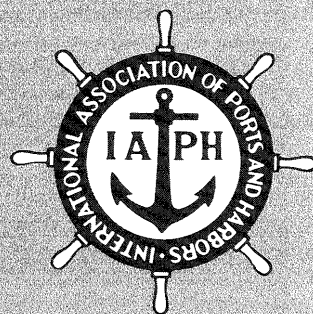


Ports & Harbors

September 1991

Vol.36 No. **7**



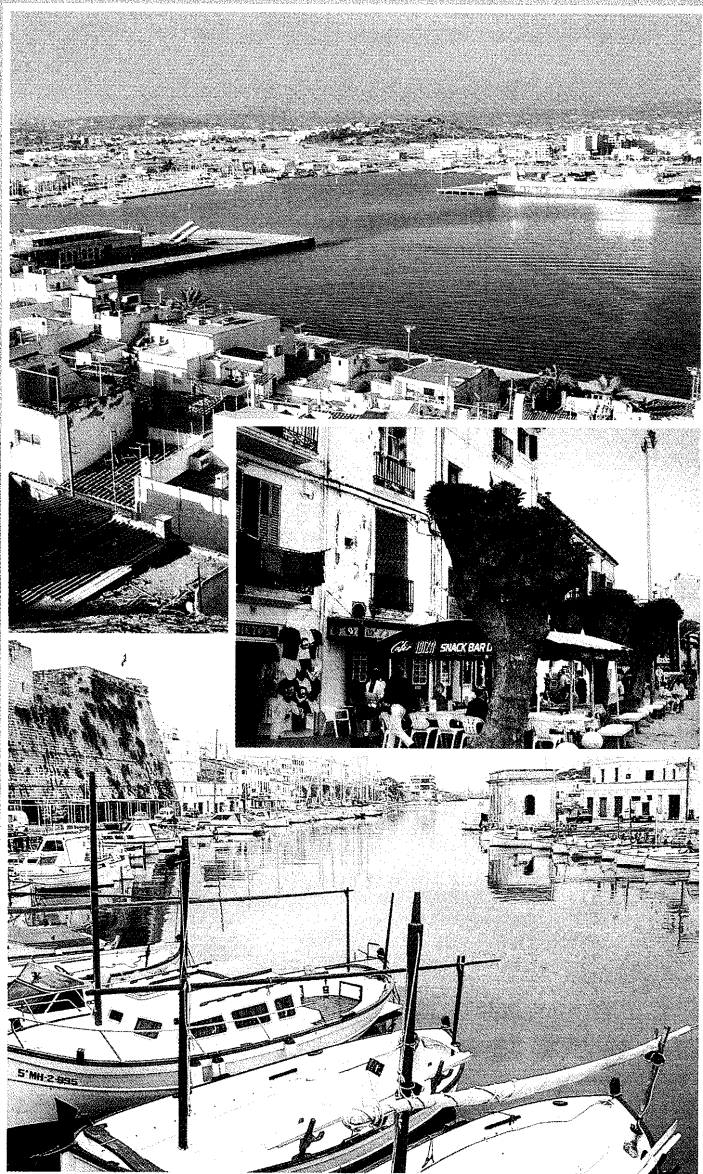
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Balearic Ports Welcome IAPH Conferees



On the occasion of the IAPH Conference in Spain, participants cruised from Barcelona to Valencia through the three Balearic ports—Mahon, Palma de Mallorca and Ibiza from 6 to 9 May 1991. They were warmly welcomed by the local hosts and received most generous hospitality at each port of call.

Ibiza—Inner Docks

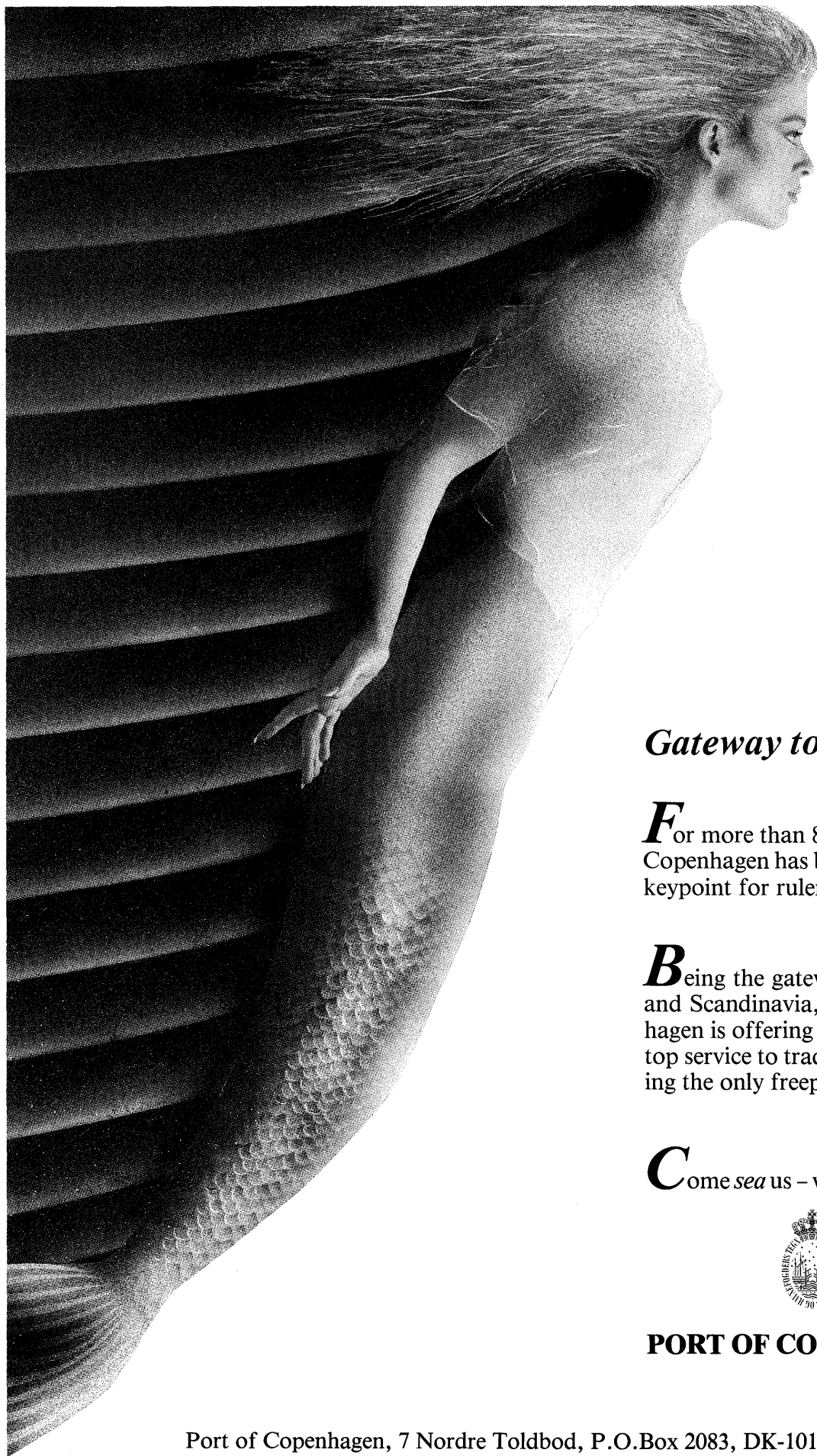


Menorca—Port of Ciudadela and old walls

At the Bellver Castle on the hilltop overlooking Palma, IAPH visitors enjoy Spanish wine and local traditional dancing.



Palma—Container Terminal at Commercial Docks



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New Zealand

Third Vice-President:
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General Manager
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Conference Vice-President:
Max Moore-Wilton
Director-General
Department of Transport
New South Wales
Australia

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- Hidayat Mao, Director Sea Traffic & Transportation Indonesia
- C B Kruk, Director, Port of Rotterdam
- T H Bryans, Managing Director, P & O Australia
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IAPH ANNOUNCEMENTS AND NEWS

President Mather Visits Tokyo

At the invitation of the IAPH Foundation in Japan Mr. John Mather, President of IAPH and Managing Director of the Clyde Port Authority, and Mr. A.J. Smith, IAPH European Representative from London, visited Tokyo for five days from July 20.

On Monday July 22 Mr. Mather, accompanied by Mr. G.P. Johnston, one of Mr. Mather's staff from the Clyde Port Authority, and Mr. Smith visited the Head Office where they were received by Secretary General Kusaka and his staff. They spent the whole afternoon in discussion dealing with various aspects of the Association's activities in accordance with the agenda especially prepared by the secretariat for this meeting.

On the afternoon of July 24, Mr. Mather and Mr. Smith were the guest speakers at the gathering of IAPH Japanese members held in Kasumigaseki, Tokyo. The meeting was aimed at the promotion of IAPH activities among IAPH members and those in the maritime and transport business in Japan and was attended by some 120 people, among whom a number of the Spanish Conference participants was included. The agenda of the 4-hour meeting included reports by those who participated in the 17th Conference from the Ports of Tokyo, Yokohama, Nagoya, Kobe and Osaka, and one from the IAPH Secretary General focussing on the Working Sessions.

To highlight the gathering Mr. Mather and Mr. Smith addressed the audience and received a warm welcome from the Japanese members. Mr. Mather spoke on the subject "UK Ports and the European Scene" while Mr. Smith's speech focussed on "Port-related events in IAPH's Africa/European Region". (The speeches will be featured in a future issue of this journal.)

During their stay, the visiting IAPH officials paid courtesy calls at the Ministry of Transport, where they were received by Mr. Kiyoyasu Mikanagi, Director General, Ports and Harbours Bureau, and on Mr. Shunru Takahashi, Vice-Mayor of the Tokyo Metropolitan Government, and Mr. Fukusaburo Murata, Director General, Port of Yokohama. They were taken on a port tour by boat both at Tokyo and Yokohama.

President Mather and Mr. Smith left Tokyo on the morning of July 25 for Taipei and Singapore, where they were scheduled to meet some IAPH members.



From left, Messrs. Kusaka, Kondoh, Smith and Mather in meeting



Secretary General Kusaka (left) and President Mather

Mr. Lunetta Leads Membership Campaign

Mr. Carmen J. Lunetta, Port of Miami Director, in his capacity as IAPH First Vice-President and Chairman of the Membership Committee, has recently circulated a letter to the IAPH members seeking their initiatives in inviting more members from the port industry. Mr. Lunetta's letter is reproduced below.

July 8, 1991

Dear Industry Colleagues:

In the changing world trade environment, with continuing advancements in operational technology and



Mr. Carmen J. Lunetta

ever-increasing emphasis on safety-security and ecological issues, it has never been more important for world ports and related industries to work in concert with each other for the benefit of all.

As you know, the International Association of Ports and Harbors (IAPH) — a non-profit organization of world ports including 230 member ports in more than 80 countries — has long been the leader in addressing such areas of mutual concern, studying thoroughly industry issues and trends and keeping members abreast of the most exciting maritime innovations and commercial developments.

For the port industry, there *is* strength in numbers. For IAPH to be most effective, we need not just your active participation but also that of each other port director and of officials of myriad adjunct industries. If you know of ports and/or related industries that are not already IAPH members but which could benefit from membership or associate membership, please discuss with them the value you have found in the association and personally let me know their names so we may follow up.

The broader our membership base expands, the stronger IAPH — and the port industry — becomes. With your participation, as well as that of growing numbers of industry partners, we all can prosper in today's dynamic maritime environment.

Most sincerely,

Carmen J. Lunetta

*First Vice President/Membership Committee Chairman
International Association of Ports and Harbors*

'Ports & Harbors' Advertising Solicited

Secretary General Kusaka's campaign letter has recently been sent out to the IAPH members and ad clients from the Tokyo Head Office.

Particular reference has been made in the Secretary General's appeal to the views of the IAPH Executive and Finance Committees that the entire membership should positively support the journal by running advertisements of at least one page a year.

The Secretary General has renewed his appreciation to all those who have been supporting the journal by running advertisements or by supplying useful articles and photographs for publication in the journal. For any additional information on advertising arrangements, please contact IAPH Head Office, whose address and fax number are printed on the first page of each issue.

CIPD Conducts Survey On Training Programs

At the initiative of Mr. Goon Kok Loon (Port of Singapore Authority), who has succeeded Mr. Kruk (Rotterdam) as Chairman of the CIPD (Committee on International Port Development) since the 17th Conference held in Spain in May this year, IAPH Head Office has circulated a questionnaire to all IAPH members requesting them to submit their 1992 training programs for which they are prepared to accept trainees sponsored under the IAPH Bursary Scheme*.

In order to facilitate the processing of applications for the 1992 bursary, Chairman Goon came up with his proposal to introduce a new framework which will take the following steps.

1st step — (to be completed by the end of August 1991):

to collect data on the availability of such training facilities at any IAPH member ports or specialized institutions which are associated with IAPH.

2nd step — (by the end of September 1991):

to finish compilation of the questionnaire results into a report for announcement to the members concerned.

3rd step — (by the end of October 1991):

to circulate the questionnaire results among the members and to announce the conditions for application for bursaries in the journal (the November 1991 issue).

4th step — (by the end of December 1991):

to close the applications.

5th step — (by the end of January 1992):

to prepare an evaluation report by the Head Office for submission to the CIPD Chairman.

6th step — (by the end of February 1992):

to notify each successful applicant of the result and to arrange the payment of bursary money to the recipient's organization and the institution involved.

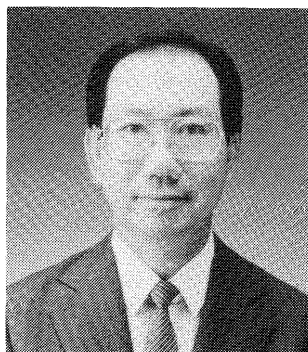
Chairman Goon hopes that the above program will ensure the bursary system functions as transparently and fairly as possible.

IAPH Bursary Scheme

1. The object of the Scheme is to provide financial assistance towards the cost of training of selected applicants on approved training courses overseas. Typically, such courses are those available in ports or institutes which are members of or affiliated to IAPH.

2. Subject to the availability of funds, 10 bursaries for each year, not exceeding US\$3,500 each, will be awarded to approved applicants from developing ports in any developing countries represented in the membership of IAPH, to cover the course fees or tuition and lodging fees but explicitly excluding airfares or other forms of primary travelling costs. If the total amount required for the applicant's training

Mr. Goon Kok Loon



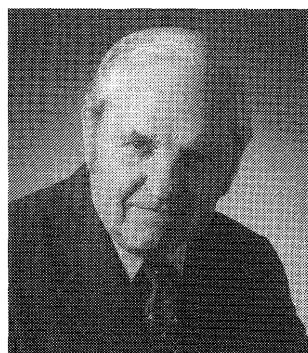
exceeds the above limit, the Chief Executive of the applicant's organization must submit written confirmation to the Chairman of the Committee stating that the balance shall be borne by the applicant's organization and forwarded to the host port/organization.

3. Applicants must have been employed in an IAPH member port for at least three years, should not be older than 45 years of age and must already be employed in a junior or middle management capacity.

IAPH Personnel Status Changes & New Appointment

Mr. Patric J. Falvey, New York

Mr. Patric J. Falvey, Chairman of the IAPH Legal Counselors, has stepped down as General Counsel and Executive Director of the Port Authority of New York and



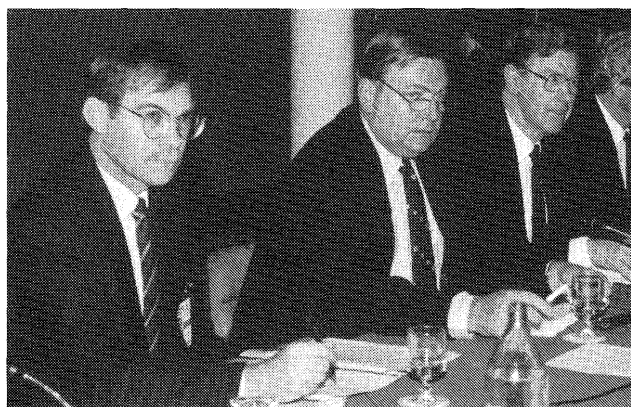
Mr. Patric J. Falvey

New Jersey, effective from July 6, 1991, and become "Special Counsel" to the Port Authority for the next three years.

Nevertheless, it was a great relief for the Secretary General to hear from Mr. Falvey that the Port Authority has agreed to continue to support Mr. Falvey's activities with IAPH, and particularly his role as Chairman of the Legal Counselors. Mr. Falvey's generous commitment was deeply welcomed by President Mather during his visit to the Tokyo Head Office on July 22. Furthermore, the President wrote to all the Exco and Board members informing them of this new situation concerning Mr. Falvey.

Mr. Max Moore-Wilton, Sydney

Mr. Max Moore-Wilton, Conference Vice-President of IAPH, has been transferred to the position of Direc-



Mr. Moore-Wilton (center) promotes the Sydney Conference in Barcelona. Also pictured are Mr. Hayes (left) and Mr. Wallace.

tor-General of the Department of Transport NSW from that of Chief Executive of the Maritime Services Board of NSW, Australia, effective from July 11, 1991.

Mr. Moore-Wilton explained that his new position is in the same area of the New South Wales public sector as the MSB position he has vacated, and thus his IAPH post as an Exco member and Conference Vice-President will not be affected by his new appointment. He assured the Association that planning for the 18th IAPH World Ports Conference will be kept on track under his initiative.

It was also reported by Mr. Moore-Wilton that Mr. John Hayes has been appointed to the position of Acting Chief Executive of the MSB, effective from July 11, 1991.

J.P. Lannou, Assistant Liaison Officer with UNCTAD

Mr. Jean Pierre Lannou of the Port of Le Havre has been assigned to assist Mr. Goon Kook Loon of the Port of Singapore Authority, the newly appointed IAPH Liaison Officer with UNCTAD.

This arrangement has been made through the good offices of Mr. Jean Smagghe, General Manager, Port of



Mr. Jean Pierre Lannou

Le Havre and IAPH 3rd Vice-President, who believed a European member of the CIPD would be able to assist Mr. Goon's task in liaising with UNCTAD through attending the various meetings in Geneva so as to ease the contacts between IAPH and UNCTAD, in view of the distance between the UNCTAD Headquarters in Geneva and Mr. Goon's office in Singapore.

Mr. Smagghe's arrangement was fully supported by Mr. Goon and was officially approved by President John

Mather while the latter was visiting the Tokyo Head Office.

Mr. Cambon of UNCTAD's Port Section in Geneva is reportedly most pleased with this arrangement as he had been worrying about the distance between Geneva and Singapore and the travelling costs involved in maintaining even closer contact between the two organizations.

IAPH Foundation-sponsored Publication on Port Reforms

The IAPH Foundation, a Japanese Corporation, has recently sponsored the publication of a paper entitled "Port Reforms in Belgium — A Study of Port Investments and Decision Procedures" authored by Professor W. Winkelmans, University of Antwerp, jointly with Professor A. Verbeke, Free University of Brussels, and has arranged for all IAPH members to receive a copy of it from the Tokyo Head Office.

The IAPH Foundation, the current President of which is Mr. Shizuo Asada, has been sponsoring a series of publications which the IAPH Secretariat has selected for independent publication from among topical papers presented to IAPH by various individuals or institutions addressing various trends in port planning and management and the interrelationships between maritime and inland transportation.

As part of this newly completed publication a number of color photographs showing the latest scenes of major Belgian ports and their facilities are provided, along with the authors' in-depth analysis of the following aspects:

- Regionalisation
- Subsidization
- Policy (in)effectiveness
- Management (in)efficiency

World VTS Guide

Captain Weeks, Maritime Communications and Safety Unit in Plymouth, U.K., which has been undertaking the production of the IALA/IAPH/IMPA World VTS Guide, has issued a progress report as of 20th June 1991, as follows:

1. IRELAND: **Dublin:** Radar surveillance of the VTS area is now in operation.
2. FRANCE: **Rouen:** A VTS Guide for this port is now available to all ships.
3. FRANCE: **Le Havre:** Page LEH5, Pilotage section, alter item 1. to read. "Deep draft vessels. Pilot boards near LHA buoy (Racon)."
4. FRANCE: **Marseilles:** Page MRS2, alter longitude 005° 00'W to read 005° 00'E.
5. FRANCE: **Paris:** Work is in progress to produce a VTS guide.
6. CANADA: **All VTS centers:** Small changes have taken place in operational procedures at all centers. Mariners are advised to contact local VTS centers for this information, pending alterations to the World VTS Guide.
7. UNITED KINGDOM: **Thames Navigation Service:** A VTS guide for the Thames Navigation Service (Port of London) is now available to all ships.
8. THE NETHERLANDS: **River Western Scheldt:**

Changes in VHF coverage areas have taken place. Mariners are advised to consult the attached diagrams pending alterations to the World VTS Guide.

