

DORTS and HARBORS January, 1977 Vol. 22, No. 1

DLYMPIC

昭和44年11月15日第三種郵便物認可 昭和52年1月号 昭和51年12月20日発行 第22卷第1号(毎月1回20日発行)

Port of Rotterdam

AZIE

Houston Conference April 24-30, 1977

The Publisher: The International Association of Ports and Harbors Kotohira-Kaikan Bldg. 1, Kotohira-cho, Minato-ku, Tokyo 105, Japan

R SAFER BERTHING!

000

88

<u>[]/</u>

000

10000

30

 \square

NNN

Γ.

qaQ

00000

~~

2000

Of all marine navigation, one of the most tricky is safely berthing the ship. With Bridgestone Marine Fenders, safer berthing is assured while the costs for construction and maintenance are reasonably low. Bridgestone Marine Fenders can meet any challenge!

Cell Fender	С3000Н —С630Н	Absorbs Maximum Energy of 730 ton-meter — for Huge Tankers and Ore Carriers
Super M Fender	SM1000H —SM250H	New Type Fender for Medium Size of Vessels
Super Arch Fender	SA1000H —SA150H	For Medium Size of Vessels
Cylindrical Fender	2000×1000 -150×75	For General Cargoes
Turtle Fender	100H×0.5M, 1.0M 130H×0.5M	For Fishing Port



NO. I - I Chome, Kyobashi, Chuo-ku, Tokyo, Japan. TELEPHONE: 567-0111 TELEX: J22217, J23207, J23227 CABLE: BSTIRE TOKYO

Revolutionary



PACECO's New Catenary Unloader can handle virtually any free-flowing material—faster and at lower cost per ton—at a fraction of the investment and maintenance cost of conventional equipment.

Unique design consists of endless line of buckets connected by wire rope, suspended from special patented sprockets and easily maneuvered by hinged boom. Reaches into remote areas of ship's hold; cleans with practically no leftovers. Moving bucket line digs and fills at steady rate regardless of depth of material. PACECO's bulk unloader can be operated from stiffleg or crane, transfers easily to free crane for other jobs.









Bulk Loaders — This bulk loader, operated by one man, handles 750 Long Tons per hour of Alumina; 1000 Long Tons per hour of Bauxite. Designed with slewing upper tower and hinged apron.

Bulk Unloaders—One of the world's largest Alumina unloaders, designed by PACECO with dust enclosure over hopper and sealed clamshell bucket. Handles 1000 Long Tons per hour with minimum loss of material.



Telephone or write today. We're ready to schedule your delivery.

Contact PACECO or the office nearest you.

Headquarters Office — PACECO, Dept. 24-A. Alameda, CA 94501 • (415) 522-6100 • Telex 335-399. New York Representative — ROBERT MOORE CORP., 350 Main St., Port Washington, N.Y. 11050. PACECO European Sales Office — PACECO INTERNATIONAL LIMITED, London.

Other

PACECO bulk handling

equipment.



Mitsui O.S.K. Lines covers the globe with over 330 ships

It provides worldwide services, connecting 5 continents via 27 regular routes — including 7 container routes, and 750 regular sailings annually to major ports in every part of the world.

The most complete international network. Over 330 ships including many specialized types make up the Mitsui O.S.K. Lines fleet. Whatever needs to be shipped – natural resources, industrial materials, commodities . . . any cargo can be accommodated by its ships.

In Asia, for example, Mitsui O.S.K. Lines offers door-to-door container services between Southeast Asian countries and Europe and Mediterranean. And also it links North America, Australia and New Zealand with Asian countries via Japan. This is Mitsui O.S.K. Lines' way of contributing to the expansion of international trade.



Boom with us?



Container cranes supplied to the Port of Portland, U.S.A.

70-long ton container gantry crane for the Port of Boston.

Profits go up. Costs go down. In Portland, Seattle and Boston. And in Hong Kong, Singapore, Port Kelang and Japanese ports, too. Worldwide. Via over 15,000 Hitachi cranes. Container and otherwise. And a word to the wise. Check out our patented "semi-rope" trolley gantry cranes. They reduce shock and sway of cargo. We have also provided high speed container cranes which employ our recently developed sway stop system. *Two container cranes now in operation at the Port of Hong Kong.*

Put both in your port and see for yourself.

You will be busy . . . but happy.



DAITO KOGYO —— Give priority to socially beneficial projects.





GENERAL CONTRACTOR Engineering & Consultants

Head

Office:

Overseas Branches:

1-38-6, Kameido, Koto-ku, Tokyo, Japan Telex: J23730 Cable Address: "KENSETSUDAITO TOKYO" Tel.: Tokyo 685-2111 Brunei: P.O. Box 2309, Bandar Seri Begawan Malaysia: P.O. Box 424, Kota Kinabalu Sabah, East Malaysia Indonesia: Jakarta Office, No. 8, Jalan Lembang, Jakarta

HARBORS PORTS and

Editor: Yoshio Hayashi

Published monthly by The International Association of Ports and Harbors

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

President

Howe Yoon Chong Chairman/General Manager The Port of Singapore Authority

Executive Committee:

Chairman:

Howe Yoon Chong President, IAPH Chairman/General Manager The Port of Singapore Authority

Members:

George W. Altvater 1st Vice President, IAPH Executive Director Port of Houston

Stanley Johnson 2nd Vice President, IAPH Formerly Managing Director British Transport Docks Board

A.S. Mayne 3rd Vice President, IAPH Chairman Melbourne Harbor Trust Commissioners Robert L.M. Vleugels

Immediate Past President Director General Port of Antwerp R.O. Ajayi

Deputy General Manager Nigerian Ports Authority

Y.M. Raja Azam Chairman Kelang Port Authority

Robert Boeuf Ingenieur General des Ponts et Chaussees, Paris

R.W. Carr Chairman Auckland Harbour Board

J.H.W. Cavey Chief, Harbours and Ports Department of Transport, Canada

Ir. J. den Toom anaging Director Port Management of Amsterdam

P.K. Kinyanjui Chairman East African Harbours Corporation

Fumio Kohmura Vice President Nagoya Port Authority

Ben E. Nutter Executive Director Port of Oakland Bruce Procope Chairman Port Authority of Trinidad and Tobago

Thomas T. Soules Port Director San Francisco Port Commission Anthony J. Tozzoli Director, Marine Terminals The Port Authority of New York

and New Jersev Gengo Tsuboi

Vice Chairman The Japan Shipowners' Association January, 1977 Vol. 22, No. 1

CONTENTS

Secretary General: Dr. Hajime Sato

Head Office: Kotohira-Kaikan Bldg. 1, Kotohira-cho, Minato-ku, Tokyo 105, Japan Tel.: TOKYO (591) 4261 Cable: "IAPHCENTRAL TOKYO" Telex: 02222516 IAPH J

New Year's Messages (From Mr. Howe Yoon Chong, President, and Dr. Hajime Sato, Secretary General)-Four Panels are Slated at the Coming Houston Conference-IAPH Introduces Its Views into IMCO Conference on Limitation of Liability for Maritime Claims-UNCTAD's publication contributed-US/Japan experts met to discuss problems of toxic bottom sediment-Port of Los Angeles Mission visited Japan and Korea-Mr. Remond of Port of Marseille visited Tokyo-Hamburg Port Delegates Visited the Head Office-Port Auth. of NY & NJ celebrated 10th anniversary of its Tokyo Office-Survey Team from Trinidad & Tobago visited Japan-K.M.P.A. Operations Experts Visited-Outline of IAPH Now Available in Three Languages-PSA Training Courses for 1977-Ship Masters' Association commends Standard Marine Navigational Vocabulary-ESCAP-IAPH jointly support SEATEC '77 Seminar

Tonics

Future Trends in Port Development (By Mr. George	
W. Altvater: address delivered in Melbourne,	
Australia))
The Linear Loader (Paul Soros, President, Soros	
Associates)	2
Placon Ltd.: Consultancy-Training 26	3
Hamburg Mission to Japan 28	
International Intermodal Conference held at the	
Port of Oakland	
25th Conference of The Association of Australian	
Port and Marine Authorities	2
Intermodal Conference in Houston a Success	
Ports:	
New Marine Traffic Control Center Being	
Installed at Panama Canal 30)
Le Verdon, Container Terminal at Bordeaux	3
Le Havre Flashes, September	3
Brisbane and AAPMA 52	
Orbiter Probe (International News):	3

The Cover:

Rotterdam is Europe's leading oil port. Rotterdam-Europoort is accessible to fully-laden tankers drawing 68 feet of water. In 1975 Rotterdam handled about 125 million tons of oil and oil products.

Price US\$2.00 per copy US\$20.00 per year

Page

225 F.C.C.

Hyatt Hotel-Singapore



nar 15

The dredging and construction of ports for developing countries

in.

Sponsored by
UNESCAP, United Nations Economic & Social Commission for Asia and the Pacific □ IAPH, International Association of Ports & Harbors

Head Office Intec Press Ltd. 3 Station Parade, Whyteleafe, Surrey, England. Tel: 01-668 1306 Telex: 27950 Ref. 378

Continent Mieke Schoenmakers, Holysingel 146, Vlaardingen, The Netherlands, Tel: (010) 71 22 66

Singapore & S.E. Asia MarIntec S.E.A. (Pte) Ltd. J-6, International Building Orchard Road, Singapore 9 Telephone: 235 3900/3909 Telex: RS 23890 NAVTRAN

Japan News Advertising Ltd., New Riccar Kaikan Bldg., 2-3 Ginza 6-chome, Chuo-Ku, Tokyo 104 Telephone: 574 6311 Telex: 252 2268

U.S.A. M. Randolph Long 301, East 17th Street, New York, N.Y. 10017, U.S.A. Tel: (212) 688 7084.

PORTS and HARBORS

IAPH Head Office Announcements: Pages 7~18 NEW YEAR'S MESSAGES



From Mr. Howe Yoon Chong President

The Executive Committee had a successful meeting in Curacao, Netherlands Antilles, in April 1976. It was gratifying that most of the Executive Committee Members attended the meeting and with their guidance and cooperation, a number of problems faced by the Association, including the difficult question of self-sufficiency, were resolved. With active participation and cooperation from members, the IAPH will grow from strength to strength and become a truly effective international organisation representing the interests and aspirations of ports and harbours from all corners of the globe.

During 1976, the Head Office and the various special committees continued to work hard to bring about greater efficiency and general improvements. I must express appreciation to all concerned for their untiring efforts and zeal. The efforts to attract more members to join the Association have produced some measure of success. We who are members and who know the work of the IAPH must be unsparing in our efforts and hard work to support the members of the Membership Committee so as to enable them to contact every port and harbour from around the world to invite them to join the Association. The Executive Committee with the full support and cooperation of the Directors of the Association will strive to expand the activities of the Association to benefit all members. It is my hope that in 1977, we will be able to intensify this

(Continued on next column)



From Dr. Hajime Sato Secretary General

A Happy New Year! We, myself and my staff in the Secretariat jointly, pray that the new year may bring a good health and prosperity to every and all members of the Association.

Our Association this day has entered upon the 22nd year of its existence. It is a matter for our mutual congratulation that, with the fast support of the members and the competent and consistent guidance of the successive presidents, IAPH now is grown to be a global body both in (Continued on page 10)

membership drive to bring in an even greater number of members.

The world economic recovery has not been as fast as was expected. Consequently most ports and port related industries are still facing problems resulting from the decline in international trade and the reduction in tonnage of cargo handled. It is therefore both timely and appropriate that the theme chosen for the 10th Conference in Houston is "World Ports' Role in Economic Development". The topics selected for discussion at the panel sessions of the 10th Conference will be of great interest to members of the Association, and I am sure all of you will make every effort to attend the Houston Conference in April 1977 to make it a resounding success.

My best wishes to all of you for a Happy and Prosperous 1977 and I look forward to meeting you all in Houston.

Four Panels Are Slated at



Mr. B.M. Tukur

PANEL SESSION NO. 1 "PROBLEMS OF PORT CONGESTION"

Chairman: Alhaji B.M. Tukur General Manager, Nigerian Ports Authority, Lagos, Nigeria.

MESSAGE:

While it is true that international trade is of great significance to the world's political and economic life, it is equally true that ports play a very important role in fostering this trade.

Unfortunately, within the last few years, ports in a number of countries have been greatly plagued by congestion which adversely affected not only their economic development but also the rate of inflation. Seasonal port congestion is not entirely a new phenomenon, but lately it has developed into near permanent feature in many places. In such places, it had assumed such frightening dimensions as to warrent a detailed analysis leading to a number of solutions which could help prevent it from recurring.

It is this important assignment that this panel, of which I have the privilege to Chairman, would tackle at the working session of the 10th Conference of the Association in Houston on Tuesday 26th April, 1977, from 0930 to 1130 a.m.

Below is a list of members of the panel consisting of experts with a wealth of experience in their respective fields. I am sure they would handle the topic for discussion in a most inspiring way:

- (1) Mr. R.T. Lorimer-General Manager, Auckland Harbour Board, New Zealand.
- (2) Mr. Fereydoon Maveddat-General Director of Khorramshahr Port Authority, Iran.
- (3) Mr. H. Paelinck-Former Head of Port Department, ONATRA, Kinshasa, Zaire.

(Continued on next column)

8 PORTS and HARBORS - JANUARY 1977



Dr. F.A.F. Scheurleer

PANEL SESSION NO. 2 "THE PORT OF THE FUTURE, NEW TECHNOLOGY, FACILITIES AND PROBLEMS"

Chairman: Dr. F.A.F. Scheurleer, Managing Director-Port of Rotterdam

MESSAGE:

It will certainly be a pleasure to chair panel discussions to discuss the futuristic aspects of ports in reference to new technology, facilities and problems.

All panelists will be able to let their imagination run freely with nobody in the position to prove that they are wrong. This creates optimal possibilities for creative thinking. The following topics are on our list: The future from a bulkowner representative's point of view, trends in shipbuilding, cooperation between shipowner and port authority, container development and ports and last but not least: modern trends in vessel traffic management.

First to present his paper in Mr. Hugo Ekwall, Technical Director of Granges Shipping in Stockholm, Sweden. He emphasizes that apart from facilitating ships' operation in port by different efficiency rendering measures, the port of (Continued on page 10)

(4) Mr. E. Williamson-Chief of UNCTAD's Ports Section, Geneva, Switzerland.

The Panel would focus attention on the symptoms of Port Congestion and try to prescribe its remedy. Other aspects which will receive comprehensive attention include the consequences of port congestion and various measures to relieve and avoid it.

My paper is a summary of the points that have been exhaustively dealt with by individual panelists. I have the belief that the discussions during the working session would provide enough food for thought and that the conclusions of the panel would be of great advantage to mankind.

the Coming Houston Conference



Mr. R. Boeuf

PANEL SESSION NO. 3 "PORT CONTRIBUTION TO INTERNATIONAL TRADE AND DEVELOPMENT"

Chairman: Mr. Robert Boeuf, Ingenieur General des Ponts et Chaussees, Paris

MESSAGE:

In most of the countries of the world, and by this I mean developed countries as well as developing countries, foreign trade has been playing for some years a more and more prominent part in the development of national economies. This development is based as well on the need for purchasing over the seas raw materials or manufactured goods, as on the general evolution of the political and economic background.

It is featured by a bigger relative increase of the exchanges of seaborne freight through cargo-liners.

The ports, as prevailing links of the chain of international transport, have definetely a great responsibility in the achievement of these exchanges.

A continuous development of the traffic of ports for the needs of the economy of a country is the expression of a voluntary policy of adequacy of the foreign trade of this country to the new conditions of international economy.

These conditions demand of every world-port a strain for fitting in not only in the technical field but also in the commercial field. In the world competition, it is indeed the global cost of transport (which takes into account only the price paid for the service rendered but also the value of the quality of the service) that prevails.

Port authorities permanently endeavour to reduce the part that, in the global cost, is due to the handling of the goods in the port, thus contributing at best to the development of the international trade of their countries.

The working-session that will be devoted to the study of this important topic will enable you to debate with the five distinguished and prominent panel members who, despite

(Continued on page 10)



Mr. Thomas J. Thorley

PANEL SESSION NO. 4 "ENVIRONMENTAL PROBLEMS OF PORTS"

Chairman: Mr. Thomas J. Thorley, General Manger, Port of Long Beach, U.S.A.

MESSAGE:

Environmental issues do and will continue to play a major role in shaping port development. Panel No. 4 will present its papers for discussion programmed for Friday, 29 April 1977, at 0900–1030 hours. This panel consists of the following members:

- Mr. John Wallace, President, The Maritime Services Board of N.S.W., Box 32 G.P.O., Sydney, N.S.W., Australia
- Mr. Taisuke Sameshima, Technical Counsellor, Bureau of Ports and Harbours, Ministry of Transport, Kasumigaseki, Chiyoda-ku, Tokyo 100, Japan
- Mr. Robert Hennessy, Port Engineer, Hamilton Harbour Commissioners, 605 James Street, North Hamilton, Ontario, Canada
- Rear Admiral Anthony F. Fugaro, Chief, Office of Marine Environment and Systems, U.S. Coast Guard, Washington, D.C. 20590, U.S.A.

WILL IT BE A HOBSON'S CHOICE?

Many years ago, in England, a stable-owner named Hobson provided potential customers the opportunity to choose the house they would rent, provided they took the horse closest to the door! In recent years, when a number of solutions have been given to a problem, yet only one of which is workable, the choice has been called a "Hobson's choice".

What does a Hobson's choice have to do with world ports? Simply stated, there is an increasing demand for ports around the world to be concerned with the environment. In many instances, where the industry has responded slowly, the government has stepped in and adopted stiff (Continued on page 10)

Dr. Sato (Continued from page 7)

name and reality, the ports of the world being united thereunder with reciprocal friendship and understanding, and that it can contribute to the improvement of their organization, management and future development.

The 10th biennial conference of IAPH is only a few months ahead of us, and at the Port of Houston Authority which is hosting the forthcoming conference, the Organizing Committee all out is exerting their capacity to make this event a maximal success, headed by Conference Chairman Mr. George W. Altvater who is concurrently Vice-President and a member of the Executive Committee of the Association. How and with what enthusiasm the "Ladies Program" is being devised and prepared by a lady-group led by Mrs. Altvater is already reported on in the September issue, last year, of "Ports and Harbors".

The 10th biennial conference to be assembled at Houston in April, I feel confident, will cast significant suggestions for the future destination of ports, and will reach some sort of realistic consensus upon the solution of the problems of ports the whole world is now confronted with, such as port congestion, environment problem and so forth, and will also attain a common cognition as to how ports can and should contribute to the future development of world trade, through the four panel sessions laid under the conference theme "World Ports' Role in Economic Development".

Furthermore, in reply to the request of a majority of the members, Committee Symposia were incorporated in the conference program this year so that all delegates could participate in the discussions of important Special Committees. To see to it that these devoted and well-thought-of preparation on the part of the host port will bear rewarding fruit, I wish as many of you as circumstantially permitted to would be present at Houston bringing with you other members in your locality.

Another facet of this conference we can not go without mentioning is an achievement of independence in the Association's finance. A new due scheme was introduced and adopted at the preceding 9th Conference and, accordingly, the first step toward the financial independence of IAPH was attained. We are very happy about this.

Though the dues were increased, no substantial withdrawal was observed as a result of this action, against our expectation. The membership of the Association as of the end of December, 1976, are 177 as Regular and 120 as Associate, spreading among 67 nations.

At the forthcoming 10th Conference a bill is slated to be introduced for resolution so as to attain financial independence-self-sufficiency of the Association, in compliance with the decision recision reached as the Executive Committee Meeting in Curacao. With these general situations on your mind, I most earnestly hope you will all join us at the April convention for sure.

I will be looking forward to meeting you in good cheer at Houston.

Dr. Scheurleer (Continued from page 8)

the future could contribute to this end by endeavouring to influence the choice of sea transportation systems, size and

10 PORTS and HARBORS - JANUARY 1977

type of ships to be used, etc.

Mr. Tsuneo Nakamura, Executive Counsellor, Sasebo Heavy Industries, Japan, our second speaker, points out that as a result of the incessant pursuit of ever more efficient design called for by commercial requirements, the vessels have gradually been made to assume a specific single function.

Next in line is Mr. R.D. Barclay, Director Operations from the Australian National Line, who deals with interesting issues such as the division of investments between a port authority and a ship owner, the cooperation between these two parties, the growing use of vehicular deck ships and the modern development in bulk trades.

Mr. Charles I. Hiltzheimer from Sealand Service, U.S.A., is expected to give his views on modern container developments and the future requirements for port authorities.

The session will be closed by Mr. Christiaan van Krimpen, Deputy Managing Director of the Rotterdam Port Management, engaged in developing a new vessel traffic management system for the Rotterdam Harbour. He describes the change from conventional shore based radars to computer aided vessel traffic management systems. Introduction of these new type of systems will undoubtedly optimize ship and shore based operations.

I am sure that the above mentioned issues will undoubtedly stimulate interesting discussions and lead to improve insight in future port development.

Mr. Boeuf (Continued from page 9)

of their professional obligations all around the world, have accepted, under my chairmanship, to think more thoroughly on the topic and to disclose their own views to you.

List of Panelists:

- Mr. Weldon Gibson, Vice President-Stanford Research Institute, Calif. USA
- Mr. J.K. Stuart, Director and General Manager, B.T.D.B. London
- Mr. Kiyoshi Kato, General Manager of the Export Traffic Division-Mitsui & Co., Ltd., Tokyo
- Ing. Hector J. Orea, Gerente General de Operaciones-Institute Nacional de Puertos, Venezuela
- Mr. E. Williamson, Chief of UNCTAD's Ports Section-Switzerland

Mr. Thorley

(Continued from page 9)

rules. Is this an indication of future trends? Will there only be Hobson choices? The answer is an emphatic "no" provided the world ports develop concerns and procedures which show appropriate, timely responses.

But what are the proper concerns and procedures? Who should make the choices? Would such concerns and procedures be suitable for worldwide applications? Should the character and contents of such be left to a world-wide group—such as the Law and the Sea Conference? In my view we can only answer these questions through a deliberate self-evaluation by the world ports and the related Maritime Industry coupled with a positive attempt to resolve environmental issues in accord with a healthy (profitable) growth of the industry. That is easy (for me) to say, but it will be hard to implement because there are basic philosophical problems:

- an increased dependence on the maritime industry to

sustain our given "way of life"

- the ingrained philosophy in all countries that unbridled use of resources is tantamount to "cultural" success
- the fact that the ocean is a world resource, so that problems in one part of the ocean eventually find their way to all parts of the world (e.g. high occurrence of DDT in body tissues of antartic penguins)
- the differing values around the world for environmental safeguards.

