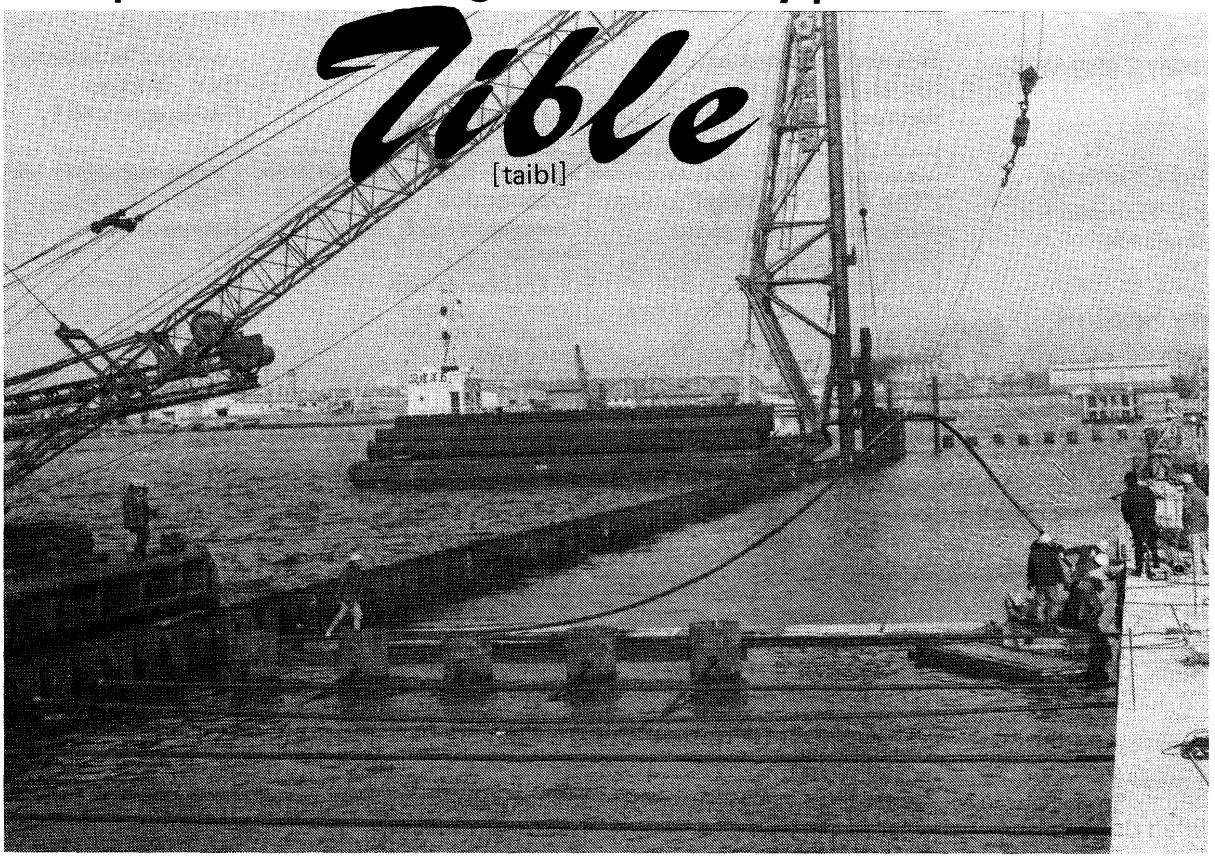
Drs. P.Y. ten Arve
Head External and Commercial Affairs,
Port of Rotterdam,
The Netherlands

Mr. J. Theaker
Crown Agents,
U.K.

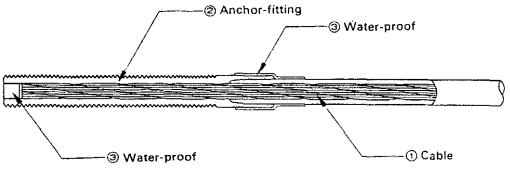
Captain D. Gandy
Sydney Maritime Private College
Australia

WORLD PORT DEVELOPMENT
CONFERENCE & EXHIBITION
2-4 May 1984 Rai-Amsterdam

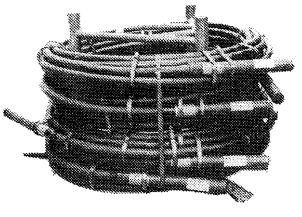
Epoch-Making New Type Tie-Rod



Structure of TIBLE



Transportation form



Advantages:

1. No need of turn-buckles nor ring-joints
2. No need of temporary supports
3. No need of assembling work
4. Simple scaffolding
5. Perfect anti-corrosion
6. Easy handling
7. Easy transportation
8. Lower price than Tie-Rod

Manufacturer

NSE

NEW STRUCTURAL ENGINEERING, LTD.

BROAD BLDG., 12, NIBAN-CHO,
CHIYODA-KU, TOKYO, JAPAN

Export agent

INTERNATIONAL NSE

NSE INTERNATIONAL, LTD.

YONBAN-CHO FINE BLDG., 7, YONBAN-CHO,
CHIYODA-KU, TOKYO, JAPAN
PHONE: (03) 230-2150
TELEX: 02322902 SEEJPN

International maritime information: World port news:

US Transport Research Forum focuses on "Port Development Issues in Developing Countries"

Mr. Herbert R. Haar, Jr., Assistant Executive Director of the Board of Commissioners of the Port of New Orleans and Chairman of the IAPH Dredging Task Force, took part in the 24th Annual Meeting of the Transportation Research Forum held in Crystal City, Virginia on November 4, 1983 in his capacity as a panel member.

Mr. Haar took up the subject "Port Development Issues in Developing Countries" in his opening address. The main areas he covered were:

- Port Development and Congestion
- Ports and Economic Development
- The impact of new shipping techniques on the handling of non-bulk cargoes in developing ports.

The text of his opening address and a list of the points at issue are given below.

More than 400 people attended the meeting. The meeting celebrated the twenty-fifth year of the TRF and had as its theme "Transportation Management, Policy and Technology: An International Focus". Reflecting its international focus, the meeting attracted 38 attendees from Canada and over 50 attendees from 16 other countries around the world.

More than 100 sessions involving paper presentations and panel discussions were held. Approximately one-third of the Meetings' sessions focussed on various aspects of international transportation, with twelve of those dealing with ports and water transportation. Among the issues examined were:

- Regulations and Policies of International Maritime Transportation
- Future of the Panama Canal
- Future of the St. Lawrence Seaway
- Port Development in Developing Countries
- Coal Transportation

The presentations of the meeting will be recorded in a two-volume *Proceedings* to be available in early 1984.

Opening Remarks by Mr. Herbert R. Haar, Jr.

Countries that became independent at various dates after the last World War had to face a multitude of urgent problems of a social, political and economic nature. In many instances the first task was simply to maintain a minimum of order and to avoid chaos that often resulted from the rapid transition to self-government from the colonial rule.

Once the initial difficulties were more or less overcome, government of developing countries were confronted with formidable long-range problems of raising the standard of living of their populations and gradually reducing the wide gap separating them from more advanced states in Europe and North America. Enlightened economic planning and well-conceived development programmes are essential tools of achieving a steady and balanced progress.

Financing port projects may appear to be a dull subject, suitable only for a gathering of specialist accountants rather than port planners and managers.

It is however a matter of capital importance for every individual port scheme as well as for the general port development policies.

Financing is the ultimate stage of planning, a final yes or no verdict on elaborate and important schemes, Refusing funds for a vital port project may result in heavy losses, not only for the port but also for the entire national economy. On the other hand, extending credits for an ill-conceived or not essential scheme may prove to be a waste of scarce money resources, and detrimental to other, more profitable development projects.

In principle, there is little difference in dredging techniques as performed in well developed countries against those in developing countries. However, in the fields of planning, financing and execution other criteria and methods are applied, mainly in the view of the general scarcity of capital for development purposes on the one hand, and the remoteness from main centres of dredging activities and from repair yards on the other hand. Moreover, in Western countries there is usually a wealth of hydrographic and morphological information available, so that planning and execution may be done in a more simple and efficient way than would appear possible in many young countries.

In summary, I think the comments that I have just made which have been gleaned from the writings of several knowledgeable individuals in the field must all be taken with one strong admonition. There is no standard procedure or formula, in my judgement, for approaching a port project or problem in a developing nation. Every situation is different and requires a full consideration of the political, social and economic factors that are involved at a given point in time for the location that is being considered. This is almost a separate subject in itself and I hope that during our discussions today that we can at least touch a little on this aspect in our general dialogue. I also believe that there is a tremendous resource in the form of international, regional, and local entities that can provide technical assistance for port development and it is very important that developing nations understand and be made aware of the full range and capabilities of these many entities that can provide assistance to them in the solution of their problems. I sometimes feel that those of us in a position to help should do more in promoting periodic regional seminars to make this information available. This could facilitate the developing nations in moving forward on their new capital projects in a more timely and efficient manner. This wraps up my several general remarks that I would like to make to introduce the thoughts I have on our issues for discussion this morning.

Port Development Issues in Developing Countries*

The current status and future prospects of ports in the developing countries are a critical issue in international trade developments. Port congestion and lack of technological developments cause increasing impediments to effect economic development. Important issues to be discussed by the panel are:

1. The importance of basic objectives and constraints on dredging, including environmental aspects, cost and financing, types of dredging and methods of operation.
2. Port congestion and the impact it is having on foreign trade – both import and export.
3. What must and is being done to modernize ports and cargo-transfer facilities. How can technology be transfered. Should LDC's follow the lead of developed nations and copy their technology.
4. What are the capabilities and improvements in handling various types of cargo – bulk, container, etc, which are most relevant for developing country ports.
5. Relationship between governments and port administration/management. How to strengthen the capabilities and skills of port management personnel in developing countries. What training and technical assistance is available, and how effective is it.
6. Can institution building in developing country ports be improved, and what model is most appropriate.
7. Privatization of ports and terminals by involving private operators, users and investors in port ownership and operations is an increasingly popular approach in the West. Is it appropriate for LDC's as well?
8. Impact of changes world trading patterns and shipping environment.
9. Alternative sources of funding and technical assistance for port development and improvement.
10. Opportunities for utilization of pioneer and/or rapidly emplaced new port facilities.
11. Opportunities for construction of port facilities through military civic action programs.

* Developed by Ernst Frankel of World Bank and Herbert R. Haar, Jr., Port of New Orleans.

"Port, Finance" course: UNCTAD/ IPER, Le Havre, 18-29 June 1984

UNCTAD and IPER (the Port Study Centre of Le Havre) will run a course on "Port Finance" in Le Havre from 18 to 29 June 1984.

This 2 week course is of interest to all the executives who hold financial or economic responsibilities whether they belong to a port authority, an administration, or a company which utilises port facilities and who are in charge of defining and implementing a policy regarding budgetary control, investment issues and port tariffs.

The main topics under review will be:

- financial and economic profitability of ports
- the policy of the World Bank
- Projects evaluation techniques
- Traffic forecasts
- Evaluating operating costs
- Port pricing
- Use of performance indicators
- Budgetary planning and control.

IPER has selected an international panel of lecturers:

- Mr. BAUDELAIRE — Course Director
- Mr. DE MONIE — Director APEC (Antwerp)
- Mr. GROSDIDIER DE MATONS — Chief, Division of Railways and Ports for Europe, the Middle East and North Africa, The World Bank
- Mr. HUNTER — Economist UNCTAD
- Mr. WILLEMS — Financial expert (Port of Le Havre)

Applications for registration should be sent to:

IPER
1 rue Emile-Zola
76090 LE HAVRE CEDEX
Tel. (35) 42 09 23
Telex: CHAMCOM 190091 F

not later than 30 April 1984.