9. JAPAN: **Tokyo Bay, Yokohama, Bisan Seto, Kobe:** Work is in progress to produce a VTS guide for these VTS areas. It is expected to be in circulation September — October 1991.
10. USSR: **Nakhodka:** Work is in progress to produce a VTS guide for this port. Expected to be in circulation September-October 1991.
11. CHILE: **Iquique:** Work is in progress to produce a VTS guide for this port.
12. All ships are requested to inform us of any change of postal address, to ensure continued delivery of World VTS Guide materials.

For details and more information, please contact:

Captain F F Weeks

Maritime Communications and Safety Unit

(Incorporating the Seaspeak Project and the IALA/IAPH/IMPA World VTS Guide)

New fax number: (0752) 604 164

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Minutes of CLPPI Barcelona Meeting

*held in the Princesa Sofia Hotel,
Barcelona starting at 14:00 on
Saturday, 4th May 1991*



Mr. Paul Valls

Present: Chairman Paul Valls,
Vice Chairman Patrick Keenan,
Messrs A. Combean, P. Falvey, T. Hirota, K. Jurriens, J. McCarthy, J-P Moulod, A Pages, A. Smith, J. Stewart and Mrs. Le Garrec.

Apologies for absence were received from:

Mrs. E. Gitau and Messrs, F. DeVos, C. Veng and H. Welsh.

The Chairman opened the meeting by expressing his thanks to those present and to the Committee as a whole

for their contribution over the past biennium.

1. Minutes of the Last Meeting

The minutes of the last meeting, held in Paris in January 1991, had been circulated and were accepted by the Committee as a true account and duly signed by the Chairman.

Mr. Stewart, who had not been present, commented favourably on the amount of work achieved by the meeting.

2. Matters arising from the minutes

There were no matters arising from the minutes.

3. CLPPI Report to the Barcelona Conference

CLPPI endorsed the Chairman's report to the Executive Committee.

4. Presentation of CLPPI to the Barcelona Conference

(Commentary with slides back-up)

The Chairman informed the Committee that the presentation was scheduled for the 2nd Working Session. The Committee approved the presentation paper that had been previously circulated.

5. Projects for special CLPPI studies to be carried out during the 1991/1992 biennium.

A general discussion took place on the workload placed on the Technical Committees. Japanese ports, aware of the need to attend meetings in the international fora, were attempting to finance it through the Japanese Association of Ports, rather than through IAPH.

It was felt that clarification was required on the rules and regulations for financing the Technical Committees' work. CLPPI members, whilst aware that financial difficulties would be involved, stressed the importance of IAPH having a professional approach. It favoured an action input in the international fora rather than a passive presence. It wished to draw the attention of IAPH members and the IAPH Executive to this opinion.

A list of subjects to be monitored and studied had been submitted, with a request for funding to continue CLPPI's work and initiatives in the fields mentioned in the minutes of the last meeting.

6. Environmental matters (Update of the current situation)

Alex Smith informed the Committee that IAPH had been formally represented at the 2nd Preparatory Meeting of UNCED (United Nations Conference on Environment and Development), by John Mather and Alex Smith.

Alex Smith commented on his report, which is due to be disseminated by Head Office, in the June issue of Ports and Harbors.

The main points were summarized as follows:

- A. A first meeting took place in Nairobi in August 1990. There were no Non-Governmental Organizations (NGOs) present. A second meeting was held in March/April this year, at which IAPH was present.
- B. UNCED is a follow-up from the 1972 UN Conference in Stockholm that dealt solely with concerns for the environment. It resulted in the formation of the Brundtland Commission, which presented its report to the United Nations in 1987 -- Our Common Future.
- C. The 1992 UNCED has based its agenda on that report, which is being developed by the Preparatory Committees.
- D. Most of the other NGOs accredited to the Preparatory

meetings are Environmentalist groups. In order to cope, these groups have been formed into constituencies. IAPH forming one constituency, since although it may align with certain groups, such as Friends of the Earth, it is the only NGO which formulates practical proposals on environmental issues.

- E. There is a need therefore to establish in the minds of delegates to the meetings that IAPH has a locus and for this IAPH must have practical input.
- F. This involves the input of various COPSSEC Guidelines, and from a CLPPI viewpoint it would be useful if a survey were carried out. Of the 3 working groups formed by UNCED, 2 are of importance to IAPH: the 2nd on the Pollution of the Sea and the 3rd on the Legal and Institutional arrangements, which was formed at the 2nd Preparatory meetings (on a Russian proposal that received general backing). It began to examine the changes required.
- G. Given that, to the extent that land-based sources of pollution generates the major part of the pollution of port waters and in the light of the fact that these may well originate in upstream riverine areas, beyond the Port's jurisdiction, IAPH should establish whether and to what extent extra-territorial control exists via bilateral, multilateral or regional treaties. The intention is the presentation of a factual document which could influence the 3rd working group.

The committee was in favour of such a survey being carried out.

Mr. Moulod was asked for the point of view of the African ports. He felt that African Ports and Governments were aware of environmental problems, but it was very difficult to combine development and environmental issues. It was a question of lack of finance, and so priority tended to be given to development. This was a field where international cooperation from UNCTAD and the World Bank, etc. was needed to secure aid.

Alex Smith stated that funds were available and it was important that Ports in Developing Countries should be informed as to how to obtain them.

Mr. Pagès drew attention to the fact that the CMI was to hold a symposium in Genoa with the aim of translating the results of the Brazil Conference into legislation on the maritime side. The National Maritime Law Association had already begun to form working groups to look into these aspects. CLPPI members were encouraged to follow the work of these groups, since it was felt that the international maritime treaties, laws and conventions currently in force were often unrelated to the reality of the maritime industry today.

With respect to the IAPH Charter on the Environment, members had certain reservations on the 3rd Draft and submitted suggestions for modifications in the wording, which the CLPPI Chairman was to submit to the Meeting on Sunday 5th May.

CLPPI wished to submit a resolution urging IAPH members to adopt this Charter.

7. The IMO Legal Committee Meeting in March 1991

The 64th IMO Legal Committee Session was held in London and attended for IAPH by André Pagès (overlapping with the UNCED Geneva Meeting). The translation and typing of his report had been delayed, but it would be

completed and forwarded to Head Office and CLPPI members as soon as possible after the IAPH Conference.

He told the meeting that debates had continued on the draft HNS convention and that 4 more meetings were to be convened on the subject.

One day UNCTAD and IMO would convene a Diplomatic Conference on Maritime Liens and Mortgages but there was a lack of money at present. The Convention on Oil Pollution Preparedness and Response had been considered more urgent and this had been successfully concluded.

A working group had been formed to study the Oil Conventions and notably the 1984 Protocols, which had little chance of entering into force as they stood, following the U.S.A. Oil Pollution Act.

Attention had also been given to the Basle Convention on the Transport of Waste and the UNCTAD Convention on the Transboundary Transport of Dangerous Goods (CRTD Convention) in order to harmonize regulations with the draft HNS Convention.

8. Results of the Diplomatic Conference on the Liability of Terminal Operators

Patrick Falvey had been present in Vienna for the Diplomatic Conference on the Liability of Terminal Operators. He informed the Committee that it had been successfully concluded by the adoption of a Treaty to govern liability during the terminal transit of goods before or after receipt from the carrier, when on the ground under the Terminal Operators's responsibility. He explained that the Treaty fell within the context of the series covering intermodal transportation.

The main points in the texts are:

It sets limitations of liability which are the same as those of the ship, if maritime transport is involved, and these of the aircraft, if air transport is involved, i.e.:

- 8.3 units of account per kilo
- 2.7 units of account per kilo

unless covered by the Hamburg Rules or Warsaw Convention.

Exemption for delays due to strikes have been accepted. It will come into force with only 5 ratifications.

Provisions have been made to update limitations rapidly by a system of indexation.

The identity of the Terminal Operator is clearly defined and he has the option of creating his own document of using the carrier's paper.

Provisions for computer storage of documents have been made.

The forfeit of the right to limit liability applies to wilful damage by the operator or his servants but not to that of sub-contractors.

There were 4 abstentions — U.K., Morocco, Australia and Japan. The U.S.A. adopted the Treaty.

It was agreed that once commerce understood the rules, it could only be beneficial. Speed is essential.

A copy of the adopted final text of the treaty is attached in annex to these minutes.

9. Renewal of the CLPPI Terms of Reference

It was agreed that the Terms of Reference as they stood were adequate to cover the Committee's scope of activities.

10. Resolutions to be submitted to the Conference

There were no other Resolutions apart from that decided

under item 6 above, concerning the Environment Charter.

11. Date and venue of the next CLPPI meeting

No date was fixed for the next CLPPI meeting, which the Committee agreed should be fixed jointly with the agreement of COPSSSEC.

13. Any other Business

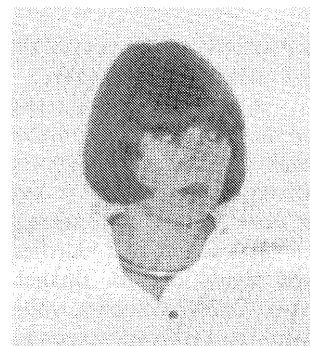
No matter was raised.

There being no other business, the Chairman thanked the members present for their helpful participation in the work of the Committee and closed the meeting at 16:57.

Evaluation Mission 57+ Project

From March 15 to 26, 1991

Ms. Fienke de Groot



**By Fienke de Groot
TEMPO,
Rotterdam Municipal
Port Management**

1. Introduction

It was noticed that in many developed ports, port workers and/or port civil servants were (and still are) discharged at the age of 57. Generally speaking, these persons are very experienced and still eager to work. Moreover, in their functions, they have experienced most of the revolutionary developments in shipping and cargo handling, such as unitization, roll-on/roll-off, containerization, etc.

It is a fact that the introduction of such techniques in developing countries has taken a slower pace than in the developed ports, from which they originate. As a result, the IAPH/CIPD developed a new scheme — the 57+ Scheme — aiming to proffer know-how and experience, in particular in the day-to-day work, to developing ports through early retired staff members of developed ports.

A pilot project has been executed in the ports of Tema and Takoradi in Ghana. Two Dutch experts in the field of cargo handling left for Ghana in October 1986 for a period of two months.

During their stay many suggestions have been brought forward regarding planning, gang balance, safety and order, maintenance, communication, etc.

A second 57+ project, so far, never took place, due to the following reasons:

- lack of funds, and
- misunderstanding of the purpose of the Scheme.

2. Purpose of the Mission

The CIPD still believes that the 57+ Scheme serves a good purpose. However, in order to be able to continue in an appropriate way it was decided to have an evaluation of the project executed in Ghana in 1986 to find out what, after 4 years, remained of the recommendations of the experts.

3. Preparation

Before departure, a questionnaire has been drafted containing the situation in 1986, the recommendations by the 57+ experts and the result of these recommendations.

4. Execution of the mission

The mission was executed by Mr. Frans Moonen, one of the 57+ experts in 1986 and, on behalf of Mr. C. Bert Kruk, by Mrs. Fienneke de Groot.

During our stay all recommendations mentioned in the questionnaire have been evaluated.

For the sake of completeness, it should be mentioned here, that the performance in the ports of Tema and Takoradi has greatly been improved due to the Port Rehabilitation Project which is being executed through a World Bank loan and assistance by port experts of Hamburg Port Consultants (HPC).

Of all suggestions and recommendations proposed by the 57+ experts in 1986, 85% appeared to have been advised by the HPC experts as well as implemented to the letter.

The other 15% has not been implemented so far, due to local circumstances (already anticipated by the 57+ experts) but also because other priorities did not allow to devote attention to some of these matters yet.

The above shows the professional approach of the two 57+ experts. However, it also became evident that a period of two months only is too short to be able to have recommendations implemented. A follow-up mission is a prerequisite.

During our stay we encountered full support and hospitality of the management and staff of the ports of Tema and Takoradi, for which we like to express our gratitude.

5. Conclusions and Recommendations

The evaluation mission to Ghana clearly showed that the two 57+ experts have done a good job. Their recommendations were fully in line with those of the professional HPC consultants.

However, due to the character of Scheme, the 57+ experts were only entitled to give recommendations, not orders. Moreover, due to regulations in the Netherlands, they were committed to a period of stay in Ghana of two months only, which, as appeared, is too short a period if the project is limited to this visit only.

All improvements observed during the evaluation mission, have been initiated by the 57+ experts.

The ports of Tema and Takoradi have changed into well organized ports with sophisticated material which, according to what we have seen, is well maintained (an essential item).

The port staff is, more than before, aware of what they are doing and why. However, such a change of mentality

cannot be reached within two months only, in spite of all goodwill of the ports involved.

57+ experts should not have the pretension to change the situation in developing countries completely by themselves. But they can make a positive contribution to the process of thinking.

57+ projects are useful and should be pursued further, provided that:

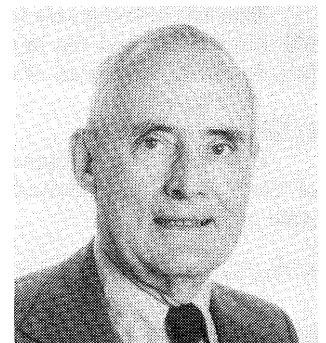
- the receiving authority fully supports the project, and
- the project has a follow-up in order to reach the optimum result. The amount of follow-up missions depends on the situation in the receiving country. However, it is believed that at least two missions following the execution of the first mission have to be executed.

The execution of 57+ projects in combination (but not necessarily simultaneously) with rehabilitation programmes, is considered to be extremely useful.

Report: 64th Session of Legal Committee, IMO

London, 18 - 22 March, 1991

By Andre Pages



Mr. Andre Pages

The IMO Legal Committee held its 64th Session at the organization's headquarters from the 18th to 22nd March 1991.

The Session was followed by 43 national delegations, four delegations from other United Nations agencies, the representatives of F.I.P.O.L. and observers from 14 non-governmental organizations.

The session was chaired by Professor R. Cleton (the Netherlands).

The Committee continued its work on the examination of various questions raised during previous sessions.

1. — (Draft HNS Convention) Draft convention on liability and compensation in respect of damage caused by the transport of potentially hazardous and noxious substances by sea.

The Committee continued its examination of the draft Convention. This was done on the basis of two important study papers:

- a new draft drawn up by the jurists of 11 of the national delegations; and

— a report drawn up by a working group of technical experts.

It specified its position on certain points, while reserving its decision on others until a later session. Thus:

a) Name of the Convention

Should the present name be retained or should it be simplified by just using the term "dangerous goods," like its counterpart adopted by UNCTAD for inland transport?

b) Definition of the Person Liable

In order to avoid all ambiguity on the identification of the person liable, this person is to remain the shipowner, without possible extension to cover the operator or the charterer. Where necessary, liability could be channeled by right of recourse.

c) Definition of Damage

The accent is placed on:

- damage caused to the environment and the costs of measures to restore it as well as to compensate for economic losses; meanwhile
- the costs of preventive measures are also to be taken into account.

d) Dumping in the Sea

The question of whether substances deliberately dumped in the sea were to be included in the scope of the Convention was left open, irrespective of whether they were authorized or not and regardless of the consequences arising therefrom.

This was also the case for parts of a ship's cargo which fell into the sea and the immediate or subsequent damage (e.g. following corrosion of drums or containers).

e) Geographical Scope

Debates are to continue on the definition of the scope of the Convention: territorial waters, exclusive economic zone or all seas!

f) Compatibility with other Conventions

The Convention should be compatible with other conventions on the limitation of liability, which may have different geographical scopes, different jurisdiction systems and different Member States:

- the case of ships carrying both passengers and dangerous goods;
- the case of oil pollution damage (but caused by the bunkers of the ships, rather than tankers); and
- the case of damage, covered in a general way by the 1924, 1957 or 1976 Conventions.

g) Shipowner's Liability

The draft establishes that the owner's liability shall be objective and covered by mandatory insurance. The normal cause for exoneration (wilful acts of third parties, war and lack of information provided by the shippers relating to the nature of the cargo and equally:

- the case of negligence or wilful fault of agents and of the *authority responsible for navigational aids* (buoys, beacons, lights, etc.)

h) Limitations of Liability

The C.R.T.D. Convention for inland transport fixes the limitation of the owner at:

- 15 million units of account (SDR) for inland navi-

gation; and

- 30 million units of account (SDR) for road or rail.

Nevertheless, the 15 million unit of account limit for a small tonnage vessel was considered high, not only by the representative of the International Chamber of Shipping (ICS) but equally by certain delegations.

Moreover, no ratio for the increase according to tonnage was proposed for this limitation of liability. In fact, this question is of particular importance and justifies the drawing up of a special HNS Convention, *because small ships can be the authors of very considerable damage*.

As in the drafting of other conventions, the loss of the right to limit liability is subject to the proof by a third party of wilful misconduct or negligence committed with full knowledge.

i) Complementary System of Compensation

The draft establishes a complementary system of compensation:

- funded by mandatory subscriptions from certain shippers of dangerous goods;
- to create an international fund;
- through the intermediary of agents, certifiers or tax leviers established in the various countries;
- for the compensation of damage, when it is not caused by the shipowner, or when such compensation is only partial; and
- up to a new ceiling, which remains to be determined.

The representatives of the chemical industry (CEFIC) voiced strong opposition to the taxing of shippers and to the costs of operating such a system.

The constitution of the fund should be facilitated by an initial deposit by the treasuries of the States involved.

j) Revision of the Limitation Amounts

The provisions envisaged in Art. 44 for the revision of the limitations of liability of the owners and the intervention of the fund are based on the habitual sequence of procedure stages, requiring successive majorities, a limited rate of increase and a 7 to 10-year minimum time lapse between any two revisions.

Such provisions are hardly compatible with the rapidity of the evolution of the purchasing power of the SDR, the unit of account of the Convention.

k) Report by the Group of Technical Experts

A group of technical experts submitted a detailed report, which should be further examined during the coming sessions:

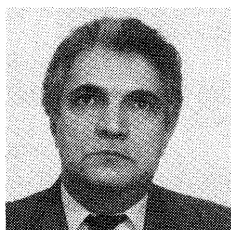
- As for the substances to be classified in the Convention, it suggested that reference to existing conventions dealing with dangerous goods should be made (1973/78 MARPOL, IMDG Code, the IBC list dealing with chemical carriers);
- it made special reference to the case of combustible bunkers (excluded from the 1969 and 1971 Conventions), nuclear substances not covered by the Paris and Vienna Conventions, residues from previous voyages, liquefied gases and immersed wastes; and
- it put forward certain possible bases for establishing taxes (at the shippers expense) on the largest portion of dangerous goods cargo.

(Continued on Page 14)

OPEN FORUM

Present-day Status of the Soviet Sea Merchant Ports and Future Outlook

By **Felix G. Arakelov**
General Director
Research-Project
Development
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"Soyuzmorniiiproekt"



The ever growing requirements of the national economy in carriage of home and foreign trade goods by sea necessitate development and upgrading of available port capacities.

In recent years the volume of traffic through sea ports increased dramatically. This happened because the international market entry by many corporations and enterprises from various industries as well as renaissance of co-operatives.

Over the period 1980-1990 the total amount of foreign trade originated traffic moved by various transport facilities increased more than twofold. There was a remarkable growth of cargo tonnage, from 220 mt up to 260 mt, in the merchant marine sector. To-day the Soviet Union can boast of over 70 ports and harbours located in regions with different climatic conditions. General and bulk sector accounts for some 300 mt. These are mostly handled at 18-20 major ports on the Far East, Baltic, Black Sea-Azov and Northern Sea basins. The ports generally comprise specialized terminals to cater for specific goods or unitized cargo, which are fitted with modern high capacity handling equipment.

There are 10 primary container terminals at the MORFLOT sea ports. The largest container throughput are the following ports: Vostochny, Leningrad, Riga, Il'ychevsk. The total container traffic through the Soviet ports now amounts to around 1.0 mill boxes per annum. Practically all container terminals have high capacity, automation of yard operations and control. Everything what is required for quick transshipment of containers via the terminal is available. Container handling equipment of these terminals meets most up-to-date requirements.

At the same time some container terminals (Magadan, Petropavlovsk-Kamchatsky, Vanino, Archangel) intend to modernize the terminals through computerization. It increases their capacity without any extension of quays and expansion of the terminal area is not required, and no acquisition of additional machinery.

