

PORTS *and* HARBORS

April, 1978 Vol. 23, No. 4



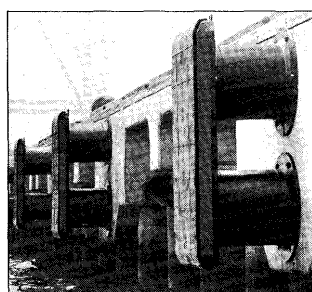
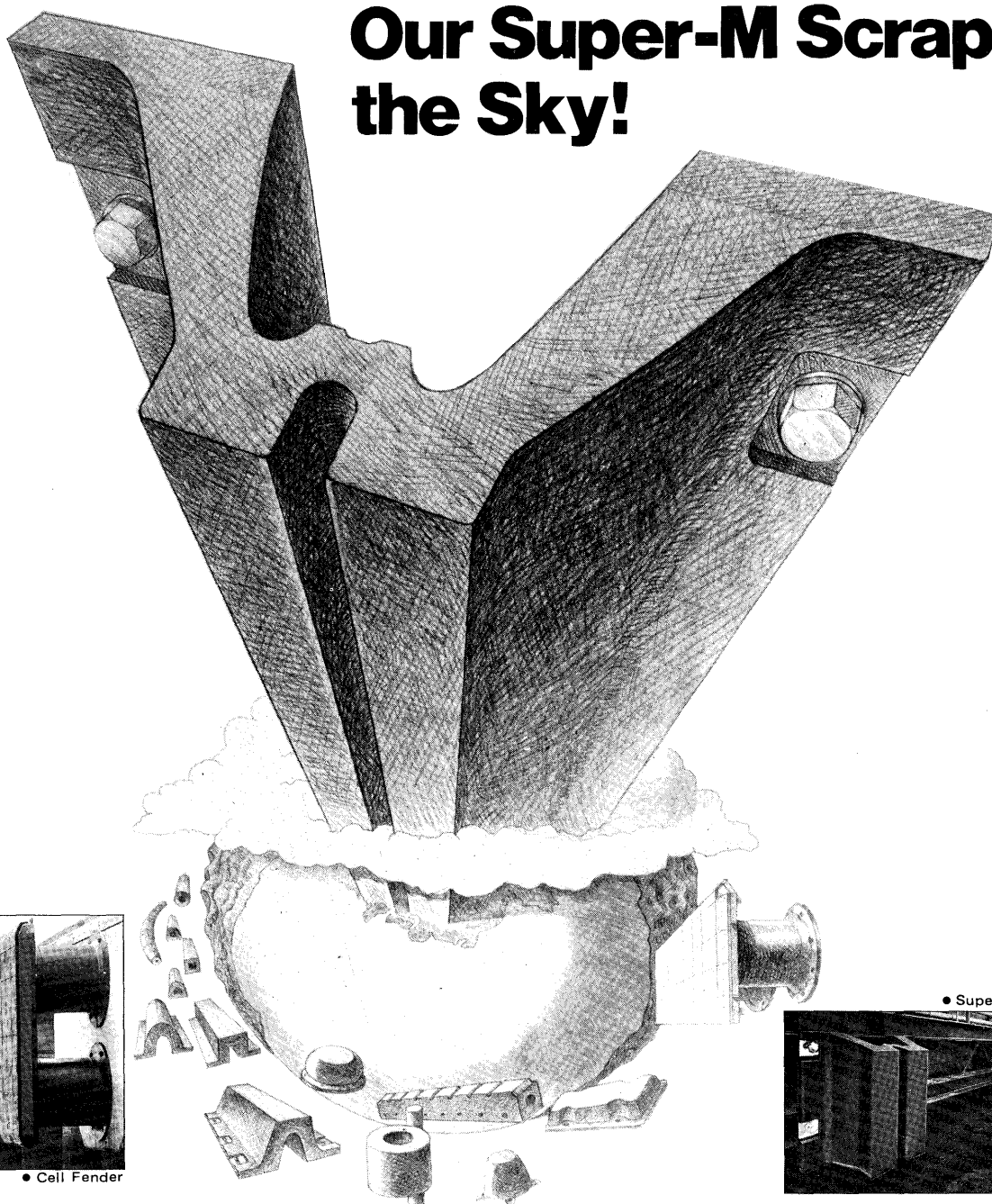
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IAPH Conference Le Havre May 1979

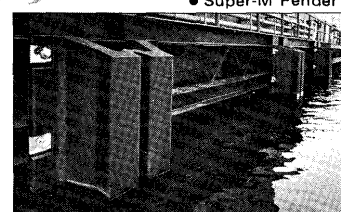
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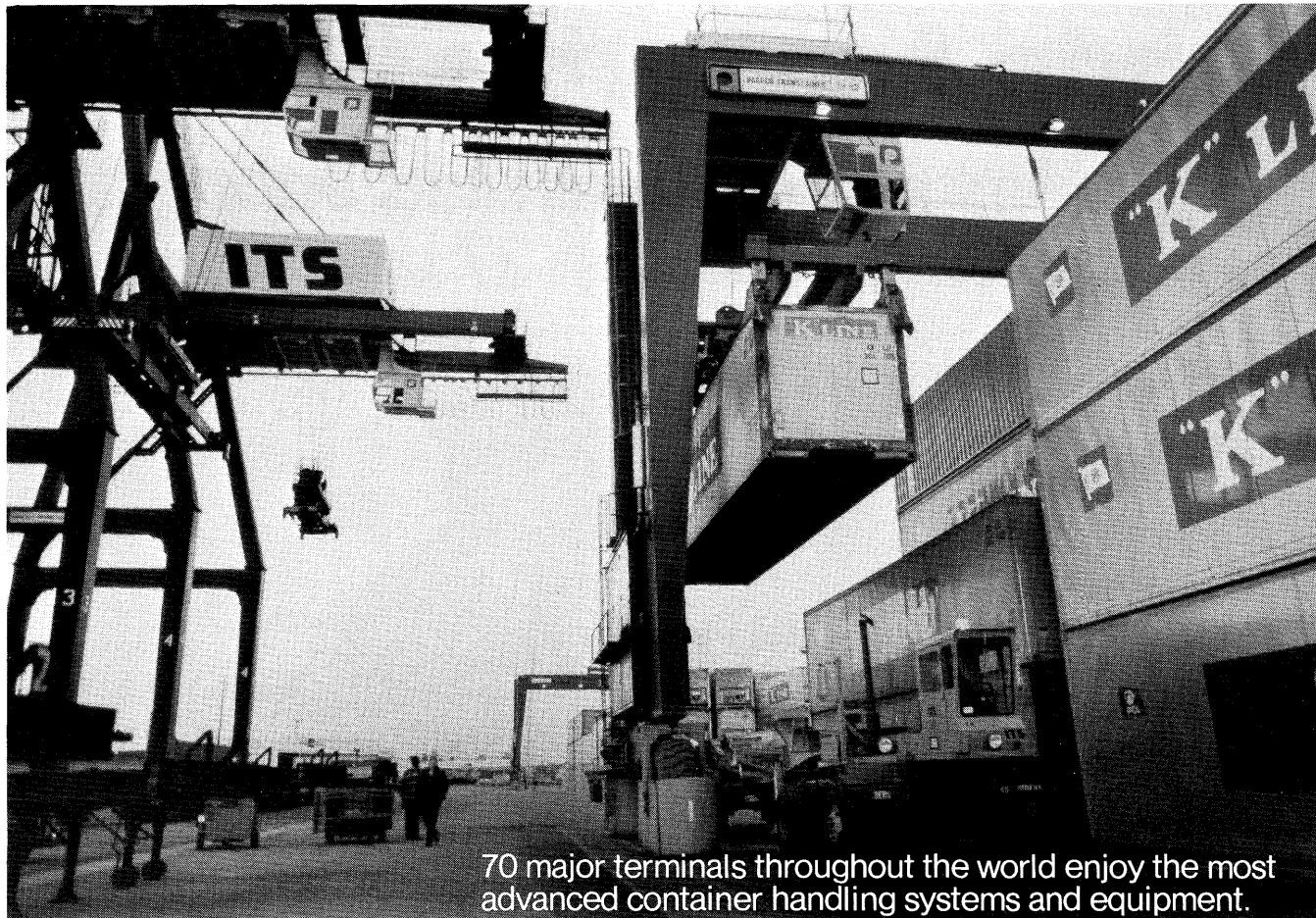
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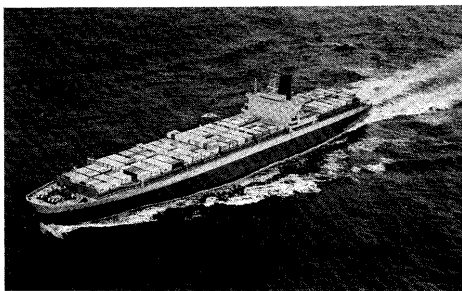
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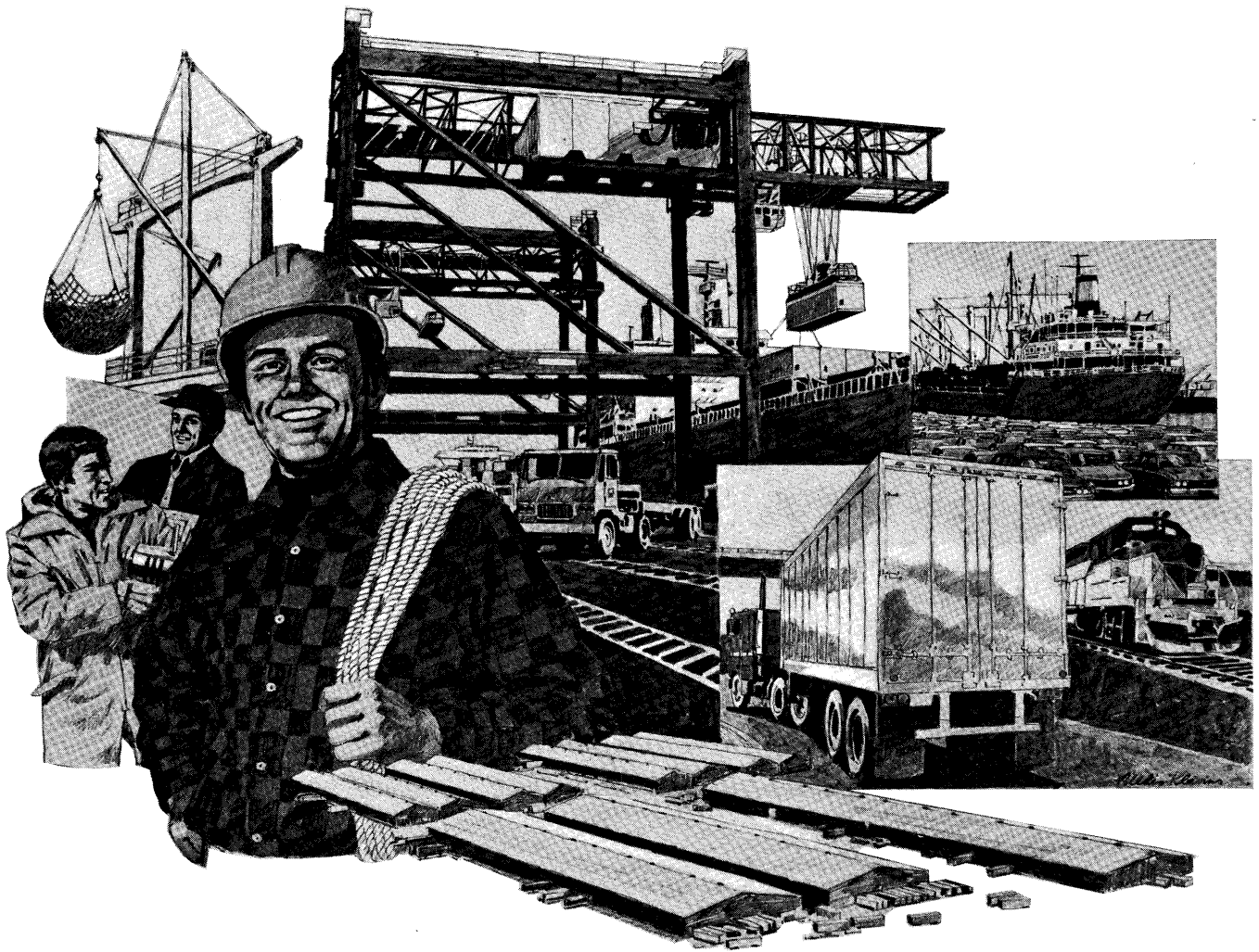
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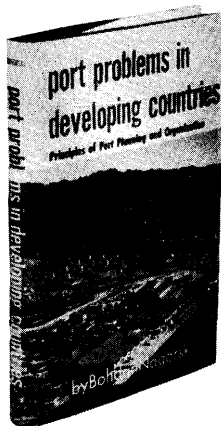
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The Cover: Port of Bordeaux—Le Verdon. (See page 60 also.) The new VERDON terminal, the only one on the French Atlantic seaboard, is equipped with two 40 ton gantries, backed up by two quayside cranes of 24 tons. The quay's railway tracks are linked direct to Bordeaux by an electrified line and hence to the European network. In the distance you can see the North bank of the Gironde. An excellent, low priced, ferry service across the mouth of the Gironde, saves a lengthy detour via Bordeaux for traffic to and from the North of France.