Associated British Ports— Staff College

For the past 20 years, ABP has been operating a residential Staff College in King's Lynn, Norfolk, United Kingdom. The centre of the College buildings is an 18th Century house which was at one time the residence of the King's Lynn Docks Manager.

The Staff College now provides twenty comfortable single study bedrooms for students and the facilities include a club bar, a comfortable lounge with colour television and a full-size snooker table. Full board is provided for students and the College prides itself on the standard of catering offered.

Since its opening in 1965, the Staff College has been providing a wide range of port oriented training courses for all sections of the workforce of ABP and its predecessor, British Transport Docks Board. Many of the courses are now being offered to other port undertakings both within the United Kingdom and Overseas.

Of particular interest to overseas members of I.A.P.H. is the Port Management Training Programme which has been designed by ABP using the expertise and knowledge gained from many years of successful and profitable port operations. The Training Programme is designed for middle management staff from all disciplines and consists of:

Port Management	– Developing effective management skills and gaining a better understanding of managing in the Ports Industry
Port Development	– Examining the techniques of operating a major port facility. Includes a visit to a major European port.
Practical Training Attachments	– At one of ABP's major ports.

The whole programme lasts for seven weeks and the planned dates for 1984 are:

- PMTP 1 14th May – 24th June, 1984.
- PMTP 2 17th September – 2nd November, 1984

The fee for the programme is U.S.$5,000. This includes tuition, travel within the U.K. and to Europe, accommodation and food for the duration of the training programme. The working language of the Training Programme is English.

Martin Swale, the Staff Training Manager, will be very pleased to provide further details of the Training Programme and the other courses offered by the Staff College. He can be contacted at:

ABP Staff College,
12 St. Ann's Street,
KING'S LYNN,
Norfolk,
U.K.
PE30 1LT.

"The Future of U.S. Harbors": University of Washington's Institute for Marine Studies

A look at the *Future of U.S. Harbors,* particularly the role of port authorities, is the subject of a report prepared by a team of researchers at the University of Washington's Institute for Marine Studies. Essentially the report, as the authors point out, is a preliminary view of the problems facing public port entities and an assessment of the directions research should take. They point out that there is relatively little understanding by policymakers and the public at large of "the harbor as a system" that serves multiple and changing needs. They note, too, that the harbor decision-making environment is complex and fragmented – one involving a melange of private and public entities, each with a somewhat different perspective on how harbor resources should be allocated. Port authorities, they say, are major determinants of the way U.S. harbors are used. They are public enterprises created and charged by law to serve the public interest but with a traditional bias toward cargo handling and revenue generation and away from other public interests. Trends that are likely to substantially influence port decision-making over the next 20 years are shifts in maritime trade and transportation, the scarcity and higher cost of capital and increased pressure from local economic and environmental organizations seeking more benefits and better accountability from public ports.

The authors cite specific areas where research is needed to effectively reassess the role of the port authority in the future of U.S. harbors. These include 1) description of the nature of public port authorities in terms of their evolution, structure, function and facilities; 2) articulation of the legal/policy environment in which ports operate; 3) identification of constraints on decision-making; 4) tracking of major trends (e.g., feeder ports and load centers, the potential role of foreign capital in port infrastructure development); and 5) more field studies describing specific port experiences. The text is brief, but informative and one that is certainly helpful in outlining issues and research directions. Also included in appendices are summaries of responses to the questionnaires developed by the researchers and a summary of their literature search. For copies of *The Future of U.S. Harbors,* contact the University of Seattle, Institute for Marine Studies, HF-05, 3707 Brooklyn Avenue, N.E., Seattle, WA 98195, telephone (206) 543-7004.

(AAPA ADVISORY)

Canadian Life Member appointed to Environmental Review Committee

The Honourable Charles Caccia, M.P., Canada's Minister for the Environment, recently appointed Life Supporting Member Fred DeVos to provide port expertise to the Federal Environmental Assessment Review Commission, which has been examining the port development master plan for the Port of Quebec intermittently since 1981. Public hearings will probably be held during March 1984.

Retired from the National Harbours Board (now Canada Ports Corporation) in July 1982 after 24 years in the Canadian civil service, Dr. DeVos became a life member of PIANC in 1967 and of IAPH in 1969, and remains active as a general management consultant in both Canada and Europe, where he had travelled extensively since 1976. In August 1983 he was awarded life membership in the Canadian Ports and Harbours Association some twenty years after attending his first conference of this organization in Quebec City.

As to the present Port of Quebec's master plan, it is generally hoped that it now stands a very good chance of being approved in view of the substantial reduction of the area to be pre-empted on the ecologically and recreationally sensitive Beauport Flats. Originally, preliminary concepts had encompassed up to around 200 hectares.

Lakes ports would welcome 10-month Seaway season

Virtually all organizations, government departments or agencies and ports with interests in the Great Lakes/St. Lawrence Seaway system are in favour of extending the shipping season. What really remains to be decided is the length of season extension and how this extension should be implemented.

Efforts by U.S. legislators to extend the Seaway's 8-1/2-month season have created some concerns in political and environmental circles. In addition, they have surprised the Canadian St. Lawrence Seaway Authority and the U.S. Army Corps of Engineers which has been studying season extension for more than 12 years.

"Actually, a 12-month season is not realistic," said John Jursa, president of the International Association of Great Lakes Ports. "First of all, the system requires at least one month down time during which maintenance work can be carried out."

Mr. Jursa, who is director of Public Affairs for the Toronto Harbour Commission, said that ports in the Great Lakes would be quite satisfied with a 10-month Seaway season. "The Corps of Engineers' program to phase in 1-1/2-month season extension over a 15-year period makes sense."

William O'Neil, president of the Seaway Authority said a 10-month season would not entail a remodelling of the lock system, "but it would require the development of a fail-safe, precise vessel positioning system."

The Seaway, in conjunction with the Canadian and U.S. Coast Guards, is working on a system that would guide ships through unbuoyed stretches of ice-jammed water, "but we have not got it yet," he added.

The principal requirements of a 1-1/2-month extension

would be icebreaker support, navigation aids in the connecting channels, the establishment of a Coast Guard ice navigation centre in Cleveland, shore and aerial ice reconnaissance, the coating of lock walls with ice-repellant materials, and construction of ice-flushing bubbler systems and the entrances and exists of lock chambers.

Early estimates by the Corps suggested that the longer season could return about $3.50 (U.S.) for every $1 invested in the first 50 years, but a later study put the benefits closer to parity. *(Port of Toronto News)*

Canadian Coal Terminal Expansion

With Prince Rupert's new Ridley Island Coal Terminal completed and awaiting its first ship and the ongoing expansion of Vancouver's Roberts Bank complex (specifically the second loading pod), nearing completion, western Canadian coal port export capability will just about double in a very short time. Completed on schedule in what must be counted a record-breaking two years' time, the Ridley Island facility will offer a 12 million metric ton (mmt) annual throughput capacity and the ability to load vessels of up to 250,000 deadweight tons (dwt). Already, 6.7 mmt have been contracted for shipment through the terminal, virtually all of it metallurgical coal from two newly-opened mines in northeastern British Columbia. In addition to the two mines and the port complex, the project entailed the construction of a brand-new coal hauling railroad and major improvements to connecting Canadian National lines. The terminal itself is jointly owned by Ports Canada (with a 90 percent share) and privately-owned Federal Commerce and Navigation Limited. Several hundred thousand tons of product coal has already been delivered to Prince Rupert. The first ship is expected there sometime in early January.

Further south, at Vancouver, three new pods have been added to the Roberts Bank facility. Some technical improvements have been made to the original loading infrastructure on Pod I and an entirely new facility is nearing completion at Pod II. When that is ready, expected in February, annual loading capacity at Roberts Bank will jump from the current 14 mmt to 22 mmt. The older Neptune terminal in Vancouver harbor can load about six mmt per year. Vancouver coal exports this year are likely to reach 15 mmt. Next year, assuming the market hangs together (not a foregone conclusion), western Canadian coal exports could jump by a third. Like Ridley Island, the Roberts Bank terminal can received bulk carriers of at least 250,000 dwt. *(AAPA ADVISORY)*

Facts about visiting boaters revealed in new port survey: Nanaimo Harbour

Results of a survey conducted by Commercial Inlet Basin supervisor Ross Dickenson and his staff, show that pleasure boating accounted for some 10,147 visitors to Nanaimo last summer. The survey verifies the generally accepted fact that American boaters dominate the scene. Of the 3,583 boats' total 58.25 percent were from the State of Washington.

B.C. Lower Mainland chalked up 17.28 percent; Vancouver Island 10.19 percent; then comes Oregon with 6.23 percent. California provided 2.93 percent. From other parts of B.C. came 71 boats of 1.98 percent.

Power boats outnumbered sail 59.06 against 40.94 percent. Majority of vessels were in the 21–30 ft. length range. Next largest group was the 31 to 40 ft. range. The boats were mostly privately owned; 94.44 compared to 5.56 percent chartered.

Nearly 45 percent of boat owners contacted were yacht club members and 55 percent were non-members.

By far the greatest number of visiting boaters were here overnight, an interesting fact from a tourism point of view. Out of 3,583 boaters in the survey 78.26 percent stayed only one night. Just over 16 percent stayed from two to three days and 1.67 percent stayed from four to seven days. There were 24 boats or .67 percent making a stay of more than a week. At the other extreme 101 boats or 2.82 percent were at the boat basin two hours or less.

It was a first visit to Nanaimo for 385 or 23.25 percent of 1,656 boats checked. But, it was a repeat visit for the others, with 581 or 35.08 percent having been here from 2 to six times before while the regulars (more than six previous visits) numbered 299 or 18.06 percent.

How did they learn about Nanaimo and its facilities? Well 43 percent said it was from previous visits. About 21 percent said from charts and 18 percent from friends. Only five or .30 percent said it was from B.C. Tourism. Now, what about moorage rates? Are moorage rates at the basin higher, lower or about the same as other places? The rates are comparable with others, said 68 percent. A little lower, said 14 percent. A little higher, said 11 percent.

What do these visitors buy while here? Groceries comes first with 89 percent; fuel next, with 55 percent; then liquor, 45 percent; parts and repairs, 18 percent; meals, 57 percent; laundry facilities, 22 percent; car rentals, 1.81 percent.

How much in dollar value does this mean to Nanaimo? The survey asked how much each one would probably spend. Results are: under $50 – 22 percent; $50 to $150 – 48 percent; more than $150 – 31 percent.

Visitor comments in general were favorable. Facilities are convenient at C.I.B. they said. They found the staff helpful and friendly.

Ridley coal terminal operational: Port of Prince Rupert

Just 23 months after the project was given the green light, the new $220 million coal export terminal at the Port of Prince Rupert is operational.

The world-class export facility on Ridley Island has been steadily unloading unit trains of coal since they first arrived in mid-November last.

The terminal was built and will be operated by Ridley Terminals Inc. – a private company owned 90 percent by Ports Canada and 10 percent by Federal Commerce and Navigation.

An extremely tight construction schedule was imperative for Teck Corporation and Quintette Coal Ltd. to meet their coal export obligations to Japanese coal buyers.

The completion of the coal terminal was a vital component to the $2.5 billion North East B.C. coal project. This development, the largest ever undertaken in B.C., opens new Canadian coal reserves to world markets. So far the development has resulted in sales of 113 million tonnes over the next 14 years.

Phase one of the terminal will have on-site storage for 1.2 million tonnes and an annual throughput capacity of 12 million tonnes. It can accommodate ships to 250,000 dwt with draughts to 22 metres and load them at a rate of 9,000 tonnes per hour.

According to Ted Winter, RTI's terminal manager, the only coal port more technically sophisticated is the Richards Bay Terminal in South Africa – the largest in the world. He says the major equipment on the terminal is equipped with programmable logic controllers which are integrated with a central computer system.