I do not have a set of new procedures for you to consider. But I do know that if the maritime industry, in particular the world ports, waits for governmental groups to develop the environmental priorities for tomorrow we will spend the next 10-20 years "digging out" from beneath a number of unrealistic rules which will be impossible to administer. Let me illustrate this by referring to a proposed pacific maritime project.

In 1978 the Prudhoe Bay oil reserves in Alaska will begin production. The resultant oil must be delivered to the "lower 48". It has been proposed that this Alaskan oil be delivered by 165,000 dwt class tankers to west coast ports for local use as well as transmission of any oil surplus to west coast needs through a proposed pipeline to the heart of the U.S.A. In order just to apply for the "key" permits (local, state and national), of which there are 470, we had to prepare, in accord with appropriate state of California laws, an Environmental Impact Report (EIR) to determine such things as:

- short-term and long-term environmental impacts, proposed means of mitigating the impacts, and how the proposed projects related to similar proposed projects.
- the energy supply and demand forecast through the year 1985 for the entire west coast of America.
- the volume of sulphur oxides, hydrocarbons, nitrogen oxides, particulates and carbon monoxide emissions resulting from oil tankers while at berth during unloading, inerting, ballasting, purging, venting, breathing, entering and leaving the harbor.
- the increase in tanker traffic along the west coast as compared to present and potential traffic together with the probability for collision, unloading and bunkering oil spills.
- the probability of others alternatives to the proposed project—we evaluated some 55 different combinations of points of entry and pipeline corridors from British Colombia, Canada to the Panama Canal, as well as shipment around South America in very large crude carriers, shipment to Japan, and leaving the oil in the ground in Alaska.

This document, containing 2094 pages, weighing 17½ lbs, and costing just less than 2 million dollars should be used as a valued data base for making decisions and issuing key permits. Yet, because of the magnitude of the project, because it required an understanding of tanker operations not presently defined, because there is no utilitarian guide for weighing environmental impacts, because it was (is) not clear which agency had (has) appropriate regulatory powers, and because of political and personal issues, issuance of the document only served to exacerbate the situation. In point of fact the key result to date has been the evolution of potential new regulatory processes such as:

- mandatory use of 0.5% sulphur content fuel while in port
- mandatory requirement that vessels have a minimum of 15% segregated ballast
- limitation of Stationary Source emissions, to include oil tankers while at the dock, to 15 lbs/hour or 150 lbs/day

My point is not to review these proposed regulations and indicate the related difficulties of implementation. Rather, the point is, with the absence of clearly defined maritime industry goals, the regulatory agencies, often without adequate operational knowledge, propose rules which:

- lack practicability
- over control without appropriate environmental improvement
- do not relate to long-term economic suvivorship

I have now gone full cycle. Will it be a Hobson's choice? or will the maritime industry take the leadership role, throughout the world, in developing and implementing reasonable, effective means of maintaining environmental stability and economic vitality?

With these thoughts as a backdrop, what is occurring around the world? The series of speakers to follow will discuss divergent issues but are related to the panel theme of "Environmental Problems of Ports".

As we listen to each of these panelists remember "Hobson's stable" with a single door. We can, and should make our goal a "Maritime stable" with many divergent doors, but all leading to a central position of environmental and econmic realism.

Changes in Panelists

Dr. F.A.F. Scheurleer, Managing Director, Rotterdam Municipal Port Management and Chairman of Panel No. 2 on "Port of the Future" informed the Head Office of the following changes in the membership of his panel session.

- a. Mr. R.D. Barclay, Director of Operations, the Australian National Line will replace Mr. R.D. Robin, General Manager
- b. Mr. Christiaan van Krimpen, Deputy Managing Director (Nautical), Rotterdam Municipal Port Management, will newly join the panel. (rin)

CORRECTION

In reference to the Membership Notes in the December 1976 issue of the journal, the name of Taiwan Navigation Co., Ltd. was erroneously printed as the member whose status changed from Regular to Associate Member, while it should have been China Merchants Steam Navigation Co., Ltd.-TKD

IAPH Introduces Its Views into IMCO Conference on Limitation of Liability for Maritime Claims

In respect to the revision of the 1957 Convention on the limitation of liability of the owners of sea-going vessels, each national Director of IAPH had been requested to inform of the general thinking to that Conference to Mr. Andre Pages, Chairman of Special Committee on Legal Protection of Navigable Waterways, and to Mr. A.J. Smith, IAPH Liaison Officer with IMCO.

Based upon the comments received from the respective Directors, Mr. Pages and Mr. Smith, jointly worked out a draft of the Association's views on aspects of the subject matter and sent it in to the IMCO Secretary General, Mr. C.P. Srivastava on 2nd November, 1976, prior to their attending the Diplomatic Conference which is to be held 1–19 November 1976.

The full text of the comments follows. (TKD)

Note by the International Association of Ports and Harbors

The International Association of Ports and Harbours (I.A.P.H.) considers the current review of the 1957 Convention relation to the Limitation of the Liability of Owners of Sea-Going Ships to be of importance not only to ship owners but to potential claimants.

I.A.P.H. considers that the vulnerability of port authorities and port approaches to damage from ships is such as to place them in the forefront of potential claimants. This prime position is all the more apparent when seen in the context of the special relationship of ports to the economy and the society of the countries in which they are situated. Disruption and/or damage to port installations or to port approaches will surely entail adverse economic and social consequences of a severity and scale disproportionate to the primary event. In these circumstances, therefore, ports require adequate protection.

I.A.P.H. has given careful consideration to the draft articles of the Convention which is to replace the 1957 Convention and points arising on these which are set out below are given in the hope that the views of the Association which is fully representative of the international port community, will be of assistance to delegations to the International Conference.

Article 1

I.A.P.H. considers that in the drafting of the final text there should be precision in the meaning of the word "salvor" in the English text so that there is no doubt that it means the person rescuer, professional or otherwise, who comes to the aid of the vessel in the first instance. The limitation benefit is to encourage him to take the maximum initiative in aiding a ship in danger before a threatened disaster where there is still a chance of limiting its consequences. In such circumstances, the rescuer benefits from the limitation of his own liability (Article 1), and his claims in respect of the owner of the aided vessel is privileged (Article 3) since it is not subject to the limitation of liability which the latter can impose on the other claimants.

The benefit of limitation should not apply to a

contractor who is asked to deal with a wreck which has already been accepted as a total loss. This is not a matter of rescue but rather a task of an engineering nature entailing obligations which, from a legal point of view, are classed under common law.

Article 2

I.A.P.H. considers that the term "harbour works" should include not only infrastructure, but also harbour waterways, installations and plants and aids to navigation. I.A.P.H. considers, however, that States wishing to do so should be able to make an exception in respect of the repair of damage to port installations.

Article 3

I.A.P.H. considers that it would be generally beneficial to extend the clause (b) to include modifications or extensions of the International Convention on Civil Liability for Oil Pollution Damage, 1969.

Article 6

I.A.P.H. considers with regard to:-

- (i) Minimum Tonnage, that the potential damage which can be caused by small ships is such as to require a raising of the figure to 3,000 g.r.t.
- (ii) Funds, that the draft appears to envisage the constitution of a fund for injury to passengers aboard a ship. In that event and if there should be two further funds to take account of personal injury claims of people other than passengers of a ship and property claims, a reversible spill over clause should be included to allow the sum total of the two funds to be used whatever might be the division of damage between the two categories. In the case of property claims priority should be given to those related to damage to port installations, including wreck removal costs.

Article 8

I.A.P.H. considers that the sums of the limitation should be evaluated on the basis of S.D. Rs and made subject to periodic re-evaluation in order to compensate for the effects of monetary erosion.

Article 10

I.A.P.H. considers that limitation of liability should not be invoked without the constitution of a limitation fund.

Article 12

I.A.P.H. considers that in so far as it is incumbent on the owner of a ship, and more generally the person responsible for the ship, to take all action necessary to prevent or minimise damage by the ship, the rights of other claimants should not be reduced by including him as a claimant.

UNCTAD's publication contributed

Mr. Eric Williamson, Chief of Ports Section, Shipping Division, UNCTAD, kindly contributed to this office, a set of UNCTAD Manual on Port Management which was prepared by UNCTAD and used in a nine-week UNCTAD/ SIDA Training Courses in Port Management which was held in Kuala Lumpur and Singapore.

Mr. Williamson informed that a limited number of copies of the manual would be available from UNCTAD's Shipping Division by writing to: Palais des Nations, CH-1211 Geneve 10, Switzlerland.

In the interests of our members, this office briefly introduces the outline of the manual.

The text of this manual consists of summaries of lectures presented at the 4th UNCTAD port management course and the four parts of the manual correspond to the main subjects of the course. The manual is not fully representative of a complete course, since a lecture summary may not necessarily do full justice to the full content of a lecture. Also, major business games, seminar material and some case studies used in the courses, and which represented about 25% of the course content, are excluded. Nevertheless the manual provides a good indication of the lecture content of UNCTAD's port management course... while the views expressed in this manual are those of the contributors and not necessarily those of the UNCTAD secretariat. (Rinnosuke Kondo)

PART ONE Transport Economics and Port Administration Lecture

- 1 The role of maritime transport in economic development and a review of recent developments in international seaborne trade
- 2 Shipping economics
- 3 The role of ports in economic development
- 4 Characteristics and cost structure of road and rail transportation and their impact on port/ hinterland relationships
- 5 The role of ports in the through transport concept
- 6 The implications of congestion surcharges imposed on ports
- 7 Port administration I. A review of the different forms of port ownership and the numerous functions undertaken within ports
- 8 Port administration II. Planning of port development
- 9 Case study: The administration of the ports of the East African Community
- 10 Case study: The administration of Swedish ports
- 11 Case study: The management organisation of the port of Gothenburg
- 12 Port authority's liability as a warehouseman including liens
- 13 A port authority's liability under the Hague rules
- 14 Legal liability of a port authority15 Legal liability under international c
- 15 Legal liability under international conventions including the concept of port state jurisdiction
- 16 Labour management in ports
- 17 Social repercussions of technological changes in ports

PART TWO Port Planning

- Lecture
 - 18 Technological change in shipping and its impact on ports
 - 19 Information needs for port planning
 - 20 Comparative analysis of the economics and port operational requirements of cargo unitization
 - 21 The planning and management of container terminals
 - 22 The impact of technological change on ports in developing countries
 - 23 Port and hinterland relationships
 - 24 Principles of port planning
 - 25 Techniques of port planning
 - 26 Planning the transport infrastructure in the port area
 - 27 Principles and practice of industrial development in ports
 - 28 Estate management and environmental factors in ports
 - 29 The port development project
 - 30 Determination of port capacity
 - 31 The project cycle and concepts of economic evaluation
 - 32 Economic tests of project acceptability
 - 33 Various tests for evaluating investments
 - 34 Case study: Economic appraisal of the expansion of ocean port facilities

PART THREE Port Operations

Lecture

- 35 Management organisation of a stevedoring company
- 36 Operations management of stevedoring operations
- 37 Analysis of the physical and economic constraints imposed by conventional handling of break-bulk general cargo and the rationale underlying the introduction of unitization
- 38 The characteristics of palletisation
- 39 The economics of palletisation
- 40 Operational problems related to container and barge traffic
- 41 Berth throughput, berth occupancy and ship turn-round time
- 42 Port productivity I. Analysing berth throughput
- 43 Port productivity II. Data requirements
- 44 Port productivity III. The ship cargo handling system
- 45 Port productivity IV. The transfer system
- 46 Port productivity V. The cargo storage, receipt and dispatch systems
- 47 Port productivity VI. Summary and application of the basic method
- 48 Port productivity VII. Performance indicators
- 49 Case study: Port productivity and costs

PART FOUR Modern Management Techniques

Lecture

- 50 Management statistics
- 51 Charging practices and cost control in stevedoring companies
- 52 Introduction to management accounting

PORTS and HARBORS — JANUARY 1977 13

- 53 Introduction to costing
- 54 Introduction to budgetary control
- 55 Budgetary control exercize
- 56 Port congestion and the control mechanism
- 57 Techniques of market research
- 58 Port pricing
- 59 Introduction to work study
- 60 Management control systems
- 61 Payment systems and incentive schemes
- 62 Planned maintenance techniques
- 63 UNCTAD's work in the field of ports

Contributors to the Manual

Mr. J. Bathurst	Inter-Regional Advisor on Shipping
	and Ports, UNCTAD.
Mr. E.N. Bisamunyu	Director General, East African Har-
	bours Corporation.
Mr. C. Carnemark	Transportation Advisor, International
	Bank for Reconstruction and Develop-
	ment (IBRD), Washington.
Mr. P. Collier	Senior Lecturer, Department of Me-
	chanical Engineering and Engineering
	Production, University of Wales In-
	stitute of Science and Technology.
Mr. M. Daunt	Economic Affairs Officer, Ports Sec-
	tion, UNCTAD, Geneva.
Mr. T. Degenaars	Corporate Planning and Operations
Ũ	Research Advisor, East African Com-
	munity Management Institute, Arusha.
Mr. G. De Monie	Economic Affairs Officer, Ports Sec-
	tion, UNCTAD, Geneva.
Capt. M. Markussen	Director of Maritime Division, IKO
	Consulting Group, Oslo.
Mr. W.E. Scobie	Senior Lecturer, Department of Mari-
	time Studies, University of Wales In-
	stitute of Science and Technology.
Mr. J. Simmonds	Management Consultant, U.K.
Dr. R. Stuchtey	Director of Marketing, Bremer
	Lagerhaus-Gesellschaft Oberseehafen,
	Bremen.
Mr. S.G. Sturmey	Director, Improvement of Shipping
in biol braining	Project for the Government of the
	Ivory Coast.
Mr. R. Takel	Estate Surveyor, British Transport
Mir. IC. Fullor	Docks Board, South Wales Division,
	Cardiff.
Mr. G.C. Tarr	Economic Affairs Officer, Ports Sec-
Mir. 0.0. 1411	tion, UNCTAD, Geneva.
Mr. B.J. Thomas	Lecturer, Department of Maritime
Dir. D.C. Miloindo	Studies, University of Wales Institute
	of Science and Technology. Course
	Tutor.
Mr. S. Ullman	General Manager, Port of Gotheuburg
Mit. D. Olillan	Authority.
Dr A Virag	
Dr. A. Virag	U.N. Advisor in Transportation and
Dr. A. Virag	U.N. Advisor in Transportation and Communication Management, East
Dr. A. Virag	U.N. Advisor in Transportation and Communication Management, East African Community Management In-
	U.N. Advisor in Transportation and Communication Management, East African Community Management In- stitute, Arusha.
Dr. A. Virag Mr. E. Williamson	U.N. Advisor in Transportation and Communication Management, East African Community Management In-

US/Japan experts met to discuss problems of toxic bottom sediment

The Second US/Japan Experts Meeting on Management of Bottom Sediments Containing Toxic Substances was held in Tokyo from 25 to 27 October, 1976, under the co-chairmanship of Mr. Kiyoyasu Mikanagi, Director of Environmental Protection Division of Bureau of Ports and Harbours, Ministry of Transport (Japan) and Mr. A.F. Bartsch, Corvallis Environmental Research Laboratory of U.S. Environmental Protection Agency (EPA).

This experts' meeting was originated by the decision of ministerial agreement by the two nations to discuss the problems of bottom sediments with toxic substances accumulated in ports or rivers which had caused various unfortunate episodes in the past.

Mr. Taisuke Sameshima, Counsellor (Technical) of the Bureau, in his opening speech for the meeting disclosed that the results of the first meeting which was met at Corvallis, Was. last year confirmed that the existence of problems caused by the toxic bottom sediments were identically serious and grave in both nations and the cooperation of both nations were vitally necessary to solve problems they had to face with.

U.S. Experts and their papers are as follows:

1. Legal and administrative aspects of bottom sediment management

Mr. A.F. Bartsch, Corvallis Environmental Research Laboratory, EPA

2. Hydraulic dredging as a lake restoration technique: Past and future

Dr. Spencer A. Peterson, Corvallis Environmental Research Laboratory, EPA

- Interchange of nutrients and metals between sediments and water during dredge spoil in coastal waters Dr. Donald J. Baumgartner, Corvallis Environmental Research Laboratory, EPA
- Dredging conditions influencing uptake of heavy metals by organisms Mr. John F. Sustar, San Francisco District, U.S.
 - Army Corps of Engineers
- 5. Dredge material desification and treatment of contaminated dredged material

Mr. Charles C. Calhoun, Jr. Waterways Experiment Station, U.S. Army Corps of Engineers

 Ecological considerations in site assessment for dredging and spoiling activities Mr. Donald K. Phelps, EPA, Narragansett Environ-

mental Research Laboratory

Japanese experts and their papers are as follows:

1. On removal works of contaminated bed sediment in Japan

Mr. Taisuke Sameshima, Technical Counsellor, Bureau of Ports and Harbours

- Conter measures for pollution in Tokyo Bay Mr. Tomonori Ohtsuka, Director-General, 2nd District Port Construction Bureau, Ministry of Transport
- 3. Organic pollution of bottom mud in the Seto Inland Sea and its removal experiment

Mr. Akio Murakami, Nansei Regional Fisheries Research Laboratory, Fisheries Agency 4. The mechanism of the methylmercury accumulation into the fish

Mr. M. Fujiki, Mr. S. Yamaguchi, Tsukuba University, and Mr. R. Hirota, Aitsu Marine Biological Station, Kumamoto University

5. Determination of trace amounts of methylmercury in sea water

Mr. H. Egawa and Ms. S. Tajima, Kumamoto University

6. Behavior of heavy metals and PCB's in the removal and treatment operations of bottom deposits

Mr. Ken Murakami and Mr. Kazuo Takeishi, Ministry of Construction

7. Study on the behaviours of mercury-contaminated sediments in Minamata Bay

Mr. T. Yoshida, Japan Bottom Sediments Management Association and Mr. Y. Ikegaki, Environment Department, Kumamoto Prefecture

8. Covering work of disposal site for dredged spoil containing mercury

Mr. Shingo Fujino, Port and Harbour Bureau, Kitakyushu City

9. Stabilizing effect of various chemical agents to some soft soils

Mr. Tatsuo Okumura, Port and Harbour Research Institute, Ministry of Transport

10. A method for disposing of waste water derived from reclamation by dredging

Mr. Eisuke Satoh, Japan Dredging and Reclamation Engineering Association

IAPH was invited to observe the meeting and Mr. Masatoshi Kinouchi, Deputy Secretary-General and Mr. R. Kondoh, Under Secretary have attended the meeting. (rin)

Port of Los Angeles Mission visited Japan and Korea

Led by Mr. Nate DiBiasi, President, Board of Harbor Commissioners, Port of Los Angeles, four-men mission visited Tokyo, Nagoya, Osaka and Seoul during the last week of October for the purpose of promoting trades between Port of Los Angeles and these ports.

On October 29, reception was held by the mission inviting representatives of shipping companies, port authorities, trading firms and manufacturers for disseminating the present situation of the Port. Also, featured at the reception was the appointment of Mr. Katsuya Yokoyama, formerly deputy secretary-general of this association who had newly been appointed as the Far East representative of the Port of Los Angeles. Mr. Toru Akiyama, Secretary-General Emeritus of IAPH, in his introductory speech addressed to the audience that it was a happy coincidence that Mr. Yokoyama took the position of representing the Port of Los Angeles where the birth of IAPH was given in 1955.

Mr. Roy Ferkich, Vice-President of the Board, Mr. Robert D. Kleist and Mr. Ono, Director and Deputy Director of Trade Promotion accompanied Mr. DiBiasi further to Nagoya and Osaka as well as to Seoul where the mission was met by Mr. Kang, Chang Sung, Director-General of the Korea Maritime and Port Authority. (rin)

Mr. Remond of Port of Marseille visited Tokyo

On October 29, 1976, Mr. Yann-Pierre Rémond, Director of Commercial Relations, Port of Marseille Authority, visited the Head Office and was met by Dr. Hajime Sato and his staff. Mr. Remond was on the way of his regular world trip for the promotion of the trade development of the Port.

He visited the Ministry of Transport to meet Mr. Kiichi Okubo, Director-General, Bureau of Ports and Harbours, and Mr. Shigeya Gotoh, Director-General of Shipping Bureau for the purpose of disseminating the significance of his Port's roles after the re-opening of the Suez Canal.

In the evening of November 2, Mr. Remond gave a reception inviting people from governmental agencies, shipping companies and trading companies for the purpose of presenting a film of Port of Marseille showing the present status of the Fos development.

After visiting the Tomakomai Tobu industrial development site which is located in Hokkaido, the northern island of Japan, where a large scale industrial development is projected under the supervision of the Hokkaido Development Agency, he left Japan on November 6. (rin)

Hamburg Port Delegates Visited the Head Office

On November 1, 1976, Mr. Helmut F.H. Hansen, General Representative, and Mr. Klaus-Dieter Fischer, Executive Director, Generalvertreters Haven Hamburg, visited the Head Office and were met by Mr. Masatoshi Kinouchi, Deputy Secretary-General and his staff. Generalvertreters Haven Hamburg is a special public organization which represents the commercial and business aspects of the Hamburg Port, while the administrative aspect of the Port is being executed by the Havendirektion of the Hamburg City State Government. Generalvertreters Haven Hamburg has been created to take the role from January 1, 1974. (See also page 28) (rin)

Port Auth. of NY & NJ celebrated 10th anniversary of its Tokyo Office

On November 9, 1976, the Tokyo Regional Trade Development Office of the Port Authority of New York and New Jersey held the reception to celebrate the tenth anniversary of the opening of the office, inviting those people from shipping, trading and manufacturing fields. Mr. James J. O'Brien, General Manager of Trade Development of the Port Authority in his welcome speech disclosed that the volume of trades between New York and Japan had multiplied many folds during the past ten years enabling Japan to sit one of major trading counter parts of the New York port and the Port Authority would be very much prepared to meet any possible increase of cargoes traffic for easy handling and delivery.