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PORTS *and* HARBORS

IAPH Head Office Announcements : Pages 7~31

Mr. A.J. Tobin of New York Passes Away

The saddest news of Mr. Austin J. Tobin, an Honorary Member of IAPH, reached here the Head Office on February 22, from the office of Mr. Anthony J. Tozzoli, IAPH Third Vice-President and Director of Marine Terminals Department, Port Authority of New York and New Jersey through the 'Immediate Release' dated February 8, 1978. It read "Austin J. Tobin, retired Executive Director of the Port Authority of New York and New Jersey, died on early today at his Manhattan apartment of cancer. Mr. Tobin, 74, is survived by his wife, the former Rosaleen C. Skehan, a son Austin, Jr., a daughter Stacy Carmichael, and seven grandchildren."

Mr. Tobin is world famous for his countless achievements in the port and harbor as well as transportation circles. Especially his name has been a synonym of a great leader for IAPH members.

As members may still remember, the Special Committee on International Port Development of IAPH was established at the 4th London Conference in 1965 as a result of his most ardent and farsighted suggestion, and Mr. Tobin himself served as its first Chairman.

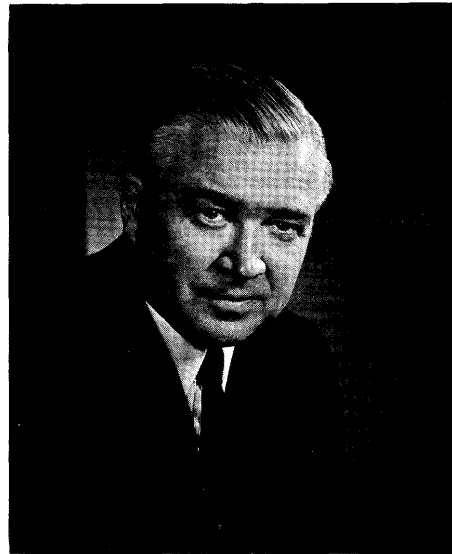
During his tenure (1965-1969), the Committee's major activities included,

- 1) Assistance to the Port of Ashdod in Israel to secure technical advice in developing that new port.
- 2) A survey of the major ports in India that were making best use of their existing resources. This was followed by a voluminous report on the outcome.
- 3) A survey team to assist the Port of Buena Ventura in Columbia, South America, looking into the causes of its serious delays to shipping.
- 4) Survey to undertake an indepth analysis of the organizational and administrative structure of Port of Guayaquil, Ecuador.

The Committee also arranged several training projects on port-to-port cooperation basis for the staff of IAPH member ports such as from Ceylon (Sri Lanka), Philippines, Peru, Venezuela and Bahamas, involving the Ports of Singapore, Malaysia, Japan and New York, Baltimore, Houston, Philadelphia of U.S.A.

The Special Port Development Technical Assistance Fund, which was established in parallel with the afore-said Committee on the basis of voluntary contributions of manpower and funds from member organizations of the Association, used to be called "Tobin Fund". This service has been successfully inherited to the present Committee headed by Mr. Ullman in the form of Bursary and Award Scheme reflecting the spirit of the founder of this significant Committee.

IAPH at its 7th Biennial Conference in Montreal, 1971, resolved to elect Mr. Austin J. Tobin Honorary Member.



The Late Mr. Austin J. Tobin

Secretary General Dr. Sato passed on to the members of the Executive Committee and those old timers of the Association the news of his death and sent IAPH condolence message as reproduced hereunder to Mrs. Tobin through Mr. Tozzoli's New York Office. Also presented here is the biography of Mr. Tobin as provided by the Port Authority of New York and New Jersey. (TKD)

Message from Secretary General Dr. Sato
(telexed on February 22, 1978)

Dear Mrs. Tobin,

We are shocked to learn today from the Port Authority of New York and New Jersey of the sad news about Mr. Tobin.

Our Secretary General Emeritus Mr. Toru Akiyama, and all my staff in the IAPH Tokyo Head Office express our deepest condolences on his passing.

Mr. Tobin, as a key member and the initiator and the first Chairman of the Special Committee on International Port Development of this Association, was always active covering every major assemblies during the Association's formation years until our 8th Biennial Conference in Amsterdam, 1973.

His achievements in the history of IAPH will long be remembered by all members, who regardless of those who had the privilege of associating with him or not, knew well of his greatness.

His most untimely death is keenly felt by all of us and we would like you to know how the members of the Association value his great services and contribution.

With deepest sympathy,

Hajime Sato, Secretary General
The International Association of Ports and
Harbors

AUSTIN J. TOBIN, Biography

For more than 45 years Austin J. Tobin devoted his skills and energy to the daily operations and long-range planning of The Port Authority of New York and New Jersey. In 1927, Mr. Tobin joined the staff of the agency, known then as The Port of New York Authority, as a law clerk, was appointed Assistant General Counsel less than ten years later, and became Executive Director in 1942. He retired from that post in 1972.

In 1927, the Port Authority had a staff of only 300 and no transportation or terminal facilities. By the close of Mr. Tobin's tenure as Executive Director, the Authority employed a staff of 8,000 and had invested \$2.6 billion in 25 public land, sea and air terminals and facilities of commerce.

Under Austin Tobin's guidance the Authority moved ahead with vigor and foresight in developing and improving transportation facilities in the Port District. It completed the second and third tubes of the Lincoln Tunnel; added a second level to the George Washington Bridge; undertook responsibility for the financing and development of the four major airports of the metropolitan district—Kennedy International, Newark, LaGuardia and Teterboro; built Manhattan's first commercial heliport, the Port Authority-West 30th Street Heliport, as well as the Downtown Heliport in the Wall Street area; and built the Port Authority Bus Terminal, the largest in the world, in midtown. It also carried forward some of the greatest marine development projects ever attempted—transforming two-and-a-half miles of dilapidated Brooklyn waterfront into a gleaming and bustling marine terminal; reconstructing docks in Hoboken; developing Port Newark into a model seaport; creating out of swampy marshland the spectacular 1,000-acre containership terminal at Elizabeth; designing and constructing a passenger ship terminal along the Hudson River in mid-Manhattan.