But, perhaps, all of the container terminals in the Soviet

Union now need a reliable system of containers, flat cars and longhaul trucks identification. Urgent task for our terminals is to appear in the intermodal trade on major shipping lines. We can achieve this if all the intermodal participants are united by single operator.

When these measures are implemented tariffs for containers delivery will be reduced, and shippers will get more profits.

There is a substantial rise in the bulk sector especially in chemicals shipments in bulk. Larger vessels to handle these cargoes appeared in recent years too. And so some specialized bulk terminals which are fitted with most up-to-date equipment were constructed recently.

Coal is handled at the specialized terminals of the ports of Vostochny, Yuzhny, Mariupol; ore — Nikolaev, Yuzhny, Kandalaksha, Batumi; chemicals — Yuzhny, Murmansk, Ventspils, Nakhodka; sugar — Odessa, Novorossiisk; cement — Novorossiisk and others. Specialized terminals are available, out of 120 mt of major types of bulk commodities only 30 mt of coal and 10 mt of bulk chemicals are transhipped through specialized terminals.

As a rule bulk terminals are fitted with the continuous loading/unloading machines. The entire complex is centrally operated. It is possible to either remotely control all vital units and to operate transport conveyors and mechanisms locally.

Speaking about the specialized terminals it's necessary to mention rail ferry links. In recent years this transportation concept has been characterized by a steady growth of traffic volumes. Over the last 10 years the amount of traffic increased twofold and reached nearly 20 mt, including 8.5 mt — foreign trade shipments of which Klaipeda-Mukran Rail Ferry Link (USSR-Germany) accounted for 5.5 mt.

This unique ferry link USSR-Germany is designed to operate four two-decker rail-ferry vessels. Accordingly on-shore terminals at both ports are fitted with two-decker linkspans.

The level of technical conceptions in this design is very high. And this innovative method to joint both rail decks with on-shore facilities, puts this rail-ferry complex to the fore of technical progress in this field, and to certain extent it surpasses everything that was built in the world to date.

Although specialized terminals in the USSR are being developed and constructed the bulk of commodities are transhipped at the multipurpose terminals which are fitted with multipurpose cranes and various handling equipment. Positive changes in sea navigation practice have certainly effected on the technical conditions of the majority of sea ports. These ports are being developed in recent years mainly because of upgrading, modernization and expansion. Old quays were upgraded to accommodate bulk carriers, Ro-Ros and multipurpose ships which carry various commodities, containers as well. Over the last 10 years there were spent more than US\$100 million for the acquisition of the import

ports handling equipment.

To summarize it can be said that despite the planned and steady development of port capacities, port facilities available to-day are not physically able to ensure timely and qualitative transshipment of cargoes and handling of transport means.

Further development of the national port system should meet the following objectives:

- maximize upgrading and modernization capabilities of existing terminals to increase their throughput capacities;
- speed-up construction of new specialized port complexes to cater for innovative shipping conceptions;
- provide reserve capacities. To make operation normal port reserve capacities should exceed actual capacities involved in cargo handling by some 20-25 per cent;
- introduce innovative labour and fuelsaving ecologically clean technologies which could help to intensify handling operations and eliminate manual labour owing to complete mechanization and automation of main and auxiliary jobs;
- equate throughput capacities with parameters of main port elements and hinterland allied transport facilities;
- renew and upgrade cranes by the units with better parameters;
- improve ports operation through better co-ordination with fleet and allied transport facilities, introduce integrated system of routine work planning, develop ACS for every working process.

These are the basic factors of the ports development. Besides, a blueprint for each port should consider its specific features: its material and technical bases, its major indices of handling vessels and ground transport facilities, and finances too. These as well as other port indices and retrospective data of its turnover serve as a basis for a port development blueprint.

The country is going to the market economy, and not only interests of the national economy as it has always been are very significant. We also want to get maximum revenues.

So for the period 1991-1995 it is planned to upgrade and construct more than 50 port terminals. Over the same period capacities will be allocated to handle nearly 42-45 mt of dry cargoes. Owing to these and other measures a 1.2-1.3 times rise in ship's handling rate and a decrease of cargo transshipment via port time by 20 per cent could be achieved.

Commissioned in this period will be upgraded, modernized or newly built terminals for containers, Ro-Ros and terminals for generals.

Transshipment of bulk cargoes, coal and fertilizers is a bottleneck. Bulk terminals are to be commissioned in a number of ports. For instance to provide for coal transshipment at the Far Eastern basin there'll have to be constructed a second stage of the coal terminal at the Port of Vostochny. When it is completed it will handle altogether 11-12 mt. Two terminals for handling potassium chloride will be built to most stringent ecological requirements. And with capacities of 2 mt, Port Vostochny, and 1.5 mt, Il'ychevsk, could well meet our trade obligations.

These two together with an operating terminal at the Port of Ventspils would fully meet our demands in potassium chloride.

There is a modernization plan to raise capacity of a fertilizer handling terminal at the Port of Kherson to a level of 1.5 mt.

All problems concerning new trends and prospects of the national port system development are a subject of scientific divisions and port projects — of project development and production divisions of the "Soyuzmorniproekt" Corporation.

We have long been involved in co-operation with foreign companies. And we often invite them to assist us in completing projects which are built to our design in the Soviet Union or elsewhere. So we hope to maintain global contacts and make them fruitful wherever possible.

Anyway you have every reason to count on our partnership.

IMO Legal Committee

(Continued from Page 12)

2 - Other questions

a) Maritime Liens and Mortgages

The draft of a new Convention was examined during six sessions of a joint group of intergovernmental experts. It remains for IMO and UNCTAD to fix the dates for the convening of a Diplomatic Conference.

b) Liability and Compensation for Oil Pollution

The IOPC Fund has constituted a working group to examine the possibilities of unblocking the 1984 protocols to the 1969 and 1971 Conventions from the mediocre perspectives of entering into force, in which they stand and are to submit their findings to the General Fund Assembly in October 1991.

c) Perspectives of the entry into force of various Conventions

The requirement of a minimum number of ratifications or of minimum tonnage involved, combined with the complexity of internal procedures in the countries concerned, can lead to very long time lapses between the adoption by

a Diplomatic Conference and the entry into force of a convention:

- 10 years for the 1976 Convention on Maritime Claims,
- 12 years for the 1974 Convention on the transport of passengers; and
- 13 years for the 1969 Convention on tonnage measurements.

As far as oil pollution damage, as mentioned above, is concerned, in the context of the 1984 protocols the time lapses also involve the 1976 Protocol to the 1971 Fund Convention.

On the contrary, from the technical viewpoint, the rapid entry into force of amendments through adhesion made, may be noted.

d) Marking of Explosives for Detection in Packages

The International Civil Aviation Organization is continuing its work on the marking of explosives so that they may be detected from the outside of packages.

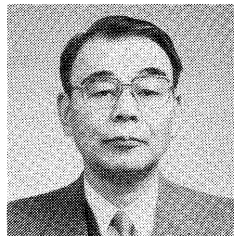
The work is of general interest to all modes of transport and justifies IMO being associated with it.

e) The Basel Convention on the transboundary movement of wastes

Given the similarity between the subjects being dealt

Container Terminal Engineering in '90s

By Itsuro Watanabe
Chief Engineer
Mitsubishi Corporation



1. Prospective Circumstances for Container Terminals in the 1990s

Containerisation in the fourth generation is now developing very vigorously.

Following APL's C-10 class ships which were the first Post-PANAMAX size vessels, nearly 40 containerships having over 4,000-TEU capacity have been or are being built and planned for Maersk, Hapag-Lloyd, Nedlloyd and CGM. This tendency to increase the ship capacity is likely to continue.

Major ports and harbours in the world are jammed with plans for new construction or renovation of container terminals, in order to accommodate these jumbo containerships. The struggle for existence among neighbouring ports is getting severe year by year.

2. An Estimate on the Size of Containerships

With the Panama Canal restriction now broken there seems to be no restriction on the size of containerships. The stacking strength of containers seems to be a potential factor of restricting the size of containerships. Based upon ISO standard, 9 high stacking of containers is the limit of strength. This means that maximum depth of ship's hold is limited

by 9 high stacking of containers.

In this circumstance, a study to estimate the limit of containership's size is introduced, as follows.

- I) The depth (D) of ships having enough depth of hold to stow containers in 9 high, is 25m as shown in Fig. 1.

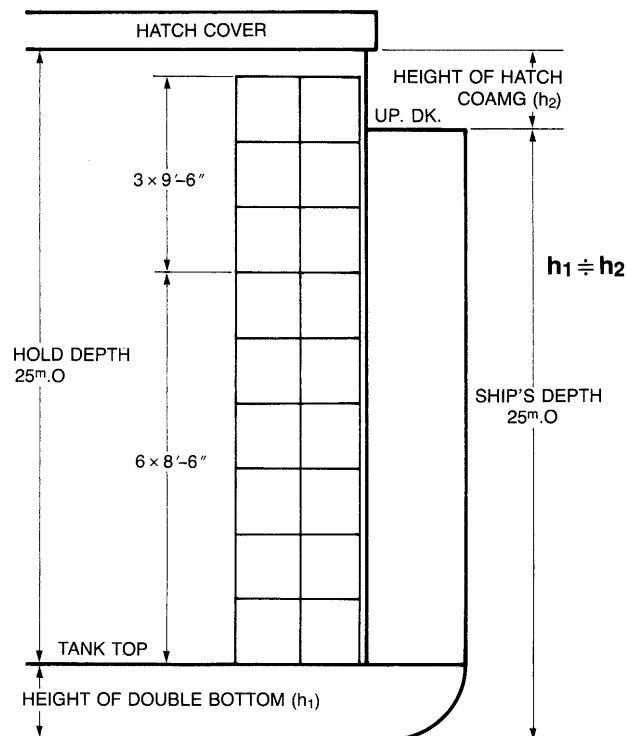


Fig. 1 Section of Ship Having 9 High Stacking

with, close liaison is required between the following three United Nations agencies to ensure that there is no overlapping:

- UNCTAD (for the convention on the overland transport of dangerous goods — CRTD);
- IMO (for the draft HNS Convention)
- UNEP — United Nations Environment Programme (on a Protocol to the Basel Convention); and

This objective is being carefully followed by the IMO Secretariat, with the other two agencies.

3 — A few points to be noted by port authorities

Port Authorities may be particularly interested in the following points on the draft HNS Convention:

- Their liability may be attacked to exonerate that of the shipowner, in cases of the faulty working of lights of marking systems.
- The numerical data of limitation of liability of the shipowner and the limitation of the intervention fund still remain to be debated.
- The mechanism provided for their revision, once the Convention under debate enters into force, is complex and slow.
- Forfeiture of the right of the shipowner to limit his liability,

thereby leading to his unlimited liability presupposes the demonstration by extension of his ill intent, or his negligence, with full knowledge of the possible consequences.

- Contrary to the oil industry, which involves only a few parties and related industries in the same field, the chemical industry is particular because of the enormous variety of products and dangers they represent, the tonnages that are shipped and the way in which they are shipped (packages or bulk, dry or liquid, etc.);
- the proposed two-tier system (owner and fund), is complex;
- operating it will lead to certain administrative costs;
- drawing it up will require still further time in the IMO Legal Committee's programme and at a future Diplomatic Conference; and
- within the context of the current Legal Committee session schedule (two sessions per annum), the examination of certain other questions which are equally on the work programme will also be delayed. This is the case, amongst others, for the revision of the 1976 London Convention, which deals with a whole range of maritime claims. This revision will be kept waiting until work on the draft HNS Convention has been completed. Yet it is even more urgent, given that since 1976 the purchasing power of the SDR, the unit of account of the limitations of liability, has been considerably reduced by monetary erosion.

- II) The length (L) of ships is derived from the ratio of L/D to keep the maximum value of 13, considering the longitudinal strength of ships.
- III) The breadth (B) of ships is derived from the ratio of L/B to keep 7-7.5, considering good propulsive performance.
- IV) By procedures above II) and III), principal dimensions L x B x D of the ships is 325m x 45m x 25m. Accordingly, TEU capacity of the ship is estimated as follows.
In hold:
 $38 \text{ bays} \times 14 \text{ rows} \times 9 \text{ tiers} \times 0.72 = 3447 \text{ TEUs}$
On deck:
 $40 \text{ bays} \times 18 \text{ rows} \times 5 \text{ tiers} \times 0.93 = 3348 \text{ TEUs}$
Total TEU capacity 6795 TEUs
- V) The deadweight (DW) is calculated, assuming 11.5 tons per TEU. Therefore, DW is about 78,000 tons.
- VI) The displacement (Δ) is derived from the ratio of DW/ Δ to keep 0.65. Therefore, Δ is about 120,000 tons.
- VII) The draft (d) is derived from Δ and block coefficient of 0.6. Therefore, d is 13.35m.

Finally, the leading particulars of maximum size of container ships estimated basing upon the stacking strength of containers, are as follows.

Length, between perpendiculars	325m
Length, overall	abt 345m
Breadth	45m
Depth	25m
Draft	13.35m
TEU Capacity	6,795 TEUs
Deadweight	78,000t

3. Fundamental Factors on Design and Operation

Following four factors are considered fundamental for design and operation of container terminals in the 1990s.

SAFETY for every operation and handling;

SIMPLICITY to perform efficient operations and handling;

SELECTIVITY to pick up a designated container, easily and promptly;

FLEXIBILITY to cope with unexpected operation and handling.

In the initial design stage of a container terminal, these 3-S and 1-F factors are very important.

Regarding **SAFETY** it is wise to separate yard-use equipment traffic such as straddle carriers, rubber tyred gantry cranes and fork-lift trucks from highway vehicles traffic, to secure a passage for pedestrians, to keep one-way traffic and to avoid crossing of traffic as far as possible.

A system requiring excessive rehandling of containers or an arrangement requiring complicated or random access for equipment or vehicles are had examples disregarding the factor of **SIMPLICITY**.

A typical bad example for the factor of **SELECTIVITY** is the block stacking of imported containers by fork-lift trucks, which are delivered to consignees irregularly.

FLEXIBILITY is a capability of container terminals to cope with disordered arrival of container ships, sudden direct loading of containers, and troubles on handling equipment and so on.

These four factors are related and are sometimes inconsistent each other. For instance, although it is sometimes

necessary to stack containers multi-tiers in a yard for flexible operation, this stacking deteriorates selectivity of handling in most cases. However, the harmony and the compromise of these four factors based upon the specific condition of each terminal, are the most important for designing and operating the terminal.

4. Targets for Container Terminals in the 1990s

The factors of 3-S and 1-F are still important for planning and designing of container terminals in the 1990s, needless to say. However, economic circumstances and technological background for container terminals in the 1990s will be greatly changed, compared with those in 20-25 years ago.

For example, the typical container ship's capacity had started from below 1,000 TEUs and is now going to develop to 4,000 TEUs or more in the 1990s. Furthermore, as fix day weekly services have been adopted for most container trade routes, the berthing time of ships at ports and harbours has to be strictly kept in order to maintain ship schedules. Consequently, the quantity of containers to be handled at a terminal will increase in proportion to ship capacity and the time to handle those containers at the terminal will not increase but will be reduced in the 1990s.

Container terminals in the 1990s will be required to perform higher productivity of handling than that at present. The higher productivity of container handling will require not only adding to the quantity of handling equipment, but also improving the efficiency of each unit of handling equipment. For instance, a terminal now allocating two ship-to-shore cranes for a ship will have to add one or two cranes for a ship in accordance with increased volume of containers to be handled. But, three and more additional cranes will not be possible because mutual interference will result in a drop in overall productivity. Furthermore, the efficiency of existing cranes will surely decline, due to increased breadth and freeboard of jumbo container ships in the 1990s. Finally, a container crane in the 1990s will have to be improved to perform higher efficiency, in order to overcome all these difficulties.

Generally speaking, highly efficient equipment tends to have complicated mechanism, and an operation or handling systems of high productivity also apt to have sophisticated sequences. In order to break through the dilemma, a fool-proof concept has to be applied on both hardware and software of container handling.

It is concluded that both high efficiency of container handling equipment and fool-proof conception on handling equipment and operational system are the key factor to perform high productivity of container terminals in the 1990s.

As another aspect, container terminals will be faced with severe cost-effective problems in the 1990s. Because a very large area will be required for container terminals in the 1990s, it will be very difficult to find suitable site for new terminals in coastal zones, over the world.

As the results, the construction costs of container terminals will increase greatly, due to big reclamation work in deep sea areas or due to deep dredging work on shallow sea areas. Therefore, container terminals in the 1990s have to be designed to perform high utilisation of land area. However, attention has to be drawn to the fact that high stacking system of containers in a terminal to get high utilisation of land area, sometimes invites the difficulties by disregarding **SELECTIVITY** as a fundamental factor.

Shortage of workers in container terminals in the 1990s

is also another severe problem especially in developed countries. The need for saving and fool-proof operating systems will be important target for sound operation of container terminals in the 1990s.

Container terminals will also have to be of higher productivity and more cost-effective than existing terminals. In order to achieve high productivity, individual handling equipment will have to be designed with improved efficiency, while the hardware and software for controlling the handling system will have to be designed around a fool-proof concept.

5. Classification of Automated Container Terminals

In the early stage of containerisation, container handling systems were manually controlled in a terminal as can be seen in local small container terminals even now. However, manual control is difficult, if terminal throughput exceeds 60,000 TEUs annually.

But, in most existing container terminals, computers are applied only for terminal controlling system, terminal planning system and related documentation. This means that individual handling equipment in a terminal is manually driven based upon work order sheets which are output in batch by computers beforehand. This is not a complete real-time operation but it is a step towards for full computerisation.

In accordance with increase of containers to be handled real-time operation will be required for container handling equipment, in order to upgrade efficiency and to prevent operational mistakes. In other words, some handling equipment will be incorporated into a computer network. In this case, transfer cranes which are rubber tyred or rail based, are easier equipment to incorporate into a computer network than other equipment such as straddle carriers, fork-lift trucks.

Finally, all major handling equipment will be incorporated into a computer network, in order to perform highly efficient, fool-proof and labour-saving operation. This will be an automated container terminal.

The above-mentioned steps of development on computerisation in container terminals is summarized in Table 2.

Table 2 Steps of Development on Computerisation

Step	Container Volume handled annually (TEUs)	Control, Planning and Documentation	Handling Equipment
I	~ 60,000	manual	manual
II	60,000 ~ 150,000	Computer	manual
III	150,000 ~	Computer	Computer for some equipment
IV		Computer	Computer for all equipment

At present, most container terminals over the world are classified in step II. However, some container terminals in advanced countries are classified in step III. There are no terminals classified in step IV, generally speaking. Only one terminal classified in step IV will be the ECT-SeaLand Terminal in Rotterdam which is now nearing completion. Terminals of this type will surely be container terminals in

the 1990s.

On automated container terminals, many consulting engineers and manufacturers of handling equipment have published their concepts and ideas. These concepts and ideas are classified in following two categories.

- i) **Non-captive type** Automatic handling of containers will be performed by the equipment in a terminal. No special attachment or fittings will be required for both of containers and containerships. Usual containers and containerships will be able to be treated in the terminal.
- ii) **Captive type** Automatic handling of containers will be performed by the equipment in a terminal, using special attachments or fittings required for either containers or containerships, or both of them. Accordingly, usual containerships stowing usual containers will not be able to call on the terminal.

Non-captive type automated container terminals are considered very universal, flexible and applicable to every port and harbour. But automatic technology in this type will be very difficult, because many problems such as change of tide, change of ship's draft and discrimination of container height has to be resolved by only the equipment of terminal side.

In captive type automated container terminals, automatic technology, by comparison, rather easy. However, this type will require large initial investments not only for terminal but also for containerships and / or containers. Furthermore, this type is not applicable to every port and harbour.

Non-captive type terminals are further sub-divided into two categories.

- a) **Direct stacking type** Containers are placed directly on the ground or stacked directly on the top of containers below.
- b) **Pigeon hole type (Rack type)** Containers are individually stowed in each pigeon hole, just like rack system in an automatic warehouse.

In direct stacking, stacking tiers will be limited to 4 or 5 high, because it will be very difficult and troublesome to pick up containers from the lower tiers of multi-tier stacks, even utilising a computer system.

On the other hand, in the pigeon hole type, selectivity of containers will be excellent. But, as the utilisation of land area will not always be good compared with direct stacking, a tall structure having 10 to 15 tiers will be necessary. This will require large scale investment.

Table 3 shows the classification of automated container terminals summarising the above.