Introduced to the attendees of the reception were film presentations of container terminal facilities, conventional cargo handling facilities, airports of New York, as well as the scenes of the Operation Sail which was held in New York on July 4 as one of the greatest events for the celebration of the bicentennial of the United States. (rin)

Survey Team from Trinidad & Tobago visited Japan

Mr. Charles W.B. Hull, Manager, Engineering, Point Lisas Industrial Port Development Corporation (PLIPDECO), accompanied by Mr. Selwyn Lee Young, Principal, and Mr. Patrick Kain, consulting engineer of Lee Young & Partners, visited Japan for one week in order to observe reclamation works in the waterfront industrial zone, during the first week of November.

Prior to their visit to Japan, Mr. Bruce Procope, Chairman, Port Authority of Trinidad and Tobago, requested the Secretary-General to assist their studies on the matter so that their studies be utilized in the development project at Point Lisas which is located some fifteen miles south of Port of Spain, being projected to be developed as the industrial zone.

The Head Office organized a comprehensive study programme for the team, inviting cooperations from resident members of IAPH, Kawasaki Steel Corporation, Daito Kogyo Co., Ltd., Tokyo Bay Port Development Authority, Bureau of Ports and Harbours, Ministry of Transport, Tokyo Metropolitan Government, Chiba Prefecture as well as the Tokyo Institute of Technology. During one week's stay, the team visited those industrial areas along the Bay of Tokyo most of which had been developed on the reclaimed lands. (rin)

K.M.P.A. Operations Experts Visited

On November 16, 1976, Mr. Han Pyo Seong, Director of Operations Bureau of Korea Maritime and Port Authority, accompanied by Mr. Han, Yun Kil and Mr. Lee, Jang Hwan, Assistants to Director as well as Mr. Park, Hyon Kyu, President, Korea Container Terminal Co., Ltd., visited the Head Office.

The experts were here to observe the container handling operations in various container terminals and discuss with those terminal operators in Japan, at Kobe, Osaka, Yokohama and Tokyo. K.M.P.A. will start its full scale container operation at ports of Incheon and Busan in an early part of next year.

In Tokyo, Mr. Nakamura, Chief of Research Section of Keihin Port Development Authority, gave an extensive lecture on the container terminal operation from the administrative point of view. (rin)

Outline of IAPH Now Available in Three Languages

Following the English version of "Outline of IAPH on What, Where, How, Why and Now", the brochure published for membership campaign, the French and Spanish versions were also published recently to cover the non-English language areas with.

Copies are obtainable from the Tokyo Secretariat. (TKD)

PSA Training Courses for 1977

Mr. Goon Kok Loon, Deputy Director, Staff & Training Division, Port of Singapore Authority communicated to the Tokyo Secretariat on November 3rd to introduce the PSA's training courses next year to the Association members.

These courses are particularly suitable for ports in South East Asia, the West Asia, the Pacific Islands and other developing countries.

For those who seek training on port matters, we reproduce the schedule and other details on the courses as follows.

Application Forms and the Brochure are available either directly from Port of Singapore Authority (P.O. Box 300, Singapore) or from the IAPH Head Office, Tokyo. (TKD)

GENERAL

THE PORT OF SINGAPORE AUTHORITY

The port of Singapore Authority (PSA) administers and operates the harbour and related port facilities. It is headed by a Chairman and a Board of eight Members.

In 1975, there were 40,426 vessel arrivals and departures recorded with shipping tonnages totalling 205.2 million net registered tonnes. Some 52.1 million freight tonnes of seaborne cargo were handled at the wharves, roads and oil terminals. The Container Terminal in 1975 handled 2.6 million tonnes of containerised cargo in 192,000 containers. Some 929 LASH (Lighter-Aboard-Ship) barges were also handled at PSA Pasir Panjang Wharves.

TRAINING COURSES

The PSA is now offering to share its experiences in certain fields of port management and operations. Courses have been formalised with both classroom and field visits to operational PSA Departments. Trainees from various countries will be able to meet with one another. The exchange of ideas experiences among the trainees would be particularly beneficial to all.

We have scheduled related courses to run one after another so that trainees would have an opportunity to attend one or more courses whilst in Singapore.

The courses are classified into the following three broad areas:

- A Port Operations
- B Management & Administration
- C Accident Prevention

The medium of instruction is English. As such, applicants are expected to have a WORKING KNOWLEDGE OF THE ENGLISH LANGUAGE.

METHOD OF APPLICATION

All applications should be:

- 1. Made on the application from attached to this brochure.
- 2. Supported and sponsored by the relevant Port or Government Agency.
- 3. Accompanied by a bank draft for the total amount of course fees in Singapore Dollars.
- 4. Separate applications.
- 5. Submitted before the specified closing dates for applica-

tions.

FURTHER INFORMATION

1. Travel and Visa Arrangements

All trainees will be responsible for making their own visas and travel arrangements to and from Singapore.

It is advisable to be in Singapore at least one day before the course begins.

As visas are normally issued for a two-week period, assistance will be provided by the PSA to extend your visas if the training duration is more than TWO weeks.

2. Accommodation

Singapore has numerous hotels and hostels which should meet the requirements of most trainees. Your Embassy, High Commission, Consul or travel agent may be able to assist in securing suitable accommodation for you. In case of difficulty, the PSA could also assist in making accommodation arrangements. We would suggest that you choose the hotel or hostel near the Port for your convenience.

3. Climate and Clothing

Singapore is generally sunny with rain showers from time to time. The average temperature is $28^{\circ}C$ ($82^{\circ}F$) during the day and $25^{\circ}C$ ($77^{\circ}F$) during the night. Lightweight casual clothing would be most appropriate.

4. Further Enquiries

If you require further information, write to: Deputy Director Staff & Training Division Port of Singapore Authority PO Box 300 REPUBLIC OF SINGAPORE

CLOSING DATE FOR APPLICATION

Two months before the respective course dates.

A. PORT OPERATIONS COURSES

	"Training for Operational Instructors" Topics include-practical and theoretical aspects of winch driving and signalling, rigging, forktruck and tractor driving, and mobile crane operations. Participants will be given an opportuni- ty to put into practice the instructional techniques taught.
For Whom :	
Course Duration : Course Dates : Course Fee :	2 Months 4 Apr 77–3 Jun 77
2. Course Title : Course Content :	"Safety in Cargo Handling" Topics include-general principles and legal aspects of safety, safety in cargo operations and with material and con- tainer handling equipment, use of pro- tective aids, hazard spotting, dangerous cargo handling and fire safety.
For Whom :	First-line supervisors, traffic officers and safety officers.

Course Duration: 2 Weeks

```
Course Dates : (a) 6 Jun 77–17 Jun 77
```

- (b) 5 Sep 77–16 Sep 77
- Course Fee : S\$300
- 3. Course Title : "Conventional Cargo Handling"
- Course Content: Topics include—cargo handling techniques, loading/discharging methods, cargo handling gears, documentation and operational procedures, and cargo stacking techniques.
 - For Whom : First-line supervisors who are involved in cargo handling work on ship and shore.

Course Duration : 3 Weeks

Course Dates : 19 Sep 77-7 Oct 77

Course Fee : S\$450

4. Course Title : "Containerised Cargo Handling"

Course Content : Topics include-documentation and operational procedures for import and export containers, freight station operations, equipment and gears, and stacking systems.

For Whom : First-line supervisors from ports who are or will be involved in containerised cargo handling.

Course Duration : 3 Weeks Course Dates : 10 Oct 77-28 Oct 77 Course Fee : \$\$450

B. MANAGEMENT AND ADMINISTRATION COURSES

- 1. Course Title : "Port Administration & Operations"
- Course Content: Topics include-organisation/functions of a port, port economics, port planning, port finance, port labour, the Traffic Department, port safety/ security/emergencies and port promotion.
 - For Whom : Port officers holding senior and middle management positions.

Course Duration : 3 Weeks

Course Dates : (a) 4 Apr 77–22 Apr 77 (b) 10 Oct 77–28 Oct 77

- Course Fee : S\$450
- 2. Course Title : "Warehousing Management & Operations"
- Course Content : Topics include-types of warehouses, their organisation and functions, PSA warehousing services, documentation procedures, billing and control systems, legal liabilities, customs and import/ export procedures, fire safety in warehouses.
 - For Whom : Port officers holding senior and middle management positions, and those in the warehousing and freight forwarding industries.

Course Duration : 1 Week

- Course Dates : 25 Apr 77–29 Apr 77 Course Fee : S\$150
- 3. Course Title : "Planning and Management of a Container Terminal"
- Course Content : Topics include-the various container handling systems in general and in particular the system adopted by PSA.

There will be discussions on the factors influencing the choice of handling systems/equipment.

- For Whom : Senior and middle management personnel whose part has just embarked or will be embarking on containerisation. Course Duration : 2 Weeks Course Dates: 31 Oct 77-11 Nov 77
- Course Fee: S\$300

C. ACCIDENT PREVENTION COURSES

- 1. Course Title : "Fire Administration & Prevention"
 - Objectives : To impart to participants knowledge in the following aspects and offer opportunities for discussion and sharing of views and experiences in: fire service administration, fire prevention legislation and management, fire protection technology, and related science.
- Course content : Topics include-role of fire service, fire prevention legislation & administration, building construction, fixed installations, safety of lives, plan reading & drawing, inspection/surveys & report writing,

private fire services.

For Whom : Fire & Safety Officers Course Duration : 2 Weeks Course Dates : (a) 21 Mar 77–1 Apr 77

(b) 1 Aug 77–12 Aug 77 Course Fee: S\$300

2. Course Title : "Ship Inspection Course"

- Course Content : Topics include-the basic chemistry of oils, hazards of petroleum and petroleum products, combustible gas indicators, legislation governing gas-free inspection of vessels. There will be lectures and practical work in the laboratories and a field visit to a shipyard. For Whom : Safety officers, supervisors, foremen and any other class of persons in the ship reparing industry and other related industries. Course Duration : 1 Week Course Dates : (a) 4 Apr 77–8 Apr 77
- (b) 15 Aug 77–19 Aug 77 Course Fee : S\$150 3. Course Title : "Dangerous Cargo Handling" Course Content : Topics include-classification of dangerous goods, labelling of dangerous goods, packing of dangerous goods etc. For Whom : Supervisors and other categories of workers handling dangerous cargo. Course Duration : 1 Week Course Dates : (a) 11 Apr 77–15 Apr 77 (b) 22 Aug 77–26 Aug 77 Course Fee : S\$150 4. Course Title : "Command Course On Oil Spill Control"
- Objectives: To impart in a practical manner, the possible ways of dealing with oil on sea & shores.
- Course Content: Topics include-history of pollution control, environmental & ecological ef-

fects of oil spills, characteristics of spilled oil, legislation, methods of containment, removal and treatment, skimmer selection, deployment of booms, oil spills prevention, shoreline protection and restoration, contingency planning.

For Whom : Fire, Police, Army, Navy and Environment Control officers.

Course Duration : 2 Weeks Course Dates : (a) 18 Apr 77–29 Apr 77 (b) 29 Aug 77–9 Sep 77

Course Fee : S\$300

Ship Masters' Association commends Standard Marine Navigational Vocabulary

Mr. B.T. Hwang, Secretary-General of the Master Mariners' Association of the Republic of China, recently wrote to the Secretary-General, Dr. Hajime Sato, congratulating IAPH roles in disseminating the "Standard Marine Navigation Vocabulary" which was compiled by the great works of IMCO experts in which many of IAPH experts from navigational fields were involved; for example Capt. R.B. Richardson, then-Harbor Master of the Port of London Authority.

The draft of the Standard Vocabulary was referred to IAPH from IMCO in April 1974 through our Liaison Officer with IMCO, Mr. A.J. Smith of British Ports Association (Full text of the Standard Vocabulary was reproduced in June 1974 issue of the journal.) for making comments from IAPH point of view. President Howe answered back to IMCO that the draft be so approved by IMCO Maritime Safety Committee (May 1976 issue).

The Head Office was told by the Japanese Maritime Safety Agency that the Standard Vocabulary was well accepted by the Japanese mariners through the suggestions made by the Japanese Shipowners' Association. Also, the officials of the Port of Yokohama informed us that the use of the Standard Vocabulary was effective and useful and the text was being adopted as a kind of text book for the training of operations men of the Port. (rin)

ESCAP-IAPH jointly support SEATEC '77 Seminar

As reported in the previous issue of the journal, EACAP and IAPH are supporting the SEATEC '77 Seminar on the dredging and construction of ports for developing countries, which is to be held at Hyatt Hotel, Singapore from March 1-5, 1977.

Mr. Danko Koludrovic, Chief of Staff Service for Shipping & Ports of ESCAP, recently wrote to Dr. Hajime Sato, Secretary-General, that both organizations now should make efforts to obtain the interest of members, particularly of those involved in dredging-consultants working in the field, users and manufacturers of dredging equipment, in the expectation that SEATEC '77 Seminar would provide a useful forum in which manufacturers and producers of dredging equipment are able to meet and

(Continued on next page bottom)

18 PORTS and HARBORS - JANUARY 1977

FUTURE TRENDS IN PORT DEVELOPMENT

An Address by George W. Altvater Executive Director Port of Houston Authority Houston, Texas, U. S. A.

Melbourne, Australia October, 1976

(Refer to page 32 "25th Conference of The Association of Australian Port and Marine Authorities.)

Members of the Australian Association of Port Authorities Ladies and Gentlemen:

I bring you greetings from the International Association of Ports and Harbors and from the American Association of Port Authorities, being privileged to officially represent both of those great organizations on this distinguished occasion. May I add that I consider it to be a high personal honor, also, to be here to address this august body, and to have the opportunity of learning from your deliberations.

This is my second visit to your great nation and, in particular, to this wonderful city of Melbourne. I have been

discuss with the users of their equipment from developing countries.

Hereunder is some information necessary for SEATEC '77 Seminar:

General: SEATEC '77 is a seminar and exhibition, bringing together at the same time, those who have a high degree of experience and technology—and those who need it. A seminar where the delegates can contribute as much as the speakers, where active participation and discussion is an essential feature.

Seminar is the centre point of SEATEC. Authors of international repute and experience will present papers on subjects of vital importance to all those concerned with the theme subject. Problems will be exposed and solutions sought, through in-depth discussion, in areas such as finance; planning; technology; sociology and commerce.

Papers program:

Day 1: 1. Keynote paper

- 2. The demand for port facilities-determinants and responses: Eric Pollock, Economist, BTDB
- 3. Role of finance bodies
- 4. Role of consulting engineers and of the National Government in planning and implementation of ports
- 5. Contract specifications and placement: Ministry of Shipping and Transport, India
- Day 2: 1. Navigational, Hydraulic and meteorological factors in site selectioin: Dr. Eduardo Serrano of SENER, Spain
 - 2. Ecological and environmental aspects of dredging and port construction (rivers, deltas

overwhelmed by the vastness of your nation, and that's saying something coming from a Texan, and by the beauty I encounter here in this lovely and friendly city. The Port of Melbourne, too, is recognized as one of the outstanding leaders in world port development and in the volume of commerce moving through this gateway each year. I'm glad to be here.

Now that I know where you are in relation to the rest of the globe, let me tell you a little of where I am from. If you were to take a map of the United States of America and put the East Coast on the right border of a piece of paper, with the West Coast on the left border of the same piece of paper, and you were to crease the paper in the middle you would have a line that would go approximately through the middle area of the United States. At the bottom of that line on the coast of the Gulf of Mexico, you would be almost at the door of Houston, Texas. We are approximately four hundred miles west of the Mississippi River, almost in the very center of our country when reaching up from the Gulf Coast. We serve the vast hinterland of our country, and our immediate market, say from within a three hundred mile radius of our city which is a one day truck delivery to our

and shallow coastal regions)

- 3. Sociological aspects of port development in developing countries
- 4. Job creation and training in developing countries
- Hydraulic research-expensive luxury or useful investment? C. Veeningen of Delft Hydraulic Laboratory
- 6. Site investigation (including soil mechanics) and surveys
- 7. Operational aspects of dredging fleets: Mr. James, Chairman of IADC.
- Day 3: Case histories showing developments in relative countries

Concluding paper from Port of Singapore Authority

Delegates fee:

Delegates from Asia, E.S. Asia, Pacific basin, African continents, Central and South America, excluding Japan and Korea.....US\$180 Rest of the world, including Japan and Korea...US\$400 Delegates from exhibiting companies (up to 3) US\$150 The delegates fee includes all seminar papers, proceedings, and participation at receptions, visits etc.)

- Application to be sent to:
 - U.K. and others: Intec Press Ltd. 3 Station Parade, Whyteleafe, Surrey, England
 - Continent: Mieke Schoenmakers Holysingel 146, Vlaardingen, The Netherlands
 - Singapore & S.E. Asia: MarIntec S.E.A. (Pte) Ltd. J-6, International Building, Orchard Road, Singapore 9
 - U.S.A.: Mr. Randolph Long 301, East 17th Street, New York, N.Y. 10017 (rin)

PORTS and HARBORS - JANUARY 1977 19

port, encompasses a population center in excess of thirteen million people.

We are a new growth area in the United States. We are not Southern and we are not Western—we are Southwestern. During the past twenty years, the expansion of the City of Houston and its country, Harris County, has been one of the most phenomenal growth records in our nation. Even today, population moving into our area of our nation exceeds 3,800 families per month net gain. This is over 70,000 people a year and we have averaged this increase in population every year for the past fourteen years. Presently our city population is 1,401,900.

We are in the center of the oil refining industry. Twenty four of the twenty five major oil companies in the United States are headquartered in Houston. We are the petrochemical center of our nation and the center of supply for oil field exploration equipment. In addition, the great wheat production areas of our country located in northern Texas, Oklahoma, Kansas, etc., are at our back door so our exports of grain are principally that of wheat. Far in excess of two hundred million bushels of wheat move annually from Houston to areas throughout the entire world.

Thus, we are fortunate in being involved in the two major needs of the world markets today and those are energy and food. This then serves to explain the great growth record that has taken place in our area of our country and, of course, the expansion of our port which has tried to keep pace with this economic development.

As you know, Houston will be the host port for the forthcoming 10th Annual Conference of the International Association of Ports and Harbors which will be held April 24-30, 1977. I extend an invitation to all of you here to attend this Conference which will draw Port Directors from more than 200 ports throughout the world. We are planning a great week of both business and pleasure which I am sure will be a profitable adventure for all of you. At the conclusion of the IAPH Conference, the 11th Annual Offshore Technology Conference will commence. To give you an idea of the worldwide interest existing today for meeting energy needs of the world, I need only to point out that more than 60,000 delegates will attend from points all over the world. More than 3,000 exhibitors will display their products and it will take all of four days to cover just the exhibits alone. Through these two conferences our delegates will have an opportunity to get a very good view of our city and its economic thrust which has become so well recognized throughout the world. Now that we are acquainted with each other, let me get on with my talk for you today.

Now according to my topic I appear before you as a prophet, one of enormous standing for I am as far away from my own country as it is possible for me to be. What I say, therefore, ought to be given the greatest reverence and weight, and you should go forth from this place with a priceless foreknowledge of plans and events.

Seriously, what I am going to discuss is to one degree or another well known to thoughtful port men everywhere, and so I have my doubts that I can bring you anything new and revealing in this discussion. It is the putting together of some of the pieces, as I hope to do in this presentation, that becomes interesting in the form of prospects for the future, and focuses on what we should be worrying about.

The real source of our concern, as port developers, is that we are providers of service to others rather than shapers of our own destinies. Further, that the universe in which we function is totally unpredictable, yet it is one in which we are asked to build structures having a high degree of permanence. To resolve that dilemma we drew a very simple lesson from our predecessors, which was "build a lasting substructure, but keep the superstructure as flexible as possible." Have we really advanced the state of our art beyond that lesson? In terms of hard knowledge and irrefutable fact, I think not.

In a more ordered world one could assume that as developing nations developed they would become self sufficient in production and when everyone became so, world commerce would become almost totally an exchange of raw or semi-processed bulk commodities. We could plan our facilities very nicely, in such a world. But in our world the very things that we don't need to import, from automobiles to shoes, seem to be the ones we want to import and by the millions.

The trust is that as developing nations develop and standards of living go up, new consumers are created and added into the world market place. In that market place we have entrepreneurs bent upon creating wants where none existed before, and then converting those wants into needs. Thus the ever rising curve of world commerce.

In our country this relationship was recently charted with great precision in a bit of research relating to the Panama Canal, which serves the ships of all nations. Gross World Product, being the sum total of all known Gross National Products, shows a growth curve which matches exactly the growth curve of Panama Canal annual cargo tonnages over the last 17 years. The total GNPs of the 12 nations that put over a million tons a year through the Canal shows an exact correlation with the tonnage those nations put through over the years.

That would seem to tell us that as nations develop, their dependence upon world shipping increases in direct proportion. Because we would have to search real hard to turn up any nations that are not developing, including yours and mine, we can say that the dependence of every individual in the human race upon world commerce increases every day. Think about that.

Now think about world population growth. Earlier this year we reached and passed the 4 billion mark. It took us from the beginning of recorded time to reach that figure, but now we are adding, at an increasing rate, a billion every ten years. Predictions for the year 2000 range between 6.5 and 7 billion.

To keep up with the increase of individuals increasingly dependant upon world trade, we built 27,321,000 gross tons of world shipping in the most recent six-month period on which I have record, and now have a fleet of vessels (in excess of 1000 gt) totalling 530,669,000 gt and consisting of 22,591 ships. So we see the world fleet increasing at better than 10 percent a year.

The only negatives applying to this almost unbelievable growth picture are the so-called artificial barriers—the trade restriction and the protective tariff. But, if we examine the trend in these areas we find a great relaxation as compared with but a few years ago. We have people who predict a free world market in the middle future.

If you believe all of these signs and portents, as I do, you may wonder if there is anything, anywhere, that can slow or inhibit this geometric growth of world markets and trade tonnages, and it frightens me to realize that the lone deterrent might be ourselves. We read of nations whose port facilities are already overwhelmed, and we say to ourselves that those poor fellows didn't keep up, and it could never happen here.

I used to think that way until it happened to us in Houston, a major world port and one of the most modern. We recently had a movement of Russian grain that literally swamped and paralyzed us for a considerable period. The combination of circumstances which brought this about are a prime example of that "unpredictable universe" mentioned earlier. The grain movement itself was clearly a part of the very growth of trade and population that we have been reviewing here.