In 1962, the Port Authority, in accordance with legislation enacted by the States of New York and New Jersey, acquired and began operating the former Hudson and Manhattan Railroad, a rapid transit system between New York and New Jersey, as the Port Authority Trans-Hudson (PATH) System. Under the same legislation, the Port Authority also began developing The World Trade Center on a 16-acre site in lower Manhattan.

During Mr. Tobin's tenure, nine Port of New York Trade Development Offices were established—five in the United States and four overseas—to furnish a wide range of services to shippers and others engaged in international trade.

Mr. Tobin's retirement in March 1972 marked the end of an era, an era recognized by joint resolution of Governors Cahill and Rockefeller and the Port Authority Board of Commissioners. That tribute expressed "their esteem and admiration for, and on behalf of the people of the Port District, their gratitude to Austin J. Tobin for his contributions and dedication in the service of the two States . . . during his 45-year career as one of the outstanding public administrators of our time."

Upon his retirement, Mr. Tobin joined the staff of the International Executive Service Corps, a non-profit private organization that provides managerial and technological advice to developing countries. He served with great

distinction on five important assignments in Singapore, Taiwan, Guatemala, Nigeria and Israel, and was one of the organization's most effective executive recruiters.

As Chairman of the Committee of International Port Development of the International Association of Ports and Harbors, he took the lead in establishing a program of port-to-port assistance to promote international commerce and good will.

Mr. Tobin holds honorary degrees from Adelphi College, Tuskegee Institute, Stevens Institute of Technology, Pace College and St. Peter's College. His outstanding stewardship both as a creative planner and as a distinguished public servant was recognized by the Commissioners of the Port Authority when they awarded him the first Howard S. Cullman Distinguished Service Medal in 1957. In 1962, the Downtown Lower Manhattan Association awarded him its William Randolph Hearst Gold Medal. That same year, the American Management Association and the American Society of Mechanical Engineers honored him with the Henry Laurence Gantt Medal. The Citizens Budget Commission paid tribute to his contributions to the community at large by the award of its Annual Bronze Medal in 1963.

In 1966, Mr. Tobin received two important civic awards: the Gold Medal of the Hundred Year Association of New York for "outstanding achievement for the advancement of New York," and the West Side Association of Commerce's New York City Award "in recognition of distinguished service to the civic welfare of New York City." In 1967, he received the Distinguished New Yorker Award from The City Club of New York.

Mr. Tobin also has been honored by the Government of France, which awarded him the Cross of Knight of the Legion of Honor in 1957 and the rosette of Officer of that Order in 1971, and by the Government of Italy, which conferred upon him that country's Order of Merit in 1966.

Born in Brooklyn in 1903, Mr. Tobin was graduated from Holy Cross College and received his law degree from Fordham University. He is married to the former Rosaleen C. Skehan. They live at 200 East 66th Street in New York City, and also have a home in Quogue, Long Island.

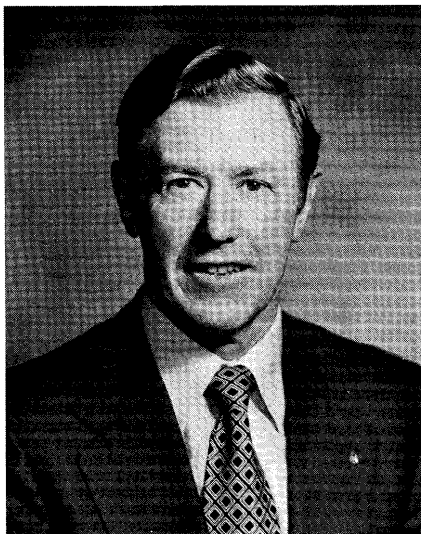
Mr. Tobin has a son, Austin Jr., an investment banker, and a daughter, Stacy (Mrs. Martin Carmichael), from his first marriage to the former Geraldine Farley, who died in 1966.

Mr. J.M. Wallace, Sydney, Newly Appointed Executive Member

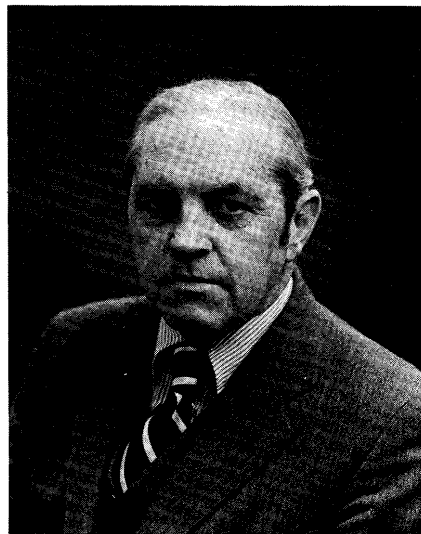
President Altvater under the date of February 7, 1978, appointed Mr. J.M. Wallace, President of the Maritime Services Board of N.S.W., Australia, to serve on the Executive Committee of this Association succeeding Mr. A.J. Peel who has left the position of Director of Harbours and Marine Queensland, and has consequently vacated his position as Member of Executive Committee due to his recent appointment to Auditor-General for Queensland.

In connection with Mr. Peel's new appointment, the Head Office was advised by Mr. R. Brokenshire, Secretary, The Association of Australian Port and Marine Authority, that, effective from February 2, 1978, Mr. A.S. Mayne, Melbourne Harbor Trust Commissioners, succeeded Mr. Peel as the President.

Mr. Wallace is expected to assume Mr. Peel's responsibilities also as a member of Finance Committee and Constitution and By-Laws Committee, though the final



Mr. J.M. Wallace



Mr. Patrick J. Falvey

confirmation of his acceptance will be obtained at the coming Mombasa meetings in April. (TKD)

Chairmanship of Legal Counselors Transferred to Mr. Falvey from Mr. Rooney

In accordance with the appointment made in Houston at the 10th Conference of the Association, April last, Mr. Patrick J. Falvey, General Counsel, The Port Authority of New York and New Jersey, took over Mr. J. Kerwin Rooney's responsibility as Chairman of Legal Counselors, effective from January 1, 1978, following Mr. Rooney's retirement from Port of Oakland at the end of 1977.

Mr. Rooney has exerted his endeavors for the formation of the Association and further to its developments since the very beginning until today, and as President Altwater commented in his recent letter to him, has been "a tower of strength to IAPH" helping formulate the continuing growth of the Association.

He was elected an Honorary Member of this Association at the 10th Houston Conference in April, 1977.

At this juncture, the new and the retiring Chairman both sent in their messages to the Association members which, the Head Office, with heartfelt thanks and appreciation, passes on to the reader hereunder. (TKD)

Message from Mr. Falvey:

"I was pleased to be notified of appointment as Chief Counsel for The International Association of Ports and Harbors following the retirement of the eminent and affable Kerwin Rooney.

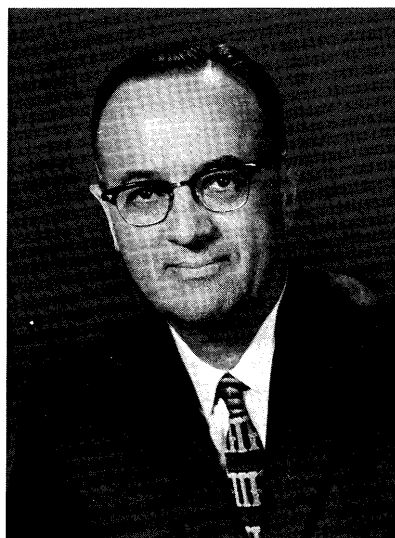
"I would be delighted to serve and trust that I will be a suitable successor to our good friend, Kerwin.

"I will be attending the Executive Committee meeting in Mombasa and look forward to meeting and working with all the members of IAPH and its wonderful constituency."

Message from Mr. Rooney:

I was honored and privileged to have been Chairman of Legal Counselors for the past several years. Having attended nine of the ten Conferences dating back to the first one in 1955, several Executive Committee meetings, have had the opportunity to see the Association overcome adversity and develop into a truly useful and dynamic international organization. I shall miss the wonderful friendship formed but shall try to remain active as Honorary Member, including attendance at Mombasa Executive Committee meeting.

My best wishes go to my successor, Mr. Patrick J. Falvey, the Officers and Staff of the Association. Regards, J. Kerwin Rooney—Feb. 27, 1978.



Mr. J. Kerwin Rooney

PIANC - International Commission for the Reception of Large Ships Meeting Observed by IAPH Representative

Thanks to the good offices of Mr. J. Dubois, Director-General, Port of Le Havre Authority, France, Mr. R. Bidet, Engineer and Secretary of the Port Authority attended the PIANC meeting of International Commission for the Reception of Large Ships (ICORELS) held in Brussels on December 8th, 1977 representing IAPH and contributed the following report for the benefit of our members and readers.

P.I.A.N.C.—ICORELS

Meeting of December 8th, 1977—Brussels—Belgium

Were present:

Mrs. C. VAN DER BURGT—Chairman of the commission,
H. VAN DER VELDEN—Secretary General of PIANC,
H. DE JONG—Secretary of the Commission,
T. REKONEN—Finland—Helsinki,
R. CHIGNARD—France—Marseille,
H.D. HOFT—Federal Republic of Germany—Hamburg,
H. VAN DER TUIN—Netherlands—Dordrecht,
Prof. F. VASCO COSTA—Portugal—Lisbon,
A. BOHLIN—Sweden—Gothenburg,
A. STEENMAYER—U.S.A.—Fred. HARRIS.