"When we're operating, information on the performance of the equipment is constantly gathered and interpreted so that adjustments can be made immediately if required".

Although RTI expected some problems with start-up, Mr. Winter says that it has gone better than expected. He anticipates some 370,000 tonnes will have been delivered to the site by the end of December.

When fully operational, RTI will have a staff of 96 operating on three shifts.

In addition to its involvement in RTI, Ports Canada spent approximately $50 million on the preparation of the 55 hectare terminal site. *(Currents)*

'Edifice de L'estuaire' inaugurated: Port of Quebec

A new building to house maintenance and police and security services was recently inaugurated at the Port of Québec.

Named "Édifice de l'Estuaire" after its proximity to the point where the St. Charles empties into the St. Lawrence River, the complex was completed at a cost of 1.125 million $. The project, which included construction of a parking lot, access routes and landscaping, was designed to harmonize with the surrounding environment of Québec City's Old Port and provincial courthouse.

With a total surface area of 1943 square meters, less than half that of the two buildings which formerly housed these port services, the new complex will reduce heating and maintenance costs. The building will provide ample office and storage space for equipment and respond more adequately to requirements for modern port maintenance services than the old and poorly insulated workshop building constructed in 1946. It also includes an auditorium with seating space for 150 people.

The new complex was built on the site of Valcartier Industries Inc., a munitions manufacturer which had decided to relocate closer to its most important client, the Canadian Armed Forces Base at Valcartier, Québec, in December 1982.

The construction of the building is linked to a vast renewal program to restore Québec City's Old Port. The buildings replaced by the new complex are located within an area first developed by the Port of Quebec in the 19th century and transferred in 1981 to the federal Ministry of Public Works.

Located close to the city's downtown, with inadequate space for modern port development, the area was no longer suitable for the 100,000 ton ships and millions of tons of cargo now handled at the Port of Québec.

The construction of the "Édifice de l'Estuaire" was financed from the Port of Québec's working capital. The principal contractor was Paul Martin Inc. of La Pocatiere (Québec). *(Port de Québec)*

Port of Quebec commits 9 million $ to upgrade facilities in 1983

In spite of poor markets which adversely affected the tonnage of several products handled at the Port of Quebec in 1983, 9 million $ was committed to modernize port facilities and strengthen Quebec's competitive position in the handling of grain. Bunge of Canada Ltd., which operates a grain elevator at the Port of Quebec also announced investments of more than 7 million $.

Major investment projects in 1983 include the renovation of Annex #1, the oldest section of the grain elevator operated by Bunge, the construction of more rapid receiving facilities for grain transported by rail, the rebuilding of rail access to sheds located in the Saint Charles River Estuary sector of the port and the construction of a new building to house maintenance and police and security services. These improvements will enable the Port of Quebec to fully benefit from an upturn in the transportation of several products where tonnage declined in 1983.

The overall volume of cargo handled during the first eleven months of the year at Ports Canada and private facilities fell to 14,401,937 metric tons from a total of 16,547,475 tons of cargo handled during the same period in 1982.

The 13% drop in overall tonnage was largely the result of a decline of more than 1,000,000 tons in shipments of grain. These were particularly strong in 1982 following a fire at the Baie-Comeau grain terminal which rerouted a number of vessels to Quebec. Competition from alternative sources of energy such as electricity and natural gas severely affected the market for fuel oil, causing a fall of 700,000 tons in the shipment of petrochemical products. Markets for minerals also remained weak through 1983 resulting in a decline of 200,000 tons in the handling of these products.

Port of Thunder Bay's cargoes set a new all-time

Cargo tonnages reached the all-time high of 23,559,163 tonnes, over one million tonnes ahead of last year's record of 22.4 million tonnes.

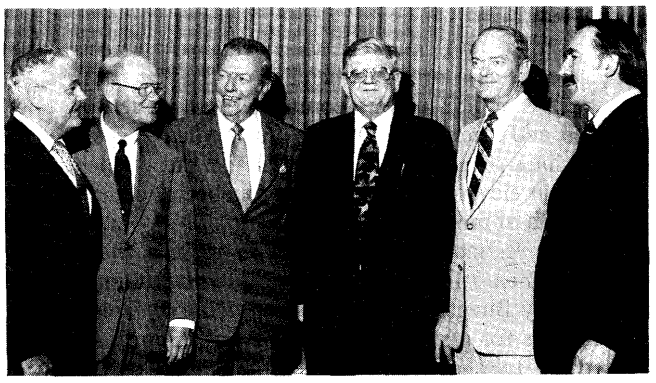
Total ships for the year reached 1,359 up 22 from last year. 123 Foreign registered ships entered port representing countries from around the world. 1983 had the earliest opening of navigation ever, when the Incan Superior made her way into port on March 25.

Thunder Bay's 17 elevators were kept extremely busy during 1983 with a record 17,679,719 tonnes of grain shipped through the Port. This is well ahead of the previous record of 16,996,696 tonnes shipped last year.

The Port's dry-bulk handling facilities moved 2,159,546 tonnes of coal through the Port, slightly ahead of last year's figures. Iron Ore reached 1,412,131 tonnes, significantly higher than last year's 808,132 tonnes, an indication that the steel-producing industry is on the road to recovery. Potash shipments of 1,451,296 tonnes were handled through Thunder Bay and construction is well underway

at two of the facilities to streamline their potash handling capabilities for the opening of the 1984 navigation season.

"Red Tape Cutters" Mid Atlantic meet



A recent session found key trade and shipping facilitators discussing the never-ending efforts to streamline shipping documentary and procedural requirements. On hand at the Norfolk, Virginia meeting of the National Committee on International Trade Documentation were NCITD's executive director Howard Henke (left); Houston's Ted Thorjussen, vice president of the West Gulf Coast Maritime Association; executive director of the New Orleans Board of Trade, J. Edward Barr; J.D. English, assistant general manager (port sales), Port Authority of New York and New Jersey; local host Jack Mace, executive vice president of the Hampton Roads Maritime Association, and NCITD Pacific Coast representative, Bob Langner, executive director of the Marine exchange of the San Francisco Bay Region.

Houston FTZ sets fast pace

During its first month of business the Houston Foreign-Trade Zone (FTZ) received 9,688 tons of cargo valued in excess of $3.9 million, reported the Houston FTZ Corporation.

The one-month tonnage figure exceeds the 1981 *annual* totals of 73% of all U.S. Foreign-Trade Zones, according to statistics available in the 1981 annual report of the Foreign-Trade Zones Board. The FTZ Board statistics, compiled for fiscal year 1981, are the most recent government figures available.

The value of merchandise received at Houston's four operating Zone sites exceeds the 1981 *annual* totals of 43% of all U.S. Zones.

Te Houston FTZ figures are based on cargo movements during the month of November, 1983.

"If the first month of operation is any indication of annual volume, the Houston FTZ will become the busiest Zone in the nation," said Curtis Spencer, general manager of the Houston FTZ Corp.

With an additional 11 Houston sites remaining to be activated in the near future, volume should increase significantly during 1984.

"There is every likelihood that after one year of operation, the Houston Zone will be the nation's largest and busiest in all categories," said Spencer.

French minister stresses nations' common interests: Port of Houston

The "unavoidable, small litigations" between France and the United States are outweighed by the benefits the two countries accrue from trading with each other.

This was the conclusion of Madame Edith Cresson, French minister of external trade and tourism, in a recent speech to members of the Houston Chamber of Commerce and local international trade organizations.

Cresson prefaced her remarks by pointing out that "between two ambitious and dynamic countries such as the United States and France, two countries which both have such a strong national tradition, relations cannot be without any umbrage. Conflicting opinions and interests are a proof of vitality and democracy."

Strong economic competition lies at the heart of French-American problems, Cresson said. She said both countries export more agricultural products than they import and both countries have developed technologies that compete in the world marketplace. The competing technologies include nuclear power plants, civil and military aeronautics, telecommunications, offshore drilling and computer softwares.

"All these foster an emulation which does not go without difficulties due to the discrepancies between our political and economic philosophies," Cresson said.

Main difficulties between the United States and France center around such factors as a U.S. trade policy that has protectionist tendencies, and high interest rates that result in a strong dollar, Cresson said.

"We fear that this trend might worsen, given a probable foreign trade deficit for the United States of nearly $70 billion in 1983," Cresson said.

She then added, "Another key issue is the East-West economic relations. The embargo measures against the Siberian pipeline deeply altered the relationships between Europe and the United States last year."

Cresson said France is "extremely concerned" by the proposal in Congress to renew the Export Administration Act. She said the legislation contains language that "dangerously threatens" once-secure international exchanges.

Cresson said she has aired these problems in meetings with government officials in Washington.

"However, I would like now to describe the relations between our two countries in a more positive way, thanks to the remarkable example given by Texas," Cresson said.

Relations between France and Texas go back as far as 1685, which was when Robert Cavelier de La Salle landed on the Texas shore. Paris also was the first European capital to recognize the independence of Texas in 1839.

"Nowadays, our relations are more economical but not less significant," Cresson said. She pointed out that more French subsidiaries are located in Texas than in any other state and that France is ranked No. 1 as the leading foreign investor in Texas.

Before concluding her remarks, Cresson said, "I would like only to state a very simple conclusion: There is much more ground for a better understanding between American and French people in the Sun Belt than anywhere else."

(Port of Houston Magazine)

Port's container cargo rises in 1983 but grain & coal shipments drop: Maryland Port Administration

The year 1983 for the port of Baltimore was one of unusual business activities with paradoxical results. On the one hand the port experienced an almost record year in the important shipping category of container cargo traffic, while at the same time important shipping category of container cargo traffic, while at the same time having one of its worst years in the movement of bulk commodities, like grain and coal.

Foreign waterborne commerce in the port of Baltimore during 1983 is expected to reach 22,659,250 tons, according to statistics prepared by the Maryland Port Administration. Comparable import-export trade in 1982 was 30,682,730. This is a 26.1 percent drop.

The cargo figures were reported by the MPA as a year-end statement and are based on partial actual statistics, and projections for the remainder of the 12-month calendar period.

The port's 8,023,480-ton cargo decline in 1982 is totally accounted for in decreases in the grain and coal export trade. Grain exports are expected to drop 52.5 percent from the 6,578,107 tons reported in 1982 to a total of 3,125,250 tons. Coal exports for 1983 are expected to reach 7,184,000 tons, a 38.9 percent decline from the 11,748,516 tons moved over Baltimore piers in 1982.

On the other hand, general and container cargo during 1983 is expected to increase to 5,100,000 tons in the port of Baltimore despite the heavy loss of bulk cargo. Estimated foreign container cargo will reach 3,635,000 tons for the year, an 8 percent increase over comparable tonnage reported in 1982. Total container cargo for 1983, including domestic business, will reach an estimated 4,565,000 tons, a 6.1 percent jump over total container tonnage reported in 1982.

W. Gregory Halpin, Maryland Port Administrator, said, "The port of Baltimore's cargo volume for 1983 was unusual, but in one important category, was very encouraging. The past year has been had for business worldwide, yet the port of Baltimore continued to excel and increase tonnage volumes in the focal areas of foreign trade, namely container and general cargo."

"In this container and general cargo business the port has promoted its own interests by responding competitively to international trade demands. The statistics prove that we've succeeded, as we have for many years," he said.

W. Gregory Halpin named 1983 Port Man of the Year

W. Gregory Halpin, Maryland Port Administrator, received the Baltimore Junior Association of Commerce's 1983 Port Man of the Year Award during ceremonies held recently at the city's Hilton Hotel.

Presented annually, the award honors an individual who has made an exceptional contribution to the development, growth, prestige and promotion of the port of Baltimore, thus benefitting all Maryland citizens.