Phased development to match such growth has all of us very occupied in my country, and we have some real problems with it. The old problem of money is the first of these, but it appears in new dimensions.

If you were to take any major port in the United States and chart its cumulative capital requirements out to the year 2000, the result would be a curve with a constant increase in slope. The change in slope reflects the effects of inflation. Then if we would add to the chart a lower curve to represent the net cash income from all resources, we would see a widening gap between the two curves. The gap would represent new capital requirements.

It has been estimated that for a typical major United States port in the year 2000, the cumulative total dollar requirement for new capital would be in excess of \$200 million. This is regarded as the single most critical problem facing us.

The options available in meeting this requirement are considered to be efficiencies within our business systems, rate adjustments to the extent that they do not hinder the flow of commerce, and the obtaining of local financial support in the traditional manner. Most of us firmly believe that we are capable of meeting the obligation.

If we examine those three options we can deduce that there will be a whole new trend in the management of seaports. Whether we are developing a new efficiency, or adjusting a rate, or justifying an investment we will have to have much more precise knowledge of what is happening on an income/expense/net-revenue basis at individual berths and port areas. We will have to know the same for individual segments of the operating cycle, and we will have to know the same for individual cargo items. Whether this is called "cost centering" or "profit centering" it all adds up to more precise fiscal control. Some of us are already well into the concept to the extent of developing the tools. I am asure that learning to use them properly will be no problem. The question of survival is a well proven motivational force.

Assuming that we gain the funds, what will we build? We will build port facilities of meet the present and future requirements of trade and shipping. And that being an unpredictable universe, we will, of course, build our lasting substructures, keeping the superstructure as flexible as possible.

But as we look at the universe that we serve, there are a few shapes appearing out there in the mist that are becoming identifiable and helpful. We should keep them in mind against our future plans.

Concerning ships, we are reaching a point at which a maximum standard in channel depth is becoming a practical necessity. We can only dig so deep. We are nearing a decision reached by the airports some time ago when a maximum standard was set for the size of aircraft to be served. In these remarks I refer to conventional ship

conformations, and not to super-tankers and their very special deep-draft requirements.

Also, concerning ships, we are well into a new era of highly specialized vessels. Referring again to the Panama Canal, and the trends in types of vessels moving through it, we see as we might suspect that our old standby, the break-bulk general cargo vessel, is down a bit but holding steady, and that container ships are up dramatically but levelling. Also up dramatically are specialized dry-bulk carriers and refrigerated ships. In all then, the real growth is in specialized vessels.

In the past, specialized vessels in the bulk trades have tended to operate on a point-to-point basis between single user port facilities, and operating really as links in a processing cycle. For reasons applying to the need for dispersal of populations and industry, coastal preservation, and the general shortage of deep-water industrial sites, our planners see much more point-to-area movement in the future, with commodity movement from a mining center abroad to a public port facility for distribution to plants throughout an area.

Trends such as the specialized vessel mean that we need more back-up space and they greatly increase our land use requirement for potential stockpiling and tank farm areas in a manner not too different from our recent experience with another specialized vessel, the containership. Anytime that the form of the cargo is changed to permit quantom jumps in throughput, there has to be space for that great increase in volume. Whether we are putting little boxes into big ones, or freezing a gas to make it a liquid, or melting a solid for the same reason, or slurrying for the same reason, or making chips or pelletizing, the increase in backland area comes with the high-volume throughput.

This is a trend already moving along. Most of our major ports are well out of central city by now and have outlying developments where there is adequate space for them.

Operationally, the strong increase in vessel traffic combined with the high cost of widening channels is already bringing us electronic traffic control systems of increasing sophistication. Electronic cargo control systems are already with us, too, and it takes no great insight to visualize a total system in terms of electronics. We have a strong sub-trend here in the port security endeavor. In the United States our port security manpower requirement has about leveled off, greatly supplemented by an electronic surveillance capability.

Coming now to cargo operations on the dock, engineers tell me that we are reaching a point of diminishing return, and have gotten about as capital intensive as we can get. Equipment is already here than can out-perform the ability of a man to operate it. Equipment is already here that our paved surfaces cannot survive. This tells us that the throughput breakthrough given us by the modern container berth has peaked, and that the need will be for more berths. Improvement of existing berths as a capacity resource, another of our old standbys, will become a dwindling factor.

Assuming that with phased development we properly finance, manage and develop to keep pace with the future before us, there remains the question of land-side access and inland transportation. We now arrive at the true roots of port congestion in any country, developed or undeveloped. The cargo doesn't move on through, piles up in the port, and it is overwhelmed.

(Continued on next page bottom)

THE LINEAR LOADER

By Paul Soros, President Soros Associates Consulting Engineers

Historical Background

Conventional design of bulk loading berths evolved from the handling of general cargo: a shiploader travels on a runway which is part of a wharf or finger pier. The traveling shiploader is usually fed by a dock conveyor with a movable tripper. (Fig. 1).

The slewing bridge loader was developed in the early 1960's by Soros Associates. The first unit was installed at Huasco, Chile (1), the first offshore application was at Port Latta, Australia (2), the largest in the world at Tubarao, Brazil (3) (Fig. 2). All of these were engineered by Soros Associates and by now these designs are in wide use all around the world.

The main reason for the success of slewing bridge loaders, as compared to the traveling loaders, was the lower capital cost of the total installation, i.e. the loader and related conveyors plus the marine structures. Other favorable features were high effective loading rates and the greater ease in enclosing the conveyor belts and transfers and in installing dust control.

The Linear Loader is an improved version of the slewing bridge loader.

Principles of Slewing Loader Development

The critical parameter in a slewing bridge loader installation is the hatch coverage which determines the length of the loading boom and the span of the slewing bridge (Fig. 3).

As port developers we have traditionally neglected this aspect. It is outside of the gates, and behind us as we look seaward. Until the containership arrived it was mainly a problem of the older major port city with its narrow, downtown streets. A few hundred trailer trucks suddently moving into normal traffic when the ship is in is a real attention-getter anywhere, however, and landside access is getting national attention in my country.

One aspect of this trend, and it is a helpful aspect, is the growth of the relatively new business of the cargo accumulator or consolidator. The former involves the so-called project shipper, and he will be with us in increasing numbers in keeping with the growth of the economies of the developing countries. The other fellow is one that we call an NVOCC, or non vessel operating common carrier. At some inland point he assembles containers full of cargo and ships them over the services of the commercial carriers. As these new kinds of services develop, it is predictable that the scheduled accumulation of cargo at the port will be less unpredictable, to our benefit.

To sum it all up, you might say that the new concepts of shipping are with us today. The Container ship, the Lash, When the slewing bridge is at right angles to the fender line, the bridge cannot extend beyond the fender line and the loading boom must be able to retract far enough to load the smallest vessel. However, as the bridge pivots, its end moves in an arc, away from the ship and the length of the loading boom has to be sufficient to reach the end hatches of the largest vessel.

The loading boom is a cantilever. Its length determines the span of the bridge and the moving loads imposed on it, and consequently, the overall weight of the shiploader and the loads transmitted to the marine foundations.

Because of this geometry, there are practical and economical limits to the hatch coverage and therefore the size of the vessel that can be loaded by a single slewing bridge loader. For these reasons, all slewing loader installations for covering vessels larger than 40,000 DWT utilize twin slewing loaders, even though this requires two additional conveyors and two additional transfer stations with their related foundations, involving additional capital costs and additional sources of maintenance.

The Linear Loader Concept

A slewing bridge type loader could achieve a substantially larger hatch coverage if the end of the bridge would move along the dock face, instead of an arc (Fig. 3).

The Linear Loader (Fig. 4) is basically a slewing bridge type loader, except in the way the bridge is supported.

The problem of rotating the slewing bridge around a pivot, with its end moving not in an arc, but on a straight or "linear" track is accomplished in the following manner:

The front end of the Linear Loader bridge is supported

the SeaBee, the Ro-Ro have all well established themselves in world trades. It has been a sensational change in shipping concepts. Frankly, I don't look to see any great significant change in the type of vessels in the years ahead. But, now we must learn to perfect our handling facilities at our ports to handle the service needs of these vessels. Let's say the maritime trades have finally become mechanized, and from here on it will be the development of sophisticated systems of shipping in which we will all learn and share our expertise hopefully to meet the increased demands of shipping and commerce that will be placed upon world markets in the years ahead.

And now my crystal ball seems to be fogging up a bit and I am running out of prophesies. I have enjoyed bringing you this message. In return I ask only a small favor. It is that one day **you** would send **us** a prophet. According to my arithmetic we are approximately as far from you as you are from us, and, therefore, we could give his powers of foresight the same credentials as mine are being accorded here. Think of it as "prophet sharing" . . . but, please don't wait too long. Some of us are very worried about what is going to happen to us all over there.



Fig. 1—Traveling Loader—Elevated gallery open on one side covers dock conveyor and transfer to shiploader. No satisfactory design exists for dust control and complete enclosure required for strict environmental control.



Fig. 2-Twin Slewing Loaders-Loading boom can move in or out on top of slewing bridge. As the bridge pivots, its end describes an arc that moves away from the ship.

by a standard traveling turntable (Fig. 5). This is a tried and proven machinery component, a part of every rail-mounted bucketwheel, stacker or revolving crane.

At the pivot, the Linear Loader bridge is supported on the same type of turntable, turned upside down (Fig. 6).

The front end of the bridge is connected to the front turntable. The turntable at the pivot provides the other support. When the front turntable travels on a linear runway parallel to the face of the dock, the turntable at the



RADIAL LOADER



LINEAR LOADER

Fig. 3-Slewing and Linear Loader Comparison-The bridge of the Linear Loader pivots with its end remaining next to the ship. Ship coverage is vastly increased and foundations simplified.

pivot is allowed to slide as well as to rotate (Fig. 7). Thus, the Linear Loader will pivot, with the end of the bridge moving along the dock face.

Marine Foundations

It is usually simpler and less expensive to construct a straight runway then a curved one, and a service roadway can be readily incorporated in a straight runway when this is desired. Compared to traveling loader berths, the Linear Loader berth needs a narrower and shorter runway, with less fendering of fewer breasting dolphins (Fig. 8).

In locations where caissons or cells are the most economical marine foundations, the breasting dolphins can be utilized as vertical and lateral supports for the Linear Loader runway, whereas slewing bridge loaders need separate foundations for an arc runway. The new Narvik ore pier (4) illustrates this concept (Fig. 7 & 9).

The same concept may also be utilized for breasting dolphins constructed with vertical and batter piles. The 8,000 ton per hour capacity bauxite loader of the Trombetas project in Brazil, currently under construction, is an example of this design (Fig. 10).



Fig. 4-Linear Loader-The Linear Loader is basically a slewing bridge type loader, except in the way the bridge is supported. Installation at Bunbury, Australia features the most advanced and complete dust control system for dust-free loading of alumina at 2,500 TPH.



Fig. 6-At the pivot, the Linear Loader bridge is supported on the same type of turntable, turned upside down.



Fig. 5—Front end support of the Linear Loader bridge is the standard traveling turntable used in railmounted stackers and bucketwheels.



Fig. 7—The girders forming the bridge are connected to the front turntable. As this turntable travels on a linear track parallel to the dock face, the turntable at the pivot permits the bridge to rotate and slide.

When the use of flexible breasting dolphins is indicated, the front rail of the linear track can be conveniently set back about 10-20 meters behind the fender line without increase in the cost of the Linear Loader. With this large setback, the breasting dolphins required to protect the runway from ship impact can be spaced further apart than for a traveling loader berth where the front runway rail is usually only a few meters behind the fender line.

The Linear Loader has an important feature for offshore applications, with pile supported structures exposed to substantial wave action. The Linear Loader, free to slide and rotate at the pivot, can tolerate relative movements of the pivot and runway foundations due to wave action. For a slewing bridge loader or traveling loader deflection has to be strictly limited, requiring bracing or other costly measures.

Twin Loader Installation

The Linear Loader lends itself to "twin loader" installation in the same manner as slewing bridge loaders. For large vessels, a slewing bridge loader has to be a twin loader installation. The Linear Loader does not. Thus, the Linear Loader offers a choice that can be based on evaluating the value of the higher loading performance of a twin loader installation versus the lower capital, maintenance and operating costs of a single loader.

Expansion

A single Linear Loader capable of loading large ships can be installed initially at minimum capital cost and later, as the production increases, the loading rate can be doubled by installing a second Linear on the same runway. The Narvik installation is an example of this (Fig. 9).

An alternative arrangement is to extend the runway and add a second Linear Loader. Such a facility will be able to load one large vessel at double the initial loading rate or two smaller vessels at the same time.

Both of the above expansion plans can be carried out without interrupting operation of the initial installation.



TRAVELING LOADER



LINEAR LOADER

Fig. 8-Marine Berth Comparison-The Linear Loader berth needs a narrower and shorter runway, with less fendering or fewer breasting dolphins.



Fig. 9-Caisson Construction-At Narvik, a concrete box girder runway is supported on five 13.8 meter diameter concrete caissons and four intermediate vertical pile bents. Initial 11,000 TPH Linear Loader covers 250,000 DWT vessel. In the future, vessels up to 400,000 DWT will be loaded at 22,000 TPH by adding a second Linear Loader on same foundations.

Environmental Protection

Environmental protection requirements of bulk loading installations may call for enclosure of the conveyors and transfers and also, depending on the location and materials



Fig. 10—Pile Construction—At Trombetas, Brazil 4 breasting dolphins of vertical and batter pile construction and 8 vertical pile bents support Linear Loader runway. Capacity is 8,000 TPH bauxite.



Fig. 11—The transfer station between the dock conveyor and Linear Loader is a fixed structure, that can be completely enclosed and sealed, incorporating extensive dust control installations.

handled, complete sealing and dust control.

Traveling loader installations can be enclosed only at great expense. The main difficulty is enclosing the moving transfer between the dock conveyor and the shiploader. Customarily an elevated "C" gallery is utilized. This structure is located high above the dock, resulting in large wind loads that increase the size and cost of the marine foundations (Fig. 1). In case of strict environmental controls, requiring dust control and/or complete sealing of the opening in the "C" gallery, the structural and maintenance problems and costs are further aggravated.

A Linear Loader or slewing bridge loader has a fixed transfer at the pivot. The conveyor feeding the shiploader can be enclosed in a standard conveyor gallery. The transfer station between the feed conveyor and the shiploader is a fixed structure, that can be completely enclosed and sealed, incorporating extensive dust control installations (Fig. 11).

For all but small vessels, slewing loaders require twin (Continued on next page bottom)

Background

The Port of London Authority

The Port of London is the largest port in the United Kingdom and is long established as one of the world's great seaport. It serves shipping on all the world's major trade routes and deals with virtually every kind of trade and commodity. It is controlled by the Port of London Authority which is an independent statutory trust set up by Act of Parliament.

The Port of London Authority's responsibilities are wide ranging. The Authority is not only the statutory body responsible for development, conservancy, navigation and security but is also a major operating organisation in its own right with experience in virtually every aspect of port management and cargo handling operations.

The Port of London Authority is responsible for the following port and harbour functions:—

Administration: administration of the port in accordance with the relevant Acts of Parliament of the Port of London as a whole. The Authority has extensive statutory powers of licensing and control.

Dock Operations and Management: cargo handling including containers, unit loads, break bulk goods, bulk

units. Twin loaders require three transfer stations and related dust control installations, compared to only one transfer station for a single Linear Loader.

Patent Status

The Linear Loader has been patented around the world by Soros Associates, who are consulting engineers, not equipment manufacturers. To avoid any conflict of interest, no royalties are accepted on Linear Loaders installed in port installations for which Soros Associates are the consulting engineers. This policy assures objectivity in selecting the loader best suited to each case. Indeed, current Soros projects involve traveling, slewing, fixed and Linear Loaders.

Accordingly, on Soros projects non-exclusive licenses, without compensation to Soros Associates, have been granted to shiploader manufacturers (Five Lille, HR, IHI, Italimpianti, Krupp, MAN, PHB, SA, Webb, etc.), enabling the owners to buy a Linear Loader under the same type of competitive contracting conditions as a conventional traveling loader. Alternately, if required for the optimum construction and contracting program of the overall project, Soros Associates provides complete detail designs and the Linear Loader is assembled from machinery components and locally fabricated structural steel purchased by the owner on a competitive basis.

On projects where Soros Associates are not the consulting engineers, the Linear Loader may be furnished by shiploader manufacturers licensed under appropriate royalty arrangements.

Current Status

The highest capacity iron ore (11,000 ton per hour),

26 PORTS and HARBORS - JANUARY 1977

goods; warehousing; groupage; vehicle pre-booking schemes; accounting; marketing; engineering; management services and computer operations.

Security: security and crime prevention; crime investigations; drug control; safety.

Conservancy: regulation of river traffic; control of hazardous cargoes; licensing of river works; craft registration; organisation and provision of emergency services. **Navigation Services:** shipping operations and communications; traffic movement regulation and coordination; radar surveillance and radio communications. **Hydrographic Services:** surveying and charting of river and estuary; development of automated survey techniques; flood warning.

Salvage Services: operation of the salvage fleet; fire fighting in vessels; diving services; removal of wrecks.

Dredging Services: maintenance of navigable channels; operation of the dredging fleet; disposal of dredged material.

Pollution Control: control of oil spillage and pollution in navigable waters.

Dock Shipping Services: locking operations; berthing of vessels; operation of tug fleet and floating cranes.

bauxite (8,000 ton per hour), and alumina (2,500 ton per hour) loading installations currently under construction in the world are Linear Loaders. They are located respectively in Europe, South America and Australia.

One of these units was designed in complete detail by Soros Associates. For the other two units, Soros Associates prepared general arrangements and specifications against which lump sum type international competitive bids were received. There are a number of additional Linear Loader installations planned, with construction expected to start in the near future.

Conclusion

The Linear Loader is a recent development that offers a viable alternative to other types of shiploading berth designs and, in many instances, can produce substantial savings in capital and operating costs. These advantages are likely to be significant for installations involving large vessels, locations where marine construction is expensive and installations requiring strict environmental controls.

References

- Soros, Paul: "New Iron Ore Loading Facility of Santa Barbara at Huasco, Chile", Skillings' Mining Review, April 1968.
- 2. Soros, Paul: "Port Latta-Open Sea Loading Terminal", Civil Engineering, January 1969.
- 3. Soros, Paul and Koman, Bela: "World's Largest Ore Port at Tubarao, Brazil", AIME Fall Meeting, Acapulco, Mexico September 1974.
- 4. Soros, Paul: "Expansion Program at Iron Ore Port at Narvik", Skillings' Mining Review, December 13, 1975.

Placon Ltd.

Placon Ltd. is a wholly owned subsidiary of the Port of London Authority established in 1973 to provide a comprehensive consultancy and training service to organisations requiring professional advice and assistance of a high calibre in the port transport field.

Through Placon, the extensive managerial, technical and operating skills and the great range of practical experience of the Port of London Authority are effectively made available. The company draws senior consultancy staff from the highest levels of the Authority's management team and can supplement its inhouse skills, where appropriate, by drawing upon its well established links within the industry and elsewhere.

A brief summary of some of the consultancy assignments with which Placon has been or is currently associated is given overleaf.

With regard to training, almost every aspect of port work is covered. Training is supplied by means of formal classroom based courses and through special practical attachments at technical and operating departments of the Port of London Authority. Courses are run regularly in London and, by arrangement, may be provided overseas in the local port environment. Subjects covered include management and operations, marine services and port policing and security. The training programme has been attended by students from some 25 countries throughout the world.

Further information concerning Placon's range of services may be obtained from the General Manager, Placon Ltd., World Trade Centre, London, E.1.

Recent Consultancy Experience

Port facilities and towage services, Mexico (1974/75)

Comision Nacional Coordinadora de Puertos.

This project involved a study of port facilities in Mexico, and included a survey of shipping patterns and operational features in all existing and planned ports. The project team produced recommendations and detailed specifications for a range of port tugs to meet expanding traffic demands.

Navigational procedures and equipment, Nigeria (1974)

Inter-Governmental Maritime Consultative Organisation (IMCO).

At the request of IMCO, Placon Ltd. provided advice and recommendations to the Nigerian Government on the improvement of navigational equipment and procedures in Nigerian territorial waters including the designation of safety lanes and the provision of position fixing systems.

Port Security, Nigeria (1974)

Nigerian Ports Authority.

This assignment involved a survey of principal Nigerian ports and the provision of advice to the Nigerian Ports Authority on matters of security.

Navigational and Communications Systems, Shetland Islands (1974/75/76)

Placon Ltd. has been retained to provide advice on the navigational and communications systems for new deep water oil terminal facilities under development at Sullom Voe in the Shetland Island.

Movement Control Study, Egypt (1975)

Suez Canal Authority.

Placon Ltd. was a member of a British consortium commissioned by the UK Ministry of Overseas Development to undertake a movement control study along the Suez Canal. The project team was led by Lt. Cmdr. R.B. Richardson, Havenmaster of the Port of London Authority. The team made an assessment of the volume and pattern of shipping through the Canal up to 1990 and recommended control systems to handle predicted traffic. Recommendations provided for phased implementation including short term improvements before introduction of the full system. The team prepared a detailed programme for installation and commissioning and also made staffing and training recommendations.

Port of Brisbane Development Study, Australia (1975)

Placon Ltd. was a member of a consortium which carried out a master plan study for the future development of the Port of Brisbane. Placon advised on overall port planning, on commercial policy and organisation, on matters of port legislation and on certain aspects of cargo handling operations.

Australian Ports Study (1975)

Australian Association of Port & Marine Authorities.

This assignment involved a study of operating practices and procedures at the ports of Adelaide, Brisbane, Fremantle, Melbourne and Sydney. Advice was provided on the restructuring of certain aspects of the ports industry and on the role of the port authority in this context.

Port Organisation and Operations Study, Oman (1976)

Oman Port Services Company.

Placon Ltd. carried out a study in Mina Qaboos, Mutrah, Sultanate of Oman, for the port operating company. The study entailed an assessmant of organisational, operational and financial aspects of the port. Detailed recommendations were made covering each of these fields and training requirements were evaluated.