Observers:

International Association of Ports and Harbors:
— R. BIDET, Engineer, Secretary General of the Port of Le Havre Authority,
International Association of Lighthouse Authorities:
— L. RIBADEAU-DUMAS, French Lighthouse Service, PARIS.

This meeting, 6th of ICORELS, was held at the head office of the Association, 155, rue de la loi in Brussels, on December 8th, 1977.

Working Group I (Ports availability)

Prof. VASCO COSTA, co-ordinator of the Working Group takes stock of works done. 16 replies came in further to the enquiry undertaken among 33 harbours into "operation limiting conditions".

He mentions the difficulties pertaining to the reliability of meteorological forecasts, especially swell, wind, visibility.

After having debated a long time, it appears that draft-report requires amendments, rectifications and additions. Appendices IV and V will be re-inserted in the text.

The report will have to be debated again at next meeting.

Each report is required to hold all recommendations together regarding concrete results and studies to be proceeded with.

Working Group 2 (radioelectric aids to navigation)

The report was reconstructed further to the meeting between W.G.2 and W.G.4. which was held on June 16th, 1977 in Paris.

Main subject of the debate consisted in the interest there would be in recommending steps to be taken for the co-ordination and compatibility of aboard equipments with land equipments. The report of this Working Group showed that ICORELS had some difficulties in pointing out a

preference for such or such system. Several systems are already compatible.

Speaking on behalf of I.A.L.A. and of I.A.P.H., in agreement with Mr. BIDET, Mr. RIBADEAU-DUMAS stressed 2 points:

- various systems being incompatible are to be found in different countries for they answer to different needs (fishing, general navigation)
- the COLS has undertaken an inquiry into the port supervisory centres operating over the world.

The undersigned mentioned that during the COLS meeting held, 13-15 September 1977, in New York, it had appeared to be wished to recommend that all ships above a very low tonnage are provided with a V.H.F. device and that every ship above 20.000 dwt is provided with 2 radars. Thus, as regards this matter, the opinions of both commissions are identical.

In short, provided that some slight alterations are made which could be dealt with by mail, report of this working group can be made known.

Working Group 3

(reception and treatment of oily waste disposal)

Working Group 3 has achieved its work that will be made known in the P.I.A.N.C. report.

Working Group 4 (strait channels and fairways)

Draft report is now fully written and includes:

- up-dating of the recommendations of W.G. 2 of the previous commission,
- review of the present state of knowledge on approach channels,
- sea straits,
- dredging equipments and use.

As many works are being carried out at the moment and as considerable developments have been realised, they decided to "freeze" the report on the basis of information gathered in June 1977.

The report will be revised by Working Group in February 1978 then studied again during next session of the commission.

Working Group 5 (sea island)

There is a problem because of differences of opinions between Working Group 5 of ICORELS and the wave commission (presided over by Mr. LARRAS) other commission of P.I.A.N.C.

This report will not mention the expression "sea state" but "wave characteristics". As the commission does not deal with works, this expression will simply be described in note as a resultant of wave height, length, their period, their spectra, etc. . . .)

The description refers to works of wave commission.

As regards future works, the commission recommends a light structure (3 or 4 members) where would be studied the reports drawn up by national or technical sections about events of the moment, this system being much more set on the direct action.

Next meeting of the commission will be held in ANVERS, at the end of May, at a date to be fixed by the chairman.

WATCH THE CLOSING DATE OF IAPH AWARD SCHEME

JULY 31, 1978 is the Day.

AWARD SCHEME

How could the efficiency of your port be improved ?

**Your answer could win you US\$ 500 in cash
plus**

**An invitation, including travelling costs up to max. US\$ 2,000,
to attend the 11th Biennial Conference of IAPH
May 1979, Le Havre, France.**

**IAPH invites entries for its 1978 Award Scheme from those working
at all levels in ports or port related enterprises in developing countries.**

Conditions for entry

1. Suggestions regarding how the efficiency of your port (or ports in general) could be improved should be presented in English, typewritten, and submitted to the Secretary General, The International Association of Ports and Harbors, Kotohira-Kaikan Building, 2-8, Toranomon 1-chome, Minato-ku, Tokyo 105, Japan.
2. Suggestions may cover any aspect of the administration, planning or operations of ports, such as improving productivity or the utilization of equipment and storage areas, reducing delays and damage to cargo, etc. An attempt should be made to quantify the benefits which would result from the suggested improvement together with the costs (if any) involved.
3. Entries may be submitted either by individuals or small groups.
4. Entries will be judged by a panel of experts appointed by the Executive Committee of IAPH.
5. The First Prize for the winning entry will be:
 - (i) A silver medal from the IAPH.
 - (ii) US\$500 (or the equivalent in local currency).
 - (iii) An invitation, including travelling costs up to max. US\$2,000, to attend the 11th Biennial Conference of IAPH, May 1979 in Le Havre, France.
6. In addition to the First Prize, Second, Third and Fourth prizes of US\$400, US\$300 and US\$200 will be offered to the next best entries.
7. Additional prizes of US\$100 each will be offered to any other entries judged by the panel to be of a sufficiently high standard.
8. A winning entry may be subject to publication in the Ports and Harbors Magazine.
9. The closing date for receipt of entries is 31 July 1978.

IMCO Reports by Mr. A.J. Smith

Mr. A.J. Smith, IAPH Liaison Officer with IMCO in his February 10, 1978 letter, contributed the IMCO reports on the meetings of IMCO's Assembly, Marine Environment Protection Committee, Legal Committee and Sub-Committee on the Carriage of Dangerous Goods. He further suggested that IAPH participation should more be promoted in the IMCO activity in the lights of the significance of issues that are to be discussed by IMCO, in particular the debates on dangerous goods and items of importance on the long-term programme of IMCO. His suggestions will be considered by the forthcoming meeting of Executive Committee in April at Mombasa.

The followings are reproduction of Mr. Smith's reports on IMCO activities, to be followed by his suggestions, together with "general layout" of Recommendations on Safe Practice on Dangerous Goods in Ports and Harbours which is being prepared by IMCO Committee on the Carriage of Dangerous Goods. (rin)

I. Assembly

The 10th session of the Assembly of IMCO was held in London from 7th to 18th November, 1977, under the Chairmanship of H.E. Shaikh Saud Nasir Al-Sabah (Kuwait).

Amongst the 39 Resolutions adopted by the Assembly were a number which have particular interest for port authorities. As follows:

- A 380 (x) Standard Marine Navigational Vocabulary.
- A 381 (x) Plan for the Establishment of a World-Wide Navigational Warning System.
- A 388 (x) Recommendation concerning Tonnage Measurement of Ballast Spaces in Segregated Ballast Oil Tankers.
- A 389 (x) Interim Scheme for Tonnage Measurement for Certain Ships.
- A 390 (x) Procedures for the Control of Ships under the International Convention for the Safety of Life at Sea, 1960 and the International Convention on Load Lines, 1966.
- A 391 (x) Procedures for the Control of Discharges under the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, as amended in 1969.
- A 398 (x) Approval of Reports of Committees.
- A 399 (x) Recommendation on the Issue by Governments of Information on Documentary Requirements and Other Formalities applicable to the Arrival, Stay and Departure of Ships engaged in International Voyages.
- A 400 (x) Amendments to the Convention on the Inter-Governmental Maritime Consultative Organisation.
- A 405 (x) Long-Term Work Programme of the Organisation.
- A 407 (x) Review of the List of Non-Governmental Organisations in Consultative States.

Details of these and other Resolutions should be readily available from National Delegations to IMCO. It may be helpful to IAPH members however to draw attention to

some of the subjects included in an indicative list for consideration by the various IMCO Committees for the period up to 1984, which have particular significance for the international port community. As follows:—

Handling in ports of liquid chemicals and liquefied gases in bulk.

Updating of recommendations on the Safe Practice in Handling of Dangerous Goods in Ports and Harbours.

Matters relating to the 1972 Convention on the International Regulations for Preventing Collisions at Sea.

Requirements of training and qualifications for seafarers. Manning from the point of view of safety.

Possible convention on wreck removal and related issues. Possible convention on the regime of vessels in foreign ports.

Arrest of sea-going ships.

Possible review of the CMI "Brussels" Convention.

Various problems associated with the 1973 Marine Pollution Convention including reception facilities at ports.

Formalities connected with the arrival, stay and departure of ships, persons and cargo.

Technical Assistance Programmes.

II. Marine Environment Protection Committee

The Eighth session of the Committee was held in London from 5th to 9th December under the Chairmanship of Mr. Per Eriksson (Sweden).

Having regard to the fact that the 1969 Amendments to the 1954 Oil Pollution Convention take effect from 20th January 1978, IAPH members will be interested to know that the text of the Procedures for the Control of Discharges under these Amendments will be issued as an IMCO publication along with the Control Procedures under the SOLAS Convention.

The 1969 Amendments have also given rise to a revision of the form on which reports are made of inadequate reception facilities at ports. Members would no doubt find it helpful to receive an early indication from ship masters of special problems encountered by them at ports.

The Committee has approved guidelines on reception facilities for sewage. The guidelines for garbage however will not be finalized until the next session. Both sets of guidelines will then be published in one booklet. The draft format for the new publication on Facilities in Ports for the Reception of Oily Wastes from Ships was also approved.

Mediterranean States which have met difficulties in ratifying the 1973 Marine Pollution Convention will be heartened by the decision of the Committee to implement a proposed feasibility study in the near future on reception facilities for selected ports in the Mediterranean.

The Committee discussed the progress made in developing and implementing projects for providing technical assistance to developing countries, in the field of prevention, control and abatement of marine pollution. IAPH members wishing details of this assistance should be advised to contact their national delegations to IMCO.