6. Restrictions on Automated Container Terminals

Against the development of automated container terminals in the 1990s, there are many restrictions to be overcome, as follows.

1) Technological aspects

Firstly, the treatment for change of draft of ships berthed during container handling, in addition to change of tide, has to be resolved. Furthermore, various height of containers such as half-height, 8' - 0", 8' - 6", 9' - 0" and 9' - 6"

Table 3 Classification of Automated Container Terminal

	Non-captive type		Captive type
Classification	Automatic handling of containers to be performed by only the equipment in a terminal. Any attachments or fittings not to be required for both of containers and containerships.		Automatic handling of containers to be performed by not only the equipment in a terminal, but also special attachments or fittings required for either containers or containerships or both
Division	Direct stacking type	Pigeon hole type (Rack type)	
	Containers to be placed directly on the ground of terminal and stacked directly on the top of containers below	Containers to be individually stowed in each pigeon hole	
Advantage	Easily realised, because of extension of existing handling system	Excellent selectivity High efficiency of handling	Excellent selectivity High efficiency of handling Possible to develop no-man handling system
Disadvantage	Selectivity	Large initial investment	Very large initial investment
Examples	PACECO: Automated Transfer Car System Portveyor System MATSON: Mousetrap System MHI: Traverser System MACS System IHI: Elevated-Track System TRANSLIFT: CTS System Port of La Spezia	KAISER: Speed-Tainer System AUTO-LUX: Aquarium System HHLA: Terraced Conveyor System AC/GEC: Multi-Linstore	VICKERS: Lautovick System Meeusen: Containoveyer System MECO System

gives rise to more complicated problems. For automatic operation of quay-side container cranes, the position of containers to be handled on board has to be exactly grasped.

Existing method of lashing containers stacked on deck is the second restriction for automatic container handling. Existing lashing methods using stacking cones and lashing bars/wires are fundamentally based upon manual work. Therefore, new stacking method compatible with automatic operation of quay-side container cranes has to be developed.

The third problem is the reliability of sensing instruments such as limit switches, proximity switches and beam sensors. In the case of automated handling equipment or system, many sensing instruments will need to be adopted to control the operation. High reliability of these sensing instruments will be a key to satisfactory operation.

The inconsistency of automatic operation against efficiency of handling is the fourth problem. In manual operation of container cranes, hoisting and lowering motions is often carried out simultaneously with traversing motion of a trolley, in order to reduce the handling cycle time. As this combined motion will be difficult to automate from the view point of safety, however, single operation for lifting or lowering and traversing motions will have to be adopted. This is one example showing the inconsistency of automatic operation against efficiency of handling.

2) Economic feasibility

The initial investment in handling equipment for an automated container terminal will have to be twice of that for an existing terminal, at least. This means that the volume

of container to be handled in the automated container terminal will have to be twice of that of existing terminal, at least, in order to get same cost depreciation for equipment per container. Therefore, it is concluded that, from the viewpoint of economic feasibility, automated container handling systems will be applicable to only large hub container terminals which will be required to have large handling capability.

3) General restrictions

It will be impossible to overestimate the safety for both people and cargoes in the automated container terminals, because the weight of containers handled reaches 30 long tons. Attention should be specially paid to the operation of receiving/delivering of containers from/to highway use trailer-chassis which will be still driven manually.

The automatic container identification system which has been recently standardised by ISO/TC 104, will be a great help for upgrading the reliability of automated container handling system. It is possible, of course, to design and operate automated container handling to stow containers in designated slots. However, automated systems to identify designated containers directly will be able to perform fool-proof operation.

Lastly, it will be very important for sound development of automated container terminals to construct information network surrounding the terminals. Information networks in terminals will have to have broad interface with other systems outside such as those for shipping companies, shippers, consignees, port administrator and so on.

Domestic Marine Transport Services in Papua New Guinea

By J.L. Covil, J.D. Dent, A.A.N. Ebrahim and K.J. Amoako¹

ABSTRACT

Coastal and river transport is the principal means for transporting freight in much of Papua New Guinea. The services are provided by a relatively small number of private operators. This paper provides background to the domestic marine transport services in Papua New Guinea, and summarises typical operating costs computed from a marine transport cost model. It examines the efficiency of the coastal and river transport industry considering the present utilisation rates and operational practices, and analyses tariffs and operating costs to give an assessment of the present financial viability of the industry.

INTRODUCTION

Papua New Guinea (PNG) consists of a mainland with a shallow coastal plain and some 600 smaller islands. The mainland is the eastern half of the world's second largest non-continental island, with a common border with Irian Jaya, Indonesia, in the west. PNG lies just south of the equator and, at its closest point, is only 60 miles north of Australia. A central spine of mountains with peaks over 4,000 metres high runs northwest to southeast through the mainland. Therefore, the northern part of the mainland (New Guinea North Coast) is not accessible by land from the south (Papuan Coast). Because of the rugged terrain, road building is expensive, difficult, and in many of the areas of the mainland impractical. Coastal shipping, therefore, plays an important role for transportation of cargo and is more or less the backbone of the domestic transport system in PNG. Air transport, on the other hand, is frequently used to move small quantities of cargo inland where there are no other transport links. Air transport, although very expensive, is also commonly used for the transportation of passengers. Historically and for the foreseeable future, however, PNG has been and will remain dependent on shipping for mass movement of cargo. Therefore, marine transport is considered to be critical to the national development process, and Government places a high priority on developing an efficient and economical maritime transport system.

The coastal and river shipping industry is closely regulated through a licensing system which is meant to promote safety in the industry by ensuring that the ships are maintained in good condition, to prevent over-tonnage and to ensure that supply meets demand. However, 70% of coastal vessels have open licences to ply any route within PNG.

The domestic transportation of the bulk of the cargo in PNG is provided by more than 200 coastal vessels. Up until recent years, Government boats provided service to many ports; however, because of low utilisation, low tariffs and other problems, the Government decided to phase out its fleet of vessels.

Ports are classified as main ports and feeder ports and are spread around the mainland coastline, the islands and

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large navigable rivers. There are 13 main ports, of which 10 are gateways for overseas trade, and over 350 feeder ports. A good deal of trade and passenger traffic to the smaller coastal and inland river settlements is carried out by small workboats such as motorised dinghies or outrigger canoes.

About two thirds of the domestic cargo movement is between the main ports and one third between the main and feeder ports. Some of the ports are served regularly while others are served only irregularly when there is sufficient cargo. Traffic between the feeder ports is negligible, probably due to the lack of service between them.

It has long been recognised in PNG that the services vary from main port to main port, on the Papua Coast, on the New Guinea North Coast and to the New Guinea Islands. Accordingly, the analyses for operations efficiency, operating costs and profit margins were conducted separately for each of these categories.

OPERATING EFFICIENCY (Scheduling)

The shipping companies operate a weekly joint service from main port to main port using a total of three ships of similar design and size. From the scheduling point of view, the service is considered to be highly efficient.

On the New Guinea North Coast, there are about 30 ports which ship operators serve. The operators have a combined fleet of eight ships of various sizes dedicated to the service. Normal commercial pressures are forcing a rationalisation of the service, with a new ship on order and two smaller ones to be retired. The present services are over-tonnaged and irregular. Nevertheless, the services are considered to be reasonably efficient.

There are about 200 ports served by the operators on the New Guinea Islands service. This service is provided by two main carriers with a total of 12 ships of the landing craft barge configuration (this type of vessel is required because they often have to discharge cargo to the beach), plus two small operators, each with one small vessel. Although the present operators efficiently schedule their vessels, the service is over-tonnaged. Here there is, as yet, no evidence of rationalisation of services.

Along the Papuan Coast, there are services to 20 coastal

ports eastward and 30 ports westward of Port Moresby, and to 10 ports up the Fly River. The present Papuan Coast operators have a combined fleet of seven ships dedicated to these three operations (ships are switched from one operation to the other as and when needed and as and when their operating licenses allow). Although the present services are irregular, they are considered to be reasonably efficient.

In addition, there are workboats which offer an essential service to many of the smaller or more remote ports. Most workboats operate on an inducement basis although cargo to specific destinations is often irregular. Workboats when used commercially tend to charge higher tariffs than the established shipping companies and the additional costs of transshipment also adds to the total transport costs. From the economic viewpoint, most workboat services are considered to be operating efficiently.

OPERATING EFFICIENCY (Vessel Type)

On the main port to main port services the present level of containerisation is only 30 percent of cargo (expected to rise to a maximum of about 60 percent) and on other services it varies from almost zero to about 10 percent. It is unlikely to rise substantially on these services as many of the small jetties and wharves are not built for handling containers. Given the generally small volumes of cargo and the small number of ships required to operate each of the services, there is no real need for specialized vessels such as fully cellular container carriers or ro-ro ships. If larger vessels were operated, the frequencies of most services would have to be reduced and this would not be welcomed by customers. Most of the coastal ships are considered to be technologically adequate for the purposes they serve. The present fleet is therefore efficient in terms of size and the types of cargo that it can carry.

Some authorities consider that the workboats are too small. They point to the Merchant Shipping Act, which allows boats of less than 10 metres length exemptions from most marine regulations, and suggest that it is only because ship owners wish to avoid these regulations that larger boats are not used. It is expected that the reduced requirements for survey and safety inspection for boats between 10 and 15 metres length should be sufficient inducement for operators to increase the size of their boats.

OPERATING COSTS

Typical operating costs for coastal and river trade vessels were computed using a marine transport cost model by considering various elements of costs of vessels. The vessels have overall lengths varying from 30 to 85 metres and workboats have lengths between 7 and 20 metres.

At the current load factor of 57%, the typical operating cost on the main port to main port is about US\$2.75 per tonne-nautical mile. For main port to feeder port on North New Guinea Coast, the cost ranges from US\$5.30 to US\$7.00 per tonne-nautical mile depending on the size of the vessel. The vessel operating cost on the main port to feeder port on the New Guinea Island routes is about US\$7.90 per tonne-nautical mile. On the Papuan Coast, it ranges from US\$8.30 to US\$11.00 per tonne-nautical mile. For a typical passenger-only ship the operating cost is about US\$9.10 per passenger-nautical mile. Finally, for workboats the average costs are about US\$45 per tonne for a 10 metre boat, US\$30 per tonne for 15 metre coastal ships to US\$90 per tonne for river vessels of 15 metres length.

TARIFFS

The maximum tariffs are gazetted and all operators use the maximum permitted tariffs. There are separate tariffs for moving cargo between main ports and between main port and main feeder ports. Each pair of ports has a tariff for seven cargo types. For example, the freight charge for general cargo from Port Moresby to Alotau is US\$37.25 per cubic metre or tonne, whichever produces the greater revenue. Wharfage of US\$1.55 per revenue tonne is then added to the freight charge (wharfage is charged at both loading and discharge ports). Officially bulk cargo rates are negotiable; however, none of the ships plying along the coast is suitable for bulk consignments. It is believed that discounts are not regularly given. However, shipping companies give their regular customers first call on available space and will rebate on an agency basis up to 25% of the tariffs to their largest volume customers.

Ships operating on main port to main port routes do not carry passengers. On other services most cargo ships carry a limited number of passengers, and fares range from 15 to 45 percent of equivalent air fares.

For workboats, there are no published tariffs and trade is conducted on a cash bases. Charges for carriage of freight on workboats vary according to the volume of goods, but no with distance or type of cargo. Passenger fares on workboats vary according to the number of passengers and distance travelled.

PROFIT MARGINS

Typical vessels earn a return on capital based on the present load factor and size of the vessel as follows:

Service	Present Return			
	Bale dwt (tonnes)	Load Capacity (cu.m.)	Factor	on Capital
Main Port to Main Port	2750	3800	57%	14%
New Guinea North Coast	400	500	55%	5%
New Guinea North Coast	1315	1630	50%	11%
New Guinea Islands	300	450	50%	12%
Papuan Coast	330	360	35%	Negative
Papuan Coast	370	530	40%	10%
Workboats — 10 metre	—	—	45%	9%
— 15 metre coastal	—	—	35%	56%
— 15 metre river	—	—	35%	24%

STEVEDORING AND CARGO HANDLING SERVICES

Costs for stevedoring and for cargo handling at Port Moresby and Lae (the second largest port) both fall within a range of US\$2.70 to US\$3.00 per tonne. The ports differ in terms of layout, efficiency, cargo throughput and cargo mix, labour to equipment ratios, and managerial ability.

Although the last increase in tariffs was in 1981 and unit costs for labour, equipment, and spare parts have increased substantially since then, the major stevedoring companies are all making a profit. The stevedoring and cargo handling industry has apparently maintained its viability by increasing labour productivity through mechanisation and training. While the total throughput of dry general cargo appears to have increased at about 4% per annum over the last decade, the labour force required to handle that cargo has decreased by about 50%.

Tariff charges per tonne for stevedoring are, on the

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International Maritime Information

WORLD PORT NEWS

International Symposium On Dangerous Goods

9 - 12 November, 1992
The Japan Shipping Club
Tokyo, Japan

Organized by: The Organizing Committee of the Eleventh International Symposium on the Transport of Dangerous Goods by Sea and Inland Waterways (TDG11)

Supported by: Ministry of Transport of Japan, International Maritime Organization (IMO), The Japan Shipbuilding Industry Foundation

• Topics

The Symposium Committee is now soliciting technical papers in the following areas:

- A) Hazardous Materials (Characteristics, Testing, Hazard Evaluation)
- B) Carriage in Packaged Form (Packaging, Container Traffic, Safe Handling)

- C) Carriage in Bulk (Design, Structure and Equipment of Ships, Operational Procedures)
- D) Environmental Pollution and Conservation (Pollution, Waste)
- E) Conventions and Regulations (SOLAS, MARPOL, HNS)
- F) Accident and Rescue (Emergency Measures/Response, Case Study)
- G) Education and Training (Technical Cooperation)
- H) Ports and Harbors
- I) Economic System (Management, Insurance, Liability and Compensation)

Note: The topic of "Class 7-Radioactive materials" is not included.

• Paper Submission

Those who wish to present papers at TDG11 are requested to submit an abstract to reach the Secretariat not later than 30 September, 1991.

The abstract must be in English within 1,000 words, which clearly describes the title, scope and the conclusion of the proposed paper, bearing the name, address and phone/facsimile numbers of the principal authors.

The Committee will review the sub-

mitted abstracts and send authors an "Authors' Kit" which included detailed instruction about the submission of a full paper by the end of October, 1991 at the latest.

The deadline for submitting a full paper will be the end of May, 1992.

Please note all papers should be submitted in English.

• Registration Fee

Early Registration on and before 15 Sept., 1992	Late Registration after 16 Sept., 1992
Participant 50,000 Yen	60,000 Yen

The registration fee includes attendance at all technical sessions, welcome reception and banquet, plus symposium materials (proceedings and Program book).

For further information, please contact: Nippon Kaiji Kentei Kyokai
c/o International Communications, Inc. Kasho Bldg., 2F, 2-14-9, Nihombashi Chuo-ku, Tokyo 103, Japan
Phone: +81-3-3272-7981
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Telex: +72-0222-3583-ICS J

Domestic Marine Transport

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average, about 52% of handling charges. On average, tariffs for combined stevedoring and handling applied to coastal shipping are about 23% lower than the charges applied to international shipping.

Stevedoring and cargo handling services in Port Moresby are provided by one company. There are separate tariffs for containers, break bulk cargoes and motor vehicles. Special reduced rates are applied to palletised cargo and there are higher rates for cement and other obnoxious cargoes. Discounts are rarely obtainable.

At Lae the same charges as for Port Moresby are applied but there are three competing companies. At the other main ports, the tariffs are about 7% higher than in Lae and Port Moresby. In these ports, because there is usually competition between different stevedoring companies, large customers can sometimes obtain small discounts. These, however, rarely exceed 5%.

At private terminals and at the smaller feeder ports, stevedoring and cargo handling charges are often set by

contract. Rates vary from almost zero (at a village jetty) to levels similar to those charges imposed at the main ports. At small feeder ports stevedoring is often undertaken by the ship's crew, with assistance from local casual labour.

CONCLUSION

The coastal and shipping services are efficient; however, less than 50 of more than 360 ports are regularly serviced. The others are serviced only irregularly when there is sufficient cargo, and most feeder ports are seldom serviced. Although the services currently are efficient, it is believed that the efficiency could be increased further by rationalisation of the fleet and by abolition of controls on the number of vessels allowed to service specific routes within PNG. It is also believed that more regular service to many of the feeder ports would be feasible without a major reduction in efficiency. Whether or not to instigate such services is, however, a policy matter or the shipping companies to decide. If the main port to feeder port services offered by the major shipping companies were more extensive, then it is possible that the need for workboats might be reduced, and the total cost for the transport of goods to many of the smaller ports might also be reduced.

Replacement of the Recommendation of the Customs Co-operation Council Concerning the use of the EDIFACT Syntax rules (June 1988) and of the Recommendation of the Customs Co-operation Council concerning the use of the United Nations Trade Data Elements Directory (UNTD) (June 1988)

At its 75th/76th Sessions in June 1990, the Customs Co-operation Council adopted two Recommendations pertaining to the facilitation of international exchange of data between Customs administrations and between Customs administrations and trade users. These Recommendations concern the use of the UN/EDIFACT rules for Electronic Data Interchange and the use of the United Nations Trade Data Elements Directory (UNTD), respectively.

These two Recommendations supersede two previous CCC Recommendations in the same field, viz. the Recommendation of June 1988 concerning the EDIFACT Syntax rules and the Recommendation of June 1988 concerning UNTD, respectively. The elaboration of two new Recommendations was considered appropriate to underline the CCC's support for UN EDI Standards and to take the new definition of UN/EDIFACT, as adopted by the United Nations Economic Commission for Europe, into account.

Recommendation of the Customs Co-operation Council Concerning the Use of the UN/EDIFACT Rules for Electronic Data Interchange (26 June 1990)*

THE CUSTOMS CO-OPERATION COUNCIL,

DESIRING to facilitate the international exchange of data between

Customs administrations and between Customs administrations and trade users,

CONSIDERING that it is desirable that an internationally agreed and universally applicable set of rules for the structuring of such data should be used in the electronic data interchange,

NOTING that the United Nations Economic Commission for Europe (UN/ECE) has developed a comprehensive set of standards, directories and guidelines for use in electronic interchanges known as UN/EDIFACT (Electronic Data Interchange for Administration, Commerce and Transport) and defined in the Annex to this Recommendation,

AWARE that the UN/EDIFACT standards, directories and guidelines can be used independently of the application area and that their widespread use in international trade will greatly facilitate the movement of cargo,

NOTING that certain elements of the UN/EDIFACT rules are in the nature of standards which must be strictly adhered to for successful data interchange to occur (e.g. the EDIFACT Syntax Rules),

FURTHER NOTING that certain other elements of the UN/EDIFACT rules are in the nature of guidelines, use of which are highly recommended (e.g. message design guidelines),

RECOMMENDS that Members of the Council and all members of the United Nations Organization or its specialized agencies, and Customs or Economic Unions should apply the UN/EDIFACT rules as defined in the Annex to this Recommendation, and future updated versions of these rules for the preparation of electronic messages to be interchanged between Customs administrations and between Customs administrations and other trade users,

REQUESTS Members of the Council and all members of the United Nations Organization or its specialized agencies, and Customs or Economic Unions which accept this Recommendation to notify the Secretary General of their acceptance, of the date from which they will apply the Recommendation, and of the conditions of its application. The

* Note: This Recommendation supersedes the Council Recommendation of June 1988 concerning the EDIFACT Syntax rules.

Secretary General will transmit this information to the Customs administrations of all Members. He will also transmit it to any Customs administrations of non-Members or any Customs or Economic Unions which have accepted this Recommendation.