Hamburg Mission to Japan (October 22-28, 1976)

Purpose of the Mission's visit to Japan



Dr. Wilhelm Noelling

The Hamburg Mission to Japan hopes to have the opportunity of discussing trade between Japan and Hamburg, and greater utilization of the port of Hamburg, in meeting with Japan's government and business leaders.

The Mission would like to call Japan's attention to present trade relations, which currently favor Japan. Therefore, subjects to be discussed include: possibility to expand Japan's imports covering various items, slowdown of export growth by governmental or voluntary measures, further liberalization of capital transactions, and promotion of European exports to Japan.

Four years ago, the Free and Hanseatic City of Hamburg inaugurated its representative office in Japan. The office has succeeded in strengthening Hamburg's relations with Japan's port and shipping companies and in 1974 a specialized port representative was appointed to the office. During this time new contacts were established, and already existing relations were strengthened.

The Hamburg Mission will invite Japanese enterprises to establish their representative offices or industrial base in Hamburg. The Mission will also introduce other aspects of the city to the Japanese people, such as attractive sightseeing spots, and facilities for international congresses in addition to the above mentioned trade and transportation fields.

The Port of Hamburg: an important distribution center for Japan's exports and imports

The port of Hamburg plays a vital role for Japan's shipping companies as a gateway port to European countries. A significant amount of trade with European countries, which has been progressing due to the easing of tensions between East and West, is handled through this historical port.

A total of 50 million tons of cargo annually passes

28 PORTS and HARBORS – JANUARY 1977



Dr. Wilhelm Noelling (standing), Minister for Economic Affairs, Transportation and Agriculture of Hamburg delivers an address at a port symposium sponsored by the Hamburg Mission at the Hotel Okura in Tokyo on Oct. 27. Others are, from right, Carl-Heinz Illies, president of C. Illies & Co.; Wilhlm Michels, representative of the City of Hamburg Japan Office; Klaus-Dieter Fischer, executive director, Port of Hamburg and Helmut Hansen, general representative, Port of Hamburg.



Helmut G.H. Hansen (standing), general representative, Port of Hamburg, speaks at a port symposium at Hotel Okura sponsored by the Hamburg Mission on Oct. 27, 1976. Others are, from left, Klaus-Dieter Fischer, Executive Director, Port of Hamburg and Wilhelm Michels, representative, City of Hamburg Japan Office located in Tokyo.

through the port of Hamburg. General cargo accounts for 15 million tons, while 35 million tons was handled for West German import and export trade. The average value of merchandise exported through Hamburg is DM2,800. Of a total of 10 million tons of transit cargo in 1975, 3.9 million tons was destined for East Germany, 1.7 million tons for Czechoslovakia and 1.1 million tons for Austria. Cargo was



South Elbe Port Industrial Area



Port of Hamburg, the largest international port in Germany

also handled for Denmark, Sweden, Hungary, Finland, Poland, Switzerland and Norway, as well as for domestic distribution on waterways.

The total volume of cargo handled annually in Hamburg for export to and import from Japan is about one million tons. About 80 percent of this cargo is containerized, and the most of which is high quality. The Far East route has the largest volume of container cargo at the port of Hamburg, followed by the North American and East Coast routes. In the first six months of 1976, 72,417 containers or 665,000 tons of cargo were handled for the Far East.

Hamburg also has great potential as a distribution center for expanding Japanese trade activities. Its warehouse area is the largest among European ports, encompassing 1.7 million square meters. Hamburg also has the world's largest warehouse complex within its free port area, covering 560,000 square meters. Commodities stored here include coffee beans, tea, cacao, tobacco, and spices, in addition to industrial finished goods such as electronic computers. The complex is located within a bonded area from which the goods can be marketed or re-exported directly to other European countries or through Hamburg's import firms. The warehouses also function well as consignment warehouses for unsold export goods. Hamburg's excellent facilities for collecting, classifying and delivering of cargo offer another advantage to Japanese trade.

Containerization is playing a greater role in Japan's trade



Congress Center Hamburg (Lake Alster in the background)



Jungfernstieg Landing Stage, the starting point for sightseeing tours on the lake Alster and regular ferry service.

today. The port of Hamburg has continuously adopted measures to be better able to cope with this trend. Hamburg functions as a distribution center for import firms for the goods of Japanese origin.

The container center in Waltershof is one of the world's largest and most efficient centers of its kind, equipped with modern, convenient facilities. Nine berths, using ten sets of gantry cranes, are available for rapid handling of containers.

In addition, there are warehouses covering 128,000 square meters for packaging and temporary storage. The Center primarily handles containers destined for the Far East on such shipping lines as Trio Group, including Nihon Yusen K.K. and Mitsui O.S.K., ScanDutch Group, and Ace Group, including Kawasaki Kisen Kaisha, Ltd.

At Waltershof, HHLA operates at the Burchardkai Wharf, and Eurokai K.G. at the terminal opposite to the Wharf.

Other container facilities are located at the terminals of Tollerort and Unikai.

New Marine Traffic Control Center Being Installed at Panama Canal

Balboa Heights, Canal Zone, November 12, 1976:-Agents for international shipping companies toured the Panama Canal's new Marine Traffic Control Center at La Boca recently and were given a preview of how it will work to the benefit of everyone concerned.

Canal officials who briefed the shipping agents included Gerard J. Welch, contracting officer's representative; Capt. A.L. Gallin, Deputy Marine Director; and James C. Foster, project engineer for the new center.

The new Marine Traffic Control System is a computer based arrangement designed to assist MTC personnel in collecting, assimilating, displaying and disseminating the data, schedules and other information required to coordinate the resources affecting transit operations. MTC employees are being trained to operate the highly sophisticated equipment before all MTC operations are moved into the new building early next year.

Once in the new center, the manual chalk board system presently used will continue to be available as a back-up in case of emergency. Should there be a breakdown in the new system, the watch supervisor would see to it that the operation is converted rapidly to the manual mode as an interim procedure.

The air-conditioned center has an independent power supply using batteries and diesel engines enabling the ultra modern MTC equipment to continue in operation during an electrical failure.

The new system, installed by Boeing Aerospace Co., the Canal's prime contractor for the project, allows controllers to make more efficient use of their time. This is essential when taking into account that on a typical day, with 35 ships scheduled to transit the Canal, including five "Clear cuts", Marine Traffic Control handles up to 1,800 telephone messages, 1,100 radio messages and 800 teletype communications. And, as the level of traffic increases, so does the quantity of data that is required.

Besides meeting the communication challenge, the new system processes data, assimilates it and, provides the location of ships in the waterway plus myriad other types of vital information.

One of the key features of the system will be an active ship file containing details on any vessel which has provided an Estimated Time of Arrival at the Canal. Also, it is compatible with the Canal's ship data bank from which considerable information has been extracted for use in the new system.

Another feature is a locks telemetry system which will designate the location of transiting vessels within all locks. Manual impulses touched off by lockmasters will tell the system when the vessels arrive, tie up, and clear the locks.

Seated behind consoles in the new center, the traffic controllers will be talking on keyboards to the computer to report and receive reports from 25 locations in the Canal Zone.

Each transit controller will use a group of six Cathod Ray Tube (CRT) displays to develop new schedules and



Forty-eight foot long ship position display board of the new Marine Traffic Control Center is explained to shipping agents by James C. Foster, left, project engineer for the new center. Immediately to his right is Cdr. William Drew, Assistant to Marine Director for Marine Safety. (Panama Canal Press Release)

update existing ones. Transiting ships will progress along the six tubes until they "march off" the CRT's and new ones move on. The progress of each ship will be compared with a pre-planned schedule. If an element is missing to complete the transit on schedule, such as deckhands or tugs, an automatic warning will be signaled so that the appropriate action can be taken.

Probably the most striking element of the new center is the huge 48-foot lighted ship position display board which shows the approximate location of every vessel in the Canal. Southbound ships are represented by amber colored lights across the bottom of the board and northbound ships by orange lights across the top. With clear labeling of the locks and reaches and turns in the waterway, a glance at the board quickly tells the controller where each transiting ship is situated.

The new systems will greatly assist the controllers but will also benefit customers of the waterway. The Canal organization will offer an optional dial-up service providing print out reports for shipping representatives needing quick, detailed printed information. Shippers on the Isthmus desiring the service will be able to rent printers for their offices or may purchase their own with no cost to them for the data provided upon request from the Canal organization.

30 PORTS and HARBORS - JANUARY 1977

International Intermodal Conference held at the Port of Oakland

Oakland, Calif., October 7 (Port of Oakland):-Already the leading economic activity in the nation-accounting alone for some 20 percent of the gross national productthe transportation industry must double its existing capacity in 25 years, according to studies cited at the first in a series of annual International Intermodal Conferences held recently (September 30) at the Port of Oakland.

But, said Robert E. Redding, consultant and former director of the Office of Facilitation of the U.S. Department of Transportation, it cannot realistically be expected that we can expand our physical transportation structure of 4 million highway miles, 200,000 miles of railroad track, 25,000 miles of navigable waterways, 250 sea, lake and river ports and 12,500 airports.

So enhanced efficiency within the system must be the answer, he declared. And increased intermodal movements of the \$200 billion worth of U.S. imports and exports traded annually are among the best means of improving freight transportation efficiency, Redding suggested.

There are reasons for optimism about the facilitation of intermodalism, Redding added, both within the U.S. and internationally.

Among them are increased cooperation among the federal agencies most directly concerned: the Federal Maritime Commission, the Interstate Commerce Commission, the Civil Aeronautics Board and the Department of Transportation.

There have been Congessional and Presidential actions to eliminate excessive paperwork, reduce transport terminal congestion, improve physical distribution capabilities for containerized shipments and establish uniform rules and regulations on intermodal tariffs, he said including hearings on the latter by the House Merchant Marine Subcommittee, establishment of a National Transportation Policy Study Commission and the passage of the "Government in the Sunshine" Act, opening regulatory agency meetings to the public.

Finally, the United Nations Commission on International Trade Law and the Economic Commission for Europe have amended, modified and reduced current procedural regulations to ease international movements of intermodal cargoes, Redding pointed out.

While admitting that he has some sympathy for the competitive position of U.S. carriers like Sea-Land Services, United States Lines and others who have recently admitted to past rebating, Clarence Morse, Vice Chairman of the Federal Maritime Commission, told the nearly 400 Oakland conference participants that he advocates stiff fines for the shippers who accept such under-the-table cuts in published freight rates "because usually they don't need it to stay in business, as the carriers sometimes do."

"We have the names of hundreds of shippers who got rebates," Morse warned, "and we will proceed against them and find out the names of any other lines" who have engaged in such practices.

Moreover, he said, the FMC is considering a requirement that a top-level official of each major American water carrier must annually certify under oath that the company did not make any unlawful rebate in the U.S. trade.

But, he added, "I will not participate in any proceeding that singles out American flag carriers and allows others to go free."

Morse noted that the FMC is now conducting factfinding into allegations that self-policing by steamship conferences of illegal and disruptive devices by its members is a failure. And he said he advocates restrictions on the numbers and types of foreign vessels which have access annually to U.S. cargoes.

"We need a bigger and more varied merchant fleet," Morse asserted, "and we need more of our exports and imports to be moved by American flag carriers."

Morse's call for increased government involvement in rate-setting by ocean carriers and encouragement of shippers to use the national mercantile fleet were among a broad range of viewpoints presented at the International Intermodal Conference by 25 high-level speakers and panelists representing the shipping and freight transportation industries.

Ben E. Nutter, Executive Director of the Port of Oakland-co-sponsor of the conference along with the Oakland Chamber of Commerce and the Oakland World Trade Club-announced that follow-up conferences will be held each year in Oakland during National Port Week. The next conference will be September 29, 1977.

Aim of the conference is to encourage advances in the efficiency of land, water and air modes of freight movement while serving the needs of shippers and engaging in dialogue with concerned regulatory agencies.

Conference panelists included William J. Newlove, Vice President. Kerr Steamship Company; George Brokaw, District Director of Customs; Eric Danoff, Graham & James; John P. Gray, President, Western Pacific Transport; Walt Bouie, International Representative, IML Freight, Inc.: Gary Ferrulli, Pricing & Conference Manager, Maersk Line:

Ike Kotelnikoff, Regional Terminal Manager, Matson Terminals; Richard Elms, Executive Vice President, Containerfreight Corporation; Raymond P. Ebeling, Vice President-Pricing, Seatrain Lines; Fred Fisher, Lillick McHose & Charles; Raymond A. Velez, Chairman, Pacific Coast European Conference; Neal Mayer, Coles & Geertner;

David Forgie, Manager, Marine Trade Development Department, Port of Oakland; Jesse C. Jessen, Expor-Import Manager, E.I. Dupont de Numours Company; Anselm Grossman, Traffic Manager, H. Molsen & Company; J. Murray Fox, Pacific Agricultural Corporation for Exporters (PACE);

William F. Horton, Vice President, Norton Lilly & Company; Fred Huntsinger, Coast Labor Relations Committee, International Longshoremen's & Warehousemen's Union; C.A. Rousser, Jr., Director of Trade Development, Port of Houston; Thomas A. Fante, Assistant Vice President and General Manager, Intermodal Traffic, Southern Pacific Railroad; Robert H. Cleveland, Vice President-(Continued on next page bottom)

25th Conference of The Association of Australian Port and Marine Authorities

A.A.P.M.A. Press Release

Melbourne, 29th October 1976 (Refer also to article on page 52 titled "Brisbane and A.A.P.M.A."):-The Association of Australian Port and Marine Authorities 25th biennial Conference held in Melbourne 25-28 October 1976 was hosted by the Melbourne Harbor Trust Commissioners (Chairman Mr. A.S. Mayne) and officially opened by the Premier of Victoria, Hon. R.J. Hamer ED M.P., Chairman of the Conference was Mr. A.J. Peel, President of the Association and Director of Harbours and Marine Queensland.

Approximately 100 delegates from port and marine authorities of all Australian States and the Northern Territory were at the Conference; the Commonwealth was represented by its Department of Transport. International visitors came from port authorities in United States of America, New Zealand, Singapore and Papua New Guinea. The International Association of Ports and Harbors representative was its 1st Vice President Mr. G.W. Altvater, Executive Director, Port of Houston, U.S.A.

At the conclusion of the 25th Conference on 28th October 1976, Mr. Peel said that a significant feature was the three sessions of guest speakers with associated discussion periods. Delegates participated in four separate syndicates of about 25 members each, prior to general discussions in the main Conference room. The guest speakers were Mr. G.W. Altvater who spoke on Future Trends in Port Development. (See page 19.) The second speaker was the Honourable A.A. Street MP Federal Minister for Employment and Industrial Relations whose subject was Waterfront Industrial Relations. Mr. R.W. Eaton, Chairman and Managing Director of Overseas Containers Australia Pty. Ltd., spoke on Transport Costs in Relation to Port Charges. All three emphasised that the port was only a link in the transport chain, but a very vital one to the Australian economy, for which efficient ports were essential. Mr. Peel said that these talks together with the spirited discussions which followed were very beneficial to the individuals attending the Conference and to their Port Authorities.

Mr. Peel went on to say that the functions of the Association of Port and Marine Authorities were simple but comprehensive;--

- To facilitate the solution of Port and Marine Problems
- To promote greater uniformity of Port and Marine Practice
- To foster a closer relationship in exchange of knowledge between members.

Traffic, Pacific Intermountain Express; and William J. McGowan, Vice President-Pricing, American President Lines.

Questions from the audience were coordinated by a press interview panel, composed of Marc Felice, Editor, Transport 2000; John Eichorn, Editor, Pacific Traffic; and Shirley Tate, Managing Editor, Pacific Shipper. It is not an authoratative organisation but one devoted to consultation and deliberation, making recommendations only to its members.

The objectives are clearly aimed at improving the efficiency of the Association's members and he believed that the 25th Conference had assisted greatly in achieving each of the three aims of the Association. Mr. Peel noted that there were changing attitudes on the part of Port Authorities. Probably the most interesting was the concept that a Port Authority should involve itself positively in the management of all facets of harbour services. This concept recognises that the port authority has provided a very extensive infra-structure within its port and its viability will be affected by the efficiency of all or any of the port services. It is also recognised that the port authority is the only authority capable of co-ordinating all port services. It accepts that capital investment by a private enterprise in port facilities must be placed under a fair and unified control of port management; it accepts that port management must have a say directly or indirectly in industrial arrangements within its port; that port management should exercise a measure of control over all movements of goods from the ship to the port terminal gates and vice versa. Port Authorities throughout the world are shrugging off the some-what restricted role that they have played in the past and are taking on a new role in the overall transport scene, to the benefit of all port users and the community in general.

After the address by Mr. Street, the conference devoted considerable time to discussing the attitude of port authorities towards waterfront industrial relations. A telegram was sent to the Minster, expressing Conference reservations that new arrangements on the waterfront to replace the present temporary provisions due to expire 31 December 1976, could be satisfactory without some Commonwealth legislative backing.

In addition to noting the Association's activities in connection with many port and marine subjects referred to in the Presidents Report to 25th Conference, the Conference exchanged views on the various practices associated with the charging of wharfage on goods and the recording of port statistics. Follow-up on these matters will be taken by the Associations Council.

Mr. Peel concluded by saying that the 25th Conference highlighted the co-operation and mutual self—help between the Port Authorities of all States and the Northern Territory, together with relevant Departments of the Commonwealth Government. He also spoke of the great value received from international contacts and referred to the overseas delegates and reciprocal visits overseas by Australian representatives to the Conferences of the South West Pacific Ports, New Zealand Harbours Association and of the International Association of Ports and Harbors.

At the end of the Conference Mr. A.J. Peel and Mr. A.S. Mayne were re-elected President and Vice-President respectively until the next biennial Conference (26th) of the Association of Australian Port and Marine Authorities which is to be held in Sydney in 1978, hosted by the Maritime Services Board of N.S.W. It's quite natural for Nippon Steel to be more than a producer of steel. You see, besides having steelmaking know-how, we've accumulated diverse technologies through constructing ten of our own steelworks.

That's why we can offer a wide range of services for offshore, urban and industrial development.

For oil/gas-related offshore projects, for instance, we handle everything from design to installation.

We even have our own fleet of work boats.

On land, we're active in many areas. Suspension bridge erection is one of them. Housing is another. A lot of people are now living comfortably in prefabricated housing developed by us.

Naturally enough, you'll find us involved in the manufacture of steel mill equipment and facilities. And, since we're the world's largest steelmaker, you won't be surprised to learn that we provide engineering for integrated steel mill construction. Along with operational guidance.

Like to know more? Send for our Engineering Divisions Group brochure. Write to: 6-3, Otemachi

STEELMAKING^{2-chome,} Chiyoda-ku, Tokyo 100, Japan. Introducing the versatility of Nippon Steel.



Manufacture of steel mill equipment and facilities has long been a Nippon Steel specialty.

Nippon Steel can engineer entire steel mills—and provide guidance for their operation. Nippon Steel undertakes all aspects of oil/gas-related off-shore projects.

Nippon Steel's prefabricated housing systems answer the need for economical housing.



Tokyo, Japan

THE SEIKO QUARTZ COLLECTION. CHANGING THE WORLD'S STANDARD OF ACCURACY.

19:08

90

The Seiko Quartz Collection encompasses a wide and exciting range of quartz watches for men and women. Quartz guaranteed accurate to within one second per month. Ultra-thin quartz. Day/Date quartz. Digital quartz watches with liquid crystal display for continuous readout. Even a digital quartz chronograph. It's what you'd expect of Seiko.

Seiko sold the world's first quartz wrist watch. And Seiko's expertise in every phase of the watchmaking process makes it possible for Seiko to make any part of any Seiko watch, and to exercise a unique quality control system through every step from design to completion. Whichever Seiko Quartz model you select, you get more than just a technologically advanced timepiece. You get the watch that's changing the world's standard of accuracy. Seiko Quartz.

> **SEIKO** Someday all watches will be made this way.
Orbiter Probe

Harbour Commissioners' Sailing School

Hamilton, Ontario, November 18, 1976 (Port of Hamilton Information Release):—A pat on the back and a full time 8 month job for the Director of the Hamilton Harbour Commissioners' Sailing School, Ian Robertson.

The Commission Chairman, Ed Tharen, said in complimenting the work of Robertson and the idea of the School that "it is a fine example of making good use of Harbour facilities for the public" and "helps to meet the need for more community recreation".

Ian Robertson reports "that over 400 Hamiltonians learned to sail and perfect their techniques" during 1975. He noted that 75% of last year's young people (our first group) returned in '76 to take classes at higher levels. Daily attendance throughout the summer was over 90% every day.

The Hamilton Harbour Commissioners founded the School in 1975 providing \$70,000.00 to get the program underway. Since then the projects have received two WINTARIO GRANTS amounting to \$16,000.00.

The prime reason for "Come Sail With Me" is to offer sailing and instruction at a very reasonable fee in order to make sailing a public resource and available to just about everybody, especially young people.

Robertson said the School and its facilities are among the best in the country and that with a suggested expansion, the School could serve up to 600 people next year.

New container line to Europe

Toronto, Ontario, November 3 (Toronto Harbour Commissioners):-Port of Toronto customers, who have close trading ties with the United Kingdom and the Continent, have welcomed a weekly container service initiated this year by Great Lakes and European Line, Inc.

The Chicago-based line, using five new cellular ships each capable of carrying some 200 containers (total equivalent 20-foot units), calls at the port each Monday with in-bound cargo and each Wednesday to take on out-bound cargo.

The express container service links the Great Lakes ports of Toronto, Detroit and Chicago with London's Tilbury Docks and the Port of Amsterdam. For Toronto, the Amsterdam connection is particularly gratifying because the two cities were twinned two years ago.

"The United Kingdom is an important trading area for us," said Port of Toronto's traffic chief Ken Closs. "It's the only container service we have on this particular route which gives our customers an alternative to using East Coast ports."

What has impressed both European and Great Lakes shippers most about the new cellular service is its reliability. The line's schedule calls for a transit time of 15 days to Detroit and 17 days to Chicago. An average Toronto-toLondon sailing takes 11 days.

"Business has improved considerably since the first ship (Triton) arrived in port on July 14," said Mr. Closs. "Interest in using the line is running high."

62nd birthday of Panama Canal

Balboa Heights, Canal Zone, Panama, Friday, August 13 (The Panama Canal Spillway):-Sunday will mark the 62d anniversary of the opening of the Panama Canal to the seafaring nations of the world.