Further consideration was given by the Committee to drafts of sections of the comprehensive anti-pollution

manual; section II dealing with contingency planning should be finalised at the next session which will be held in London from 1st to 5th May, 1978.

III. Legal Committee

The 34th Session of the Legal Committee was held in London from 9th to 13th January 1978.

The principal item under consideration—and one of particular importance to the international port community—was a proposal for a new draft convention on liability and compensation in connection with the carriage of noxious and hazardous substances by sea.

To progress matters the Committee looked at the scope of the draft Convention (including the risks to be covered and the nature of damage arising from such risks); the party to be held liable for damages; and the nature and extent of the liability to be imposed.

Scope

As to scope the Committee noted that there was a need to ensure that the opportunities for recovery should be as broad as possible consistent with the capacity of the insurance market to cover risks. The aim of the Convention should be to ensure that the primary victim, and the government or other authority engaged in preventive or abatement measures, should be compensated for damage whether or not it resulted from an exceptionally hazardous substance or a catastrophe associated with it.

With that aim in mind the Committee concluded that the scope of the draft Convention should assume that pollution of the environment, toxicity in respect of human and living resources of the seas, fire and explosion would be the risks to be provided for; a list should be prepared of a limited number of substances of exceptionally destructive capability related to each of those risks.

No decision was taken at this time on the question of the inclusion of specialised vessels carrying dangerous cargoes within the draft Convention.

Party liable

The Committee expressed a number of views as to the determination of the party liable through the issue of whether the shipowner would be an optional defendant or would always be proceeded against by the claimant was left undecided. It was generally thought however that the shipowner should be primarily liable only to the limits set by the 1976 Limitation Convention.

It was noted in this regard that smaller cargo vessels might give rise to large-scale damages and, in view of their modest tonnage, leave victims uncompensated in cases where no higher limitation fund had been created or liability imposed on the shipper or manufacturer.

Various options still require to be considered. The draft convention could provide for actions against the shipowner up to the 1976 Convention limits; against the shipper either alone or for amounts additional to those provided in the 1976 Convention; against the shipper for damages with possible recourse actions and limitation and similarly against the shipowner.

It was very interesting to note that there was a substantial sentiment in favour of measures that would ensure preventive as well as curative aspects of the prospective system of liability and compensation. It was even suggested that the convention might include penalties

by way of liability when dangerous substances were not properly identified, packaged and labelled in break-bulk shipments.

The nature of the liability

Further study is to be given to the problem of the nature of the liability if it were distributed between the vessel and cargo interests such as a fault-based liability for the shipowner or operator and strict liability on the cargo; or strict liability for both with recourse as to the method of distributing the financial burden.

Extent of the liability

There is a general view that it would be appropriate to provide for a limitation of liability so far as the shipowner is concerned. Cargo interests are regarded somewhat differently.

It was generally recognised that catastrophes could neither be dealt with by way of unlimited liability nor the regime of the 1976 Convention. The latter was unsuitable because of the relatively low limits established for small ships and the former because it would tend to be counter-productive by driving the persons liable out of business without entitling compensation of the victims. It was felt that where catastrophes occurred government assistance would still be required for the victims.

Amongst other matters, the Committee touched briefly on the geographic scope of the prospective convention and the parties entitled to compensation. A view was also expressed that a restriction to recovery for damage arising outside the ship should not be applied without some consideration for the equitable treatment of innocent victims involved in services demanding their presence from time to time on board ships such as pilots, port officials and stevedores.

Further consideration will be given by the Legal Committee to the proposed new convention at its 37th session to be held in London from 20th to 24th November 1978.

IV. Sub-Committee on the Carriage of Dangerous Goods

The 28th session of the Sub-Committee on the Carriage of Dangerous Goods was held in London from 16th to 20th January, 1978 under the Chairmanship of Mr. C.H. Buschmann (Netherlands).

The priority item for discussion at this session was that of amendments to the recommendations on safe practice on dangerous goods in ports and harbours.

Having submitted a detailed paper for consideration by the Sub-Committee it was appropriate that IAPH be represented on an ad hoc Working Group set up by the Sub-Committee to progress the matter.

Related papers and notes were also submitted by the Federal Republic of Germany, Japan, Netherlands, Poland, Sweden, United Kingdom, United States, and U.S.S.R.

In the time available it was only possible for the Working Group to establish a general layout for the presentation of the amended recommendation. This is set out in an appendix for the information of IAPH members.

It will be noted that the term "Dangerous Goods" is used in its broadest sense and includes reference to both Bulk and Packaged requirements.

Having approved the layout the Sub-Committee considered it desirable to progress the matter by means of an intersessional Working Group with participants representing

all the appropriate Sub-Committees of I.M.C.O. and also IAPH. The Netherlands delegation has indicated its willingness to host a meeting of the Group from 5th to 9th June, 1978.

V. Draft of Note from IAPH to IMCO on Carriage of Dangerous Goods

IAPH, as the representative voice of the international port community, is fully appreciative of IMCO's efforts towards making progress on amendments to the recommendations on the safe practice on dangerous goods, in ports and harbours and will continue to give its practical support to that end.

The subject matter is regarded by the ports as one of extreme importance on which guidance should be circulated as a matter of urgency.

It is noted with concern that collation, vetting and approval of the substance of the guidance would require to be carried out by the Sub-Committee on the Carriage of Dangerous Goods, the Sub-Committee on Bulk Chemicals and possibly even the Sub-Committee on Containers and Cargoes. An arrangement whereby separate action by these Sub-Committees is contemplated would, it is believed, entail unnecessary delay in the issue of guidance.

It is also noted however that the 38th session of the Maritime Safety Committee will consider inter alia the report of the 28th session of the Sub-Committee on the Carriage of Dangerous Goods.

IAPH therefore recommends that consideration be given at that time by the Maritime Safety Committee to establishing an intersessional Working Group, representative of the Sub-Committees having an interest in this subject, the aim of which should be to develop updated recommendations on the safe practice on dangerous goods in ports and harbours for early issue as guidance to ports and port users.

VI. (Reference) General Layout of Recommendations on Safe Practice on Dangerous Goods in Ports and Harbours (IMCO document)

1. PREAMBLE (to include owner's responsibilities)
2. DEFINITIONS
3. GENERAL RULES CONCERNING DANGEROUS GOODS
 - 3.0 General
 - 4 — Acceptance of dangerous goods into port areas
 - 5 — Exemption limits
 - 6 — Facilities for inspection
 - 8 — Power to remove
 - 9 — Notice [inbound]
 - 62 — Notice [outbound]
 - 12 — Berthing
 - 52 — Time limit
 - 55.2 — Buildings used for the storage of packaged dangerous goods—Availability of hazard information concerning particular parts of the port
 - 56 — Mechanical handling equipment
 - 58 — Training
 - 66 — Inland waterways

- 68 — Transfer operations
- 70.1 — Railway movements—Control of railway movements in and out of sidings
- 70.2 — Railway movements—Restrictions to be observed by locomotive crews
- 3.1 Ships (directed to the master of the ship)
 - 10 — Signals
 - 11 — VHF
 - 17 — Manning of vessels
 - 72.2 — Untoward incidents—Duty of master to inform harbour master immediately of any untoward incident
 - 18.2 — Loading and discharging of dangerous goods—General—Master's duty to keep relevant information available
 - 18.3 — Loading and discharging of dangerous goods—General—Master's duty concerning discharging ballast or slops, cleaning or ventilation of tanks or pumping of bilges
 - 22 — Supervision
- 3.2 Shore installations (directed to the berth operator)
 - 15 — Shore electricity
 - 24.4 — Fire precautions—Fire fighting facilities; access; crew training and practice; audible emergency alarm; international connexion
 - 71 — Emergency procedures
 - 72.1 — Untoward incidents—Port Authority's responsibility for the establishment of and adequate familiarity with emergency procedures
- 3.3 Handling of dangerous goods (directed to master and berth operator)
 - 16 — Lighting
 - 18.1 — Loading and discharging of dangerous goods—General—Commencement of discharging
 - 19 — Warning notices
 - 20 — Weather precautions
 - 21 — Intoxicated persons
 - 23 — Safety
 - 24.1 —
 - 24.4 — Fire precautions—Smoking and smoking signs—Carrying of matches—Precautions against explosions etc.
4. RULES CONCERNING PACKAGED DANGEROUS GOODS
 - 4.0 General
 - 25 — Packaging [inbound]
 - 26 — Marking and labelling [inbound]
 - 63 — Marking and labelling [outbound]
 - 64 — Packaging [outbound]
 - 65 — National regulations
 - 4.1 Ships (directed to the master)
 - 12 — Berthing
 - 14 — Repair work on board vessel
 - 28 — Portable electrical equipment
 - 4.2 Shore installations (berth operator)
 - 55.1 — Buildings used for the storage of packaged dangerous goods—Quality of buildings
 - 57 — Packages
 - 60 — Freight containers
 - 67 — Parking
 - 4.3 Handling of dangerous goods (master and berth operator)
 - 27 — General handling precautions