Halpin, the 15th recipient of the award, was one of 20 qualified candidates nominated by past recipients and other members of the Baltimore maritime community.

Halpin was selected as most deserving of this recognition, according to the Baltimore Junior Association of Commerce, because of his efforts in promoting the port's channel dredging program and the expansion of the Dundalk Marine Terminal, as well as his repeated willingness to assume a leadership role in working for port interests. *(Port of Baltimore)*

Boston Foreign Trade #27 to be relocated to Pier 51

The Massport Board of Directors recently approved an agreement which will mean a new location, and new management, for the Boston Foreign Trade Zone #27, currently operating at Commonwealth Pier.

New England's first foreign trade zone – FTZ#27 – will be relocated to Pier 51 in Charlestown under the management of McNeil & Associates, Inc., a real estate development company based in Westwood.

Massport Executive Director David W. Davis said the relocation of the Boston Foreign Trade Zone will bring new life to the industrial area of Charlestown as well as financial benefits to shippers in New England.

"We feel the new waterfront location of the Foreign Trade Zone is a bonus for companies that import and export goods," Davis said. "Any business concerned about import quotas, duties or restrictions may find that use of a Foreign Trade Zone will save both time and money," he added.

Foreign Trade Zone #27 opened at Commonwealth Pier in September, 1980. Since it began operations, the FTZ has received 534 tons of merchandise valued at $4.5 million. Seventeen companies use the facility, primarily to warehouse goods, but also to test, inspect and re-package imported merchandise. Davis pointed out it became necessary to move the FTZ from Commonwealth Pier because that facility is being transformed into BOSCOM.

Water Projects Legislation initiated: VIA Port of New York-New Jersey

The House Public Works and Transportation Committee approved legislation (HR3678) which is being called one of the major bills of the 98th Congress. The "Water Resources Conservation, Development and Infrastructure Improvement and Rehabilitation Act of 1983" won the unanimous approval of the committee.

It contains project authorizations for roughly thirty-five seaport channel projects as well as a number of inland waterway and other water projects – costing nearly $10 billion. The legislation breaks ground in a number of ways with respect to ports. Cost-sharing is required on ports, though only for projects deeper than 45 feet. The port or other non-federal agencies would be responsible for 50% of the dredging project's cost and future maintenance. User charges would be permitted for the recovery of that non-federal cost.

In addition, a port would not have to totally rely on the federal government to do the channel work on an expeditious basis. Provision is made in the bill to allow ports to initiate and complete some projects as a means of "fast-tracking" the work. Perhaps the most important and

innovative item is the creation of a trust fund for port development, financed totally from customs revenues. Existing customs revenues – as much as $2 billion per year – would be diverted from the federal treasury and be dedicated to seaport channelwork.

The Port of New York and New Jersey specifically benefits in the legislation with the authorization of five channel projects. Included are the deepening of the Kill van Kull-Newark Bay Channels to 45 feet and the deepening of the Ambrose and Anchorage Channels to 55 feet.

North Carolina Ports record tonnage increases

Ten steel-carrying cargo ships at Wilmington as well as a large military shipment, and coal and phosphate movements at Morehead City during the month of September 1983, pushed the North Carolina State Ports Authority's tonnage figures well over a million tons three months into the 1983 – 84 fiscal year.

Total tonnage at both state ports exceeded 1.66 million tons of cargo to 1.16 million tons for the same period last year.

The Morehead City facility constituted the largest share of the tonnage with 1.02 million tons because of movements of coal, phosphate products and liquid bulk. Wilmington's contributions to the tonnage picture included over 15,000 tons of steel and steel products and a military operation which amounted to over 3,000 tons of equipment and hardware.

Containers at Wilmington totaled 9,775 for three months of the fiscal compared to 10,903 last year. The month of September showed 4,045 containers handled compared to 3,527 containers handled the same month in 1982.

Year-to-date revenue figures show a seven percent increase over the revenue of last year at the North Carolina ports but profits were down 15 percent from the 1982 – 83 figures.

Total revenue from all operations showed $3.59 million earned compared to $3.36 last year constituting a profit of $354,259, which was down $59,046 from last year's total. *(Carolina Cargo)*

Export gateway seeks inbound increase: Port of Oakland

Ever since containerization vaulted Oakland to the forefront of Northern California maritime facilities, the Port has relied heavily on export cargoes for much of its business – 60 to 75 percent, in fact, in recent years.

But a variety of factors are prompting the Port to take another look at the lucrative import market. In these days of a strong U.S. dollar, American products are struggling to remain competitive abroad. Meanwhile, worldwide economies are beginning to pick up, inbound freight is returning to its traditionally heavy levels, and the U.S. trade deficit is widening. So while it continues to handle its share of exports, Oakland has decided to draw a bead on business that up to now was going elsewhere – particularly Southern California.

As Timothy Chen, Oakland's cargo marketing manager, explains it, the Port has been at something of a disadvantage because so few steamship lines have adopted it as their first port of call inbound. This has resulted in a siphoning off of substantial amounts of imports at Los Angeles/Long Beach to the south, and the Pacific Northwest in the north.

But intermodalism may have changed all that. Chen notes that Oakland's proximity to trans-continental railheads could make up the extra time it takes to carry the cargo to the Bay Area. In addition, he says, shipping lines are beginning to have more of a voice in determining routing. Where shippers used to make the sole decision, in the days of breakbulk carriage and a lack of swift inland transport, carriers are now cooperating with their customers in plotting the journey of their goods.

Aggressive Program

With these things in mind, Oakland has launched an aggressive program to attract more inbound traffic. According to Chen, a number of elements are involved in selling it as an "importer's port."

To begin with, the Port stresses total transit time, rather than the mere duration of an ocean voyage. Shippers are urged, he says, to break that down into ocean transit; "port interface," where the goods switch modes; inland transit, and final delivery time.

Oakland is banking on an efficient workforce, no congestion, and a ready supply of rail equipment, to make up for the extra ocean time. The Port works closely with local consolidators to ensure expeditious handling. Chen says that goods can be tied up in the congested transportation system of Southern California; in addition, rail terminals currently are much further from the port area there than in Oakland. In the north, he points out, rail facilities are "virtually across the street leading to lower drayage costs." The construction of an intermodal switching yard at Los Angeles and Long Beach will offset that advantage somewhat, but Oakland hopes to have convinced shippers to try out its own, already-in-place system before that time. "We're trying to build up import momentum now," Chen says.

The question of available rail rolling stock is a crucial one to Oakland. Ironically, the Port's dominance as an export cargo facility is a big help in this area; it ensures a ready supply of flatcars and other equipment for immediate turnaround. The steady flow of cars from the inland frees the carrier from having to pay for the repositioning of empty containers, a savings that Oakland is quick to point out to its potential customers.

In short, Chen says, while a container may get held up in Southern California for as long as two-and-a-half days to three days, it's often out of Oakland in a day – giving the Port an edge it needs to stay competitive with the Southland.

To Oakland, the best possible approach is to convince inbound steamship lines to adjust their schedules to call there first. Traditionally, only U.S. Lines has, but the Port recently got a big boost when Seawinds and Mexican Line followed suit. This, along with the fact that carriers are acquiring an increasing amount of decision-making power, is prompting the Port to view its new effort with optimism.

According to Chen, the obstacle isn't practicality but tradition. "The pattern of rotation has been set for years and years," he says, "and it's tough to break it."

All of this coupled with the Port's reliance on long-term contracts with shipping lines, has given Oakland a "pretty good share" of inbound minibridge cargoes, according to Chen. Still, the Port continues its efforts to increase its scope of business – geographically as well as in terms of cargo destination. "We can't rely on local markets," Chen says, "our future lies overland – across the country." *(Port Progress)*

Port Commission sets new land policies: Port of Portland

In a move to make Port lands more attractive to buyers, the Port of Portland Commission has approved a series of more flexible real estate policies. The policy changes affect all Portland industrial parks, including the 3,000-acre Rivergate Industrial District, the new 130-acre Mocks Landing Industrial Park and Swan Island Industrial Park, where two parcels remain available in the otherwise fully developped area.

Also, industrial and commercial sites at Portland-Hillsboro and Portland-Troutdale general aviation airports have been made available to non-aviation users.

Specifically, the new Port Commission approved real estate policy includes: exclusive broker listings on selected parcels; sale of land on tract terms; changes in deed clauses; periodic review of deed and lease forms; changes in option policies; more flexible lease terms; revisions to the pricing schedule for Rivergate and Mocks Landing; sale of small parcels in Rivergate; and lease schedule for general aviation properties. *(Portside)*

Seattle's 1982 waterborne trade with selected Asian countries

Seattle's geographic location prompts a heavy concentration on trade with the Asian countries situated along the Pacific Rim.

When the value of the 1982 waterborne imports and exports is combined, Seattle ranked third in this country's two-way commerce with Japan. Though Seattle was behind Los Angeles and Long Beach, it was ahead of the largest U.S. port, namely, New York. With Taiwan, Seattle was second, behind Long Beach but ahead of New York. The same was the case with South Korea. In trade with Hong Kong, Seattle surpassed even Long Beach and ranked first!

U.S. Total Waterborne Trade Imports and Exports with selected Asian Countries in the Pacific Basin in 1982

Country	National trade	Seattle trade	Seattle's share in national trade	Seattle's rank in national trade
	Millions of Dollars		*Percent*	
Japan	$52,037	$6,367	12.2	Third*
Taiwan	11,682	1,916	16.4	Second*
South Korea	9,508	1,356	14.3	Second*
Hong Kong	5,752	1,209	21.0	First
PRC	5,039	139	2.7	Eleventh
Singapore	3,198	391	12.2	Third*
Philippines	2,288	184	8.0	Third
Thailand	1,315	79	6.0	Fourth
Malaysia	1,101	78	7.1	Fourth
Macao	193	33	17.1	Third

In waterborne exports which the Asian countries shipped to the United States last year, Seattle ranked first in Hong Kong's shipments and second in the case of Japan, Taiwan, South Korea, Singapore and the Philippines. More than 25 percent of Hong Kong's exports were routed through the Seattle harbor in 1982. In the case of Singapore, its share exceeded 27 percent.

U.S. Total Waterborne Imports from selected Asian Countries in the Pacific Basin in 1982

Country	National imports	Seattle imports	Seattle's share in national imports	Seattle's rank in national imports
	Millions of Dollars		*Percent*	
Japan	$35,659	$5,257	14.7	Second*
Taiwan	8,439	1,711	20.3	Second*
South Korea	5,083	994	19.5	Second*
Hong Kong	4,310	1,089	25.3	First
PRC	2,292	119	5.2	Sixth
Singapore	1,211	330	27.2	Second*
Philippines	1,089	122	11.2	Second
Thailand	682	56	8.2	Fourth
Malaysia	579	58	10.0	Third
Macao	179	33	18.4	Third

*Ranked *ahead of New York*
Source: Census Bureau FT 305/705 tapes *(TRADELINES)*

International traffic sets pace for growth: Port of Seattle

Despite a still sluggish world economy and keen competition from other West Coast ports, the President of the Port of Seattle Commission is predicting a record-breaking year in air and sea traffic for the Port in 1983.

Paul S. Friendlander said by year's end he expects the Port of Seattle will have handled more than 900,000 containers on the waterfront and more than 10 million passengers at Jackson International. The current airport record is 9.8 million passengers set in 1979. The best year on the waterfront was 1981 when 805,000 containers were moved through Port facilities.

Friendlander's predictions were based on performances through the first eight months of 1983. "Passenger traffic at the airport has increased more than 11 percent over last year and is still climbing," he said. "On the waterfront, breakbulk tonnage is up 15 percent and container traffic has increased 12 percent."