Recommendation of the Customs Co-operation Council Concerning the Use of the United Nations Trade Data Elements Directory (UNTD) (26 June 1990)*

THE CUSTOMS CO-OPERATION COUNCIL,

DESIRING to facilitate the international exchange of data between Customs administrations and between Customs administrations and trade users,

CONSIDERING that it is desirable that internationally agreed and universally applicable data element names, data element descriptions and character representations should be used in such trade data exchange,

CONSIDERING that it is desirable that the same names, descriptions and representations should be used for data elements irrespective of the context in which trade data is being exchanged (e.g. between exporter and carrier, exporter and importer, importer and Customs, etc.),

NOTING that these standard data elements can be used with any method of data interchange, on paper documents as well as with other means of data communication, can be selected for transmission one by one, or used within a particular system of interchange rules, e.g. UN/EDIFACT,

FURTHER NOTING that a subset of UNTD constitutes the EDIFACT Data Elements Directory (EDED) also recommended by the Customs Co-operation Council specifically for use in Electronic Data Interchange (EDI),

CONSIDERING that the Directory has been accepted by the International Standards Organization as an international standard, Sections 1, 2, 3, 4 and 9 of the Directory constituting International Standard ISO 7372,

RECOMMENDS that Members of the Council and all members of the

United Nations Organization or its specialized agencies, and Customs or Economic Unions should use the data element names, descriptions and character representations contained in the United Nations Trade Data Elements Directory (UNTDDED) and future updated versions of this Directory in trade data exchange between Customs administrations and between Customs administrations and other trade users,

REQUESTS Members of the Council and all members of the United Nations Organizations or its specialized agencies, and Customs or Economic Unions which accept this Recommendation to notify the Secretary General of their acceptance, of the date from which they will apply the Recommendation, and of the conditions of its application. The Secretary General will transmit this information to the Customs administrations of all Members. He will also transmit it to any Customs administrations of non-Members or any Customs or Economic Unions which have accepted this Recommendation.

** Note: This recommendation supersedes the Council Recommendation of June 1988 concerning UNTDED.*

Definition of UN/EDIFACT

UN/EDIFACT: United Nations rules for Electronic Data Interchange for Administration, Commerce and Transport. They comprise a set of internationally agreed standards, directories and guidelines for the electronic interchange of structured data, and in particular that related to trade in goods and services, between independent computerized information systems.

Recommended within the framework of the United Nations, the rules are approved and published by the UN/ECE in the United Nations Trade Data Interchange Directory (UNTDID) and are maintained under agreed procedures. UNTDID includes:

- the EDIFACT Syntax rules (ISO 9735);
- Message design guidelines;
- Syntax implementation guidelines;
- the EDIFACT Data Elements Directory, EDED (a subset of UNTDED);
- the EDIFACT Code List, EDCL;
- the EDIFACT composite data elements Directory, EDCD;

- the EDIFACT standard segments Directory, EDSD;
- the EDIFACT UNSMs Directory, EDMD;
- Uniform Rules of Conduct for the Interchange of Trade Data by Teletransmission (UNCID);
- Explanatory material, as appropriate.

AOCI/ICAA Integration: Reasons for Integration

In the past, there were 3 major international airport organizations, AOCI, the International Civil Airports Association (ICAA), and the Western European Airports Association (WEAA). Each of these groups requested formal standing in the International Civil Aviation Organization (ICAO). Without such standing, airports were reduced to trying to influence ICAO only through the official delegations of their respective countries. This resulted in disjointed and ineffective efforts, particularly since national delegations were being influenced by airlines and other interests besides airports. However, ICAO advised that it would recognize only one airport organization, just as it recognized only one airline organization. As a result, in 1970, the three organizations formed the Airport Associations Coordinating Council (AACC), which was granted formal observer status at ICAO, allowing airports to participate in the organization's activities.

At the end of 1985 WEAA dissolved. European airport authorities recognized the benefits of speaking with a single, cohesive voice on behalf of their interests before the Commission of European Communities, ECAC, and other European agencies and government organizations. At the world level, however, the continued existence of two major airport organizations, AOCI and ICAA, has perpetuated inefficiencies due to the duplication of effort and proliferation of meetings.

Moreover, the lengthy procedures needed to reach policy decisions have made it difficult for airports to respond to a rapidly changing global aviation industry. Worldwide issues relating to security, environment, technical matters, and aviation economic policy often require swift adoption and dissemination of firm policy responses. While

AACC has assisted in the presentation of airports' views to international bodies such as ICAO, airports have been at a disadvantage in dealing with their industry counterparts such as IATA and IFALPA. Reliance on a small cadre of expert volunteers from member airports, in the absence of full-time professional staff, to cover the multitude of international meetings and assemblies on aviation has stretched our resources much too thin, resulting in an inability to represent airports as forcefully and effectively as we should in these world arenas.

A single, integrated world-wide organization with a common membership constituted in regions will result in an enhanced and focused international representation for airports during a time of worldwide economic integration. This economic integration is occurring with most force on a regional basis (e.g. EC, Pacific Basin, etc.), and the organization of the new world body on a regional basis will allow airports to reflect these trends and develop policies in the appropriate arenas. Technical matters developed on a truly worldwide basis would be served by the worldwide organization, while matters still defined by regional interests would be best developed within the regions, with cross-fertilization where appropriate.

While both ICAA and AOCI have recognized for some time the advantages of merging the two organizations, previous attempts to accomplish this never came to fruition. Recently, the leadership of both organizations has made a concerted effort to accomplish this integration, and a working group headed by Mr. Clif Moore of Los Angeles has put together a proposed constitution for the new organization. AOCI representatives on the working group were Mr. George Bean (Tampa), Mr. Paul Gaines (Houston), Mr. Arye Grozbord (Israel), and Mr. Jack Moffat (Australia). The new constitution was approved by the ICAA membership on September 27, by a vote of 154 to 14. If approved by the AOCI membership at the Annual Conference in Chicago, the transition to the new world organization would take place over the next year, concluding with the first annual world general assembly at the end of AOCI's annual conference in October 1991.

New Publications

Index of IMO Resolutions (Second Edition)

Sales No. 126 90.11.E, price £10.00 (English)

Supplement to the Code of Safe Practice for Solid Bulk Cargoes (1989 Edition)

Sales No. 286 90.12.E, price £3.00 (English)

IMO Secretariat
Publications Section
4, Albert Embankment
London SE1 7SR

Public Port Facilities in the Central and Maritime Regions of Canada

The Harbours and Ports Directorate, which is part of Transport Canada under the administration of the Canadian Coast Guard, has recently published two brochures highlighting public port facilities in the Central and Maritime Regions of Canada.

The brochures offer a description of port facilities and services offered at the major public port facilities. Copies are available free of charge by contacting our below-noted address. Brochures for public ports in the Western and Laurentian Regions of Canada will be available by October, 1991.

Port Development Branch (AMHB)
344 Slater Street — Canada Building
5th Floor, Room 511
Ottawa, Ontario, Canada

"Intermodal Transport Systems" — Port Management Textbook Volume 2

Institute of Shipping Economics and Logistics, Bremen

The second volume of the new series 'Port Management Textbook', edited by Prof. Dr. R. Stuchtey in cooperation with the Port and Transport Consulting Bremen GmbH, was published this month. It was possible to find renowned authors of different fields of activity for the individual contributions again. While Volume 1, which was published in March 1990, deals mainly with the general aspects of port management,

the new volume treats of all aspects of intermodal transport systems.

The first contribution "Inland Interface: Supply and Demand Factors — General Aspects" introduces into the facts. During the last 25 years significant changes in world liner shipping have taken place; on all main searoutes the container vessel has substituted the conventional liner vessel. During the phasing-in period of containerization the shipping lines concentrated their efforts on the operational aspects of sea transport and the container handling in the seaports. The aspect of the inland transport of the containers was often neglected. The entire intermodal transport system is based on the general idea to transport containers from door to door or from depot to depot. The high figure (more than 40%) of containers stuffed or stripped in the ports shows that the efficiency of intermodal transport can be further improved in future.

The following essay tries to respond to some questions concerning the impact of Series 2 Iso-containers on intermodal transport. Will these newly developed containers meet the challenge of the next 25 years? Who developed the proposal for the new Series 2 containers? What are the characteristics of the newly developed units? Further themes are the handling and transport of the containers, the efficiency aspects and the macroeconomic influence on infrastructure. And which transport system will best meet the demand of minimum pollution?

Furthermore, the liabilities in intermodal transport systems are described. The questions of responsibility and liability are crucial to the complex issues in the relationship between providers and users of intermodal transport services. In the context of such an operation based on an international sales transaction, contractual arrangements exist basically at three interrelated levels, each one being governed by a specific set of responsibilities and liabilities (seller/buyer; seller or buyer/carrier; multimodal transport operator/actual resp. performing carrier).

The following four contributions show the role of the different traffic carriers in intermodal transport systems. The truck is a flexible and multi-useful piece of equipment in the transportation industry. The technical

aspect and the services handled by the trucking company are equally important in order to guarantee safe and timely deliveries. The truck itself is a machine, it is the driver, the dispatcher, the workshop and other personnel involved.

"Feeder Services from a shipping Line's Point of View" deals mainly with feeder systems in general and the advantages and disadvantages of the feeder concept. It can be assumed that operating costs will continue to rise steadily, at the same time ocean freight rates will fluctuate according to supply and demand. Fuel prices will almost certainly return to normal and be subject to their regular increases. Therefore long-term energy saving feeder systems, slotcharter arrangements and joint services will be further developed in order to improve the bottom line financial figure.

"Container Terminal Handling systems in the Nineties" describes the challenges in the future for container terminal operators, the logistical requirements and operational aspects and the integration of rail systems. As result it can be conclude that container terminal handling systems in the nineties will be a mixture of computer control, semi-automation in certain areas and conventional flexibility produced by human labor.

The next volume of the series will be published under the title "Port Marketing" in autumn 1991.

The price for this volume is DM69,- (incl. packing and postage; for airmail add DM12,-). The address of order is: Institute of Shipping Economics and Logistics, Universitätsallee, GW 1 Block A, D-2800 Bremen 33.

The Public Sector's Role in Logistics for the 21st Century (Proceedings of the 2nd KMI International Symposium, 2-7 July 1990, Seoul, Korea)

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Discussion Session II

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Discussion

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General Discussion

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The Ships Atlas

Edited by Robert Pedlow and Charles Watson. (3rd Edition, Reigate, UK: November 1989). 98 pages. Maps. Tables. Index.

Order from: Shipping Guides Limited, 75 Bell Street, REIGATE, Surrey, RH2 7AN, UK.

Price: £33 (UK only); £38 (outside UK).

The Ships Atlas features 75 large format maps, all in colour, showing more than 10,000 ports and terminals around the globe. Also included are world maps featuring ports, load line zones, and time zones. Regional and international distance tables accompany most maps.

The comprehensive index identifies geographical coordinates for each port together with additional data on maximum vessel size, bunkering, drydocks, and airports.

1991/92 Register of Ships

The latest edition of the *Register of Ships* is now available from Lloyd's Register of Shipping and contains additional information for tankers and bulk carriers. Tonnes per centimetre immersion is now included, together with manifold details, bow loading and stern discharge facilities, cargo pump capacity and details of cargo tank protection in terms of double bottom, double deck and double skin sides.

The *Register*, in three volumes, includes all known sea-going, self propelled merchant ships of 100 gross tonnage and above. Some 78,000 ships are listed and are updated throughout the year by eleven cumulative Supplements. Ships are listed alphabetically and details include owners and managers, shiptype, registration, tonnages, dimensions, former names, ship and engine builders, dated of build, number and size of holds, hatchways, winches, derricks and cranes, details of main and auxiliary machinery, fuel bunkers and speed are also given.

This unique publication can be ordered from Maritime Information Publishing Group (ref. MIPG/MPMS/GNW) Lloyd's Register of Shipping, 71, Fenchurch Street, London, EC3M 4BS, Telephone 071-709 9166 (ext. 2438), FAX 071-488 4796, or from LR's local offices."

Organised Maritime Crime in the Far East (January 1991)

For information, please contact:

International Maritime Bureau
Maritime House 1 Linton Road
Barking Essex IG118HG United Kingdom

Telephone: 081-591 3000

Telex: 8956492

Fax: 081-594 2833

Lloyd's Marine Equipment Guide

THE 1991 EDITION of *Lloyd's International Marine Equipment Guide*, the annual reference directory for international buyers and sellers of marine and offshore equipment and services, has been published by Lloyd's of London Press.

Eighteen additional headings have been incorporated into the Products and Services section in this new edition, which contains over 30,000 product references and 6,800 company listings. It also contains a review of International Marine Purchasing Association activities for buyers and suppliers.

Lloyd's Marine Equipment Guide 1991 (ISBN 1-85044-394-7 ISSN 0268-3253) is available from major booksellers or direct from the Book Sales Department, Lloyd's of London Press Ltd, Sheepen Place, Colchester, Essex CO3 3LP, England. Price UK & Europe £70; North America US\$150. Discounts are also available for bulk

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Major Changes Forecast in Bulk Trade & Shipping in 1990s

According to a new report, *Bulk Trade & Shipping to 2000*, from the UK-based Ocean Shipping Consultants group, significant trade development and fleet renewal are set to occur in the period to 2000.

The 215-page Report includes extensive projections on the development of all the principal bulk trades—iron ore, coal, grain, cement, bauxite/alumina, fertilizers—and evaluates the implications for all the major sectors of the bulk fleet. The Consultants also examine the potential development of the bulk fleet over the decade and analyse the implications for bulk carrier new-buildings throughout the period.

Bulk Trade Development to 2000

Aggregate trade in the major bulk commodities—iron ore, coal, grain—is forecast to expand from the 875 mt of 1989 to 892 mt in 1995 and 979 mt in 2000, this representing total forward expansion of around 12%. Average annual trade growth is thus put at less than 0.5% in the first half of the 1990s, and around 1.75% in the later years. For the alternative Low/High scenarios, the projected aggregate trade volumes in 2000 equate 856/1141 mt.

With the net effect of expected structural developments in the iron ore, coking coal, steam coal and grain trades, being a marginal increase in the overall average shipping distance, the forward development of shipping demand is set to be slightly more positive than for trade volumes. Thus, total demand for shipping in these trades is forecast to increase by 13% over the 1990s overall, taking the total to over 5450 bn TM—this against the 4832 bn TM level of 1989, and 4185 bn TM of 1985.

For all the commodities studied in the Report, aggregate shipping demand

is forecast to increase by 14% from around 5430 bn TM to 6190 bn TM in 2000, with the Low/High range for 2000 approximating 5240/7325 bn TM. Within the overall trade and shipping demand profile however, very different forward developments are forecast for the individual commodity trades.

Indeed, there is a clear division between the expected growth of demand from the grain and steam coal trades, and the expected shipping employment reduction in the iron ore and coking coal trades. Thus, from around 43% of the major bulks' shipping demand total in 1989, the relative significance of iron ore is set to fall to 31.5% by 2000. The corresponding development for grain is from 23 to 27%, and that of steam coal from 16 to 28%.

In terms of tonne-mileage therefore, shipping demand in the steam coal and grain trades is set to increase almost to the level of iron ore—the latter is set to fall by 17% over the 1990s, as against an almost doubling (97% growth) for steam coal.

Whilst the different forward Cases are associated with very different shipping demand volumes, there is an underlying structural change in bulk shipping demand, and this is likely to continue largely irrespective of general growth conditions. With the steam coal and grain trades having a very different employment profile—in terms of vessel sizes—from iron ore, the pattern of demand growth for individual bulk carrier size classes is set to vary significantly across the fleet.

Bulk Trade & Shipping to 2000

216 pages of text, tables, & graphs
Price: £330 (US\$675)

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The Americas

Port of Halifax to Launch EDI Pilot Project

Plans are in place to soon launch an EDI (electronic data interchange) pilot project at the Port of Halifax which is expected to result in one of the most comprehensive port EDI systems in North America. EDI is the computer to computer exchange of business documents between companies resulting in lower costs and improvements in efficiency and service. EDIPORT Atlantic Inc., the organization propelling the development of EDI at the Port, has made several significant strides recently in carrying out its strategic plan for EDI at Halifax.

Discussions between Port officials, marine terminals, ocean carriers, Canadian National, custom brokers and government agencies (including Canada Customs) has led to an agreement on a pilot project format including transactions to be exchanged and message standards to be used. In its initial stages the project will cover more than 58% of containerized cargo moving through the Port. The pilot will involve the use of a Value Added Network (VAN) service to facilitate exchange of messages but will also allow for participants to communicate directly with one another. With participant commitment in place, involving a significant financial contribution from the private sector, funding support for the pilot is now being reviewed by various government funding agencies with a decision expected soon. Implementation of the pilot project, which is anticipated to take place this summer, will be another important step in further strengthening the competitiveness of the Port of Halifax. (*Port of Halifax*)

Vancouver: Incentives to Container Lines

Starting July 1, 1991, container lines calling the Port of Vancouver will be eligible for two attractive rate discounts. The Vancouver Port Corporation (VPC) announced that container lines making Vancouver their first North American west coast port of call will receive a major discount, and all lines calling the port will be eligible for

rebates based on volumes.

The "incentive rate" structure is major new element in the port's stepped-up efforts to improve the competitiveness of its container operations, according to Port Manager Captain Norman Stark.

"All the players — from the railways, to the terminal operators and unions, to the Port itself — are putting extra effort into improving every aspect of container handling in the Port of Vancouver," commented Captain Stark. "This rate initiative will be a big boost for our team approach to being cost competitive."

The "First Port of Call" incentive offers a 30% reduction in the total container wharfage charges invoiced to the line. The current route of most transpacific container lines has them calling at Californian and Pacific Northwest ports before calling at the Port of Vancouver. VPC is seeking to change that rotation in an effort to have more Canadian destined containers off-loaded at the Port of Vancouver. Being "First Port of Call" will also give the Port of Vancouver the opportunity to handle some volumes of U.S.-bound container traffic.

Volume rebates will be paid to the container line, and determined by a sliding scale based on the total number of loaded TEUs the line ships through the Port of Vancouver in a calendar year. For example, a rebate of 5% on container wharfage charges is given for 5,000 TEUs, 10% for 10,000 TEUs, and upwards in 5% increments to 50% for 50,000 TEUs. The maximum volume rebate offered is 50%.

Volume rebates may also be combined with the "First Port of Call" discount. Rebates will be paid quarterly.

"The new rate structure is designed to reward those lines currently showing the highest level of commitment to the Port of Vancouver, and to attract others to do more business here," added Captain Stark. "We believe our new rate structure offers substantial discounts and will be viewed positively by the industry."

The Port of Vancouver currently handles approximately 320,000 TEUs per year, but is confident that, with efficient services and competitive rate incentives, it can handle a considerably larger share of this growing business. Currently about 150,000 TEUs of Ca-

nadian destined or originated containers are being shipped through Pacific Northwest U.S. ports. Impediments to competing with American ports include economies of scale enjoyed in the U.S., and a more favourable U.S. railway taxation regime.

The introduction of volume rebates and "First Port of Call" discounts represents the completion of the Port's two-phase container rate streamlining programme. Phase one, implemented January 1, 1991, introduced a simplified per-container "box rate" which replaced wharfage rates calculated according to the value and type of cargo.

Status of U.S. Public Ports

(Extracts from "A Report to the Congress on the Status of the Public Ports of the United States 1988-1989, U.S. Department of Transportation, Maritime Administration")

Introduction

Dynamic changes continue to have an impact on the U.S. transport industry and in no less degree, the port segment thereof. This condition is no different from any other sector of the economy in this era of high technological change. The public port industry of the United States found itself in such a status during the years 1988 and 1989.

This Report to the Congress on the Status of U.S. Ports (1988-1989) addresses major issues facing the industry. In so doing, it recognizes that many issues are multi-faceted. Some give the appearance of being intractable since they have been on the scene a long time. The evolution of vessel, transport, terminal and information technology has brought a number of the issues to the fore. The Report sets forth some of the conditions which surround each issue and discusses actions being taken, where appropriate, to solve the problem. In some instances the issues and their solutions point a direction or plan for the future.

U.S. ports are adjusting to changes in technology, trade, transportation, economics and environmental regulation. All of these have significantly altered traditional port operations and development practices.

The existing trends affecting ports are:

- extensive capital expenditures,

e.g., over \$1 million per acre to build a new container terminal;

- the need for fewer but more highly skilled dock workers;

- continuing growth in an intermodal system where just-in-time service, through bills of lading and single carrier liability are realities;

- continuing deregulation of ocean and inland transportation services;

- larger, more specialized ships and double-stack container train services coast-to-coast;

- deeper shipping channels, harbors and berths but fewer alternatives for relocation of dredged material;

- shifts in traditional patterns of container cargo movement, with greater ocean carrier concentration on high volume intermodal ports;

- more spacious terminal facilities for cargo handling and storage and intermodal transfer;

- more automated information and cargo handling equipment;

- continuing relocation of port activity away from urban waterfront cities where land is expensive and scarce;

- more intense port competition; and,

- declining public subsidies.