- 4.4 Categories requiring special treatment, e.g. radio-actives, explosives and unstable substances
 - 7 — Unstable substances
- 5. RULES CONCERNING BULK DANGEROUS GOODS
 - 5.0 General
 - 13 — Use of tools
 - 30 — Cargo information
 - 51 — Completion of operations
 - 5.1 Solids (to be developed)
 - 5.2.1 Ships (master)
 - 5.2.2 Shore installations (berth operator)
 - 5.2.3 Handling of dangerous goods (master and berth operator)
 - 5.2 Liquids including liquefied gases
 - 5.2.0 General
 - 29 — Certificates of fitness
 - 5.2.1 Ships (master)
 - 14 — Repair work on board vessel
 - 32 — Portable electrical equipment
 - 40 — Deck fire houses
 - 42 — Loading and discharging
 - 43 — Ship's stores
 - 44 — Cooking equipment
 - 45 — Entry into spaces
 - 46 — Gas freeing and tank cleaning
 - 5.2.2 Shore installations (berth operator)
 - 39 — Communications
 - 54 — Storage of liquids in bulk
 - 69 — Road tankers
 - 70.3 — Railways—Precautions before transfer operations
 - 5.2.3 Handling of dangerous goods (master and berth operator)
 - 31 — Testing of controls and systems
 - 33 — Compatibility of materials
 - 34 — Safety checks
 - 35 — Pumping
 - 36 — Pipelines
 - 37 — Flexible pipes
 - 38 — Prevention of leakage
 - 41 — Protective clothing
 - 5.2.4 Liquefied gases
 - 14 — Repair work on board vessels
 - 47 — Compartments to be kept closed
 - 48 — Safety relief devices
 - 49 — Loading and discharging
 - 50 — Refrigerated liquefied gas

World Port Study by U.K. Civil Servant

On February 8, Mr. Richard O. Goss, Under Secretary, Departments of Industry and Prices & Consumer Protection—Common Services of the U.K. Government, visited the Head Office and was met by Dr. Hajime Sato and his staff, enroute his three months study trip to major world ports, who had been awarded with the Civil Service Travelling Fellowship.

During his one week stay, he visited Ports of Osaka, Kobe and Yokohama as well as the Bureau of Ports and Harbours of the Ministry of Transport, and met the officials to discuss the present situations of port administration, operations and finance, and also Prof. T. Nakanishi of Waseda University and Dr. G. Takami of Yokohama Institute of Port Economies.

His study is aimed at an international comparative study of the administration and management of major world ports, to compare the ways in which certain countries administer major seaports, the ways in which those seaports are managed; to attempt to identify the best practices, as well as the methods of trade forecasting, investment appraisal, financial policy, pricing policy adopted in those world ports.

He is the authors of "Studies in Maritime Economic, 1968, Advances in Maritime Economics, 1977 which are published by Cambridge University Press.

His study covers Israel, India, Thailand, Hong Kong, Japan, Canada and U.S.A., while his second trip will cover ports of Australia and New Zealand in the latter part of this year, for which relevant members will be requested to render their assistance to the visitor, Dr. Sato says. (rin)

Membership Notes:

New Member

Associate Member

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 Western Australia
 Office Phone: (09) 381 6900
 Telex Number: AA 93107
 Cable: VOITH PERTH
 (Mr. Louis G. Schouten, Managing Director)



Baton Rouge, Louisiana, U.S.A., March 3, 1978:—The L.S.I. Hammerhead Crane (photo) is developed by Lifting Systems Inc. of this City. It is barge-mounted and will be utilized by its owners to load and unload grain and ores in the Mississippi River using a 24 cubic yard clamshell bucket. The crane is also designed to handle containerized cargo. It is designed as a 40 ton crane at a lifting radius of 90 feet.

The horizontal bridge, which has a moving counterweight, spans over 192 feet from end to end. The crane, from the barge deck to the top of the tower, is almost as high as a twelve-story building (115.5 ft.).

Course of Management in Port Operations, in Kenya

Kenya Ports Authority (Formerly known as the Kenyan part of East African Harbours Corporation) and University of Wales Institute of Science and Technology jointly organized the second Course on Management in Port Operations and Productivity, at the Oceanic Hotel, Mombasa, Kenya, from January 23 to February 17, 1978, inviting lecturers including Capt. S.H. Evans of University of Wales, Dr. R.P. Joshi of East African Community Management Institute of Arusha, Tanzania as well as Dr. A.M. Virag, UNDP Adviser in Transport and Communications, and being attended by twentyfour participants from diversified business fields of Kenya Ports Authority and Kenya Cargo Handling Services officers.

The following is the reproduction of the Opening Speech made by Mr. Joh Gituma, Managing Director: (rin)

Ladies and gentlemen, it is a pleasure for me to be with you today at the opening of the second course of Management in Port Operations organised and conducted jointly by the staff of the Kenya Ports Authority and the Department of Maritime Studies of the University of Wales Institute of Science and Technology.

The last course was opened on November the 1st, 1976 by the then E.A. Harbours Corporation Chairman. Since then a number of developments have taken place which I am sure most of you have followed with interest.

I take this opportunity to welcome Captain S. Evans the University of Wales Institute of Science and Technology Course Coordinator and his colleagues who are expected to join us during the next few days. I also wish to welcome the two Consultants from the East African Community Management Institute.

I am pleased to see that among the main speakers and lecturers during the running of this course will be those who participated in the running and organisation of the last course which was extremely successful. It is hoped that with their wealth of experience this course will prove to be even more successful.

As you are aware the immediate objective of these courses is to provide a framework within which all our middle managers can be developed to be effective managers by introducing them to the application of modern management techniques to the Port Industry.

During the last course, the University of Wales Institute of Science and Technology and Kenya Ports Authority shared the organization and running of the course on 80:20 basis. This time, I note with appreciation, this responsibility is being shared on a 50:50 basis.

In compliance with the policy of self reliance it is anticipated that the University of Wales Institute of Science and Technology contribution to the next course will be further phased out to comprise only 25% of the total input and that the following course should see our own staff running these courses without any direct overseas assistance.

I note that the main theme of this course is Port Productivity and factors influencing productivity. In order to be able to take stock of our present trend of operations we need criteria for evaluating productivity. Current com-

mon practice used to express productivity in ship working takes into account:—

- (1) Ships' working time;
- (2) Number of gangs employed and
- (3) The tonnage per gang hour/shift.

This is alright in so far as the stevedoring activity is concerned. So far as shore or terminal operations are concerned productivity can be expressed in terms of

- (1) Quay utilisation
- (2) Crane utilisation, etc.

However, what all this amounts to is that in the port we are involved in a multitude of lifting and lowering activities that shorten the distance of a particular item of cargo, between its producer or manufacturer and its ultimate consumer.

It is our duty as operators to view port operations as a system within a bigger system, that is, of transportation. We must realise that of the total transportation costs, terminal costs or port costs constitute a larger part. In the ports, the terminal ends of the sea transportation chain, the costs are composed of costs of handling goods and costs of ship's time while waiting. The greater possibilities of reducing port-costs will be found in reduction of the costs of keeping ships waiting in our ports. In other words to shorten the ship's turnaround time.

Transport costs in the long run will have to be borne by the consumer of the transport service, who will in turn pass it onto the ultimate consumer of the goods. It follows then, that any reduction in costs will benefit the ultimate consumer which is each one of us in this room and those outside and around us, in other words, the entire populace.

Towards the end of 1977 some congestion was experienced. This was caused by a number of factors important among them being, bunching of vessels, unscheduled arrivals, unusually heavy rains resulting in the loss of 71 hours 35 minutes in the month of November alone, more holidays last month as a result of holidays falling on Sundays and lack of proper and adequate offtake from the port and also a marked degree of reduced efficiency amongst our staff due to lack of adequate supervision.

I trust that during the course every effort will be made to analyse some of these factors and what part you and your colleagues ought to play to improve productivity because as most of you are aware, we have in the past been criticised for low productivity in our port.

Ladies and gentlemen, on behalf of the Chairman and the Board of Directors of the Kenya Ports Authority, I would like to thank the British Ministry of Overseas Development, (ODM) who continue to assist us in financing these courses, the Department of Marine Studies of the University of Wales for their cooperation, and the East African Community Management Institute for their resource personnel.

Let me also thank members of the Coordinating Committee who include the Deputy Managing Directors of the two Organisations, the Personnel Managers and their staff for planning and making all the necessary arrangements for the success of this course.

Lastly, the course participants. As I am sure you are aware, considerable sums of money have been invested and are being invested in the improvement of handling capacity at our port in the form of new equipment and transit facilities, we are also investing very heavily in staff training and development. In this connection, I am sure you are all aware of our Bandari College now under construction.

Optimum utilisation of these facilities, some of which will be under your supervision should be your primary objective.

At the end of this course we shall expect you to come out with practical proposals which can be tried out. Other factors allowing, go back to your work place and achieve that target of 70 tons per gang shift that has eluded us for so long.

Thank you very much ladies and gentlemen.

World's Seaport & Airport Police will meet in London, May 1978

According to the letter from Mr. K.W. Luck, Secretary of International Association of Airport and Seaport Police (IAASP), the 9th Annual Conference of IAASP will be held in London at the Tower Hotel from 22nd to 26th May, 1978.

The 1978 London Conference will also be used as a focal point for the meetings of the Association of Chief Police Officers (South East Region), the Crime Prevention Officers Conference and the Annual Meeting of the E.E.C. Association of Airport and Seaport Police.

The programme will include major presentations on the following:

1. Police Disaster Planning

It is a frightening thought but one major world airport knows that it must, by law of average, expect a major incident of one kind or another, every year. An airport of this size is, of course, geared to almost every eventuality, but this statistical probability does not mean the smallest airport can expect to come through unscathed.

2. Crime Prevention

Although lacking the galmour of crime detection, crime prevention scores because it is the most cost effective way of dealing with any crime problem. It is a subject which is broad in concept dealing not only with obvious physical considerations, but also with questions of security of systems, management involvement etc.

3. Hazardous Goods

As no airport can claim exemption from a major incident, similarly, no cargo terminal, either aviation or marine, can claim exemption from the consequence of a mishap involving hazardous goods. Not only is the quantity increasing every year, but the variety and the incompatibility of so many makes this a very real problem.