On August 15, 1914, the dream of centuries became a reality as the SS *Ancon*, the old cement carrier of construction days, her recently painted white hull gleaming as she pulled away from the docks at Cristobal, began the first official transit of the waterway. Carrying 200 guests, including President Belisario Porras of Panama, the United States Secretary of the Army, members of the diplomatic corps and Canal officials, she made the historic transit in 9 hours and 40 minutes.

That memorable day also paid tribute to the Canal builders and to their efforts in digging the Big Ditch through mud and mountains, a feat hailed throughout the world as the engineering wonder of the era.

Since that first transit in August 1914, the Panama Canal has provided a shortcut from ocean to ocean to a total of 522,940 vessels of every category arriving at her gateways from the four corners of the world. In their holds, these ships have carried a multitude of cargoes weighing 2,820,498,449 long tons. The opening of the Canal has added tremendous impetus to the development of Latin American.

Merchant vessels of almost every nation, battleships and carriers have been a part of the passing parade of ships transiting the waterway. Recently, several of the world's tall ships passed through the Canal en route to the Bicentennial parade of sailing vessels in New York. Also recently, the U.S.S. *Tarawa*, the first in a new class of amphibious assault ships and the largest warship in operation that can go through the Canal, made a southbound transit to her home port at San Diego, Calif.

Major dredging at Baltimore

Baltimore, Maryland, November 9 (News from Maryland Port Administration): -The first major construction-related dredging in the port of Baltimore since 1973 will soon begin at the site of the new South Locust Point Marine Terminal.

The U.S. Army Corps of Engineers recently issued a permit that will allow the dredging of an access channel, turning basin and berth slips at the 40-acre terminal, which is still under construction and scheduled to open for business in early 1978.

(Continued on next page bottom)

Intermodal Conference in Houston a Success

Port of Houston News Release By Miss Middy Randerson Publicity Manager

(Refer to the news "Intermodal Seminar" Ports and Harbors, October, 1976 page 41.)

Lively discussions, thought-provoking speeches, and comments from well-balanced panels of experts helped to make the recent "Shipper's Dialogue-West Gulf" intermodal conference in Houston a success. Held at Stouffer's Hotel, the conference attracted close to 200 delagates from across the United States and Mexico.

The co-sponsors, The Port of Houston Authority and the Containerization Institute, Inc., had selected the panelists to provide pro and con opinions on some of the more pressing problems confronting the maritime and transportation industries today.

Following a morning panel discussion on the commodity

A total of 829,000 cubic yards of spoil will be removed in dredging a new 36-foot-deep access channel from the existing Federal Ferry Bar Channel to the terminal and in dredging the turning basin and wharfside slips. The spoil will be placed in an on-land, environmentally sound disposal site at The Arundel Corporation property in the Masonville section of the port.

Conducting the dredging will be the McLean Contracting Company of Baltimore, which placed a bid of \$3,448,460 for the Maryland Port Administration project in November 1975.

Although Environmental Dredging, Inc., of Wenonah, New Jersey, placed an apparent low bid of \$3,274,000 at the same time for the project, the firm could not get a Corps of Engineers permit for a proposed disposal site on Maryland's Eastern Shore as a result of objections by a local zoning board in that area. McLean was apparent second low bidder on the contract.

The dredging is expected to begin before the end of 1976 and will take approximately one year to complete. The project marks a major step forward in making possible the operation of much-needed port facilities at South Locust Point, which is located in the southwestern portion of Baltimore harbor, adjacent to Port Covington Marine Terminal.

The \$30 million, three-berth terminal will offer shippers a wide range of modern cargo-handling capabilities, including one shore-based 300-ton capacity heavy-lift derrick, two 40-ton capacity container cranes, one revolving gantry crane and a 120,000-square-foot shed.

The South Locust Point Marine Terminal channel dredging is the first project of its type in Baltimore since a similar operation was completed at Dundalk Marine Terminal three years ago.



Federal Maritime Commissioner Bob Casey delivered a hard-hitting speech on rebates in the shipping industry at the recent intermodal seminar held in Houston and sponsored by the Port of Houston Authority.

approach to intermodalism, which focused on various products and their suitability for containerized transport, Bob Casey, Federal Maritime Commissioner, delivered a hard-hitting luncheon address decrying the practice of paying illegal rebates.

Casey warned that the FMC will investigate all instances of "questionable payments and foreign payoffs" in the shipping industry.

Although such payments have been commonplace in the ocean trades for years, Casey noted, they are illegal and may result in civil penalties levied by the FMC and criminal charges brought by the Justice Department.

"We hear the conferences say they must rebate to compete effectively, and I accept the fact that no other nation has shipping laws and regulations based on our own legal concepts such as anti-trust, Casey said.

"I therefore favor any statutory changes necessary to insure that foreign flag lines doing business in the United States comply with the non-rebating feature of American law, and, insofar as possible, place them on a par with American carriers."

During a speech the following morning, T.W. Gleason, President of the International Longshoremen's Association, took Casey to task for criticizing American shipping without mentioning what he called the "biggest threat" to the U.S. maritime industry-the Soviet Union.

American and European carriers cannot compete with

36 PORTS and HARBORS - JANUARY 1977



Walter Pancoe, left, Southwest Regional Traffic Manager for DuPont in Houston, presents a Texas-shaped plaque to George Stafford, Chairman of the Interstate Commerce Commission, in partial thanks for his speech given at the intermodal seminar held in Houston.

those of the USSR, Gleason said, because the Soviets operate "for political motives and not profit."

Gleason said he believes the U.S. government should subsidize and build vessels in American shipyards, putting people to work instead of handling out welfare checks.

He added that from 15 to 18 per cent of all cargo from third-flag countries is being moved on the Trans-Siberian Railroad and being brought to West Coast ports without ever using U.S. carriers.

Gleason also commented that in his opinion the container ships will eventually be out-moded by the Roll On/Roll Off ships which do not require special cranes for loading and discharge.

Chairman of the Interstate Commerce Commission George M. Stafford, featured luncheon speaker on the second day of the conference, said that rapid changes in the transportation industry have forced that agency to broaden its outlook and remain flexible.

The Railroad Revitalization and Regulatory Reform Act of 1976 "is perhaps the most visible evidence of change which is being developed from a re-evaluation of the industry's needs," Stafford said.

He also noted that regulation of the trucking industry is now beginning to reveive the same kind of in-depth analysis that railroad regulation has received. Stafford predicted that legislative changes in that area are a possibility.

Other comments from the second-day speeches included:

F.W. Colburn, Counsel for the Port of Houston Authority:

Colburn contended that cross-country mini-bridge rates drain containers and traffic from affected ports and harm the long-established theory of tributary traffic. He also noted that in the Port of Houston, every container diverted from the Port by mini-bridge costs Houston \$920.

Paul D. Coleman, Attorney with Coles and Goertner:



Long Beach, Calif., 102976 (Port of Long Beach News):-For the second time in five years, the Port of Long Beach has been awarded the Admiral Richard E. Byrd trophy for "general excellence in maritime communications" by the American Association of Port Authorities. Pictured with the awards are, from left, Long Beach Harbor Commission president James G. Craig, Jr., with AAPA scroll to be kept permanently; Chuck Davis, of Davis & Associates Advertising Agency, holding ship bell for the best annual report in color; and Harbor general manager Thomas J. Thorley, with brass speaking tube from Admiral Byrd's Antarctic exploration vessel, symbolic of supremacy in maritime communications.

Coleman said that he is opposed to a premium rate structure for minibridge service, saying that it would cripple the steamship industry and possibly destroy the conference system. He added that ports have no right to guaranteed cargo flow and that such guarantees would limit the shipper in routing of cargo.

Delegates to the conference also heard Al Puzel, Vice President of Morflot America Shipping Co., and J.R. Arwood, President of Trans Freight Lines, speak on the competition between Eastern bloc shipping and U.S. seaborne commerce, and heard a commentary on the future of Ro/Ro given by J.G. Wulfers, President of Maritime Transport Overseas Inc.

General Chairman for the conference was Walter Pancoe, Southwest Regional Traffic Manager for E.I. DuPont de Nemours and Co., Inc. C.A. Rousser Jr., Director of Trade Development for the Port of Houston Authority, was Program Chairman, assisted by Norman Stone, Executive Director of The Containerization Institute Inc.

Moderators included Wiley George, President of West Gulf Maritime Association; Terrence A. Gallagher, Manager of Chemical Sales/Export Distribution for Shell Oil Co.; and George Strange, General Manager of the Houston Port Bureau.



Long Beach, Calif., 102976 (Port of Long Beach News):-Newest arrival on its maiden voyage to the Port of Long Beach was the diesel bulk carrier MV Baynes, built by Sumitomo in Japan for Dillingham Jebsen Shipping Corp., a joint venture between Dillingham of Honolulu and A/S Kristian Jebsens Rederi of Bergen. The 33,750 long ton vessel cruises at 15.7 knots and carried as its first cargo a load of sand from Newcastle, New South Wales, to Hawaii-for construction purposes, not to refurbish Waikiki. Seen at Port presentation ceremonies are, from left, J.K. Winter, executive vice president of Automar, Inc., Captain Oddvar Johansen and Francis J. Pard, executive secretary of the Long Beach Harbor Commission. The Baynes loaded petroleum coke at the Metropolitan Bulk Terminal while in Long Beach.

Mitsubishi Board Chairman honored

Long Beach, Calif., 111576 (Port of Long Beach News):-The Long Beach Harbor Commission has presented its highest recognition-the title of Honorary Port Pilot-to Chujiro Fujino, Chairman of the Board of Mitsubishi Corporation, Tokyo, at a luncheon ceremony held here recently. Mr. Fujino is only the 49th person to be accorded the honor in its 22 year history.

In making the presentation, Commission president James G. Craig, Jr. noted that the recipient has been associated with the Mitsubishi organization for more than half a century, becoming its president in 1966. He was subsequently named to the Board of Directors and has served as Board Chairman of the corporation since May of 1974.

Mr. Fujino holds many other positions in various Mitsubishi companies and is closely associated with a number of world-wide trading organizations and international commerce committees.

Among his government posts is the Chairmanship of the Import Committee of Trade Conferences, an advisory body on international trade to the Japanese Prime Minister.

Previous recipients of the unique award, a plaque bearing a ship's clock, include Prime Minister Sato and Prime Minister Miki, who personally visited the Port of Long Beach in 1972 and 1976 respectively.



Long Beach, Calif., 111776 (Port of Long Beach News):-The title of Honorary Port Pilot, highest honor awarded by the Long Beach Board of Harbor Commissioners, was recently bestowed on Chujiro Fujino, Chairman, Mitsubishi Corporation, Tokyo, during ceremonies held at Long Beach. Commission president James G. Craig, Jr., right, is shown presenting the Port Pilot plaque, complete with ship's clock, to Mr. Fujino, left, who is only the 49th personage to be thusly honored since President Eisenhower became the first Port Pilot 22 years ago. Among recent recipients of the award are Prime Ministers Sato and Miki.

The presentation luncheon was attended by officials of many of the American and Japanese firms doing business with Mitsubishi and the Port of Long Beach. Leading commodities handled involving Mitsubishi include grain, petroleum coke, steel, electronic equipment, soda ash and machinery.

Japan has been the leading trading partner with Long Beach Harbor for many years, accounting for nearly \$2-billion in import and export trade last year out of a total of the \$6.2-billion in commerce handled across the Port's 66 berths.

Two top awards captured

Los Angeles, Calif., October 21 (Port of Los Angeles News):-The Port of Los Angeles has captured two top awards for its advertising and promotion work in competition with nearly 100 other harbors in the Western Hemisphere.

The Port also placed second in the same contest for its 1975 annual report.

The competition was sponsored by the American Association of Port Authorities at its annual convention in Philadelphia this past week.

Top honors went to the Port's four-color advertising, an eye-catching photograph of a three-dimensional paper sculpture depicting the wide variety of cargo handled at the Port. The illustration and accompanying text, stressing facilities and services at the Harbor, were produced by Marsteller Inc., advertising agency for the Harbor Department.

38 PORTS and HARBORS - JANUARY 1977

All Ports Are Alike



Test your transportation IQ. Put a check in one of the squares and look at the bottom of this column to see if you agree. By way of information, some ports provide only the bare essentials. Then there are others, like the Port of Houston, where facilities have always been kept ahead of customers' needs. For instance we have now expanded into three distinct port areas, each complete and designed for your particular cargo, providing the best facilities in the Gulf of Mexico.

TRI-PORTS OF HOUSTON

Serving You better three ways

Port of Houston Authority/P.O. Box 2562/Houston, Texas 77001/Field Service Office/ Lincoln Bldg./60 East 42nd St./New York, N.Y. 10017

Answer: False; but if you marked True, please write to the Director of Trade Development for information.

Also rated first place by the panel of independent judges was the environmental work carried out by the Harbor, and the related program informing the public of the vast improvement in the quality of Harbor waters. The Port of Los Angeles is now recognized as one of the cleanest commercial harbors in the world.

The Port's 1975 annual report, which earlier had won the B/PAA Best West Award for Excellence sponsored by the Business/Professional Advertising Association in Los Angeles, carried a reproduction of the first place four-color illustration on its front cover.

Highest revenue tonnage

Los Angeles, Calif., November 5 (Port of Los Angeles News):-Tonnage and income at the Port of Los Angeles showed substantial increases in the fiscal year ended June 30, according to figures released today (Fri., Nov. 5) by General Manager Fred B. Crawford.

Revenue tonnage, he said, which is all cargo crossing the Port's wharves, totalled 30.5 million tons, highest for all West Coast ports. It was also more than two million tons over the previous fiscal year's 28.3 million tons.

The gross revenue figure was \$27.7 million, as compared to \$24.9 million the year before. Included were \$11.1 million collected for wharfage and \$3.2 million for

dockage. These charges showed a combined increase of \$2.5 million. There was also an increase of \$460,000 in oil royalties, Crawford said.

Net income at the Harbor also climbed to a total of \$10.6 million as compared to \$10.1 million the year before.

Operating expenses at the Port totalled \$13.4 million as compared to \$11.7 million in the previous fiscal year.

\$60 million revenue bond approved

Los Angeles, Calif., November 10 (Port of Los Angeles News):-The Los Angeles Board of Harbor Commissioners today (Wed., Nov. 10) approved negotiations with a financial bond consultant in preparation for a proposed \$60 million revenue bond sale.

Chosen from a field of ten consulting firms submitting proposals to the Harbor Department was the Los Angeles firm of Stone and Youngberg. The firm has been the Port's consultant on the four previous revenue bond issues, beginning in 1960.

A Harbor Department review board evaluated the ten proposals, rating the firms according to five basic criteria: experience in financial and economic analysis; association with General Obligation, Revenue, and Bond Equipment Revenue issues; experience in the maritime industry, and



New York, N.Y., October 12 (The Maritime Association of the Port of New York):-Maritime Queen of Port of NY Chosen at MAPONY Golf Outing. James P. Rafter, vice president, United States Lines, Inc. (seated) chairman of the Maritime Association of the Port of New York's 48th Annual Golf Outing this year happily embraces the two runners-up in the Maritime Queen of the Port of New York Contest, Sharon Diamond (left) and Wendy Johnsen. In back (1 to r) are Eric Guy de Spirlet, president of the Association and president of Belgian Line, Inc., the new Maritime Queen Susan McRoberts, McRoberts Protective Agency, Inc., and Edward J. Barber, chairman of the Association's Promotion Committee, which sponsors the annual event, and chairman of Barber Steamship Lines, Inc. Other picture shows the three contest finalists at swimming pool prior to the event.

experience in sale of bonds.

Stone and Youngberg's responsibility will be to supply the Board with a necessary financial feasibility evaluation, projected Harbor costs and revenues and cash flows.

The proceeds of the bond sales, which will be used to finance certain specific capital improvements, will be derived from three separate issues: \$22 million in 1976-77; \$10 million in 1977-78, and \$28 million the following fiscal year.

500-ton lift derrick will operate again

New York, October 27 (News from The Port Authority of NY & NJ):-Shippers have been assured by the Port Authority that vital heavy lift services of the "Century," a floating derrick capable of lifting up to 500 tons of cargo, will be continued in the New York-New Jersey harbor by a



new operator, Witte Heavy Lift, Inc. of Hillside, New Jersey.

Resumption of this service, discontinued by the former operator in June, will assure the preeminence of the Port in handling heavy lift shipments and related cargoes that might otherwise be diverted to competing ports, according to Anthony J. Tozzoli, Director of Marine Terminals of the Port Authority, which has owned the equipment since 1972.

Announcement of this new arrangement, pending a permanent charter agreement was made today by Mr. Tozzoli and John A. Witte, the President of the heavy lift company.

Donjon Marine Company, Inc., also of Hillside, an affiliated company, has been active in marine salvage work since 1966, operating floating derricks for cleanup work in the bi-state harbor.

"We expect to provide service at a cost consistent with the shippers' need," Mr. Witte said. "Consequently we are publishing new reduced rate schedules to encourage heavy lift shipments through the New York-New Jersey Port. The new schedules will have the net effect of reducing costs of heavy lift services by at least ten percent and up to as much as 50 percent, depending upon the amount of cargo lifted."

The new cargo rate schedules reflect reductions from previously published lift rates of the former operator, including publication for the first time of cargo hoisting rates to a maximum of one million pounds. It will be mailed to shippers and carriers within the next 10 days.

The return of 500-ton lifting capability to the Port began with the placement by the derrick "Century" last Thursday, October 21, of a 164-ton compressor component aboard a ship in Port Newark.



Oakland, Calif., October 29 (Port of Oakland):-PRELUDE TO RESCUE-Only hours after Port of Oakland Executive Director Ben E. Nutter presented this maiden voyage commemorative desk set to Captain N.S. Lin of the new Orient Overseas Container Line ship Oriental Financier, the 683-foot French-built containership was involved in a dramatic rescue at sea.

Eight hundred miles off the Golden Gate, Captain Lin and his crew spotted a drifting raft carrying two survivors of the sinking of a 42-foot ketch bound for California from Hawaii. The young man and woman were taken aboard the Oriental Financier in good condition despite a week without food on the open sea. Two of the five crew members of the storm-wrecked sailboat were less fortunate. Their deaths were reported by a third survivor in a second raft, found almost a week later by the U.S. Coast Guard after an intensive search touched off by the Oriental Financier's vigilant look-outs.

The "Century" is a 112-foot, A-frame derrick mounted on a steel hull, 165 feet long, 66 feet wide and 18 feet deep. It is equipped with a 115-foot boom and provides lifting capabilities equivalent to the combined weight of five diesel locomotives.

The Port Authority also owns two other heavy lift vessels available for charter: the "Monarch," which can lift 250 tons, and the "Constitution," 150 tons. The equipment is based at Port Newark.

Mr. Soules elected AAPA President

Philadelphia, Pa., October 21 (The American Association of Port Authorities, Inc.):-Thomas Taft Soules of San Francisco was elected president of the American Association of Port Authorities today, as that organization brought its 65th annual convention to a close.

Soules, who succeeded Alfred M. Eschbach of Portland, Oregon, is director of the Port of San Francisco and has held similar posts at Boston; Guayaquil, Ecuador; and Dammam, Saudi Arabia.

Nicholas Beshwaty, port manager of Montreal Harbour, was elected first vice president, moving up from the post of second vice president.



Oakland, Calif., November 19 (Port of Oakland):-NEW STAR BLAZES AT OAKLAND-The eight-pointed emerald starburst on the stack of the first Evergreen Line containership to call at the Port of Oakland augured a fruitful future for the new twice-monthly West Coast-Far East full container service introduced by the line from Oakland this month. Present with mementoes to mark the maiden vovage of the M.V. Ever Spring to San Francisco Bay were, from left, Captain C.L. Yang, Evergreen Marine Corporation; Gary S. Syverson, Evergreen United Corporation: Walter A. Abernathy, deputy director of the Port of Oakland: Captain Wen Shyong-Lin, master of the Ever Spring; William M.C. Wang, president of Evergreen Marine Corporation: Robert W. Crandall, Port of Oakland; and Gary Heil, Marine Exchange of the San Francisco Bay Region.

Edmundo Rostran, director of the Autoridad Portuaria de Corinto, Nicaragua, was elected second vice president. When he became third vice president last year, he was the first Central American port official to be so honored.

Elected to the position of third vice president was Clifford B. O'Hara, director of Port Commerce for the Port Authority of New York and New Jersey. O'Hara has been chairman of AAPA's Committee on Port Commerce for several years.

The Executive Corner

Savannah, Georgia ("The Executive Corner" by George J. Nichols, Executive Director, Savannah, July-August "Georgia Anchorage", Georgia Ports Authority):-If you should visit our terminals at the Port of Savannah, you will find yourself emerged in a scene of intense activity-construction sites mushrooming in all areas; new roads being cut; old roads being re-surfaced; an intricate network of drainage and sewer systems being installed; a new container ship berth taking shape on the banks of the Savannah River and the first of two new huge container cranes inches skyward.

In the midst of all this new construction you would probably be astounded that our four million square feet of warehousing is filled to near capacity and that our grounds



Oakland, Calif. (Port of Oakland):-The Port of Oakland's 19th and newest full container service was inaugurated recently when Taiwan-based Evergreen Line's first containership, Ever Spring called at the Port. Only a year old and capable of transporting 340 40-foot containers at 20-knot speeds, the Ever Spring loaded cargo for Pusan, Keelung, Kaohsiung and Hong Kong at Oakland's Seventh Street Public Container Terminal.

Evergreen plans to offer twice-monthly West Coast-Far East sailings from Oakland, with two additional new ships scheduled for arrival November 27 and December 26. Both the Ever Mercy and the Ever Moral, with 570 20-foot unit capacity, will call at Oakland on maiden voyages fresh out of the shipyard.

are landscaped with the fruits of international commerce; thousands of containers, autos, trucks, tractors and heavy machinery in various shapes and sizes all being held in open storage.

Have we, you wonder, reached the saturation point. What about tomorrow; more ships will come and more tons of cargo will flow, will we, you ask, be ready?

Without hesitation we answer in the affirmative. We answer this way because one man has taught us not to think in the negative. That man is Jack Holt who took advantage of the past few years to plan and build a future for our port. You may remember the past few years as the "recession"; Jack looked at it as a "breather", a time to build, a time to expand but most of all a time to prepare for the future.