The sea traffic increase is attributable to more aggressive marketing that has brought new customers to the Port of Seattle and from added steamship capacity from both new and existing container steamship lines, Friendlander said. "Shipments are increasing as the domestic economy continues to improve and as inland U.S. businesses move to build-up inventories." *(TRADELINES)*

The Heart of SLPC: The Commissioners

Much of the success of the Port of South Louisiana must be credited to the active involvement of the members of its governing body, the South Louisiana Port Commission.

The Commission is a working group which serves as unpaid consultants to the Port, offering expertise in a remarkably varied array of occupations. Represented on the

Commission are the professions of law, engineering, insurance, accounting, teaching and political science. Shipping and retailing are also represented.

Members of the Commission receive no compensation, either in the form of salary or per diem. This differs from the majority of boards and commissions in Louisiana, which usually compensate members with salary or per diem. (Average per diem payments are now pegged at $75 daily, according to staffers at legislative commerce committees.)

The time logged by commissioners for Port business is considerable. In a given study period, the lowest number of hours spent by a commissioner in a month was 30; the highest, 100. For this period, the nine commissioners spent a total of 453 hours on Commission business, for a commissioner average of 50 hours monthly.

All members of the Commission are mature, successful business or professional men. The youngest commissioner is 44, the oldest 58. The average age is 52.

The selection process for commissioners is a rigid, demanding procedure which insures that nominees represent the choice of a consensus of government and the private sector.

All appointees serve for four-year terms.

There are five agencies which nominate Commission candidates spelled out in the legislation governing the Port Commission: the River Region Council of the New Orleans Chamber of Commerce, the Louisiana Farm Bureau, the Louisiana AFL-CIO, the Southern University River Parishes Alumni Association and the River Parishes Chemical Industry Council.

The nominating agencies each submit a nominee from each of the south Louisiana parishes of St. Charles, St. John the Baptist and St. James.

The governor of the state chooses one resident from each parish from the slate of nominees furnished him by the organizations. Members appointed by the governor must undergo confirmation by the state Senate every two years after the initial confirmation.

The parish president of each of the three River Parishes appoints two nominees from the names provided by the nominating agencies. However, the parish president's action must have the concurrence of two-thirds of the parish council of each parish.

There are few boards or commissions in Louisiana that require a nominee to undergo such a trying procedure. When measured against the financial rewards, the question naturally arises: "Why do River Parish residents seek the office?"

Interviews with commissioners reveal a variety of reasons, but there is a common thread running through the answers. Although the phraseology differs, all feel that the prospect of participating in the economic advancement of one of the nation's most dynamic areas is worth all the headaches that come with the job.

One commissioner says, "There is no way a commissioner can gain directly from his involvement with the Port. The only indirect gain that accrues is the enhanced business climate that the Port is responsible for."

Another explains, "It's a challenging thing, and I just see so much we can do in the future. We have the facilities to bring in additional jobs for local people. I believe the Port is headed in this direction now."

Most commissioners find that their business or professional background allows them to provide unique services to the Port, especially in committee service. There are ten operating committees, each dealing with a particular phase of Port work. These committees cover insurance, finance, boat operation, the Port master plan, by-laws, the foreign trade zone, industrial development, legislation, tariffs and dredging.

Louisiana has one of the most effective and workable "sunshine" laws in the nation. It provides that the business of all public agencies must be conducted in open session, in the full glow of the "sunshine." Businessmen, accustomed to making decisions on the basis of profitability and chances of success, sometimes find the restrictions of government service burdensome.

Says one member, "In business you satisfy the auditors and, if you can make a profit on it, you go ahead and do it. In government, you have many checks and balances, because you're involved in a public trust."

Public hearings and other safeguards to protect the public interest are necessary and desirable, but they make government business more complicated than private business.

Sometimes public service becomes so inhibiting that business people are inclined to return to the private sector and "let somebody else sit back and listen to all that criticism and lack of appreciation."

But for most, the benefits obviously outweigh the shortcomings. One commissioner summed it up this way:

"I feel this could be the best port in the United States. And you have the gratification of doing something good. And I know what we're doing is good." *(NEWS)*

Foreign Trade Zone #86: Port of Tacoma

Foreign Trade Zone #86 is one of the Port's newest sales tools for promoting imports, exports, industrial development, and local jobs. The Port, as a member of the Puget Sound Foreign Trade Zone Association, received foreign trade zone authority in July. The award was made by John L. Evans, deputy assistant secretary for import administration of the United States Department of Commerce.

Exactly what is a foreign trade zone? It's a special commercial area that is legally outside the United States for U.S. Customs Service purposes. In a zone, foreign and domestic goods can generally be stored, processed, or manufactured duty free. Goods are subject to duty only when they leave the zone to enter the U.S. market. No duty is charged if the goods are reshipped from the zone to a foreign country. Products consumed in the U.S. are levied a duty that excludes the cost of American components and labor that went into the final product created in the zone.

The initial site of the foreign trade zone is the Port's 151,000 square-foot Marshall Avenue warehouse. In addition to this site, the Port can also apply for special subzone status at other locations, such as private business facilities.

U.S. and foreign investors and manufacturers often find it to their advantage to operate in such a subzone. Examples of successful import and export related subzones include: an Olivetti typewriter assembly plant in Harrisburg, Pennsylvania, a textile manufacturing plant in Boston,

a Honda motorcycle plant near Columbus, Ohio, a Ford Motor Company tractor assembly plant in Michigan, and a Volkswagen assembly plant in Pennsylvania. Volkwagens assembled at the plant used to be totally foreign made. Now they are made with more than 50% U.S. parts and supply jobs for over 5,500 people.

A foreign trade zone offers substantial tax savings to both importers and exporters. According to Charles E. Doan, assistant executive director at the Port, "Our foreign trade zone will help make the Port more attractive to both domestic and foreign business firms."

Foreign trade zones were first authorized by Congress in 1934. Although there were only ten such zones in 1970, there are currently 87 throughout the United States today. Last year foreign trade zones accounted for $6.5 billion in business and over 16,000 jobs. *(Pacific Gateway)*

Brazilian port news in brief

- The Ministry of Transportation is being confronted by a serious predicament: in order to further the reequipment of the Brazilian ports with resources of the World Bank, since the internal resources of the country are scarce, it shall have to change its posture of preference for the national industry.
- Until April of 1983 the trend of cargo handling in the Port of Rio was that of decrease. With 1,475,777 tons handled in April, against 2,236,136 tons in April of 82, the port is suffering on one hand under the effects of the government's policy of reduction of importations and on the other hand with the transfer of a significative cargo volume to the Port of Sepetiba, which in global terms does not preoccupy, since both ports are administered by the same company, CDRJ. *(PORTOS e NAVIOS)*

1982 Container traffic in the port of Antwerp marks a new record

From data provided by the Antwerp Port Authorities it appears that 1982 was another record year for container traffic.

In all 846,029 TEU were loaded/unloaded in Antwerp, i.e. a 6.5% increase over 1981. The number of TEU handled was well balanced between incoming traffic (415,967 TEU) and outgoing traffic (430,062 TEU).

Containerized cargo traffic amounted to 7,217,000 tons (+1.3% over 1981). Some 60% of this total was loaded with an overseas destination while the remaining 40% concerned incoming traffic. *(HINTERLAND)*

New regulations concerning the free time allowance on inbound cargo: Port of Antwerp

On 1 October 1983 new regulations governing the leaving of inbound cargo on the quay came into force in the port of Antwerp. These regulations replace the former regulations governing watching charges.

Thanks to close cooperation between all the various port sectors represented in the Community of Antwerp Port Interests it has been possible to make a number of important improvements to the contents, the principal ones being:

- all goods irrespective of quantity may in future remain on the quay without incurring demurrage charges for a period of two full working days. There are only a few exceptions to this rule, such as when a week-end is preceded or followed by a legal holiday. The period of exemption from demurrage charges is in this case extended by a maximum of 48 hours. This means that even in this case the consignee has at least one full working day in which to remove the goods or to sign the delivery order;
- Saturday is no longer taken into consideration when calculating the period of exemption. In the case of cargo unloaded on a Friday, the period during which charges are not payable thus runs through until the end of the day shift on Tuesday;
- no period of exemption from demurrage charges is granted for very valuable goods. The norm has in this case been raised from 50,000 to 250,000 BF per parcel. The weight norm has also been adjusted;
- from now on tariffs will be calculated per ton or per container instead of per 100 tons or per 15 containers. There is, however, a minimum sum payable in all circumstances. This means a considerable reduction in charges. A consignment of 120 t, for instance, according to the old regulations paid about 14,000 BF per 24 hours for the first two days after the period of exemption. From now on only 8,280 BF per 24 hours will have to be paid in such a case.

The wording of the text has also been completely revised, abridged and simplified. All footnotes have been eliminated. It naturally does not mean that goods may not remain longer than two days on the quay. What is involved is merely a question of liability. If the delivery order is signed the goods may remain longer on the quay without incurring further costs, this provided agreement by the terminal operator and considering port authority regulations. However, the consignee is then liable for possible loss or damage. He can also have the goods removed to a warehouse upon expiry of the period of exemption. This possibility is moreover explicitly provided for in cases where the delivery order is not fetched. The ship's agent may then at 13.00 hours at the latest on the last day of the period of exemption have the goods removed to a warehouse. All costs thus incurred must be borne by the consignee.

In fact demurrage costs have only to be paid when the consignee or his representative does not in good time take the necessary steps either to remove the goods from the quay or to sign the delivery order. These costs are primarily intended to prevent congestion on the quays and to avoid abuses.

The new regulations were approved by all the port's professional associations and ratified by the Community of Antwerp Port Interests (AGHA) and the Antwerp Chamber of Commerce and Industry.

By care of the Port of Antwerp Promotion Association an English translation of the unabridged text of these regulations will be published in the « Quadrilingual Vade-Mecum of the port of Antwerp ».

(HINTELAND)

Multipurpose bulk centre to be opened by mid-1985: Port of Le Havre

The Minister in charge of the Sea Division at the Ministry of Transport, Mr. Guy Lengagne, announced during his visit to Le Havre on 15th November last that the various decisions relative to the government's share in the financing of the multipurpose bulk centre were being implemented and that work could therefore begin. The new facility will be highly competitive and will be brought into service in 1985, filling a much-felt gap in the services we offer. As Mr. Lengagne said, "Unlike its North European competitors, Le Havre has not hitherto had the equipment and back-up areas needed for the development of a wide-ranging traffic in bulk products. This is both the reason and the justification for building a multipurpose bulk terminal in the alluvial plain stretching along the north bank of the Seine".

The Centre will be located in the industrial zone, beside the Havre Ship Canal. Work on the access roads, financed by the Port of Le Havre Authority, started on November 21st. In its first phase, the terminal will be able to accommodate vessels of 85,000 dwt fully laden or up to 150,000 dwt after lightening, and will be gradually expanded as traffic builds up until in its final stage it will be able to handle vessels of up to 250,000 dwt. The berth will be 250 m/820 ft long and will have high-speed loading and discharging equipment linking it directly to the storage areas. These will be constructed by CIPHA (Compagnie Industrielle des Pondéreux du Havre), a body composed of a number of public and private firms operating in the field of bulk traffics who joined together in order to partner the port authority in this major undertaking.

The Multipurpose Bulk Centre will enable the port authority to provide a really worthwhile new service for both importers and exporters of bulk products and the end result should be a return to France of traffics at present routed through foreign ports, with Le Havre playing a role in international transit comparable to that of its major Belgian and Dutch competitors.

Port of Le Havre signs big contract with KMPA

The port of Le Havre, which has long been known for its project studies round the world, recently signed a major engineering contract with the Korean Maritime and Port Administration, a tribute to our expertise all the more remarkable for the intense international competition involved.