In addition to these major areas of study, time will also be given to four matters for special consideration, as follows:

a. Civil Aviation

An introduction to International Civil Aviation, aimed at familiarising an airport police officer with the unique aspects of his operating environment.

b. Terrorism and Sabotage

A discussion on marine terrorism and an examination of the preventive and combative measures which can be taken against sabotage and terrorism in ports generally.

c. Insurance

An appraisal of international aviation and marine crime and its effects on the insurance market, with particular reference to areas where there could be increased co-operation and mutual assistance between police and insurers.

d. Criminal Intelligence (Police Officers only)

A study of criminal intelligence methods both national and international and an examination of possible improvements in international co-operation in this field.

For further information, please write to:

The Secretary, IAASP

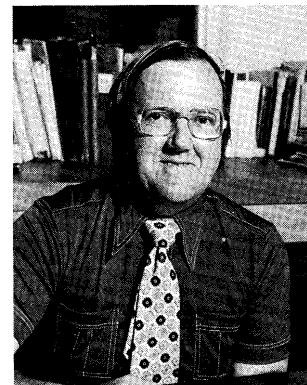
Port of London Authority Police Headquarters

Gallions Entrance, Royal Albert Dock,

London E16 2QD, England (rin)

Australian Study Paper on "Cyclonic Surges and Their Effects"

Through the good offices of Mr. A.G. Field, Chairman of Townsville Harbour Board, this office was given with a copy of the above paper which was prepared by Prof. K.P. Stark, Professor of Systems Engineering, Head of Department, Civil and Systems Engineering, James Cook University of North Queensland and was presented at the 31st Conference of the Queensland Harbour Board's Association held at Magnetic Island on August 31, 1977.



Prof. K.P. Stark

In this twenty-five page paper, he discusses cyclones from various angles, including terminology, structure & dimensions, the eye, floods, wave and surges, being backed up simulation of storm surges at numerous coastal locations of the area. He further discusses design philosophy, protection-front line of defence to cope with the possible disasters generated by the cyclones.

Prof. Stark's recommendations and conclusions are as follows:

"I have presented these recommendations in a number of places but I feel they are well worthwhile repeating. Cyclones are natural phenomena which can wreak untold havoc in communities which are unprepared. If adequate precautions and carefully detailed planning are undertaken on a long-term basis and if civil defence organisations are alerted to cope with emergency evacuation plans then there need be no unnecessary loss of life in the event of even the most intense cyclones . . .".

Those who are interested to obtain the full text of this paper, please write to:

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Review of Port Development in ESCAP Region

With reference to the report in the previous issue on the recent ESCAP meeting on Shipping, Transport and Communications, which was contributed by Mr. David Low, Officer, Charge d'Affairs of Singapore Embassy in Bangkok who had observed the above meeting on our behalf, we introduce hereunder the present review for 1977 of the port development in ESCAP region from among the ESCAP document entitled "Review of Developments in Shipping, Ports and Inland Waterways" (E/ESCAP/STC.1.31.). (D.S.G.)

PORT DEVELOPMENT

There has been a continued upswing in the modernization of ports in the region. Some have added to already well-advanced infrastructures, whilst others have been obliged to conform to modern innovation, partly brought about by the need to increase main-line unitized load factors. The ports in ESCAP countries have made progress either in physical construction, redevelopment, rehabilitation, or project planning and surveys. An attempt is made in this section to highlight the developments of some of the ports in certain countries in the different subregions of ESCAP.

EAST ASIA

China

To modernize the seaports in China, programmes were initiated by the Government at the major ports, resulting in the construction of 40 deep-water berths capable of handling vessels of over 10,000 dwt.

In Shanghai, the country's largest port in terms of tonnage handled, a reconstruction programme is under way which, when completed, will increase the number of berths at the port to 52. Large quantities of silt had been removed from the harbour mouth since 1974, to permit entry of vessels of 25,000 dwt, formerly possible only during high tides. Cranes and other equipment are being increased in both size and number, and mechanization of cargo-handling is under progress. A special berth for chemical fertiliser is in the process of construction. There are also plans for the construction of a container terminal.

In Dairen, an oil wharf capable of handling 100,000 dwt tankers was newly constructed in conjunction with the Taching-Dairen oil pipeline. This facility ensures berthing for the 100,000 dwt tankers recently purchased from Japan. Completion of projects has continued under difficult circumstances during the past year, not least the Tangshan earthquake, which closed the port of Hsinkang (China's second largest port) for more than a month.

Two northern harbours, Talien and Lusun, are being developed especially for petroleum exports from the country's rapidly-expanding oil fields. Both ports are expected to be able to accommodate tankers of between 50/100,000 tons. In Talien, the volume of freight moving through the port has increased considerably, with coal, petroleum, grain, ore and timber predominating.

Chinhuangtao, in Hopei province, has diversified its cargo throughputs considerably; the port was primarily one of the country's main coal ports. It is now receiving over 500 foreign vessels every year. Tankers of 20,000 tons can

be accommodated at two berths, where loading of crude oil, originating from the oil fields at Taching via a 1,000 km pipeline, is undertaken through modern facilities.

The Hsinkang port has also made substantial progress. New construction includes two berths for 5,000 dwt vessels, five berths for 10,000 dwt vessels and a bunkering pier for similar-sized vessels. Work on two berths for 35,000 dwt vessels is nearing completion.

Tsingtao, in Shangtung province, is being expanded and in Lienyunkang a coal-loading facility for ships up to 10,000 dwt is nearing completion.

The ports of Whampoa, Chang Chian and Mawei in the south are undergoing modernization, but for some time to come a considerable quantity of China's exports from the south will move through Hong Kong, particularly those goods suitable for containerization. A proposed rail-link from Shantin in Hong Kong's new territories to the container terminal at Kwaichung will enable Hong Kong to handle China's goods more efficiently.

Hong Kong (Kwaichung Port)

The container facility taken up for construction at Kwaichung port in Hong Kong three years ago is now completed. It provides a total of six berths, giving over 6,000 linear ft of frontage and 120 acres of cargo working space.

Early in 1976, a locally constructed mobile floating ro-ro ramp was put to use, although a fixed ro-ro ramp has been established for some time at a West Kowloon pier.

On Tsing Yi Island, two new tanker facilities are to be provided. A large chemical manufacturing company has established a plant on the island. With the reorganization of the harbour mooring systems, due for completion in 1977, improved moorings for 73 vessels will be provided. The current dredging programme in the central fairway is expected to result in a depth of 36 ft being achieved.

Republic of Korea

The total berth capacity in the Republic of Korea has been increased during the past decade from 63 berths handling about 10 million tons of cargo to 93 berths handling simultaneously 50 million tons of cargo. In another 10 years, the total berth capacity is expected to increase to 150 berths, with a throughput of 180 million tons.

The premier port of Pusan is being completely redeveloped, and port facilities are being improved with a stress on containers.

The second important port, Incheon, opened a new dock in 1974 capable of accepting 50,000 dwt vessels at all tides. The port has berths for 18 vessels. There are plans to increase the port's cargo handling capacity to give a throughput of 11 million tons per annum by 1980, mainly to be achieved by building additional quays to give a total capacity of 35 berths. There is also a \$US 12 million facility for handling grain.

SOUTH EAST ASIA

Burma

The country's main port of Rangoon has, in recent

years, encountered severe silting problems and entry to the port has been very much restricted. A river survey was carried out in 1975 with the aim of dredging a 21-mile access channel from the Bay of Bengal to the port.

Indonesia

The ports in Indonesia are classified into five different categories, according to the basic facilities and services offered; for example, according to their suitability for coastal craft (inter-island trade) or ocean-going traffic. The ocean-going ports are further classified depending on their commodity traffic, general cargo, oil, etc. and other factors.

Jakarta (Tanjung Priok): Indonesia's largest general cargo port, Tanjung Priok, is being considerably expanded at a project cost of \$US 79.3 million, of which over 40 per cent is in the form of a loan from the World Bank, repayable over 20 years with a 4-year grace period, carrying an interest at 8.7 per cent per annum. The enlarged port will provide facilities for handling an increased volume of containerized cargo, and will reduce the turn-round time of container ships and encourage the use of larger, more efficient ships. The project also includes the on-going government-financed construction in Basin III (East) and provides for back-up facilities, container handling and other equipment, 545 metres of new general cargo berths, improvement in land access, 500 houses and related services, consultancy services, technical assistance and measures to improve cargo-handling efficiency. The project is scheduled for completion in 1979.

Belawan, Sumatra's main port and the third largest in Indonesia (which currently handles one million tons of liquid cargo and two million tons of general cargo annually) is under expansion. Following completion of phase I expansion, its annual capacity is expected to reach 4 million tons. This project, which is the first step in the over-all development of the port, will provide urgently-required quay space, including five berths for ocean-going vessels, dredged initially to 10.5 metres, with an ultimate design depth of 11.5 metres. All berths will be equipped with large transit sheds. The project requires extensive dredging and reclamation and will entail a programme of comprehensive hydraulic investigation. It is being financed under a loan from the Asian Development Bank, whilst local currency costs will be met by the Indonesian Government. Documentation and pre-qualification of contractors will be completed during mid-1978.

During the past year port rehabilitation, upgrading and extending have been undertaken in Indonesia, at the country's main ports of Tanjung Priok, Belawan and Surabaya. Feasibility studies for a port master plan covering these ports is under way; should plans be approved, work can start in 1977. Plans for container traffic development in the next few years will also include the construction of special berths in these three ports. The construction of two quays in Tanjung Priok with 400 m footage is now under way and both should be in operation this year.