Waterfront Land Use Conflicts

Technological development and the "Age of Containerization" have transformed the land use patterns and the design of urban port waterfronts. Where once a finger pier with a narrow apron and transit shed could accommodate a general cargo vessel, one now sees large tracts of land with gantry cranes and stacks of waiting containers serving giant container ships handling 3500 units or more. These requirements force public port bodies to seek larger, less expensive tracts on urban outskirts which offer easier access for rail and truck modes. The urban centered facilities, which these new investments replace, tend to fall into disuse. While they may appear as excess terminal capacity, they are, in fact, inefficient for most modern cargo handling systems and rendered obsolete under those standards.

More than 40 percent of U.S. marine terminals are located in 15 port cities with 500,000 people or more. In these cities, all with long port traditions, competition for high value waterfront real estate is becoming intense. Vacant or underutilized waterfront properties

have become attractive investments for non-maritime uses as the public and local governments seek access. The maritime working waterfront must now share its space with commercial office buildings, retail businesses, recreational facilities and residential living. This "gentrification" or migration of urban populations to waterfronts has in many cases dislodged traditional marine activities, such as cargo terminals, shipyards, tugboat and towboat operations, barge fleeting areas, etc. Expansion of commercial cargo operations at many ports will require careful planning and a consideration of alternatives to assure compatibility of land uses and reconciliation of conflicts.

Given this challenge, how can sufficient waterfront property in our ports be retained to meet future expansion needs? In San Francisco Bay, for example, a unique Seaport Plan, developed by local, regional, state and Federal entities in 1982, coordinates and guides the future expansion of marine terminal facilities and connecting ground transportation at the ports of San Francisco, Oakland, Alameda (Encinal terminals), Redwood City, Richmond and Benicia. The Plan's policies are implemented by the Bay Area Conservation and Development Committee, composed of public and private interests, including the Maritime Administration (MARAD) and the U.S. Army Corps of Engineers, oversaw the cost-shared development of the Plan and continues to monitor its application.

Under the Plan's guidelines, the Bay's six ports know where and how they can expand. Expansion sites along the San Francisco Bay shoreline are listed for each port indicating the more suitable locations in terms of environmental concerns, adjacent land use and linkage to the regional transportation network. To ensure that port development is actually related to marine commerce, the Plan prohibits approval of new bay fill at ports where housing and office development are desired on sites designated by the Plan for maritime use.

And 35 to 60 percent of the cost of Federal dredging projects. The financial outlook is for continued increases in the cost of doing business in ports, complicated by narrow margins of income with which to absorb these costs. Increased funding from states and localities will also continue to be more

difficult to obtain as these governments face increasing demands for other priority public services. In addition, given the pressures on the Federal budget, state and local governments will encounter further proposals to limit their ability to use tax exempt borrowing for port development causing ports to assume a greater share of these costs of expansion and maintenance.

As a result, public ports can expect to be asked by these governmental entities to assume a more "pay as you go" policy. This policy will require a renewed look at pricing levels which increase revenues and cover costs. This compensatory pricing is viewed by many ports as a viable way to balance the decreasing levels of public subsidies and to move closer to self-sufficiency. The ability to realize such a pricing structure, however, is directly proportional to the intensity of inter-port competition. This competition limits the ability of a port to control its own price structure and thus its ability to cover costs and achieve a fair return on invested capital.

Current Funding Sources

Landside port facilities (privately and publicly owned) require major funding in two areas—capital investment and basic operation. Business income and private borrowing are the principal funding sources for operating and improving the many bulk cargo facilities owned by private industrial companies. Likewise, the few private owners of general cargo terminals employ the same sources for operations and capital investments. Funding of publicly owned facilities, however, varies by source and type. Major sources of funding for capital investment include commercial market instruments (e.g., general obligation bonds and revenue bonds, etc.); direct subsidies (e.g., general revenues, tax levies, trust funds, and grants or loans from state or local governmental entities); earned revenues; and public-private ventures (e.g., cooperative agreements). Other sources, which are not widely used, include user charges and state lotteries. Prior to 1978, the dominant source, which represented 30-35 percent of all sources, was general obligation bonds issued mainly by governmental entities. The 1980s marked a clear shift to revenue-type bonds issued by governmental entities and/or port authorities. The current trend is

toward combining revenue bond and earned revenues to fund major port projects. Future trends suggest that earned revenues will constitute a larger percentage of all funds available for capital investment projects.

Surveys from the American Association of Port Authorities (AAPA), the American Association of State Highway and Transportation Officials (AASHTO), and various Federal agencies indicate that \$4.3 billion was amassed by public port entities from all government sources during the period 1978-1988 to fund capital investment projects. The surveys further indicated that 61 percent originated from local sources (i.e., county, city, and/or port), 37 percent from states, and less than 2 percent from the Federal Government. Of the \$4.3 billion, \$2.1 billion was from commercial market instruments issued by state and local governments and port authorities, and \$1.1 billion was taken from earned port revenues. These represented 75 percent of all funding sources.

Major funding sources for public port operations are from earned maritime and non-maritime revenues and direct and indirect subsidies (e.g., security and utilities provided by governmental entities). The dominant source stems from maritime revenues generated from operating and/or leasing facilities and equipment. According to an AAPA survey for fiscal year 1987, the net income of those port authorities that handled approximately 70 percent of total U.S. foreign waterborne tonnage was \$237.3 million. The survey also indicated that the ports of Los Angeles and Long Beach had combined net income in 1987 that represented 47 percent of the total for the entire industry. In addition, the survey showed that 17 percent of the ports could not cover their operating expenses from earned revenues, and 24 percent could not cover all expenses, including interest on debt (e.g., bonds, notes, loans, etc.).

There is no Federal financial aid program authorized specifically for the construction or operation of landside port facilities. However, during the period 1978-1988, the U.S. Economic Development Administration provided public port agencies with \$110 million in grants for various maritime-related public works projects aimed at reducing unemployment in economically dis-

tressed communities. This contribution represented approximately 2 percent of all government sources of funding for public ports during the period 1978-1988.

While some public ports advocate more businesslike practices and self-sufficiency, many pursue traditional state and local subsidies and are content with creating jobs with local tax dollars. It is a matter of philosophy in different port communities. But most ports receive some form of public subsidy-direct and/or indirect. Public subsidies enable ports to skew their pricing and as a result earn little or no return on investments. More ports, therefore, need to pay their own way and set prices to cover their costs and earn an adequate return on invested capital.

Port Facility Labor/Management Relations/Productivity

Labor Costs and Productivity

The pressure to reduce labor costs and increase productivity through a stable, well-trained work force remains a dominant force in American ports. While technological advances, such as containerization, have decreased the number of longshoremen needed in the historically labor-intensive port industry, labor costs still exceed 50 percent of the operating expenses of marine terminal operators. Waterfront employers cite inflexible and varying work rules and conditions between ports as the chief cause.

Minimizing the labor cost of port operations is an ongoing goal of all waterfront labor employers and water carriers. Absolute labor costs can be expected to rise steadily, but management groups are seeking to tie new wage and fringe benefit increases to worker productivity improvements. The Guaranteed Annual Income provision in existing port labor contracts provides income to unemployed and underemployed longshoremen. It is frequently cited by employers as a substantial cost unrelated to cargo handling needs. The traditional casual labor structure of the marine terminal industry could give way to steady employees as the need for specially trained personnel increases and the dependence shifts from human strength and action to that of the machine and electronics.

A study by the Marine Board of the National Research Council (NRC) for

MARAD viewed greater cooperation between labor and management outside of the collective bargaining process as an essential element in improving port productivity. MARAD has continued its catalytic efforts to encourage round-table discussions between the two groups for clearer understanding of their mutual problems and for recommending potential solutions.

Labor Requirements and Training

Improving labor and management performance and relations will be by far the most significant challenge for terminal operators in U.S. ports during the 1990s, because the successful adaptation and implementation of new cargo handling technologies will depend upon the cooperation and input of the people who manage and work marine terminals. To accomplish this goal, investment must be made in human resources as well as equipment. The NRC study concluded that the most promising area for improving U.S. terminal productivity lies with better employment and utilization of the human element. This includes:

- labor-management relations,
- the quality of management and supervision,
- the quality and commitment of longshore workers, and
- the quality and flexibility of the work place.

The study also noted that communications between labor and management should not be limited to collective bargaining. It recommended that labor should have a more active role with management in promoting improved terminal productivity. It noted that there is no reason longshoremen should not use their extensive knowledge and experience to suggest changes in cargo handling operations that will improve terminal performance. It is clear that future success of many U.S. ports depends on how well labor and management can learn to cooperate and work together to boost productivity.

Savannah Warehouses As Import/Export Center

Warehouse space totaling 800,000 square feet ideally suited as a Southeast regional import distribution or export consolidation center is now available at the Port of Savannah.

The two 400,000-square foot, modern steel-frame warehouses offer excellent

access to highway, rail, sea and air transportation. The on-port warehouses are conveniently located less than 10 miles from Interstates 16 and 95. More than 100 motor carriers serve the port.

Competitive rail service via CSX and Norfolk Southern with on-site rail switching performed by the Savannah State Docks Railroad provides direct access to the warehouse complex.

In addition to its proximity to highway, rail, and deepwater port access, the warehouse space is minutes from Savannah International Airport and Foreign Trade Zone (FTZ) 104. The nearby air cargo and FTZ facilities allow shippers an extra dimension of flexibility of combining air shipments with land and ocean carriage. The Savannah airport is slated for a \$152 million improvement program.

The warehouses are fully sprinkled by an automatic fire prevention system. Security is provided by an on-site, fully bonded, 70-person port police force.

Worldport LA: More Services to Customers

The WORLDPORT LA Customer Service Center offers a diverse variety of services to the maritime industry. State-of-the-art computer databases provide referrals on virtually every aspect of the transportation industry and are available for anyone needing information regarding moving goods around the world. The Customer Service Center has information geared for large and small shippers in need of expert advice.

"We wanted to expand beyond our knowledge of the maritime industry here at WORLDPORT LA and provide our customers an even greater level of service to respond to every possible area of concern for those in the ever changing international trade business," WORLDPORT LA Marketing Director Albert Fierstine commented.

You can contact the WORLDPORT LA Customer Service Center by calling toll free from inside California at (800) 640-POLA, from outside California dial (800) 654-9904 or you may fax your inquiry by dialing (213) 831-4896. Representatives are available during regular business hours (8 a.m. to 5 p.m. Pacific Standard Time).

"We think that service is what will make the differences among competing ports in the 21st Century and

WORLDPORT LA is determined to provide the best service in the world to all our customers, large and small," Mr. Fierstine added.

Mr. Friedland Elected Long Beach Board Pres.

Mr. Joel B. Friedland, a member of the Long Beach Board of Harbor Commissioners for four years, has been elected to serve as Board President for fiscal year 1991 - 1992.

Mr. Friedland is a local businessman specializing in the coatings trade. He will be joined by veteran Harbor Commission member, Mr. David L. Hauser, who was named Vice President for the coming year. Other members of the Commission include Mr. Alex R. Bellehumeur, Mr. George F. Talin, Sr. and outgoing President C. Robert Langslet.

In passing the gavel to the incoming President, Mr. Langslet noted that the year just ended was filled with progress and notable accomplishments.

"The opening of the Hanjin terminal was one of the Port's best projects," said Mr. Langslet. "We took a piece of land that was nonproductive and really made it something. The Pier J landfilling process was truly remarkable...and I'm pleased to see Steve Dillenbeck at the helm of the Port of Long Beach, the West Coast's busiest harbor."

Gov. Schaefer Dedicates 50-ft. Shipping Channel

Governor William Donald Schaefer, in a ceremony at Ft. McHenry overlooking the Patapsco River, dedicated the 50-foot channel deepening project which allows the world's largest ships to navigate the Chesapeake Bay on their way to call the Port of Baltimore.

"We have a special partnership here today," Governor Schaefer said. "The Army Corps of Engineers and the state of Maryland worked together — with help from a lot of other people — to make this 50-foot channel a reality."

The \$227 million state-federal project is the first and largest cost-shared navigational project in the United States to be done under the Water Resources Development Act of 1986. The federal government covered 57 percent of the cost, while Maryland financed the remaining 43 percent.

The deepened channels include three in the Virginia section of the Chesapeake Bay and a long northern section

in Maryland from the Bay Bridge toward Baltimore. The project covered 57 miles spread over a total of 175 miles and was completed in about three years, although the planning was begun several decades earlier.

Dredged Material for Creating New Land

Spoil from three dredging contracts worth a total of \$17.8 million is being used to create hundreds of acres of new wetlands on the Louisiana coast, according to an announcement by Col. Rick Gorski, New Orleans District engineer for the U.S. Army Corps of Engineers.

Corps dredging contractor T.L. James is working on a \$7.9 million contract dredging the Mississippi River ship channel in Southwest Pass. The company will place the dredged material in a 190-acre wetlands creation site 9.5 miles below Head of Passes near the mouth of the river. During the 1989-1990 dredging seasons, Corps contractors place dredged material there to create 130 acres of new wetlands.

"It's important to remember," Mr. Gorski says, "while we'll use the 190-acre site for beneficial placement this season, every dredging season we routinely create even more wetlands by placing dredged material in shallow open water areas in East and West bays to promote wetlands growth."

The other sites where Corps contractors are creating new land are in Terrebonne Bay and the Atchafalaya Bay. (*Port of New Orleans RECORD*)

NY/NJ Approves Fund Increase for Dredging

The Port Authority Board of Commissioners has agreed to increase by \$70.2 million the bistate agency's contribution toward the cost of dredging the Kill Van Kull and Newark Bay channels, two of the major shipping lanes serving the Port of New York and New Jersey.

"The importance of the port to the economic vitality of the region is clear," Port Authority Chairman Richard C. Leone said following the regular monthly meeting of the Board. "The industry now contributes \$16 billion a year to the regional economy, as well as nearly 200,000 jobs and \$4.5 billion in wages and salaries.

"This navigation project is essential if we are to maintain the port's competitiveness," he said. "We must deepen these vital waterways to at least 40 feet in order to accommodate the new generation of large container ships at our facilities in both states, including the Port Newark/Elizabeth Marine Terminal Complex in New Jersey and the Howland Hook Container Terminal on Staten Island."

The total cost of the project, originally estimated at \$145 million, has risen to \$346 million. The terms of the federal Water Resources Development Act of 1986, which authorized the project, require the Port Authority to provide 35 percent of the total cost as local sponsor of the project. The federal government provides the balance.

"The primary reason for the doubling of the cost of the project," the Chairman said, "is the nature of the work itself. It requires a significant degree of underwater blasting, which is costly and painstaking, and trickier still in busy shipping channels like these. There are very few firms either capable of or willing to undertake this work."

"The Corps of Engineers is currently negotiating with Great Lakes/American, a joint venture, and we expect a contract to be awarded shortly," he said.

Details of the project were presented to the Commissioners by Port Department Director Lillian Liburdi and Colonel Ralph M. Danielson, Commander and District Engineer of the U.S. Army Corps of Engineers. In their presentation they stressed the overriding importance of the project, noting it will improve navigation as well as enhance safe operation in the channel.

Mrs. Liburdi stated that the project is essential to ensure the competitive position of the port. "A large volume of our country's imports and exports pass through our port," she said. "It is essential for our region's economic well-being that we keep this port, one of the nation's premier gateways, open and accessible."

Under the terms of an agreement with the U.S. Army Corps of Engineers authorized by the Port Authority Board of Commissioners in May 1986, the bistate agency agreed to provide \$50.8 million, 35 percent of the then estimated total cost, to bring the 35-foot channels to a depth of 40 feet and carry out selective widening work. The Port

Authority has already paid \$27.7 million to the Corps of Engineers under the agreement, which requires the Port Authority, as local sponsor of the project, to pay 25 percent of the project costs during construction and an additional 10 percent upon completion.

"As a result of today's Board action," Chairman Leone said, "the Port Authority's contribution will be \$121 million. We anticipate that this phase of the dredging work will begin this spring, with completion scheduled during 1994."

ACES 2 Years Old; Expansion Planned

Automated Cargo Expediting System (ACES), the New York-New Jersey Port's system of Electronic Data Interchange (EDI) of oceanborne cargo information, has successfully completed its second year of service to brokers, forwarders, steamship lines and marine terminal operators and is now being offered to maritime cargo carriers and shippers doing business at other ports throughout the United

States, it was announced by Mr. Stanley Brezenoff, Executive Director of The Port Authority of New York and New Jersey.

"Through the efforts of an industry-wide committee, we have been able to meet all the needs of our port community and are now ready to expand ACES to motor carriers, shippers, railroads, and any cargo carrying organization serving this or any other port in this country," said Mr. Brezenoff.

"In addition, during the coming months we will explore the potential of connecting ACES with compatible electronic systems at major foreign ports in Europe and Asia," he noted.

The expansion of the ACES network will enable participants to obtain up-to-the-minute status reports on cargo and to track shipments from point of origin to final destination.

General Electric Information Services (GEIS) will continue to be the EDI network provider for the ACES system. GEIS and the Port Authority recently renewed their contract for an additional three years.

Under the terms of the new contract,

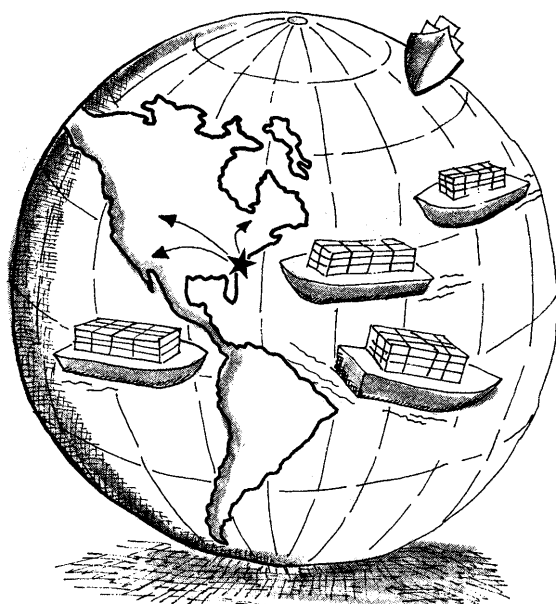
ACES will be made available to all steamship lines, freight forwarders/custom house brokers, marine terminal operators, motor carriers and railroads doing business with any port anywhere in the United States.

"Other ports in the country, such as Savannah, New Orleans, Houston and Los Angeles, have expressed strong interest in participating in the ACES system," said Ms. Lillian Liburdi, Director of the bistate agency's Port Department.

"ACES successfully tested a link to Germany with the Port of Hamburg's DAKOSY system. The Port Authority is also exploring the potential with other foreign port systems, such as those used by Rotterdam, Le Havre and Singapore," she stated.

Oakland Plans 5-Year \$330 Million Expansion

The Oakland Board of Port commissioners has been asked to approve a \$124.5 million capital budget for the fiscal year that began July 1, 1991, and a five-year capital improvement pro-



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gram costing \$330.5 million through 1996.

This will mark the first time the Port has had a formal capital budget, in addition to its operating budget. The money to pay for projects planned for construction over the next five years will be financed from Port revenues, from grants by state and federal agencies, and from \$100 million in new bond issues.

The capital program envisages generating a surplus that will permit the Port to make more planned payments to the City of Oakland for delayed repayment of city bond issues that benefitted the Port. The cash flow projection forecasts providing for a \$5.2 million payment each year from fiscal 1992 through fiscal year 1996. The final payment to the city would be in fiscal 1997.

Acting Executive Director Charles R. Roberts said a prime management

goal will be to reduce operating expenses over the next five years so that the ratio of expenses to revenues will be about 50 percent by 1996. It will be 55.4 percent in fiscal 1992.

The Maritime Division will be spending another \$22 million to repair earthquake damage over the next two years; some \$38 million as the Port's share of the program to dredge Oakland channels from 35 to 42 feet, and a new container terminal at Berth 30 will be built and financed primarily by Mitsui OSK, in partnership with the Port. The Port's share of the cost will be about \$11.5 million. Mitsui will spend about \$60 million on the project.

The Port's Commercial Real Estate division will be making additional improvements at Jack London Square; repairing and rebuilding the former Port headquarters building at 66 Jack London Square (\$8.8 million), and building a new marina in the Jack

London Square area at a cost of \$14.6 million, funded by State Department of Boating and Waterways loans.

The Real Estate Division also included in its capital budget construction of a \$16 million Amtrak Station at Jack London Square. Eighty percent of the cost will be paid by Caltrans.

Oakland "Fine Tunes" New Pricing System

Responding to ocean carrier concern over proposed rate increases, the Oakland Port Commission has approved changes and reductions in the new per-container wharfage structure that will become effective on July 1.