Our partners in the projects are the Korean Port Engineering Company and two French firms specialising in the field, CDF Ingénierie and Coper Nopel. The work consists in designing coal handling equipment for the ports of Inchon and Ulsan, preparing the tender document, aiding the K.M.P.A. in evaluating the tenders, and supervising the construction of the equipment.

The port's technical collaboration with South Korea goes back to 1972, when we shared in designing the equipment for the Inchon sea locks. Much closer co-operation began in 1980 and we are at present working on a number of projects for the country, particularly the navigation control system at the Pyeong Taek natural gas terminal and the stimulation studies in the Bay of Kwang-Yang.

The preparation of the IXth Plan (1984-1988): Port of Rouen

The Board of Directors of the Port Authority studied an important document concerning a synthesis of ideas for the preparation of the IXth plan (1984–1988).

The essential axes of discussion taking into account the existence of a stagnant market, widespread competition and the difficult financial situation conjointly with the evolution of the port were:

- Raise technical and human potential and improve services rendered,
- Strengthen the development of the port on solid markets but without neglecting diversification,
- Obtain a river channel coherent with the potential of the harbour and in particular complete « the 10 m downstream draft » program,
- Insure the competitivity of the port while controling operational costs,
- Work in a spirit of active cooperation with the different partners of the port such as users, local collectivities, etc.

From these orientations and perspectives of traffic in each of the principal activities of the port, an equipment program has been implemented in the fields of access, portuary installations and industrialo-portuary areas.

1982-1983 cereal campaign — more than 5 m. tons: Port of Rouen

Rouen, the most important cereal exporting port in France and Europe, has registered regular increases in export tonnages in function of the expansion of its own storage and loading facilities.

The spectacular evolution of exports may be summarized by the following figures:

- Only 633,000 t were loaded during the 1970–71 campaign.
- For the first time more than 2 million tons were exported during the 1971–72 campaign.
- Exports exceeded 3 million tons in 1978–79 and 4 million tons in 1979–80.
- Almost 5 million tons in 1980–81 and 1981–82 (4,987,000 t and 4,983,000 t).

The 1982–1983 campaign was in excess of the 5 million ton mark. The exact tonnage exported between the 1st of August 1982 and the 31st of July 1983 was 5,596,469 t.

Also in 1983, steady cargo-handling in Bremen/Bremerhaven

Whereas cargo handled in 1983 in nearly all northwest European ports – from Antwerp, via Rotterdam, to Hamburg – decreased (in part, considerably); the inwards/outwards cargo-stream remained steady through Bremen and Bremerhaven (1982: 26.2 million tons 1983: 26.4). Handling here evinced a rising tendency from month to month so that the, already proverbial, 'cautious optimism' of ports-senator, Oswald Brinkmann, is justified also for 1984. Here undoubtedly the excellent port-technical installations and services – as well as the optimum traffic circum-

stances of the port group – have had their effect. Senator Brinkmann: "The Bremen ports offer their customers a widely-ranged palette of services, brought up to a high state of development. They are trump cards which can be played favourably at any time".

The reversal, as everywhere, in conventional general-cargo handling could be counter-acted in Bremen/Bremerhaven by the increase in the container-handling of 12 percent. The bulk commodities, which otherwise fell in the European ports, increased slightly in Bremen/Bremerhaven – to 9.7 million tons.

Steady growth in the Port of Amsterdam

International sea-going goods traffic in the Port of Amsterdam is showing a steady growth. Total goods traffic in the first half of 1983 totalled 12.3 million metric tons, an increase of 6.2 percent over the first six months of the previous year. This increase is the result of continued growth in the transport of mineral oils and animal fodders/oil seeds.

The transport of mineral oils increased from 4.9 million tons in the first six months of 1982 to 5.7 million tons in the first half of 1983, an increase of 17.5 percent. Animal fodder/oil seeds rose a total of 56.6 percent from 1.1 million tons to 1.8 million tons in the same period.

Other sectors showed declines. Ore traffic decreased by 4.9 percent to 560,000 tons while coal traffic went down 17.1 percent to 1.1 million tons. Grain traffic declined 28.3 percent to 1.1 million tons. Molasses traffic was 295,000 tons, down 18.5 percent from the 362,000 tons handled in the first half of 1982.

In the general cargo sector, there was an overall drop of 6.2 percent to 1.35 million tons. In this sector, however, there were increases in both container (up 5.4 percent) and timber (up 18.4 percent) traffic. The increase in timber traffic was due mainly to larger stockpilling by the trade. The total number of ships handled in the first half of 1983 increased by 30 to 2044.

The Amsterdam Port Management expect a good development of world trade in 1984, especially with regard to sea-going transport to and from North America and South East Asia, particularly in container traffic.

(HAVEN Amsterdam)

First signs of recovery may have become visible: Port of Rotterdam

The world recession is still clearly noticeable in the port of Rotterdam, but it looks very much as if the slight upturn reported in various sectors of the world economy, is being confirmed by the latest handling figures.

The second quarter of 1983 was still not a good quarter, but it compared favourably with the first three months of the year. Even more important is that it brought the end of a falling trend that had continued steadily for over fifteen months.

If handling activity in the first quarter of 1983 was 18.5 percent down on the same period of 1982, the drop was much less at 4.2 percent in the second 1983 quarter. In that period 59.8 million tonnes of cargo were handled.

All in all the port of Rotterdam handled 116 million tonnes of freight in the first half of 1983, about 15 million tonnes (11.7 percent) less than in the first half of the previous year.

It is noteworthy that the drop in the general cargo sector remained confined to 1.3 percent. The container sector chalked up further growth in volume. It was good news that all the general cargo categories together reached a total of 10.3 million tonnes in the second quarter of 1983, which was more than in all preceding quarters of 1982 and 1983.

The number of seagoing ships calling at the port of Rotterdam in the first half of 1983, totalled 15,706, nearly 400 down on the first half of 1982.

(Rotterdam Europoort Delta)

New Container Terminal in the Port of Lisbon

The Port of Lisbon is Portugal's largest port and handles about 14 million tons of cargo per year.

At present it has a container terminal – Santa Apolonia – which is operated directly by the Port of Lisbon Authority. It has 860 metres of quay wall. Depths of 8 metres and 8 hectares of storage area. This terminal is equipped with 3 harbour cranes and 5 transtrainer gantry cranes.

Its yearly turnover is about 80,000 TEU's.

In the view of the fact that the water depth at the existing terminal limits the tonnage of the ships that it is possible to revive. The Port Authority has decided to implement a new container terminal.

This new terminal will be located at the wharf of the Port of Lisbon – Alcantara – which has 1,100 metres of quay wall. Low-tide depths of 10 – 13 metres and storage ground of up to about 20 hectares. The aim of this project is to meet internal demand and also to attract additional traffic. In particular regarding transhipment which would benefit from the excellent geographical position of the Port of Lisbon in relation of shipping routes.

Operation of the new terminal will be carried out by a company with a majority of portuguese capital. Preferably with a competent foreign partner on a concessional basis. The concession will cover a period of twenty years and will be granted by means of an international tender.

ABP tops container league in North-West

Container business is booming at two of ABP's ports in the North-West. Figures released by the Department of Transport show that in 1982 over 50% of all unitised cargo shipped through North West Ports passed through Fleetwood and Garston. Fleetwood handled more unit load traffic than any other port in the Lancashire and Cumbria area (which includes Merseyside and Greater Manchester), notching up a record-breaking 1,774,000 tonnes of roll-on/roll-of unit loads. Garston (near Liverpool) handled 620,000 tonnes of lift on/lift off container traffic.

1983 has been another extremely busy year for the two ports, and last September Fleetwood handled its millionth load since the ro/ro terminal opened in 1975. During the year Associated British Ports obtained the necessary parliamentary powers for the construction of a second roll on/roll off berth.

The results at Garston are due to the successful operation of the port's North Dock container terminal, opened in 1982. ABP continues to improve this facility, and recently commenced a £400,000 scheme to widen the entrance to the North Dock. This will enable larger ships to use the terminal. The opening in 1984 of the new Garston by-pass will further improve road access to the port, which is also adjacent to a freightliner terminal.

ABP announce £350,000 project at Swansea

Associated British Ports has recently revealed a £350,000 plan to provide new storage facilities at its South Wales port of Swansea.

This new investment is being undertaken to cope with the increasing tonnages of heavy cargoes being handled at Swansea. Containers are an increasingly important part of the port's business, and regular shipments are now carried to and from Yugoslavia, Israel and India.

The new facilities will also provide storage space for exported steel slabs – another cargo that has shown a marked increase recently. Swansea is an important centre for the shipment of tinplate, steel coils, slabs, and other products manufactured by the steel industry.

Getting the job under way . . . start on grain terminal: Port of Brisbane

Work has started on the construction of new bulk grain export facilities for the Port of Brisbane. The installation will be located between the present bulk oil wharf and the container terminal on the Fisherman Islands.

It will cost $36 million... will handle 60,000 d.w.t. ships (and up to 80,000 d.w.t. with further dredging)... and is due to be operational by late 1985.

The Queensland Grain Handling Authority (trading as Bulk Grains Queensland) (formerly State Wheat Board) will contribute $28 million to the project's capital costs. That outlay will pay for the loading equipment and terminal storage.

The Port of Brisbane Authority's contribution will be $8 million to cover the cost of dredging, services, site reclamation and fill, and wharf construction.

The Authority has let a $1.7 million contract to Steel Mains Pty. Ltd. for the manufacture and supply of the wharf's steel piling.

The contract ($700,000) for the filling of the rail balloon loop area also has been let and is due for completion early in the new year.

Over the past couple of months, the Authority's main dredging unit, "Sir Thomas Hiley", has been providing sand fill for the terminal site.

The surcharge on the site is now being removed by a private contractor.

On site construction is expected to commence in February.

When completed, the installation will be able to load ships at the rate of up to 2200 tonnes per hour.

The new facility will operate as part of a coordinated grain export system which will include the present Pinkenba grain terminal.

Pinkenba is expected to stay "in action" for some time.

(Brisbane Portrait)

Taking the port to the people. . . with Warana

The Port of Brisbane Authority was "on show" – again – as the lead team (and float) in Brisbane's 1983 Warana Festival parade.

For the past three years, the Authority has been the parade's sponsor, not only in the visual sense but also as the organization which provides the trophies for which parade entrants compete each year.

Thirty of the Authority's staff members, all rigged out in smart gold, green and white uniforms, volunteered to march in the parade which was watched by an estimated 200,000 people.

Our marchers commented that this year the crowds seemed to be much more responsive and there were many spontaneous greetings between individual team members and the on-lookers, particularly children.

Their efforts were rewarded with a highly commended certificate in the "best unit" section – the first Warana award which the Authority has received.

Float winners received their prizes from the then Minister for Tourism, National Parks, Sports and the Arts (Hon. J.A. Elliott) at a trophy presentation function held at Parliament House on October 18. *(Brisbane Portrait)*

Marketing the Port of Tomorrow: Port of Geelong

The Port of Geelong is one of the first Port Authorities in Australia to have established a marketing department.

The Port's Marketing Department was expanded late last year and has the objective of encouraging freight and shipping operators into the State of Victoria and particularly Geelong.

The Department is headed by Marketing Manager, Paul Fletcher, who took up the position at the Port of Geelong in December 1982. Mr. Fletcher has a background in the air and road transport industries including ten years with Qantas in various senior management freight positions and three years as Pacific Marketing Manager for Emery Air Freight Corporation. Prior to moving to Geelong he was New South Wales Manager for Fleetways.

Mr. Fletcher said one of the Department's long term priorities was the development of Port of Geelong as the multi-mode transport centre for south-eastern Australia.

He said the Authority's marketing plan has to be reviewed and updated, consistently, as planning and constructions proceed and as new trading opportunities emerge. He said the state and country's economic and financial circumstances also have an effect on the Port's trading objectives.