Jack Holt arrived in the Port of Savannah eighteen years ago, not many people remember our port of 1958-there wasn't much to remember.

Jack is retiring now leaving us a wonderful legacy and a benchmark difficult to challenge to all who follow. So long, Jack-we will always remember!

New Golden Gate Atlas ready

San Francisco, Calif., 11/5/76 (Marine Exchange of the San Francisco Bay Region):—The latest edition of the Golden Gate Atlas, long recognized as a reliable source of information on the San Francisco Bay Region ports system, is now being distributed, world-wide; and is also available to



maritime companies at attractive bulk rates and on time for Xmas gift distribution to their customers, clients and friends. Particularly for advertisers in the Atlas, it is an ideal business Xmas goodwill giveaway item.

The new edition, updated to October, 1976, provides in-depth information on all of the major ports serving vessels that pass through the Golden Gate; detailed data on anchorages in the entire San Francisco/San Pablo/Suisun Bay and river system; ocean routes to and from the Golden Gate; a complete list of shipowners agents, plus an extensive directory of maritime services and facilities.

The new edition is perfect-bound, with an attractive cover from an original oil painting by well-known San Francisco artist, Nicholas Podich. Litho reproductions of the cover, suitable for framing, are also available for holiday gift-giving.

Special gift cards, labels, overwraps, etc. can be provided to special order. These allow companies to identify themselves as the "Gifter" and/or to personalize the Atlas for the receipient.

Orders placed early will be shipped directly from the printer.

Full information, including quantity discount prices, is available from the sponsoring Marine Exchange, 303 World Trade Center, San Francisco, Ca. 94111. (415) 982-7788.

New overseas trade office

Savannah, Georgia, October 27 (Georgia Ports Authority News Release):-George J. Nichols, Executive Director of the Georgia Ports Authority, today announced the opening of the Authority's third overseas Trade Development office and the appointment of Basil G. Grekoussis as Mediterranean Director for Middle East and North Africa to be headquartered in Athens, Greece. The G.P.A. maintains



San Francisco, Calif. 11/15/76 (California Marine Affairs and Navigation Conference):-GOLDEN STATE NEW NAVIGATION OFFICERS-Newly-elected officials of the California Marine Affairs and Navigation Conference conferred following the fall meeting of the 21-year-old statewide promotional and development agency: (from left) Capt. Thomas R. Eddy, USN (Ret.), director of the Port of Richmond, 1976-77 president; Victor Adorian, director of Los Angeles County Dept. of Small Craft Harbors, vice president; Paul H. Sorensen, senior engineer, Port of Oakland, 1976-79 director; Col. Frank C. Boerger, USA (Ret.), engineering consultant, treasurer, and Bobert H. Langer, reelected executive director and association secretary. C-MANC represents California's commercial and recreational harbors and related interests dependent on navigation, in presentations annually to the Congress and the Office of Management and Budget, as well as cooperating with the Corps of Engineers, other federal agencies and state government in matters affecting the study, design, construction, improvement and maintenance of coastal and river harbor projects.

Trade Development offices in Atlanta, New York, Chicago, Bonn, West Germany and Tokyo.

In making this appointment and establishing a new overseas trade office for the Authority, Nichols stated, "The obvious increase of international trade, and growing exports to Middle East and North Africa countries has made it necessary for us to work in direct contact with commercial and governmental agencies in that part of the world, to secure a greater share of cargo movements through Georgia's ports. Also we will be in an advantageous position to arrange additional steamship services between these countries and the Ports of Georgia.

Fred Whelan, Director of Trade Development for the G.P.A., commenting on the new overseas office stated, "This is another positive forward step of the Georgia Ports Authority, as we will be the only U.S. port authority with office and direct coverage in that area of the world. We will also be able to work in closer cooperation with Greek shipping interests.

Grekoussis, a Greek National, was born and educated in Alexandria, Egypt. He is multi-lingual with seven fluent languages including Arabic. He comes to the Georgia Ports Authority with a solid background in international trade, transportation and shipping. He has had tours of duty in Massawa, Ethiopia; Djibouti, Afars Et Issas (Sudan); Sao Paulo, Brazil; with Esso Oil Company, Pan American, and most recently Athens Pipe Works Corporation. Grekoussis resides in Athens with his wife Aliki and two children.



San Francisco, Calif., 11/16/76 (Marine Exchange of the San Francisco Bay Region):-SALUTOS AMIGO is extended to Capt. J.C. Marsengo, master of the Argentine M/V Rio Esquel on the motorship's maiden voyage to the Golden Gate. Presenting the Captain with a Marine Exchange try is Ted L. Rausch, Exchange director and San Francisco Customs broker. Also on hand to welcome the motorship were Argentine Deputy Consul General, Adolfo E. Nanclares and several representatives of Transpacific Transportation Company, the ship's agents.

The new Athens office will handle Georgia Ports Authority interests and trade development in Greece, the Middle East countries, Gulf states, as well as Egypt, Libya, Morocco, and Nigeria on the African continent, also other countries in this area as becomes necessary.

High AAPA honors awarded

Tampa, Florida, 10-26-76 (News from the Tampa Port Authority):—The Tampa Port Authority was awarded high honors in two separate categories of port administration at the annual convention of the American Association of Port Authorities in Philadelphia.

A first place award was given for outstanding achievement in protecting and improving the environment in the port area. The selection was made for a series of major projects including oil spillage control, water quality management, aquatic plantings and protection of marine life.

The second award was for third place in excellence in the publications' contest for the Authority's 1975 Annual Report.

The Tampa Port competed against more than 100 entries in both categories.

Present to accept the award certificates were Dr. William Fehring, Director of Environmental Affairs and Thomas J. O'Connor, Director of Port Services for the Port Authority.

Grain loading record topped

Toledo, Ohio, November 11 (Toledo-Lucas County Port Authority):-The Port of Toledo topped its single season grain loading record today when 540,000 bushels of corn were loaded aboard the laker BENJAMIN FAIRLESS at



San Francisco, Calif., 10/22/76 (Marine Exchange of the San Francisco Bay Region):-The M.S. JAG SHANTI and her Captain, F.M. Martin, are greeted during her maiden voyage to the Golden Gate. On hand to welcome this Indian vessel were John Greene, vice president General Steamship Corp., Ltd., Maritime Princess Chris Herring, Bill Bosque, Marine Exchange director and San Francisco Freight Forwarder, and Don Taggart, Port of San Francisco public relations director. While in San Francisco this bulk carrier was taking on the first part of a record load of 47,000 bales of cotton.

The Andersons' riverfront elevators.

The total amount of grain loaded this year at the port's three water-side grain facilities now stands at 100,607,000 bushels, according to Jerry Lyons, acting chief grain inspector for the Toledo Board of Trade.

This tops the former record of 100,484,000 bushels set last year when the final grain boat sailed from Toledo on December 23.

"Export grain volumes are running more than a month ahead of the pace set last year," according to Norman A. Fox, director of trade development for the Toledo-Lucas County Port Authority. "Therefore, Toledo's elevators could load as much as 115 million bushels before the season is over."

Overseas vessels must be cleared from Toledo by the time the St. Lawrence Seaway closes on December 18. Lake boats must depart before the Welland Canal closes on December 30.

MARAD releases report on dredging regulations

Washington, D.C., October 5, 1976 (United States Department of Commerce News):-The Maritime Administration, after studying a multiplicity of Federal, state and local rules and procedures governing dredging operations in the Nation's rivers and harbors, released today a report which suggests several ways to achieve "regulatory reasonableness" in that segment of the port industry.

The report, "Untangling Dredging Regulations," was prepared and released by the Agency's Western Region Office of Port and Intermodal Development in San Francisco.

"Regulatory reasonableness" is a term used recently by Secretary of Commerce Elliot L. Richardson to describe a departmental policy goal for improvement of the regulatory process.



San Francisco, Calif., 11/24/76 (Marine Exchange of the San Francisco Bay Region):-Swedish Capt. Sten Eric Hakansson happily receives the welcome extended to his ship, the M.V. Don Carlos on its maiden voyage to the Golden Gate. The Don Carlos, the largest automobile carrier of the Wallenius Lines, has a total capacity of 4,600 cars. On hand to greet the Captain are Maritime Princess, Chris Herring of the Atlantic Companies, and Dirk Van Meurs, Marine Exchange director and president, West Coast Ship Chandlers. Also present at this celebration were various representatives of the Port of San Francisco, members of the Fred F. Noonan Company, Inc. (agents for the ship) and other members of the Golden Gate maritime community.

A number of other Federal agencies and state and port industry organizations on the West Coast participated in the dredging study.

The report examines the importance of dredging for maintaining the unhindered flow of waterborne commerce. The various types of dredging regulations are described and permitting procedures are analyzed.

The report identifies problems U.S. ports have encountered as a result of existing dredging regulations. Among these are:

- Agency overlap and duplication of regulatory procedures.
- Long delays in obtaining permit approvals.
- Insufficient use of simplified application procedures for the authorization of maintenance dredging projects.
- The need for long-range planning of dredging activities, coupled with regional port planning.
 Suggested remedies include:
- Adoption by state and Federal agencies of clear and concise decision-making procedures.
- Coordination to eliminate duplication.
- Fixed time limits for agency actions.

A limited number of copies of "Untangling Dredging Regulations" are available from the Office of Port and Intermodal Development, Maritime Administration, U.S. Department of Commerce, 14th & E Streets, N.W., Washington, D.C. 20230 and the Maritime Administration's

44 PORTS and HARBORS — JANUARY 1977

Europe-Africa

Western Region Office, 450 Golden Gate Avenue, Box 36073, San Francisco, Calif. 94102.

CLYDEPORT NEWS

Glasgow, October (Extracts from "Clydeport News", Clyde Port Authority):-

• First-half surplus up

Clydeport and its subsidiaries are on course for another financially successful year, according to the Group's recently published results for the first 24 weeks of 1976.

Gross revenue was up by $\pounds 1,654,000$ to $\pounds 8,154,000$, giving a gross operating surplus of $\pounds 2,512,000$. Net surplus, after interest and depreciation, was $\pounds 677,000$ compared with $\pounds 463,000$ for the same period last year.

• VIEWPOINT

While the port is, by nature and by tradition, concerned principally with the commercial face of the Clyde it has always kept a watchful eye on the recreational activities for which the estuary is also well known and widely used.

Traffic in the shape of pleasure craft has increased enormously in recent years.

The glorious sight of *Britannia* and the *Shamrocks* racing off Hunter's Quay may be only a memory now, but sailing is no longer a sport reserved for kings and millionaires. Everyman's fibreglass armada rules the waves on days when they are not too steep. Since one man's pleasure means business for another, the industries allied to sailing have prospered in step with growth of the sport.

One of the latest much-sought-after acquisitions for the boat owner is a place in a marina. It's safer and infinitely more comfortable to tie up alongside rather than moor in deep water. Berthed at a floating pontoon, the boat is available for sailing during a much longer portion of the year. The Clyde's first marina, established at Inverkip several years ago, has never been short of customers. Clearly, in such a popular centre for the sport, there is room for more facilities of this kind.

The site at Rhu, which has been selected by the consortium headed by the Authority for a $\pounds 1$ million marina development, is ideally placed for Clyde sailing enthusiasts and for visiting yachtsmen.

Clydeport's ability to cater for giant tankers and bulk carriers, ships with containers and break-bulk cargo, and special-purpose vessels of many kinds is widely known throughout the shipping world.

New it can be truly said that the port provides facilities for craft of every size.

• Hapag-Lloyd step up container services

The Combi Line service from the Clydeport Container Terminal, which was increased in frequency from fortnightly to weekly during the summer, is being extended this month to include the port of Mobile, Alabama.

Mobile is now being served fortnightly, alternating with Miami.

Combi Line (Hapag-Lloyd/I.C.T.) have four Omni-class vessels on the service operating the round trip from Greenock on a strict 28-day time schedule.

This is the latest in a whole series of developments in the services from Clydeport which Hapag-Lloyd has undertaken



Esso (Exxon) invested \$250 million in a new refinery in the Antwerp port. Works started in 1973 and the new installations are now put into operation. The refinery has 10 million tons throughput capacity per year. It replaces the previous Esso refinery which had 4.5 million tons capacity. The combined capacity of the 5 Antwerp refineries now amounts to 36.5 million tons per year. Total storage capacity of refineries and tank farming companies is over 10 million cubic metres. The Belgian refineries export about half of these production (Port of Antwerp)

since the beginning of the year.

First of these was the introduction of a weekly two-way link with Le Havre.

Then in the spring, Euro-Pacific (Hapag-Lloyd/C.G.M.) stepped-up the frequency of their service from fortnightly to a tenday call at Greenock. They also introduced four cellular vessels, two of which-the *Main Express* and *Rhein Express*-were already well known at the container terminal. Two years ago they were employed on Hapag-Lloyd's weekly North Atlantic service.

The itinerary of the company's North Atlantic service was also extended some months ago to cover the port of Boston, Mass.

Half-year results heartening

London, September ("DOCKS", British Transport Docks Board):-Half-year results for the Docks Board show an increase in traffic of 7 per cent to 43 million tonnes, compared with the corresponding period of 1975. The financial result for the first half year (to 30 June 1976) was a profit of $\pounds 10.5$ million before interest, equivalent to a yield of 13 per cent. This compares with 8 per cent for 1975.

Commenting on the results, the chairman, Sir Humphrey Browne, said, 'The Docks Board, like other port authorities, have to cope with the continued recession in world trade. Our results for the first half of 1976 are therefore all the more heartening. In a highly competitive industry we are increasing our share of the market.'

The British Transport Docks Board is almost unique amongst state undertakings and port authorities in making provision for additional depreciation on a replacement cost basis calculated in accordance with the Retail Price Index.



London, 12th November (PLA News):--"City of Pretoria", 9,000 dwt, pictured loading at the Port of London Authority's Tilbury Docks to inaugurate the Ellerman Harrison Container Line service to South Africa this week. Tilbury is the UK terminal for EHCL's interim container service to Cape Town, Port Elizabeth, East London and Durban. The service will operate at first with two chartered vessels giving a 25 day sailing frequency. Next sailing will be the mv "Fellowship" due at No. 43 Berth, Tilbury, on the 8th December. Cargo bookings are handled by ACT Services Ltd., and by Brokers currently accepting conventional cargo on behalf of Ellerman City Liners and Thos. & Jas. Harrison Ltd.

Even allowing for this and after the payment of interest the net surplus for the half year was $\pounds 4.5$ million.

The Board have guaranteed that prices will remain stable until at least the end of the year.

"EUROPORT SOUTH"

Extracts from ``Marseilles/Fos Europort South'', The Monthly magazine of the Port of Marseilles Authority, September 1976

• EDITORIAL

FOS, Industrial zone, is all too often unrecognised as a port. But, 1976 gives an excellent illustration of the extensive works which place the port high in the list of the largest and best equipped ports in the world.

With the construction of the first berth on the second petrol dyke, the P.M.A. will start a new era of Mediterranean oil traffic. After the opening of berth No 4 in 1977 for vessels of 500,000 Tdwt. for tank cleaning and for the unloading of ships of 150,000 Tdwt., other berths will be built to increase our reception capacity.

The extension both north and south of the container terminal at FOS, will give as early as 1977, 800 metres of quay equipped with 4 gantry cranes.

Finally, and above all, the opening of dock 3 (whose first berths will be opened in 1978) and the construction of a quay for heavy loads and horizontal handling on the Saint Louis Canal, announces the beginning of a new vista in

commercial traffic which traditional Marseilles could no longer cope with.

FOS, the great unknown . . .

• Fight against oil pollution

One of the crucial topics which exites public opinion is the prevention and the fight against oil pollution at sea. The government gives this matter serious consideration but even so, it remains a grave problem. The Port of Marseilles is playing it's part and contributes to the efforts made in this field.

Overlaps occur between the various reponsible authorities: Navy, Merchant Navy, Health Service and Department of Public Works to such a degree that one feels it's pity that there is no French equivalent to the English autonomous and powerful institution the "Coast Guards".

The local and national concertation developped recently makes up as well as it can for these difficulties. Various examples, such as the POLMAR plan (maritime alternative to the ORSEC plan), and the MINIPOL 76 at Marseilles show what can be done, in spite of the somewhat cumbersome system which is currently being altered.

The leader in the anti-pollution fight is the Navy.

In all, an effective organisation in spite of its complexity.

The P.M.A. joins in the action. With a first credit of 1.8 million francs voted by the Administration Board, two coastal vessels were equipped with a dynamic collector, several hundred metres of floating barriers, and to buy small dynamic or static collectors. The State contributed a share of 325,000 Francs towards anti-pollution equipment.

The Administration Board, in July of this year, decided on a further purchase of equipment (floating barriers and various moving equipment) at a cost of 2.5 million Francs.

The action taken in the port is as follows: in cases of pollution over a small area, action is taken from the shore and the slick is removed from the sea or from the shore using the most suitable method. In the case of pollution not actually touching the shore, action is taken from the sea with or without barriers, and the oil slick is removed directly using dynamic or static methods. In the case of extensive pollution (outside the port) sea-borne collectors are used especially the specialised coaster "Chasse—Marée" and others chartered for the purpose. Should this situation occur, the POLMAR plan is used.

The list given below gives an idea of the equipment available or being obtained which will make our port one of the best equipped in this field.

It is to be noted that no extensive pollution has occured at Marseilles-Fos, and that the minor and medium sized cases have been dealt with successfully. The equipment of the port with the most up-to date methods shows that the Port Management knows how to link dissuasion, protection and, if necessary, reparation.

SMALL GLOSSARY

Static Collector: machine placed in a static oil slick which pumps towards vessel.

Dynamic Collector: machine fixed on vessel and "nibles" at the slick whilst moving and avoiding its splitting.



This is Wilhelm Meyer-seen privately.

(He swears by the Free and Hanseatic way of life)

An important person for you and for us. Professional in matters of import and export.

He'll help you with your overseas business. Like the other Hamburg experts in foreign trade. Marine insurance. Consular documentation. Information on foreign markets. Port and overseas forwarding. Warehousing Foreign trade financing Cargo handling. Shipping matters And everything else



that goes with overseas trading. Individual service, perfect cargo handling and an extremely high frequency of sailings.

That's the Free and Hanseatic way of helping foreign trade.

We welcome any inquiries concerning Hamburg Port. Please contact us at the address below.

Hafen Hamburg

The Free and Hanseatic City of Hamburg, Representative Office in Japan, c/o Irisu Shokai K.K. Toranomon Mitsui Bldg., 3-8-1, Kasumigaseki, Chiyoda-ku, Tokyo ∓100 Tel: 03-503-5031

COUPON PH·1

Send us the coupon on the right. You will receive current information on "Port of Hamburg" and other pamphlets related to the port.

Le Verdon, Container Terminal at Bordeaux

3 Press Releases from Port of Bordeaux Authority

• (2nd November 1976) The first containership call is made at Le Verdon

The facilities built for the reception of roll-on/roll-off vessels at Le Verdon were brought into service on June 23rd. this year when the TOMBARRA made her first call at Bordeaux's deep-sea terminal.

But Thursday October 21st. 1976, has seen an even greater event in the history of this new outer-port of Bordeaux, for it was then that the very first fully cellular containership called at the port and commissioned the new berth and facilities created for container traffic.

The only terminal of its type on the French Atlantic Seabord, the container and roro Le Verdon Terminal is now fully operational.

The "TOURS", owned by the S.N.C.D.V., who made her first visit to Bordeaux's Port facilities last month, when she was brought into service on their AFRICATAINER run, had the opportunity to make yet a second special call in Bordeaux by being the first vessel to be handled at the new container berth.

"TOURS" is a fully cellular containership, built in Canada like her sister ships "ROYAN" and "ROCHE-FORT". She is 160 m. long and is 17,000 dwt.

The fourth vessel maintaining the weekly service is the "POITIERS" which will also shortly be making her maiden call at Le Verdon and like her sister ships has a 640 container capacity.

• (2nd November 1976) A regular line Bordeaux-Le Verdon/U.S.A. Canada

The first result of the opening of the Container Terminal of Le Verdon, on the French Atlantic Seabord on October 21st is the creation of a regular line service to the United States and Canada.

The shipping line ITALIA represented in Bordeaux by Agence Maritime General have decided to link Bordeaux-Le Verdon to the United States and Canada. The first vessel, the VOLINE, to call at Le Verdon, a fully cellular containership is scheduled for the 2nd November 1976. After this first call, ITALIA line vessels will call at the port every 8 days and link the french port to St-John, Canada, and Boston, New York, Baltimore, Norfolk and Charleston in the United States.

The port of Bordeaux already offers over forty regular line services linking it to 70 countries throughout the world.

This new link up will mean that cargo loaded at Le Verdon will be unloaded in the United States 11 days later. This link fills a gap in the selection of regular services offered by the Port of Bordeaux to its exporters throughout the West of France.



Bordeaux, France (Port of Bordeaux Authority):-On Thursday October 21, 1976 at 11.00 Hours, a container is discharged for the first time at the new Container Terminal of Verdon.

• (4th November 1976) Bordeaux and Cognac via Bordeaux

Bordeaux opened its docks to containerships just about a fortnight ago, when the TOURS, destined for the West African Coast made her first call at the new Container Terminal of Le Verdon on October 21st.

Hard on the heels of this commissioning of the new facilities, came the announcement that ITALIA line had decided to offer a feeder service every 8 days to the United States and Canadian West Coasts, from the new terminal.

It is interesting to note that Bordeaux's wine shippers and the exporters of Cognac were not slow to take the initiative or to realize that the long overland hauls to other ports throughout France and Europe, were not only costly but could be detrimental to their famous products and that at long last, they were able to export through their own port, on their own doorstep, Bordeaux's new Port, Le Verdon, on the tip of the Medoc Peninsula.

This can be seen by the fact that approximately half the containers loaded aboard the VOLINE on the 2nd. November, when she inaugurated the new weekly service, were filled with wine or cognac.