"In addition to these changes," said Mr. William D. Stevens, the port's maritime director, "we're committed to working with our steamship clients to make appropriate format adjustments after the system has been operating for a while." The port will continue to review cargo manifest data and compute the impact for any carrier that provide detailed information, he said.

Since the port unveiled its new system in March, port staff has analyzed the economic impact of the per-container structure on the carriers that have stepped forward with such data. As a result, Mr. Stevens explained, the port has "fine-tuned" the system to reduce all per-container rate levels except 20 and 40-foot boxes in rate basis A; and reduce the standard revenue ton values based on container size for each rate basis group.

The port also has reclassified several major commodities into a lower rate basis group, including: international shipments of tropical fruit, from rate basis B to A; sawed lumber, from B to A; electronics (televisions, computers, VCR's and copiers) from D to C; and auto parts, from D to C.

The revisions will keep Oakland competitive with other West Coast ports and are in line with tariff rate increases planned by other California ports later this year, Mr. Stevens added.

Seattle Readied for Growing Cargo Demand

The addition of almost 240 acres of cargo terminal facilities at the Port of Seattle could result in 4,000 new port-dependent jobs within the next

Port of Oakland's New Wharfage System

Four Pricing Categories, Effective July 1, 1991

	Dollars Per Container		
	20-24 ft. Container	35-40 ft. Container	Over 40 ft. Container
Rate Basis A			
Animal Feeds; Cereals;			
Cocoa; Coffee; Cotton;			
Earths; Fertilizer;	\$85	\$110	\$135
Fresh/Frozen Foodstuffs;			
Hides; Lumber; Metals;			
Wastepaper			
Rate Basis B			
Beverages; Canned goods;			
Farm equipment; Petroleum	\$125	\$160	\$190
Products; Lift trucks;			
Resins; Wine			
Rate Basis C			
Auto parts; Chemicals;			
Cleaning Compounds;			
Electronics; Hardware	\$130	\$235	\$260
Machinery;			
Small Appliances			
Rate Basis D			
Antiques; Bicycles;			
Clothing; Footwear;			
Furniture; Large	\$135	\$250	\$310
Appliances; Tires			

Commodity listings for each Rate Basis group are not complete. Please refer to Port of Oakland Tariff 2-A for applicable commodities

(SOURCE: Port of Oakland)

10 years, Port officials announced. The Container Terminal Development Plan (the "Plan") will serve as a blueprint for redevelopment and invigoration of Seattle's working waterfront to meet a growing international demand for more container cargo terminal space.

The \$300 million Plan will allow Seattle to enhance its status as the premier international gateway to Pacific Asia. Trade forecasts indicate container shipping volume through the Puget Sound region will more than double over the next 20 years. The Plan is designed to keep the Port of Seattle, as well as the region, ahead of the demand and better able to compete with other west coast ports, primarily California.

"It has all the exciting elements of a new business venture and more," said Mr. Zeger J.J. van Asch van Wijck, Chief Executive Officer. "This region celebrates when Boeing is awarded a new contract — jobs are created. Similarly this plan represents 4,000 new jobs over the next 10 years. Further, it is the result of hundreds of hours of work by the Port of Seattle in consultation with our customers, other public agencies and the community."

The Plan will aggressively and positively benefit the Puget Sound region in many ways in the coming years:

Economic stimulation and job creation: The increased container shipping activity projected through the year 2000 will likely generate up to 4,000 new port-dependent jobs and close to 25,000 port-related jobs. Total additional jobs by the year 2010, including dependent and related employment, could be nearly 60,000. Within 10 years, additional salaries and wages from new port-dependent employment are expected to total up to \$200 million annually. The additional increment of annual business revenues by 2000 could exceed \$500 million.

Meeting the demand of Port customers: The Plan will allow existing customers the chance to expand their business at the Port of Seattle by providing more space. It will also advance the Port's legacy as the forerunner in attracting new international business to the region.

Expanded intermodal services: The Plan provides for more rail yards and enhanced transportation systems at several terminals. The variety of increased intermodal (from ship to rail

or truck) services provides customers a more efficient way to handle containerized cargo.

Environmental benefits: The Plan will accelerate the cleanup of several industrial properties. Contaminated sediments will be cleaned up, and unused waterfront properties will be developed for use by water dependent customers. More public access areas will be made available to area residents in the form of bike paths and viewpoints.

Seattle as an international magnet: The region and the Seattle area are being recognized around the world as an important international gateway. Seattle's leadership will serve as a catalyst for international trade for the entire region.

"Not only are we thinking about our customers' needs by providing additional terminal space and capabilities, but we are also acting on strategies to bring additional economic benefits to the community and assuming a leadership role on Elliott Bay environmental issues," said Mr. Frank Clark, senior director of the Port's Marine Division.

Financing for the Plan falls well within the Port's current ability to provide for additional capital development. As with other Port capital projects, a combination of income from operations, public funds and the issuance of tax-exempt revenue bonds will be used to pay for the container development plan.

Information about the container development plan has been shared with more than two dozen organizations, governmental agencies, and community groups.

Individual meetings with the city of Seattle, state agencies, maritime industry leaders, the federal Environmental Protection Agency, Port of Tacoma and community groups preceded today's announcement. The Port now begins a 30-day public comment period in which it will actively solicit additional citizens' viewpoints on the plan.

The Plan supplements the Harbor Development Strategy (HDS), first developed in 1986 to establish policy guidelines on the general location and timing of marine facilities development.

Following the 30-day public comment period, Port of Seattle officials will make amendments to the Plan and present it to the Port Commission in

July for adoption. The five-member Port of Seattle Commission will take action on individual phases of the project over the next several years.

A number of container terminal developments involving approximately 40 acres of Port property have been completed in the past five years, bring total current container terminal acres to 345. Presently the Port is expanding on-dock rail capacity at Terminal 18, which will nearly double current loading capacity.

An economic catalyst to the entire Puget Sound region, the Port of Seattle develops and manages commerce through the Seattle harbor, Seattle-Tacoma International airport, Fishermen's Terminal, and Shilshole Bay Marina. The Port directly and indirectly impacts over 80,000 jobs in the Puget Sound region, and does over \$30 billion annually in two-way trade.

Seattle Productivity Up; Labor Force Efficient

The high level of container crane productivity, exhibited at Port facilities through May of this year, is directly attributable to an efficient labor force and quality terminal services, said Port and labor officials.

In May, Port-wide container crane productivity at terminals 5, 18, 25, 30, 37, 42, and 46 averaged 26.2 moves per hour. "Moves" are defined by a crane either loading or discharging a container.

Productivity at the port has increased steadily in the past years. Recent figures indicate that the Port was up almost two moves per hour in the first quarter of this year, when compared to last year.

Local stevedores believe that their solid working relationship with the Port and the ILWU is the main reason for the rise in productivity. Others mentioned equipment modifications, such as alterations in yard chassis at Terminal 46, the addition of air suspended cabs in the yard tractors and the higher cab top picks at Terminal 18. They also cite the Port's well maintained cranes and terminal pavements, both of which allow far more efficient and effective movement of cargo.

"This continual improvement will ensure that we meet our customers' turnaround needs," said Mr. Frank Clark, senior director, Marine Division. "This level of productivity, shared by

the Port, labor and stevedores, demonstrates the overall teamwork approach necessary to maintain this region's competitive edge."

Pat Vukich, president of ILWU Local 19 said, "We are extremely proud of our workforce. Their ability, as well as the quality services provided by the Port, complement each other on a daily basis."

In 1990, the Port averaged 24 moves per hour with projections for 1991 rising to 25 or more moves per hour.

The increase in container crane productivity comes at an important time for the Port in light of the recently announced Container Terminal Development Plan. The Plan, which could increase the Port's container terminal capacity by 240 acres and create 4,000 port-dependent jobs within the next ten years, will prepare the Port to meet the future growth of container trade to the Puget Sound region.

"As we prepare to develop more container capacity in the coming years, it is essential that we continue our high productivity and efficiency standards. Our customers should expect nothing less," said Mr. Clark.

The Port of Seattle is an economic catalyst to the entire Puget Sound region. It develops and manages com-

merce from world markets through the Seattle harbor, warehouses, Seattle-Tacoma International Airport, Fishermen's Terminal, and Shilshole Bay Marina. The Port creates over 80,000 jobs in the region, and handles over \$30 billion annually in two-way trade.

Tacoma OKs Land Sales For Cogeneration Plants

At a recent commission meeting, Port of Tacoma Commissioners approved the sale of two major parcels of land at the Port's Frederickson Industrial Development Area. The planned developments at the two sites represent expected investments totalling \$350 million and 230 jobs. The two sites, totalling just over 62 acres were awarded to the Enserch Development Corporation and Pentech Energy, Inc.

Both sites will be used to develop cogeneration plants. Cogeneration is the sequential production of two types of energy from one fuel. Both projects will produce electricity and thermal energy in the form of steam and hot water from natural gas, the cleanest fuel available for generation of electrical energy.

"Bringing new jobs and industrial

development to Pierce County is what Frederickson is all about," said Mr. John McCarthy, Port Commission president. "Attracting these new, clean industries to the area will be a real boost for the region."

EDC's total investment will be approximately \$150 million. About 180 construction workers will be needed during peak employment of the facility's 18-22 month construction schedule. About 30 employees, most of them salaried professionals and technicians, will be required to operate the power plant. Up to an additional 100 employees will be required when the greenhouse is built.

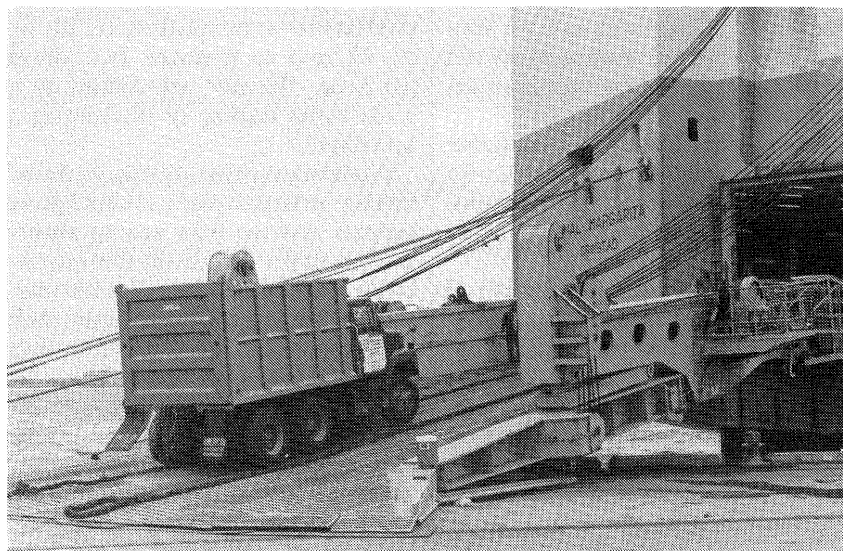
The Frederickson area, which is located 13 miles south of the Port, was purchased by the Port in the late '60s in an effort to set aside land to use for industrial development. Frederickson contains some of the largest parcels of land in Pierce County zoned M-2 for heavy industry use. Last year, the Boeing Company announced plans to build a major production facility near the Port-owned land at Frederickson.

Africa/Europe

Bremen Completes "Neustädter Hafen"

Expansion of the port basin "Neustädter Hafen" has been completed recently. This harbour, the most modern facility in the City of Bremen, now offers a quay length of 2,250 metres, 900,000 square metres of handling and storage areas, and 266,000 square metres of warehouses. 39 cranes with a hoisting capacity of up to 24 metric tons, and six container gantries guarantee quick handling. The extension at the east side of the harbour includes 450 metres of quay, corresponding to two berths, as well as shed 23 and the stacking area belonging to it. According to the original plans, construction of the Neustädter Harbour would now be complete; however, a new structural plan for the port calls for even further extension.

Bremen's Senator for Ports, Shipping and Transport, Mr. Konrad Kunick, recently sketched this concept during the dedication ceremony in the harbour. Today does not mark the end of construction here. According to the deci-



Cargo for Kuwait Rolls Through Charleston

One of 130 dump trucks, garbage trucks, and water trucks destined for Kuwait rolls onboard the *Hual Margarita* at the Port of Charleston's Union Pier Terminal. The truck chassis were purchased in Rhode Island and driven to Alabama for modifications before being delivered to Charleston. The entire operation required only 25 days to complete. The trucks are being sold by Global Truck and Equipment, Inc., of Houston, Texas. Union Pier is the Port of Charleston's centralized facility for roll-on/roll-off operations.



"Neustädter Hafen" in Bremen

sion made a few days ago by the Senate and the Committee for Ports, Shipping, and Transport, final construction will mean extending the quay furthermore. This extension will result in two more berths and an additional area of 120,000 square metres.

According to the Senator, construction work is planned to begin in 1994. Mr. Kunick described the new port concept quite simply: "Handling on the left side of the Weser River; storage, processing, and distribution on the right side. The new concept aims at a rational division of labour between the harbour facilities in order to meet changing and growing demands for fast handling, storage, and distribution as well as developments in the size of ships.

World Trade Center Bremen APC Opens

According to Ernst and Young's European Location Advisory Service (ELAS), Bremen numbers among the most attractive business locations. The Hanseatic City gains above average marks in the areas of economic climate, jobs market, location, transport connections, and quality of life in particular. Bremen offers almost ideal conditions for working the European market. But the Hanseatic citizens are not resting on their laurels.

The emergence of the Single European Market in 1993 is a development with global significance. The economies of Asia with their strong export orientation are particularly interested in improving their sales potential in Europe. At the same time, the wide range of goods offered by the Far East pro-

vides European industrial and commercial enterprises with interesting opportunities for buying and selling.

In order to foster these promising trends in international trade and provide the necessary logistic back-up, Bremen has, with the financial support of the EC, founded the first European Meeting Point.

In March this year, the first tenants moved into the new World Trade Center Bremen, Asia Pacific Center, situated in the heart of the city. The five-storey building provides 15,000 square meters of office, conference and exhibition space to over 70 businesses from the prosperous Asia Pacific economic region, representing Brunei, China, India, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, Sri Lanka, Taiwan, Thailand, and Vietnam.

The range of firms at the APC stretches from manufacturing companies through trading companies, com-

puter and electronics suppliers, down to companies in the textile industry, food importers and firms in the arts and crafts business. All of them enjoy the advantages of the "logistic service chain" offered by Bremen, which extends from the ports of entry to the ultimate buyer.

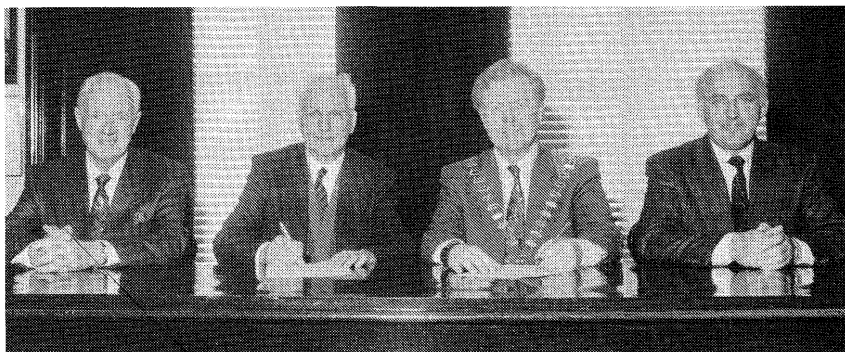
The APC was officially inaugurated on June 3rd, 1991 by Mayor Klaus Wedemeier of Bremen.

The BLG Bremer Lagerhaus-Gesellschaft, the port operating company of the Bremen ports, supports the World Trade Center APC project and runs an office in the center in order to assist its present and future distribution clients.

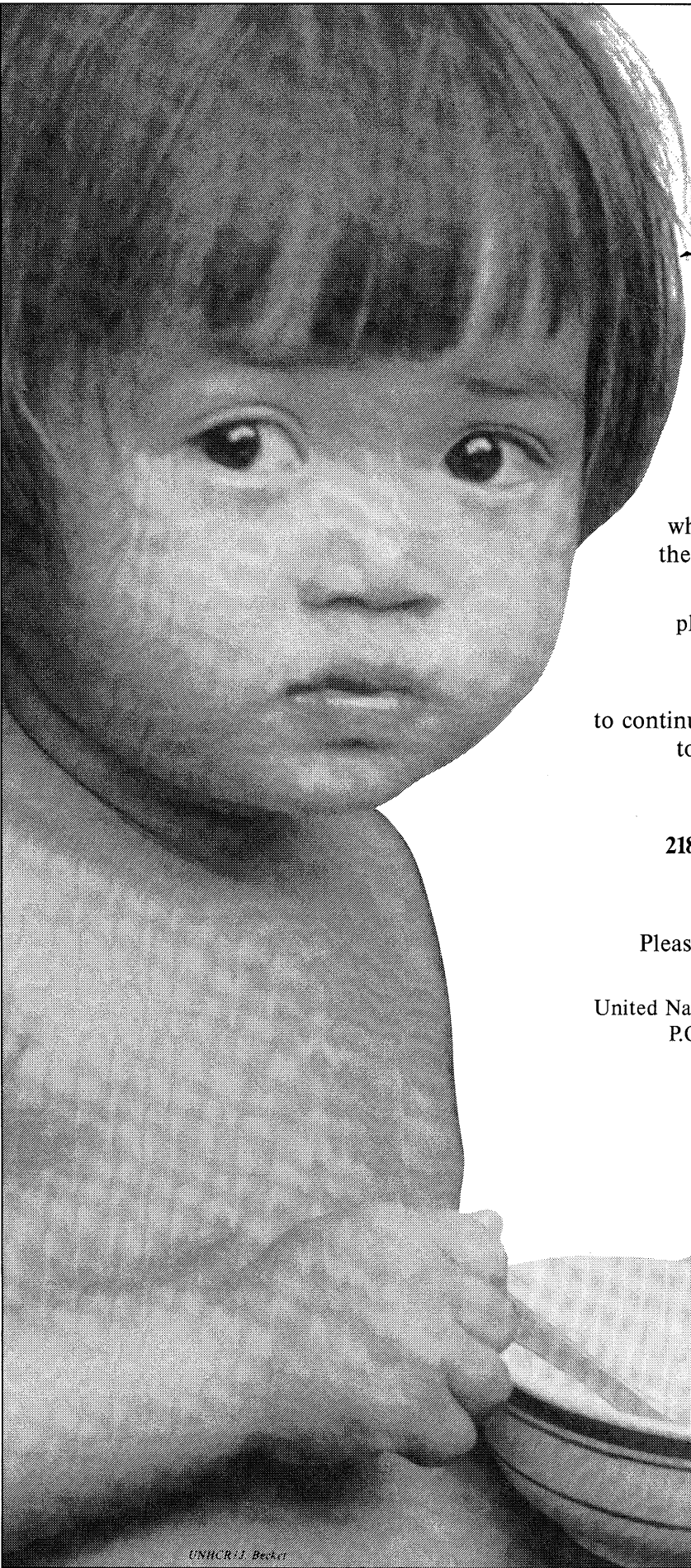
Old Quay at Cork To Be Refurbished

On 1 May, 1991 Cork Harbour Commissioners awarded a contract for the strengthening and refurbishment of one of the Port of Cork's oldest quays, the South Deepwater Quay. Built over 110 years ago the remedial work is necessary to enable the quay to handle modern cargo handling plant. Despite major investment at both Ringaskiddy and Tivoli in recent years, much of the port's traditional traffic such as animal feedstuffs, cereals, fertilisers, coal, salt and timber continue to be handled at the city quays where in 1990 here were 1,100 shipping movements and cargo throughput of 750,000 tonnes.

The contractors are P. J. Edwards & Co. of Dublin who are specialists in this field. The work is due to commence within a few weeks and will be completed by the end of this year. The contract price is £673,000.



Pictured at the signing of a contract for the strengthening and refurbishment of one of the Port of Cork's oldest quays, the South Deepwater Quay, are from left: Mr. Brian O'Sullivan, Harbour Engineer, Cork Harbour Commissioners; Mr. Joe Edwards, Managing Director, P. J. Edwards & Co., Ltd.; Mr. Conor Doyle, Chairman, Cork Harbour Commissioners; Mr. Pat Keenan, General Manager, Cork Harbour Commissioners.



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Best Quarterly Results For Port of Rotterdam

According to provisional figures, the amount of goods handled in the port of Rotterdam rose by more than 6% in the first quarter of 1991, as compared with the same period in 1990. Total transshipment amounted to 74 million tonnes. These are the best results ever achieved by the port in a first quarter.