"Geelong is already well established as Victoria's premier bulk cargo port, handling grain exports, petroleum products, alumina and fertilizer components", Mr. Fletcher said.

"All these trades are forecast to expand in the future and Port facilities must be expanded to meet rising demand."

The Marketing Department is also responsible for setting all pricing on port tariffs and rates and charges.

It implements market research for new trade potentials, carries out product evaluation and business development and directs sales meetings on behalf of the Port.

Mr. Fletcher said "The Progressive implementation of the Port's detailed Development plan will see the Port of Geelong well established by the turn of the century as one of Australia's leading freight movement facilities.

"We are actively promoting ourselves in the United Kingdom and European markets and Port Authority management is also concentrating its efforts in developing the lucrative Japanese and South-East Asian contingent", he said. *(Portside)*

Port of Hong Kong just keeps on growing

Hong Kong's container port at Kwai Chung in the New Territories, which may already have replaced New York as the world's second busiest container terminal, is to undergo a US$84 million three-phase expansion programme.

The project is due to be completed in 1988.

The Secretary for Economic Services, Mr. Piers Jacobs, last week signed an agreement with Hong Kong International Terminals Ltd. and SeaLand Orient Ltd. to expand the Kwai Chung container port to meet shipping needs through the rest of this decade and the next.

Under the first phase, some 25.5 hectares of seabed in the Kwai Chung creek will be reclaimed within the next three years, increasing the port's working capacity from its present 1.4 million twenty-foot equivalent units (TEUs) by 57 percent to 2.2 million TEUs by 1986.

The second phase of the project will comprise a new terminal with three berths to the south of the reclamation. Construction of this phase will start in 1986 and will be completed in 1988, raising the container port's capacity by another 45 percent.

Construction of two additional terminals is being planned under the third phase of the expansion.

"The investment in this expansion is undoubtedly a vote of confidence by the two companies and the Hong Kong Government in the future of Hong Kong," Mr. Jacobs said.

(The Week in Hong Kong)

Port of Mizushima Promotional Association on tour: Port of Adelaide

At the suggestion of the Australia-Japan Fouccation, and with the enthusiastic support of both the Port of Mizushima and the Port of Adelaide, the two marine authorities are in the final stages of forming a twin-port relationship, a highly practical arrangement in an industrial sense and in cultural terms.

Headed by Mizushima's port and industrial doyen, Kaiki Suzuki, president of the Kurashiki Transport Corporation and chairman of the Mizushima Port Promotional Association, a 16-member delegation arrived in SA on November 14 to seal the twinning agreement. By early 1984, the formal knots may have been tied.

With increasing Japanese involvement in the SA economy as the basis of a steadily growing two-way trade and joint-venture partnership – Japan is SA's largest individual trading region – there are many bonds on which such a relationship can comfortably rest. As well, companies like Mitsubishi Motors, Mitsubishi Chemical and Asahi Chemical, all of which have an active interest in SA, have part of their operations in Mizushima, which is located on the Seto Inland Sea, South-West of Tokyo, Mizushima and Adelaide have much to learn from the contribute to each other in an industrial sense.

They also share the common bond of having the relationship with the City of Auckland, New Zealand. In fact, the delegation from Mizushima went on to Auckland after its Port of Adelaide visit.

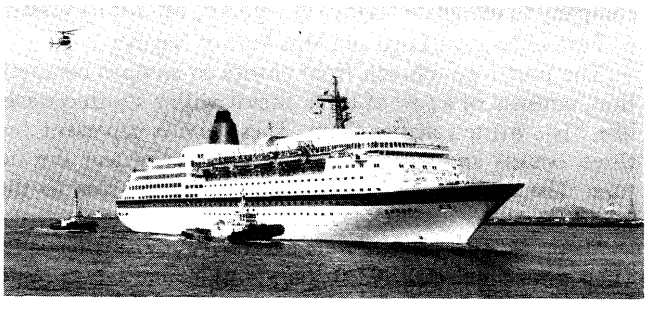
The riverboat "Proud Mary" got into the act because the River Murray is a declared harbor under the control of the Department of Marine and Harbors from its mouth to the Victorian border. Deputy mission leaders were Michio Iwayama (Kawasaki Steel), Masayuki Kunita (Mitsubishi Motors) and Shigeru Suwaki (City of Kurashiki), and Teiichi Imai, director of the Okayama Prefecture Mizushima Port and Urban Development Bureau, was senior delegation member. The group inspected the Port of Adelaide, travelled by riverboat from Murray Bridge to Walker's Flat, saw and sampled in the Barossa and Clare Valleys, overflew Port Pirie, Port Bonython and Whyalla en route to Port Lincoln for an overnight stay, shared lunch with the Australia-Japan Businessmen's Association, visited Mitsubishi Motors and dined with Marine Minister Roy Abbott and leading Port industrial representatives.

1983's top ten news items: Port of Nagoya

The visit by the luxury liner "Europa" and the inauguration of the Nagoya/Fremantle sister port affiliation topped the list of the ten major news items of 1983, chosen by the Nagoya Port Authority. As these stories indicate, the authority is progressing with its objective of creating a people-oriented port. The Port Building, with a Maritime Museum, Port Viewing Observatory and restaurants, is scheduled for completion in July of this year, and is certain to prove popular with Nagoya residents. The top ten news stories were as follows:

1. West German luxury liner "Europa" visits Nagoya

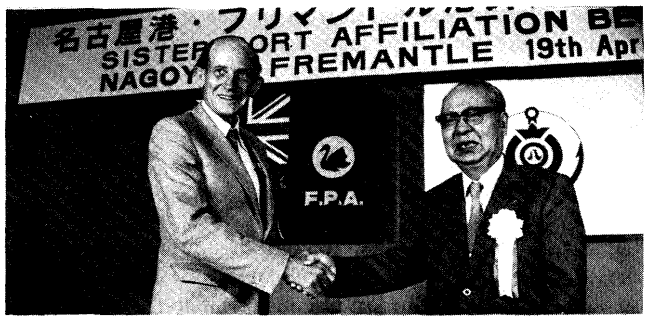
The passenger liner "Europa," on a round-the-world tour, visited Nagoya on April 8, and was welcomed with water cannons, balloons and marching bands. After "Europa," "Coral Princess," and "Pria Murie" also visited Nagoya last year.



The luxury passenger liner "Europa" with 750 people on board enters the Port of Nagoya.

2. Nagoya/Fremantle sister port affiliation agreement signed

Nagoya's second sister port affiliation came into being on April 19, when it signed an agreement with Fremantle (Western Australia). Nagoya and Los Angeles signed a simi-



Mr. T.J. Lewis, Chairman of the Fremantle Port Authority and Mr. Masao Motoyama, Mayor of Nagoya and then President of the Nagoya Port Authority, shake hands at the signing ceremony for the sister-port agreement.

lar agreement in 1959. Nagoya and Fremantle will continue to develop their relationship through the exchange of information and personnel.

3. Container cargo volume jumps

Container cargo handled by the Port of Nagoya in 1983 is estimated to have increased by 30 percent form 1982 to 5 million tons. The increase was triggered by the marked trend for developing countries to containerize, and the designation of Nagoya as a port of call by European container shipping lines.

4. "Trio Group" chooses Nagoya as a port of call for fully containerized ships on the European route

The "Trio Group," which holds the largest share of container traffic to Europe, called at Nagoya for the first time on March 16. The ScanDutch Group inaugurated a similar service in 1982. With vessels from these two groups now calling at Nagoya, most Europe-bound cargo is now loaded at Nagoya. This resulted in considerable decrease of feeder cargo formerly shipped through other ports.

5. Nagoya Port conducts first overseas promotion campaign

The Port of Nagoya held its first overseas promotion campaign in San Francisco and Los Angeles from October 1 to 10, 1983.

The port representatives also visited APL (American President Lines), which is based in Oakland, to urge the company to designate Nagoya as a port of call for its vessels.

6. Port of Nagoya/Logo and Miss Port of Nagoya

The port logo, chosen from entries to an open competition, consists of a row of three circles, with a stylized wave-like "N" written across them. These circles represent the three oceans and symbolize trade, prosperity and the future. The "N" is Nagoya reaching across the seas to the world.

Misses Port of Nagoya were chosen from 71 contestants. Their duties include participating in welcoming ceremonies for ships and other events.

7. Garden Pier Green Park opened

The Garden Pier Green Park was opened to the public as a recreation area for local residents, port workers and tourists. The Fountain Square and Port Building, with a Maritime Museum and Port-Viewing Observatory, will open in July 1984.

8. Japan's first LNG carrier "Bishu Maru" (100,000 tons) calls at the Port of Nagoya

Japan's first LNG carrier, operated by a new company set up jointly by three of Japan's major shipping lines, called at Nagoya on August 31. The company plans to operate three LNG carriers which will transport the 3.2 million tons of LNG a year Japan will import from Indonesia under a 20-year agreement.

9. Inaei Overhead Bridge opened

The Inaei Overhead Bridge, located behind the Nagoya container terminal, was opened on November 6, 1983, to facilitate the flow of cargo out of the terminal.

10. Supporting pillars for the Nagoya Port West Bridge installed

The supporting pillars for the Nagoya Port West Bridge, scheduled for completion in March 1985, were installed on July 28, 1983. The bridge will link the Port of Nagoya's two container terminals, the Kinjo and the NCB, and improve port efficiency in general.

International Container Center opens: Port of Osaka

The first warehouse (Q-1) in the Internaitonal Container Center, which aims at facilitating collection of general merchandise cargo at the Port, opened 1st December last.

This warehouse features an elevated floor (5,000 m^2) and is to be used by three cargo handling firms. 170 thousand tons of container cargo are to pass through the warehouse each year.

Construction on a second warehouse will begin in 1984.

Fergusson Container Terminal operation under reveiw

The Auckland Harbour Board has engaged a British port consultancy to study the operation of Fergusson Container Terminal at Auckland.

The Board took over operation of the terminal soon after it opened in 1971 and the volume of container traffic has increased steadily from 10,000 containers a year to more than 100,000. Around $40 million has been spent by the Board in developing and equipping the terminal, which now employs 400 people to handle 1.5 million tonnes of cargo annually. The Board earns $40 million a year in revenue from the terminal which services about 230 ships each year.

The Board's General Manager, Mr. R.T. Lorimer, says the possibility of new services being introduced and the need to improve performance generally within the Board's Department are seen as providing an appropriate time for a revision of the terminal's systems and operations, which have remained largely unchanged during the past decade. In broad terms the study is:

- To review the present management and supervisory structure of the Container Terminal operation and make recommendations.
- To observe and review the current operational capability, practice, procedure, associated systems and the interface between the port users and the management team of Auckland Harbour Board.
- To consider and comment on peripheral aspects related to the effective and efficient operation of the movement of containers through Fergusson Wharf Container Terminal including the Monash Street Container Base.

It will also advise the Board on the possible effect which may occur in the future if there is any dramatic change in the use of rail and road transport.

The study project will be headed by Mr. R.C. Bridges, Manager of the Felixstowe Port Consultancy Service.

The Port of Felixstowe on England's east coast is known throughout the maritime world as Britain's largest and most efficient container terminal. The port is unusual in that it is privately owned by the Felixstowe Dock and Railway Company, and has been developed during the past 20 years from a derelict tidal basin into a widely admired example of the application of modern port management and operation techniques, with an annual throughput exceeding 500,000 TEUs.

Felixtowe's performance results caused frequent requests from around the world for advice and instruction, and the setting up of Felixstowe Port Consultancy Service as a division of the port company. The service has developed container and unitised cargo terminals for clients throughout the world, including the Port of Geelong in Australia. Among its most recently completed assignments was a British Government-backed scheme to redevelop the Kenyan port industry. *(New Report)*

NAF Levy System — Port-by-port system an impossible goal?