To say that it was a long awaited moment for wine and cognac shippers is to put it mildly, not to mention the many other exporters of products from Greater South West France, who have had to bear the burden of complicated transport routes and high shipping costs before they can get

(Continued on next page bottom)

48 PORTS and HARBORS - JANUARY 1977

Le Havre Flashes, September

Le Havre, France (Port of Le Havre Flashes, September 1976:-



September cover feature: New Tancarville Lock in service

• Havre-Antifer Oil Terminal opened

The only port in Europe able to take vessels of over 550,000 tonnes deadweight fully laden was officially declared open on June 25th by the French Minister for Regional Development, Mr. Robert Galley. A few minutes later the world's largest tanker, the 554,000 dwt Batillus, was named by Madame Benard at a ceremony presided over by the Minister of Transport, Mr. Marcel Cavaille. The Minister of State, Mr. Jean Lecanuet, a top-ranking Cabinet minister closely connected with Normandy, was present at both ceremonies.

As a result of the economic crisis, the world tanker fleet is at present suffering from overcapacity, but that does not in any way diminish the value of large tankers as such, since giant vessels like the Batillus enable very considerable savings to be made on transport costs. On the voyage from the Arabian Gulf to Antifer, for example, a 550,000 dwt

their merchandise on the markets of the West Coasts of American and Canada.

ITALIA LINE, who are represented in Bordeaux by AGENCE MARITIME GENERALE, have with this new service filled the gap in the range or regular lines offered by the Port of Bordeaux. At present 40 plus regular lines link the port to over 70 countries throughout the world.

With a vessel scheduled every 2 days at the new facilities, which are operational 24 hours a day and with inquiries and negotiations continuing with other major shipping lines, who are thinking of making calls at Le Verdon, the Port Authority is working hard to ensure that its second berth will be available at the end of the year and that the terminal's storage areas and back-up facilities are ready to cope with the increase in traffic that this will bring.

But already, the Authority can feel justly proud that it has achieved what it set out to do: To create on the French Atlantic Seaboard, a throughport, designed and conceived to handle modern ocean going vessels as they were designed to be handled.





tanker brings down costs by 7 to 8 francs a tonne compared with a 250,000 tonner.

Moreover, the new port at Antifer was not built solely for the purpose of supplying the local refineries. It was also designed as a dispersal port (where oil brought in by the giants is transferred to smaller vessels and taken to a variety of French, English, Belgian, Dutch and other ports) and as a port where vessels can be lightened by discharging part of the cargo in order to reduce their draught and enable them to enter shallower ports. In both cases, the oil hinterlands of the smaller ports will benefit from the savings in transport costs that result from the use of giant tankers between the Arabian Gulf and Antifer.

By July 31st the Havre-Antifer Terminal had received 40 tankers since it came into service on April 13th, all with a deadweight tonnage of above 200,000 tonnes, including two, in addition to the Batillus, of over 400,000 dwt.

The Havre-Antifer Terminal has a great contribution to make to the European economy.

• New Tancarville Lock in service

The new Tancarville Lock at the eastern extremity of the port/industry zone has been open to traffic since July 5th, when the first barge train went through, made up of the pusher/sand-barge Stéphane and the barge Maelle. The

Europe-Africa

lock had been in use for some months previously, prior to completion of the dredging programme, but only for relief purposes when the old lock adjoining it was overcrowded.

The new lock is 200 metres/656 ft long, 24 metres/78 ft wide and 5 metres/16½ ft deep, and can take push convoys of up to 10,000 tonnes deadweight. It is operated by a port officer and two employees and has its own maintenance crew. Unlike its predecessor, which was often unable to cope with the demand, the new lock can pass boats through during a period running from four and a half hours before to three and a half hours after high tide, which means there will be no more hold-ups.

The new facility, which cost 42 million francs to construct, was urgently needed in order to allow river traffic to increase beyond last year's figure of 3,471,000 tonnes.

• New service to Mexico

On May 30th Belgian vessel Jordaens inaugurated a new service to the Atlantic ports of Mexico. Known as UNIMEX, it is run jointly by the Belgian company "Deppe S.A." and the German "Ocean Stinnes Linien". The agents here are the Comptoir Maritime Franco-Belge, and there are twice-monthly sailings both from Le Havre and from the Mexican ports.

• New traffic between Le Havre and Southampton

Since the end of July a great quantity of Poclain hydraulic earthmoving equipment has been passing through Le Havre on its way to Britain. About fifty units a month cross the Channel on the Normandy Ferries boats to Southampton, the traffic being co-ordinated by Collard & Cie, in collaboration with A.M. Garage of Birmingham, Normandy Ferries and Poclain Great Britain.

• Half-year results show general cargo 15% up

The total traffic of the port of Le Havre was 5.6% up during the first six months of 1976 compared with the same period last year (38.4 m tonnes against 36.3 m). Arrivals between January and June were up by 3.4% (4,088 vessels against 3,953), with the tendency towards large vessels continuing, judging at any rate from the 7% increase in the net draught of ships entering harbour.

Despite the economic crisis, arrivals of crude oil amounted to 26.4 m tonnes (compared with 23.8 m for the first 6 months of 1975), a rise of 11%, which seems to indicate a definite recovery of the oil trade. Imported refined petroleum products were slightly down (861,000 tonnes against 1 million), as were dry bulks (1,532,000 tonnes against 2,167,000), but the latter should soon be on the upturn again, as a result of the coal contracts entered into with a number of foreign countries, particularly South Africa.

So far as exports are concerned, outgoing cargoes of crude oil were 20% down, as a number of French ports now receive a greater proportion of their requirements direct. Exports of refined petroleum products were 13.3% up, however, at 1,381,000 tonnes, while cereals, at 466,000 tonnes, progressed by 69%. But the main reason for the general upswing in activity since the beginning of the year lies in the improvement in general cargo, a sector that is particularly job-creating. General cargo, i.e. conventional, containerised or ro-ro cargo, all bulks excluded, increased



during the first half of the year by a remarkable 15.5%, from 2,702,000 tonnes to 3,122,000 tonnes. Imports and exports roughly balanced out, with 1,559,000 tonnes discharged and 1,563,000 tonnes loaded.

This increase in the amount of general cargo handled is attributable partly to the new specialised facilities brought into service in the port of Le Havre and partly to the inauguration of many new container services, particularly to the West Indies and the Far East, which are due to be joined next year by a service to South Africa. Third generation containerships with a capacity of nearly 2,500 boxes call several times a month at Le Havre, where we expect an overall traffic for the year of 77 million tonnes and the retention of our No. 3 position in Europe.

Bremen News

Bremen International

Structural Changes in Cargo Handling

Bremen, 25.10.76 (BremIn). The modern ports are increasingly developing from mere transit locations to extensive collection and distribution centres. In the train of this structural change in cargo handling, the speedy transit through the port is becoming the exception, declared the chairman of Germany's biggest port handling company (BLG) Consul Gerhard Beier, at the Annual General Meeting. Cargo handling has thereby become more intensive in efficiency. To an increasing degree the investment goods, in particular, require intermediate storage and subsidiary servicing, such as pre-shipment packaging as a condition for rational loading into the ocean vessel.

Bremen's Tenth Ro-Ro Service: Europe/West Africa

Bremen, 25.10.76 (BremIn). Messrs. B.F.I. Lines Ltd, London, as tenth roll-on-roll-off overseas service from Bremen and Bremerhaven, commenced the Bremen/West Africa ro-ro service early in October 1976.

(Continued on page 52)

50 PORTS and HARBORS - JANUARY 1977





Nakagawa Corrosion Protecting Co., Ltd.

Oil Unloading Pier protected by Cathodic Protection

OKINAWA, SINGAPORE TAIWAN, ROTTERDAM

(Continued from page 50)

Already Nearly up to Record Year 1974 BLG Bremen reports 'Distinct Positive Turning Point' in Cargo Handling

Bremen, 15.11.76 (BremIn). Since the third quarter of 1976 the Bremen ports handling-barometer has shown distinct signs of a positive turn. The cargo handling of the largest, with 4000 employees, cargo-handling undertaking of the Bremen ports, the BLG, nearly attained, in the Autumn of 1976, the respective results of the 1974 record year. "The worst is behind us", declared the BLG-chairman, Gerhard Beier, to the press. He is not expecting any 'spectacular rise', but a BLG handling plus of at least three percent over 1975. "It could", he said cautiously, "even be four or five percent".

Germany's largest cargo-handling undertaking will continue "to offer an optimal service". Its current investmentprogram (DM 75 millions) is continuing to proceed at full speed: construction of a further shed, replenishment of the equipment stock, the acquisition of two more heavy-left cranes and a localised-bridge, the installation of another four container bridges, three of which are for the Bremerhaven Container-Terminal, whilst the fourth is at present being erected on the Bremerhaven Columbus Quay, on the Outer-Weser, as a combined container-cum-heavylift bridge for cargo pieces of up to 38 tons, in order to accelerate still more the handling of constantly increasing general-cargo lifts of high individual weight.

Cargo-Handling of Bremen Inland-Waterway Shipping reported as: +40%

Bremen, 15.11.76 (BremIn). The Bremen inland waterway shipping has reported an unusually heavy increase in cargo handling. According to the latest advices from the Bremen Statistical Office (for July 1976), bulk-cargo handling into and ex inland water-craft has increased over the last 12 months by more than 40 percent—from 439,720 tons (July 1975) to 629,562 tons (July 1976).

Peak Performance in Container Handling Bremerhaven: Increase of 1976-3rd Quarter over that of 1975: Over 24%

Bremerhaven, 15.11.76 (BremIn). In the general overall increase in cargo handling, the traffic of the large metal boxes again takes a high leading place. The container handling of the BLG, the largest handling undertaking, in the Bremen ports increased from 801,000 tons in the 3rd quarter of 1975, to 998,000 tons in 1976's 3rd-quarter, i.e., by over 24 percent. In Bremerhaven and Bremen the BLG, in the first ten months of 1975, handled a total of some 2,679,00 tons; which is 11 percent more. The total 1976 result, in container handling for Bremen/Bremerhaven, should lie some 14 to 15 percent over 1975. Whereby the container-traffic in Bremen and Bremerhaven showed the least loss of all cargo-handling procedures during the recession.

Brisbane and AAPMA

"Change is necessary

(This news has been re-written from a telex received by IAPH. Refer also to article on page 32 titled "25th Conference of The Association of Australian Port and Marine Authorities".)

Brisbane, Australia:-Shipping and Port interests can expect an official statement from the Federal Government in the near future concerning significant changes to the recruitment, training and allocation of stevedoring industry employees.

Mr. A.J. Peel, who recently was re-elected to his second two-year term as President of the Australian Association of Port and Marine Authorities, said today the Association was convinced that change was necessary.

Mr. Peel said the A.A.P.M.A. members were ready to play a more active and direct role in stevedoring operations.

He said the Association's recent national conference decided to ask the Federal Government to ligislate to support the proposed new management arrangements in the stevedoring industry. Such support was considered essential and the Federal Minister for Employment and Industrial Relations (Mr. A.A. Street) has been advised accordingly, he added.

(In the past, the Federal Government-through the Stevedoring Industry Authority-has been responsible as the control body for the recruitment and allocation of staff to the ports' stevedores. The Federal Government now proposed to withdraw from the scene entirely.)

Mr. Peel said the A.A.P.M.A. proposals were for the introduction of consultative machinery as follows: --

- 1. At the national level-A consultative council with A.A.P.M.A. membership to inform the Minister: to refer disputes to arbitrations: and to consider breaches of stevedore licenses.
- 2. At the national level-A co-ordinating committee representative of employers, employees and when required port authorities to deal quickly with industrial matters referred by port co-ordinating committees.
- 3. Port co-ordinating committees with a port authority chairman and employer and employee representives to meet frequently to deal with operational matters.

Mr. Peel is Director of the Queensland Harbours and Marine Department and will be a member of the Port of Brisbane Authority which comes into force on December 6, 1976.

He said port authorities were responsible for very substantial investments in port infrastructure and they recognised that stevedoring operations formed an important part of the total national transport system and had a significant effect upon the viability of port authorities' investments.

For the same reason, port authorities also were agreed that they had to concern themselves to a greater extent with the planning and proper operation of transport systems to and from their hinterlands.



Gray, Mackenzie news, August

• Abu Dhabi

77 vessels called at Abu Dhabi during the month of August with 99,054 deadweight tons of cargo on board for discharge. Imports consisted of 41,796 tons of general, 13,778 tons steel, 29,850 tons cement, 1,630 tons pipes, 4,000 tons of timber and 8,000 tons bitumen.

Additionally two tankers called at Mina Zayed and discharged gas and fuel oil.

20 to 22 days waiting time continued during the month and is likely to continue during September.

Eight new cranes have arrived with a capacity ranging between 10 and 20 tons which are equipped with the most modern electronic devices.

It is reported that shipping companies using Mina Zayed equipment for reasons other than ordinary handling of goods will have to pay new rates announced recently.

Khorramshahr

69 vessels discharged 488,611 tons import cargo.

There was a berthing delay of 120 days for vessels at top of list lightening for berth alongside, 50 days for vessels at top of list with suitable draft alongside and up to 10 days for anchorage space for barge discharge at ships' expense.

9.9 million tons in a year

Karachi, Pakistan, July 15th, 1976 (K.P.T. News Bulletin):—The total 9,925,288 tons cargo handled during the year ended 30th June, 1976. The total import cargo handled during the year was 7,569,982 tons and export cargo was 2,355,306 tons.

Import cargoes handled during the year included Chemicals 35,114 tons, Coal 6,130 tons, Coke 31,246 tons, Fertilizers 318,164 tons, Phosphate 34,193 tons, Iron & Steel 394,502 tons, Jute 51,630 tons, Motor Cars 17,291 Nos. and tons, Oils Edible 231,313 tons, Crude oil 2,904,416 tons, Desiel oil & Liquid Fuel 616,995 tons, Kerosene oil 172,636, Paper 31,106 tons, Sugar 29,431 tons, Tallow 36,985 tons, Tea 46,085 tons, Timber 16,038 tons, Wheat 1,421,958 tons and other cargo 1,095,902 tons. While the Import cargoes for Afghanistan handled at Karachi Port during the year ended 30th June, 1976, included Fertilizer 11,788 tons, Wheat 2,000 tons and other cargo 65,159 tons.

Export cargoes handled during the year under review included Bones 10,838 tons, Cement 97,638 tons, Cotton 120,698 tons, Cotton Yarn 81,256 tons, Edible Oils 9 tons, Fertilizers 2,980 tons, Fish 19,874 tons, Foodgrains (other than Rice) 15,191 tons, Hides & Skins 3,511 tons, Leather 9,717 tons, Marble Stones 16,060, Molasses 126,780 tons, Oil Cakes 99,946 tons, Ores 18,203 tons, Petroleum products 375,595, Guwar & Rape-seeds extraction 15,587 tons, Rice 782,637 tons, Salt 421 tons, Seeds (other than Rape seeds) 23,851 tons, Sports Goods 4,086 tons, Sugar 156 tons, Textiles 60,136 tons, Tabacco 11,113 tons, Wool & Goat Hair 4,691 tons and other cargo 454,332 tons.

Port Qasim inaugurated by Prime Minister Ali Bhutto

Karachi, Pakistan, August 15th, 1976 (K.P.T. News Bulletin):-Prime Minister Mr. Zulfikar Ali Bhutto performed the foundation laying Ceremony of Port Qasim on August 5th, 1976. Port Qasim is going to be the second deep water port-to be built at Phitti Creek as a "Vital segment in the infrastructure needed for the economic development of the country."

Speaking on the occasion of the foundation-stone-laying of the historic project at the site, the Prime Minister said that the Karachi Port Trust has served the nation well, and it will continue to do so, but its heavy burden will, in the near future, be shared by the new port.

The first phase of the project, costing Rs. 2,688 million with a foreign exchange component of Rs. 1,233 million, the Prime Minister said, should be "welcome news not only to all of Pakistan but to the international mercantile community which trades with us, and for all those who use our seaports for the good of their economies as we do for ours".

Our objective in building Port Qasim is to reduce turnround time for carriers coming to and going from Pakistan, to increase the frequency of their calls and attract new ships" the Prime Minister said.

Government's policy, he declared, is for developing a workable and purposeful communication's systems, a system which will expedite the opening up of the backward regions of Pakistan to the benefits of social and economic progress and link them with centres of trades and education not only in Pakistan but with all those parts of the world where we can earn and learn.

"Insha-Allah", he said "within 20 months from today port should be operational and receive its first cargo vessel. With that pressure on the Karachi Port will begin to ease and its chronic congestion will begin dissipate".

Earlier, Mr. Mumtaz Ali Bhutto, Federal Minister for Communications in his welcome speech said the first phase will be completed by 1979-80 completing seven multipurpose berths at a cost of Rs. 792 million. The steel Mill berth will be completed by early 1978 at a cost of Rs. 269 million and an automatic Conveyor system of 1,000 tons per hours capacity will connect the loading point at the port terminal with the discharging point at the Steel Mill.

The important item of development work during the first phase is the dredging of navigational channel to accommodate ships of 50,000 tons carrying capacity. During the first phase, dredging alone will cost Rs. 589 million, he said.

Mumtaz Ali Bhutto Federal Minister for Communications thanked the Government and people of Britain, France, Japan, Canada, West Germany, Bulgaria and Belgium for their assistance and co-operation.

New K.P.T. Chairman appointed

Karachi, Pakistan, September 1st, 1976 (K.P.T. News Bulletin):-Commodore (Retd.) R.A. Mumtaz has been appointed Chairman of the Karachi Port Trust by the Federal Government. He took over the charge of his office on August 20th, 1976.

Commodore Mumtaz was also a Trustee on the K.P.T. Board of Trustees from June to December, 1971, when he was commodore Incharge, Karachi.

He joined the Royal Indian Navy as Sub-Lieutenant in 1944 and retired from the Pakistan Navy in 1972.



A big smile from Capt. A.C.S. Ezekiel, (left), Master of the Neptune Pearl as he receives a commemoratives salva from Mr. Billie Cheng (right), Director (Operations), PSA to mark the vessel's maiden voyage to Singapore on 4 Nov 76. Neptune Pearl, Neptune Orient Lines first full containership serves the Far East and Europe. She is a large, sophisticated and fully cellular containership of 31,000 deadweight tonnes. She has a total carrying capacity of 1569 (TEU'S), 97 of which can be of the refrigerated type. Neptune Pearl is being operated under a master schedule within the fleet of the ACE Group, a container consortium formed in June 1975. by Franco Belgian Services (FBS), Kawasaki Kisen Kaisha Ltd. ("K" Line), Neptune Orient Lines (NOL) and Orient Overseas Container Line (OOCL). (Port of Singapore Authority)



The 15,000 dwt M V "CATAMARCA II" was accorded a special welcome on 30 Oct 76 during her maiden voyage to Singapore. A simple presentation ceremony followed by a cocktail was held on board the vessel to commemorate the occasion. The cargo vessel belonging to the Argentinian

national line, Empresa Line Maritimas Argentinas (ELMA) loaded some 2,000 tonnes of rubber in Singapore and was homeward bound for Buenos Aires through Durban. Picture shows PSA Keppel Wharves Zone 'C' Manager, Mr. Tan Kay Juay presenting a pewter salver to the shipmaster, Captain O. Trigueros. (Port of Singapore Authority)



The T.S. "Chevalier Roze" berths along PSA Container Terminal. (Port of Singapore Authority)



A special welcome was ready for the container vessel m v "ANNE MARIE KRUGER" and her crew members when she sailed into the PSA's Container Terminal on 14 Nov 76 on the occasion of her maiden voyage from the Persian Gulf. The 9,700 GRT vessel owned by Gulf Orient Express Service (GOES) has a total capacity of 390 containers (TEUs) and plys between the Gulf and the Far East. At a ceremony held on board the ship, commemorative gifts were presented to the Master and the ship. In the picture, Mr. V. Thirupathy, Operations Manager (Container Freight Station) of the Port of Singapore Authority is seen presenting a pewter salver to the Master, Commodore H. Reimers. (Port of Singapore Authority)





The 27,835 GRT T.S. "Chevalier Roze" the second new container-ship belonging to the Franco-Belgiam services called at the Port of Singapore Authority (PSA) on 9 Nov. 76 on its maiden voyage from Europe. She worked 271 TEUs of containers (Twenty feet equivalent units) while in port before sailing to Hong Kong, Taiwan and Japan. The 208 metres long vessel has a container capacity of 1458 TEUs and plys between Europe and East Asia. Picture shows Mrs. Boon-Gek Mudeliar, (left) PSA's Assistant Director (Operations) presenting a commemorative salver to Capt. Robert Michel during a cermony on board "Chevalier Roze". (Port of Singapore Authority)



Mrs. Boon-Gek, Mudeliar (Extreme Left) explains to Capt. Robert Michel the history, culture, social and economic activity of the Republic of Singapore with the help of a book "East meets West, Singapore" which was also presented to the ship's library. Mrs. Monica Beh, Administrative Office (Container Terminal) (right) looks on. (Port of Singapore Authority)

Enjoy the hospitality of Japan worldwide.

Hospitality is a highly refined art in our country. So wherever and whenever you fly with us, you'll be an honoured quest. Whether it's a short hop or a long haul, you'll appreciate the graceful service of our hostesses in the air and the helpful service of our staff on the ground. Let the tradition of service which JAL is respected for worldwide, go with you worldwide.

We never forget how important you are.



JAPAN AIR LINES



MITSUI Computer Control System for Container Terminals

Huge piles of data! How do you process them for efficient handling of containers?

Our System can help solve your problems and enable you to reap the true benefits of container transportation.

Developed in 1972, this System has proved its efficiency at the busy Ohi Pier, Port of Tokyo, and we are now prepared to aid you in solving your terminal problems, particularly those in the fields of cargo information and operations systems.

Major Application Software

- 1. Planning Support & Management System
- 2. Receiving/Delivery Operations System
- 3. Loading/Unloading Operations System
- 4. Marshalling/Shift Operations System
- 5. Report Generating System
- 6. Inquiry System
- 7. Back up & File Control System

COMPUTER ROOM



GATE OFFICE

CENTRAL CONTROL UNIT



OPERATION ROOM

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 Offices: New York, Los Angeles, London, Duesseldorf, Vienna, Hong Kong, Singapore, Rio de Janeiro

昭和四

- 四年十一月十五日第二種勇便物語可。誌名「ポーツ(アンド)ハーバース」

一月号 第二十二卷第一号 昭和五十一年十二月二十日。

い、十日発行

alter and all the