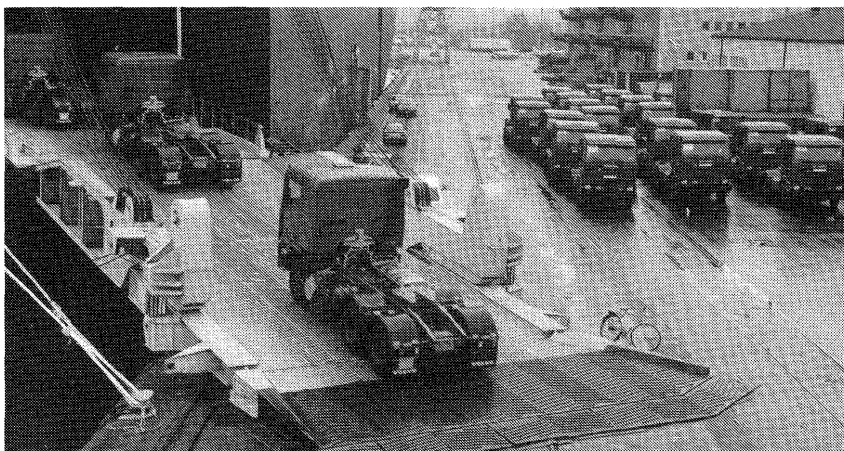
The port's strong start is partly the result of a catching-up effect, following the very moderate fourth quarter of 1990. The Gulf War has apparently only meant a temporary setback for Rotterdam. World trade began to flourish again in the first quarter, after the end of the war. Other important factors are the growing belief in a recovery of the American economy and the low price of petroleum. The port's trend towards growth over the past few years appears to be continuing.

In the liquid bulk sector the transshipment of crude petroleum in particular (+ 16.4%) caused figures to rise by 10.4% as compared with those for the first three months of 1990. This was despite a fall in the transshipment

of mineral oil products of 22%. At 6.7 million tonnes, this remained at the same low level as the previous three quarters. Total dry bulk remained stable.

Figures for mixed cargo were 5%

higher than the first quarter of 1990. The transshipment of containers (+ 14.2%) formed the basis for this increase. Transshipment figures for other mixed cargo (ro/ro, conventional mixed cargo) fell.



2,000 Heavy Lorries Shipped to Iran

About 2,000 heavy lorries of Volvo and Scania makes are being shipped from the Port of Gothenburg's Free Port facility to Iran this spring. The vehicles, all towing units, are being shipped on five different occasions by car/truck carriers. At the receiving end, Bandar Abbas is the port of discharge. Gothenburg is Sweden's most important car port with a turn-over in 1990 of about 200,000 vehicles, three-fourths of which were exports.

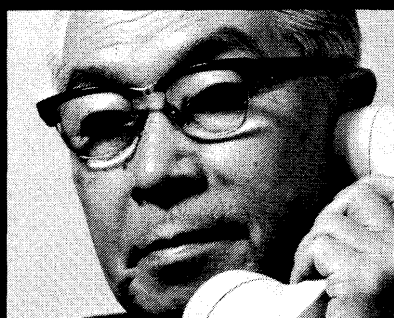
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Lisbon More Popular With Cruise Liners

During the first quarter of 1991, there has been a considerable increase in the number of cruise ships calling at Lisbon. In this period there was a total of 7,947 passengers, representing a rise of nearly 300% as compared with the same period in 1990 when the figure was only 2,792 passengers.

These three months saw the arrival in Lisbon of the "Canberra" (1st January), handled by James Rawes and

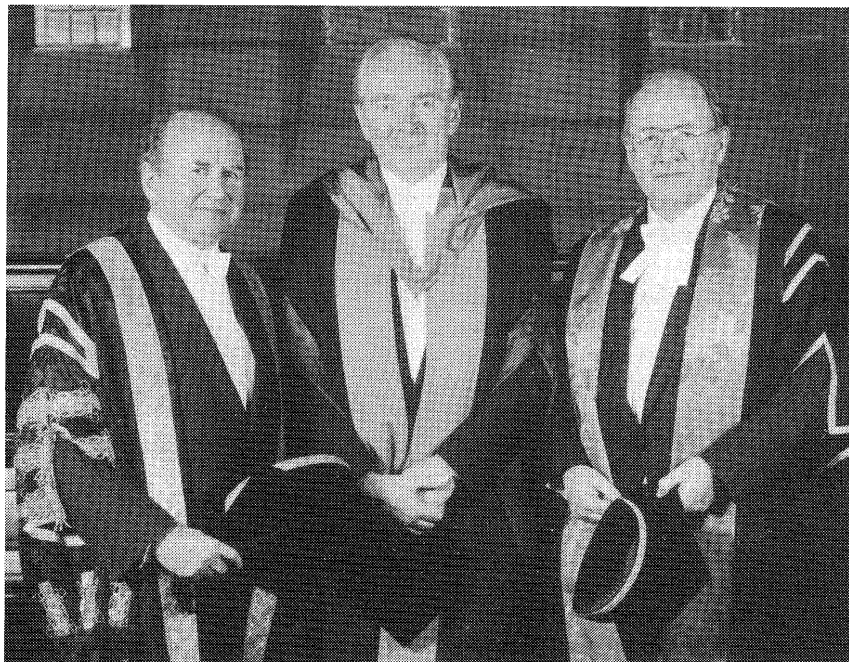
Co., the "Black Prince" (2nd, 7th and 21st January, 4th and 8th February, and the 5th and 26th of March) handled by Wiese Transporters Lda, the "Karelia" (on the 2nd of January, 21st of February and the 25th of March), the "Lev Tolstoy" (4th January), the

"Ivan Franko" (21st February) and the "Azerbaydzhan" (30th March), all the latter being handled by Aminter — Agência Marítima Internacional, totalling some 14 calls.

One should note that during the same period last year, there were only 9 calls.

Sir Robert Honored With Degree of Doctor

Sir Robert Easton, Chairman and Managing Director of Yarrow Shipbuilders Ltd. (Chairman, Clyde Port), was honored with the Honorary Degree of Doctor by Strathclyde University. Left to right: Professor Sir Graham Hills, Principal and Vice-Chancellor of Strathclyde University; Sir Robert Easton; Professor Michael Baker, Deputy Principal, who presented Sir Robert to the congregation.



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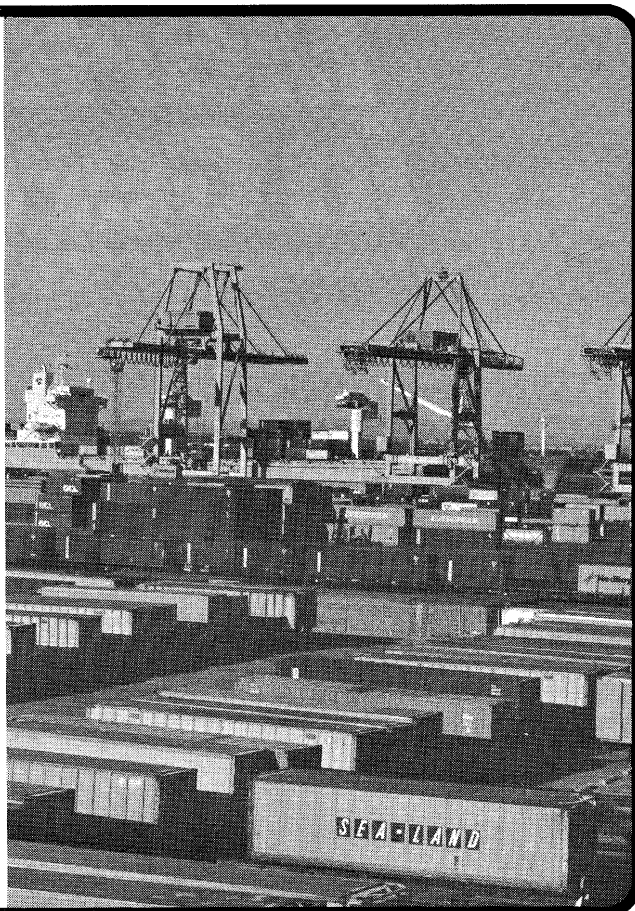
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Atelier Paul Bertrand

Asia/Oceania

200 Queensland Firms Support Port Survey

By Mr. Greg Martin
Chief General Manager

It is more than appropriate that I should extend my personal thanks to those 200 Queensland importers and exporters who recently gave their total support and co-operation to a port survey initiated by the Port of Brisbane Authority (P.B.A.).

We needed hard, empirical evidence from our customers—and now, we have it.

The information we received was most important and will help us to address the problems of our regional traders in considering the port's future development.

The actual survey/analysis was conducted by independent consultants, Coopers and Lybrand.

All data is now being evaluated to ensure that Brisbane will be well positioned to compete as the nation's key port for Asian/Pacific trade.

A strategic planning project for the port, now well advanced, is being managed by an "in-house" P.B.A. Policy and Planning team. The formal plan will be released for discussion and public comment by the end of the year.

Summary

Coopers and Lybrand overall summary of the survey said:

"It is estimated that trade through the port will increase over present (1989/90) levels by approximately 20% by 1995 (3.7% per annum growth) and by approximately 50% (2.7% per annum) by 2005.

"The major change in use of the port over the next 15 years will be in the volume of trade and an increase in the proportion of container trade.

"The port is perceived as having more problems than the road, rail or shipping components of the transportation chain, with the major problems relating to delays in the port itself.

"The costs associated with the port's services do not emerge as an issue and are not high on the agenda of port users' concerns.

"A clear majority of users believe that

a port should be proactive in marketing and earn revenue through this activity as opposed to merely being a facility concerned with administration and collecting dues.

"There is a strong belief that ports should be in competition, and 84% of users consider that proactive marketing of a port can generate additional trade.

"The concept of Brisbane as a gateway ('access') port enjoys the support of the majority of users with 53% believing it to be a viable possibility.

"There appears to be a high level of satisfaction with the P.B.A. which received high ratings for management related issues." (*Brisbane Portrait*)

ADB Approves Loan for Vanuatu Santo Project

Exporters and importers of cargo in the Republic of Vanuatu will benefit from an interest-free supplementary loan of SDR 2.37 million (about \$3.4 million equivalent) approved by the Asian Development Bank for the Santo Port Project.

The loan is from the Bank's concessional Asian Development Fund. It carries a term of 40 years, including a grace period of 10 years, with a service charge of 1 percent per annum.

Santo Port handles about 80 percent of the country's exports and about 30 percent of its imports in terms of tonnage. Because of its vital role in Vanuatu's economy, the Project has been given the highest priority in the Second National Development Plan (1987-1991).

The Project is to provide a new earthquake-resistant wharf for overseas ships to enable cargo to be handled economically and efficiently. The existing overseas wharf has suffered severe earthquake damage and has started to collapse.

Savings in ship service time and avoided lighterage costs are the main quantifiable benefits expected from the Project.

The Project, physically underway since 1989, consists of a new 130 meter wharf and ancillary facilities in the port area. During construction of the new wharf, however, unexpectedly weak soil conditions were encountered in 1990, requiring piles deeper than the depths originally envisaged.

The total revised Project cost is es-

timated at \$10.53 million compared to the original Project cost of \$7.18 million. The Bank's supplementary loan equivalent to \$3.4 million will cover the entire additional cost of civil works and consulting services involving the deeper piles.

Community Input on Fremantle Sought

Western Australian Transport Minister Pam Beggs has released a summary booklet to initiate the next phase of the Fremantle Long-Term Options Study.

Mrs. Beggs said this was part of the public consultation process. "The Government is anxious to receive community input on what is a vital planning issue," the Minister said.

The Options Study was implemented last year and is designed to look at the long-term development requirements of the existing port.

"The work so far essentially has been technical and now is the time to gather a wider understanding of the community's views on the future of the State's main port," Mrs. Beggs said.

The summary booklet puts forward details of the Study and its future direction.

The Study so far has identified three possible future sites for the port—Naval Base, Catherine Point and the existing North Fremantle site.

"The Government has decided to broaden the examination of the current site (North Fremantle) before going further," Mrs. Beggs said.

"This involves examining the constraints on future expansion, when those constraints may be felt and how much it would cost to overcome them.

"It also looks at the role of regional ports such as Bunbury and Geraldton as back-up facilities."

Mrs. Beggs said that while the technical phase of the study was under way, it was vital that the broader community had an opportunity to comment.

She urged interested people to read the document and put forward their views. (*Fremantle Port News*)

PGA: Communication Vital to Success

Consultation and communication are more than just corporate buzzwords in the Port of Geelong.

The Authority's "lifelines" to the business community are its Shippers and Stakeholders groups that meet bi-monthly to facilitate the two-way communication vital to the successful operation of a modern maritime authority.

The informal gatherings of key waterfront operators and major users provide a regular opportunity to air problems or discuss issues, as well as enabling the Authority to present its views.

Executive Manager, Marketing and Corporate Services, Mr. Vincent Tremaine said the meetings helped the

Port of Gladstone: Record Throughput

The Port of Gladstone had a record cargo throughput of 31.8 million tonnes during the year ended 30 June 1991. This represents an increase of 7.7% over the previous year.

Gladstone Port Authority General Manager, Mr. Reg Tanna, said it was the first time the Port has passed the 30-million-tonne mark.

"It is quite remarkable and extremely satisfying that tonnages have grown from 20 million in 1983 to in excess of 31 million this year.

Exports for the year reached 22.3 million tonnes, of which coal accounted for 18.2 million tonnes, 3.3% above last year.

Imports of 9.5 million tonnes were dominated by bauxite for QAL's Refinery which accounted for 8.4 million tonnes, 24% higher than the previous year.

The record cargo was carried by 651 ships of 22.8 million gross registered tonnage.

"We are on the brink of a new wave of developments in Gladstone," Mr. Reg Tanna said. "The next couple of years will see further major expansion at Clinton Coal Facility, including duplication of the shiploading system."

Port Authority Chairman, Mr. Leo Zussino congratulated all connected with the Port on the year's result. He said the operation of the Port of Gladstone was a major exercise in co-operation from all sectors of the port community and land transport operators. Mr. Zussino said the Port of Gladstone would continue to play a very significant role in the economic development in Queensland.

Authority to steer its direction in accord with the needs of users.

"It's an opportunity to discuss problems openly and to clear the air before they can fester into damaging conflict.

"From the Authority's point of view, we try to be as open and frank as possible with both our problems and achievements, in the hope that the public and customers will understand what we are doing and why we are doing it.

"A recent example is the modification we made to our new pricing policy based on reaction from the groups," he said.

Many of the issues raised in the shippers' meetings are forwarded to the more broadly-based stakeholders group for discussion.

The Shippers' Group comprises the top seven users of Port of Geelong facilities, but its membership changes from time to time based on upswings and downturns in the shipping activity of the companies. Its current membership includes the Australian Wheat Board, Hi-fert, Australian Phosphate Corporation, Alcoa of Australia, Midway Wood Products, Shell and Terminals Pty. Ltd.

The Stakeholders Group includes representatives from the Geelong stevedoring companies, the Waterside Workers Federation, the Seamen's Union of Australia, V/Line, the Australian National Maritime Association (ANMA), Melbourne Tug Services, the Shippers Group, the Shire of Corio, an employee representative, a shipping agency representative and the Victorian Road Transport Association.

(Portside)

Brani Terminal Geared To Achieve New Heights

By Oh Bee Lock

Brani Terminal

Port of Singapore Authority

Construction of PSA's second container terminal is progressing on schedule at Pulau Brani. Costing \$1.1 billion, Brani Terminal (BT) will have five main and four feeder berths with a maximum handling capacity of 3.8 million TEUs. There will be a 3-storey office cum workshop complex that will house BT's control centre, an air-conditioned cafeteria, lockers, showers and other facilities for staff.

Higher capacity and faster equipment are being purchased for BT. High-speed

quay cranes (including several with double trolleys), wider and higher-stacking yard cranes, high capacity tractors, double stack trailers and possibly multitrailers will give BT operations a faster cycle time.

There will be more automation for BT equipment to achieve higher productivity. Automation modules are being introduced to container handling equipment to enhance operational speed and efficiency. For example, two container stacking blocks in BT will have fully automated yard cranes.

Planning will be simple and faster through further automation of computer planning and scheduling systems. To carry out reliable and predictable forecast of activities, BT will use systems such as Yard Berth Forecasting System and comprehensive Electronic Data Interface (EDI) links with shipping lines and contractors. These links will facilitate faster communications and transmission of instructions.

Brain's operations will be more controllable and predictable with a centralised Command, Control and Communications (C3) centre. Monitoring and control of terminal operations such as traffic control, logistics, yard and vessel operations will be carried out centrally at the air-conditioned C3 centre with the aid of CCTV cameras, radio and CITOS control systems.

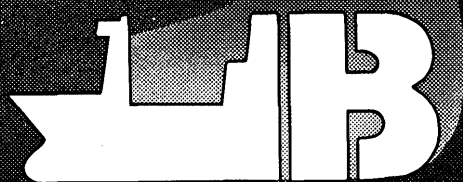
BT staff will be grouped into teams to focus on each cohort of shipping lines to provide integrated and customised operations. Each team will perform multi-functional roles which include ship planning, yard planning and vessel operations. According to Mr. Ng Chee Keong, Deputy Director (Operations):

"Being a new-generation container terminal, the work environment at Brani Terminal promises to be a challenging and exciting one. Customers will have higher expectations and demand higher performance and more stringent service standards. New equipment and operating systems will be extensively used. BT's officers will have to exercise greater initiative, flexibility and be prepared to try out new ways of doing things."

BT's first berth is scheduled to operate in January 1992.

With state-of-the-art equipment, a professional team and customised mode of operation, BT is certainly geared to achieve new heights! *(PSA Port View)*

Access
Australia
the World
through
Brisbane



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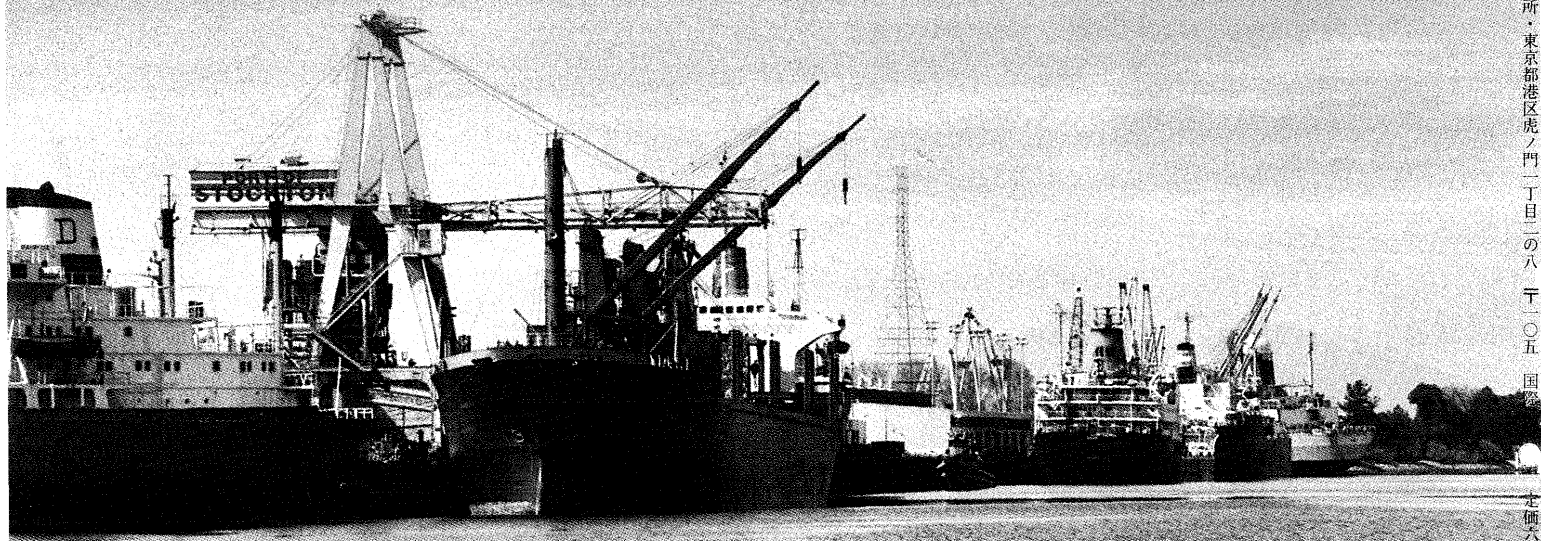
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We invite you to tour our facilities and compare our rates. See why we're second to none when it comes to handling your cargo efficiently and economically.



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