One of the most problematical subjects on the agenda of Auckland Harbour Board meetings – and it appears there often – is the National Administration Fund Levy struck by the Waterfront Industry Commission mainly to pay watersiders at New Zealand's ports for 'idle time'.

Waterfront labour in New Zealand is paid by the Commission (see box). Port users – stevedores, shipping companies and agents – are required to pre-pay on a weekly basis to the Commission the cost of employing that labour.

The ports are required to register their labour forces at a manning level consistent with normal port activity. If a port requires a greater than normal number of watersiders, these can be obtained on temporary transfer from another port, travel and accommodation costs being met from the NAF levy. If a port has no ships berthed and therefore no work for its registered watersiders, the men are paid as if they were doing a normal 40-hours-a-week stint.

Built in to the amount paid to the Commission by port users for waterfront labour is a fee to cover this idle time, travel accommodation, holiday pay and various other amounts. But the bulk of the money collected by way of the National Administration Fund Levy goes to meet idle time payments.

This can lead to situations which, to say the least, are interesting. The Commission publishes regular reports showing the amount of idle time clocked up by each port's workforce and the amount of money generated through each port for the NAF Levy. The Commission insists that these figures remain confidential to the industry but it is fairly common knowledge that the customers of a busy port like Auckland, with comparatively little idle time for its watersiders, contribute massively to the fund and the port is generally very much 'incredit'. Its users, that is, pay in very much more most of the time than the fund pays out to non-working Auckland watersiders – at times to the extent of around a million dollars a year.

At the other extreme, a port like Opua in the Bay of Islands, which has been known to go almost a year without seeing a single ship, and which has a team of more than 20 registered watersiders, is always distinctly in debit to the fund.

This pattern is for users of the country's larger and busier ports to subsidise, through the NAF Levy, the operations of those ports which are, to varying degrees, uneconomic.

And it doesn't stop there. No one would call the Port of Tauranga an economically marginal operation but during a recent dramatic downturn in log exports Tauranga was considerably in debit to the fund while Auckland was substantially in credit, and this at a time when there was frequent public speculation as to which of the two ports would be chosen by New Zealand Steel Limited to handle the increased tonnages anticipated from that company's planned major expansion.

As Auckland Harbour Board Chairman, Mr. M.A. Shanahan put it: 'We're subsidising our competitors'.

General dissatisfaction with this situation has caused the Board to take an active interest in supporting a port-by-port approach which would lead to the users of each port paying to support that port's workforce rather than into a general fund for national distribution.

> The waterfront cargo handling industry has been controlled by the Government for many years. The Waterfront Industry Act 1976 was enacted to consolidate, amend and update all previous legislation in the industry.
>
> The Act provides for Government control in many areas but in particular it provides the machinery to control the amount of waterfront labour employed on a national basis, the registration of both employers and workers, the engagement and allocation of labour, payment of wages and industrial conciliation procedures.
>
> The administration of most of these functions is undertaken by the Waterfront Industry Commission, set up under the Act, and consisting of five members appointed by The Governor-General. Of these one is the appointed chairman, two are nominated by port employers and two by the waterside workers.
>
> Members at 30 September 1982, were: Mr. I.M. Mackay (Chairman); Messrs. D.I. Binnie and N. de V. Lawrence, representing employers; Messrs. M.E. Foster and N.F. Quinlan, representing waterside workers.

This proposal, advanced to the Waterfront Industry Commission in 1981, was rejected because of 'the possible disadvantages to the balanced growth of New Zealand's national port system'.

The Commission did, however, suggest a new three-tier levy system to replace the existing single levy procedure and this was seen by most port users to go some way, albeit not very far, towards removing some of the inequities they saw in the existing system.

This was followed by the submission by the New Zealand Association of Waterfront Employers of an alternative three-tier proposal, the ingredients of which were seen to form a mix that was a little closer to the ideal of a port-by-port levy system. At the same time submissions were made by several individual harbour boards and shipping companies, as well as the NZ Container Terminal Operators' Association and the Harbours Association of New Zealand.

The Commission received these submissions in September, 1982, but because of the pressure of other work, held over its consideration of them.

In December, 1982, the Commission indicated that because of a probable substantial deficit in the National Administration Fund for the year to 30 September 1983, an increase of not less than 10 percent in the NAF levy was probable after 28 March 1983.

The announcement met with wide-spread opposition throughout the industry, and the Commission deferred consideration of a levy increase until September 1983. The Auckland Harbour Board felt that the Commission's substantial reserves should be scrutinished with a view to bridging deficiencies rather than increasing the NAF levy.

Auckland-based critics of the current levy system point out that the port industry as a whole, and not just those port users who pay the levy, is under pressure from the economic recession and has had to take various measures to hold or reduce costs.

It is often said by Auckland-based critics of the WIC that it does not appear to be making any effort to reduce costs and should not, particularly in the current climate of economic stringency, be adhering to a cost-plus operational philosophy.

Apart from the obvious potential cost-saving move of reducing the number of workers registered at ports, there is the area of the Commission's own internal costs.

The Commission's accounting system is frequently described as antiquated. Despite large reserves, the Commission still demands a weekly deposit from stevedores and shipping agents to cover wages for the following week. This creates a lot of bookkeeping and a considerable amount could be saved if one account was sent out when the job was finished, rather than multiple accounts if a ship is in port for some time.

The discussion between the employers and the Commission continues with the former holding steadfastly to what at times must seem the impossible goal of a port-by-port levy system. *(Port of Auckland)*

Success lies in containerisation and training: Dr. Yeo Ning Hong, Acting Minister for Communications & Minister of State, Singapore

ASEAN ports have responded well to the advent and growth of containerisation. Large capital investments have been made on suitable cargo handling equipment and container facilities while port personnel have undergone training to acquire higher skills in port management and operations.

This two-pronged approach will act as catalyst for greater growth in intra-ASEAN and international trade when the world economy recovers.

This was revealed by Dr. Yeo Ning Hong, Acting Minister for Communications and Minister of State (Defence) in his keynote address during the opening ceremony of the 9th Meeting of the ASEAN Port Authorities Association (APAA) on 5 Dec. 1983 at the WTC Auditorium.

Dr. Yeo warned that the world economic situation is everchanging and each recovery demands new philosophies of business management and new technologies. To keep up, "ASEAN ports must evolve to enhance ASEAN's ability to cope with expanding regional and global trade." This was recognized way back in 1981 when the ASEAN Integrated Work Programme on Shipping (IWPS) was formulated for the period 1982 – 1986. The development of ASEAN ports was one of the major programmes in the IWPS.

He then highlighted some of the projects undertaken by APAA. One particularly noteworthy project is the standardization and simplification of documentation for the movement of ships and cargo among ASEAN ports. Another is the enhancement of safety in the transportation, handling and storage of dangerous goods so as to minimize possible pollution, damage or loss to our resources.

In conclusion, Dr. Yeo expressed the hope that APAA continue to provide the impetus for establishing a chain of bustling ports in ASEAN with high levels of facilities and services. *(Port View)*

Productivity in the Port of Singapore

(Excerpts of the speech by Mr. Wong Hung Khim, General Manager, Port of Singapore Authority, at the productivity month function held last November at the WTC Conference Hall)

"The most important determinant for improved productivity rests upon a highly motivated workforce with the will to accept changes. In the years to come, the strategy to promote productivity in the PSA through a people oriented programme will be the mainstay of our productivity drive. This will involve attitudinal and value changes on the part of our employees."

"A survey conducted by the Times Organisation in August this year indicated that action on productivity is not yet widespread in the workplace. 71% of Singaporeans felt that productivity in their companies was hindered because managers were not good at motivating workers. They also believed that workers lacked the understanding of productivity. 58% felt that workers were not encouraged to make suggestions. These findings are indications of the manager's role to achieve higher productivity."

"The manager must critically re-examine the type of relationship and how effectively he has been communicating with his subordinate. One cannot elicit the best from a person or cause a change in his attitude by issuing orders alone. The employee would perform better if his job is well defined, he has a goal to his job, and there is a two-way communication between himself and his manager. In this way, the employee not only gets to know what is expected of him – but also the reasons for the expectation. One could often do something better if the reasons are known."

"Managers must also foster job commitment in their workforce. This commitment can be attained if the employee is involved, in some way, in planning his job. He could then obtain satisfaction in doing his job."

"Last year, our productivity in terms of value added per employee rose by 10.6 per cent. This double-digit growth rate compares favourably with the 3.7 and 7.3 per cent achieved respectively by the whole economy and the transport and communication sector. We should not be complacent on what we have achieved. All employees must continue to be conscious of productivity in whatever they are doing." *(Port View)*

17th Century, Dutch ships outside Muscat

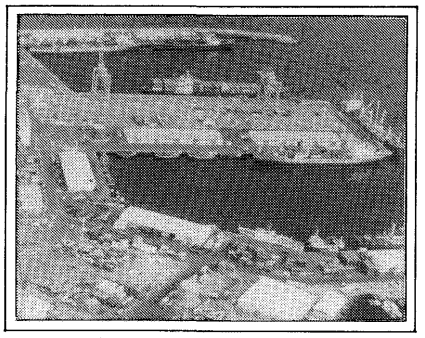
Our services are not just a decade old.

Ancient Muscat for centuries was the prominent market place in the Gulf for merchants all over the world.

At the entrance to the Gulf, today, once again Oman is a major trading centre for the modern world. Port Qaboos is the epi-centre of the trading activities in Oman.

Port Qaboos was the first port in the Gulf to be clear of congestion. Geared with the modern cargo handling facilities and round-the- clock operation, Port Qaboos offers fastest turnaround and excellent transhipment service by land and sea for the entire Gulf region. The container terminal offers big area for storage and handles container vessels with two 35 tons Gantry Cranes and modern supporting quay equipment.

Less time spent at a Port means more value for your money and Port Qaboos offers this to you.



Modern Port Qaboos

A tradition of service that goes back to centuries.

IHO

Port Services Corporation Limited
P.O. Box 133, Muscat, Sultanate of Oman
Tel : 734001 Telex : 5233 MQABOOS ON

MITSUI Automated Container Terminal System

Masses of data! But how to process it for efficient handling of containers?

The Mitsui System can speed up and rationalize container handling to give increased benefits from container transportation. Developed in 1972, this system has proved its efficiency at the busy Ohi Pier, Port of Tokyo, and it could be working for you in solving your container terminal problems, particularly those in the fields of cargo information and operations systems.

❶ Computer Room
❷ Gate Office
❸ Operation Room
❹ Portainer®
❺ Rail-Mounted Transtainer®
❻ Rubber-Tired Transtainer®

MITSUI Automated Container Terminal System Consists of 6 sub-systems.

1. Yard Plan Computer System
2. Yard Operation Computer System
3. Data Transmission and Oral Communication System
4. Transtainer® Automatic Steering System
5. Transtainer® Operation Supervising System
6. Portainer® Operation Supervising System

MES MITSUI ENGINEERING & SHIPBUILDING CO., LTD.

Head Office: 6-4, Tsukiji 5-chome, Chuo-ku, Tokyo, 104 Japan
Cable: "MITUIZOSEN TOKYO", Telex: J22924, J22821
Material Handling Machinery Sales Department Tel. (03) 544-3677
Systems Headquarters Marketing Dept. Tel (03) 544-3272
Overseas Office: New York, Los Angeles, Mexico, London, Duesseldorf, Vienna, Singapore, Hong Kong, Rio de Janeiro

昭和四十四年十一月十五日第三種郵便物認可　誌名「PORTS and HARBORS」
三月号　第二十九巻第二号　昭和五十九年二月二十日発行（毎月一回二十日発行）
発行所　東京都港区虎ノ門一丁目二の八　〒一〇五　国際港湾協会
定価六〇〇円