Malaysia

Port Kelang: The port now has a 2,500 ft deep-water wharf and a 2,800 ft wharf for container vessels. In phase one of the North Port development, due for completion this year, a new 1,400 ft bulk cargo berth with a 70-acre tank farm has been built together with a 2,100 ft general cargo and container berth which also includes a 70-acre stacking yard behind it. The second phase, set for the next

two years, involves the construction of another 2,100 ft wharf for general cargo and a special wharf to expand the present roll-on/roll-off facilities, a timber wharf and a new bunkering centre.

In Penang Port, the Butterworth berth is being extended. A large mobile gantry crane has been ordered and will be delivered in the near future.

At Kuantan, on the east coast of Peninsular Malaysia, a deep-sea port is presently under construction.

At Sibu port, facilities created are considered to be sufficient until 1990, a new 1,000 ft x 69 ft wharf extension with two storage sheds totalling 76,000 sq ft having just been completed. Currently cargo-handling capacity at Sibu is 175,000 tons per year, but expansion will increase this to 450,000 tons per year.

At Kuching in Sarawak, a recent extension is expected to increase the port capacity from 300,000 tons to 650,000 tons per annum. Master plan studies are also being made for Tanao, Kota Kinabalu, Sandakan, Lahad Datu, Kudat, Semporan Kunah and Labuan. The latter port supplied lay-up berths for large tankers hit by the recent world recession. The new port development at Tanjung Kedunong is not expected to be operational until March 1980. These developments, however, are primarily based on a \$US 1.2 million LNG plant at Bintulu. It is anticipated that the port will also cater for timber products and oil in bulk.

Philippines

A previous development plan, launched in 1974, will be completed this year. It was financed by \$US 26.98 million in foreign loans plus a considerable amount from domestic sources, and involved the modernization of the four principal ports of Manila, Cebu, Cagayan de Oro and Davao.

In Manila, the 1974 expansion plan provided 16,750 m² of marginal wharf, 3,422 lineal metres of bulkhead frontage and breakwaters and 51 hectares of reclamation, to meet the increasing container traffic. The existing container wharf at Manila can handle container feeder vessels (CFVs). Currently, back-up equipment consists of one "tango" crane and one track-driven container crane. One ro/ro ramp is also available, presently serving Australian and Japanese ro/ro operation. Generally the much needed port improvements have been initiated, particularly around the southern harbour area.

The role of the recently constituted Philippine Port Authority is to integrate and co-ordinate port developments at the national level, and its first task has therefore been to prepare a Philippine port development programme.

The Manila master plan study will cost about £ 7 million (\$US 0.95 million), of which £ 5.1 million (\$US 0.7 million) is the foreign currency component. Execution of the study is expected to take about one and a half years.

Another development study, namely, the "Third IBRD Port Package Review", with the following locations, Zamboanga, Iloilo, Puerto Princesa, Butuan/Nasipit, Cebu, Cagayan de Oro (Phase II) General Santos (Phase III) Tabaco, Legaspi, and Batangas consists of reviewing, evaluating, and updating the feasibility studies of the ports mentioned.

Singapore

A deep-water port is proposed at Changi near the new airport, as it is estimated that by 1980 containerized cargo will account for 50 per cent of Singapore's seaborne freight; and the container terminal is expected to handle 450,000

TEUs annually. Work will commence shortly to increase the number of full container berths at the port of Singapore from three to five. The two new berths will be fully operational in 1978 and 1980 respectively. Singapore also has a berth for container feeder vessels.

In Jurong port, harbour extension is being undertaken, which will add 800 metres of berths for ocean-going vessels.

Thailand

Bangkok port (Klong Toi) has recently provided container facilities. For feeder services, no container gantries are used, but a 127-ton capacity crane will be provided shortly by private industry to supplement three mobile cranes already in use. Two berths are currently working, whilst two more were available at the end of 1976. One "tango" crane has been ordered for delivery in mid-1977. Currently CFVs serving Bangkok have been non-self-sustaining.

Bangkok port has considerable draft limitations and fully laden, large vessels are obliged to commence discharge or complete loading seaward of the main sandbar at Kohsichang. Klong Toi harbour is being further developed with the construction of two more general-purpose berths and two container berths, capable of handling 200,000 and 500,000 tons of cargo a year respectively. Fully cellular operations are still confined to self-sustaining feeder vessels, mainly serving Singapore and Hong Kong. However, the port lacks a container gantry crane and other handling equipment.

The Port Authority of Thailand (PAT) is currently surveying a suitable site for a deep-sea port in Amphoe Si Racha (in the province of Chon Buri), which would handle commercial traffic, including tankers, of more than 10,000 dwt (which is beyond Bangkok Port's capacity at present).

In the five southern ports of Kantang, Songkhla, Pattani, Phuket and Bandon, the initial development stages have been completed and the Thai Harbour Department has now outlined the next stage of the work to be carried out. This will involve deepening the channels at Bandon and Krabi, whilst at Phuket the channel into the Aow Makhham harbour will be dredged to 9.6 metres and the privately-owned harbour will be returned to state control for handling cargo ships not exceeding 20,000 dwt. At Narathiwat harbour, the channel will be deepened to serve small cargo ships. Pattani port will also be developed and the outside channel dug to a depth of 3 metres.

Socialist Republic of Viet Nam

Haiphong port has now been restored and enlarged to include more berths and modern cranes. The port is now accessible to vessels of up to 30,000 dwt through the Nam Trieu Canal. A 200-metre quay with warehouses has recently been completed.

SOUTH ASIA

Bangladesh

The geographic features of Bangladesh are such that the riverine system divides the country into two distinct communication systems. This led to the establishment of Chalna anchorage in 1950 at a point about 40 miles south of Khulna to serve the western part of the country, as there are not direct communication links from the port of Chittagong to the northern and western districts. Strong tidal eddies during the monsoon and other physical

problems have led to the relocation of the anchorage on two occasions, being finally established 9 miles south of Chalna (at Mongla) in 1954. Since that time the anchorage has played a vital role in promoting industrialization and national development.

In Chalna, the construction of a permanent port is now under way. Phase 1A and 1B of the project provides for the construction of 11 jetties, 7 transit sheds, 8 warehouses, administration and residential buildings, open storage, repair berth and workshops, roads, drainage, railway sidings and portal cranes. Steps have been taken to speed up progress and to complete phase 1A by 1979/80.

At Chittagong Port, a project for repair of the offshore oil terminal has been undertaken with the assistance of a World Bank loan of \$US 4.6 million during 1975-1976.

India

The completion of major port projects at Calcutta (Haldia), Visakhapatnam, Madras, Tuticorin and Mangalore is considered sufficient to meet the current boom in export of bulk commodities, principally coal, fertilizers and iron ore. Projects for the oil pipeline at Bombay and for building up the Salaya offshore oil terminal are in progress.

In Visakhapatnam, the outer harbour project has made it the deepest (16.5 metres) and most mechanized port of the country, able to handle 100,000 dwt bulk carriers, and load 10 to 12 million tons per annum. Equipment includes a 8,000 tons per hour capacity ore loading gantry. Another project at this port is for an extension of the existing port, for handling vessels up to 36,000 dwt with a maximum draft of 10.5 metres. Much of the port's iron ore throughput is for Japan. The extension is associated with the iron ore mine at Bailadilla in the hinterland of the port.

Haldia, 56 nautical miles down stream from Calcutta, when fully completed, will provide 6 new berths, one each for iron ore, fertilizer, coal, salt, breakbulk and container traffic. A jetty outside the system takes the oil tankers. A maximum draft of 10.5 metres will be available for about 39 days in the year and 9 metres throughout the year.

Mormugoa port, the leading Indian ore port which provides depth of 8.4 metres, will be deepened and reclaimed, which is intended to give one new berth (draft 13 metres) at all tides. A new rapid-loading gantry will have a rated capacity of 8,000 tons per hour.

The New Tuticorin Port is now in operation. It provides five new berths, one each for coal, salt, cement, general cargo and oil, catering mostly for the coastal trades.

The Madras outer harbour scheme just completed comprises one ore berth having loading plant of a rated capacity of 8,000 tons per hour and one oil berth. Madras currently has a draft of 13.8 metres during the summer months; it is proposed to increase this to 14.7 metres later.

Further, the Mangalore port on the east coast of India is being developed as an exit point for Indian iron ore destined for Iran.

Iran

Khoramshahr, the country's largest general cargo port, has signed, in pursuance of a policy of increased efficiency, a \$5.1 million contract with a United Kingdom firm for the clearance, renovation, conversion and screening of dockside handling equipment.

Two new oil berths to assist exports of oil were opened in early 1977 at Kharg Island, and this new facility is now the world's largest export terminal for crude oil. It allows

for the handling of four large tankers at the same time.

Although Koramshahr remains the major international general cargo port of the country, the growth of Bandar Abbas, Bandar Shahpour and other smaller ports, such as Bushire, is progressing steadily. New specialized cargo berths are being incorporated in major port plans for the current period. Both Bandar Abbas and Bandar Shahpour will have container facilities, whilst the former will have a ro-ro and lash terminal also. The development at Bandar Abbas involves the construction of an entirely new port, to be known as Bandar Shah Abbas, some 15 km from the old port, while the old port will be retained purely as a naval installation. There will be 10 new general cargo berths at the new port by 1980.

Pakistan

Port Kasim Development of this new port, located at Phitti Creek some 48 km from the present Karachi Port, has in part been supported by an Asian Development Bank (ADB) loan totalling \$48.6 million. This new port is for the handling of bulk and semi-bulk cargoes, whilst the existing Karachi port will concentrate on general cargo and liner-type ships. The iron ore and coal terminal at the new Port Kasim will be used for unloading raw materials required to support the production of the new Pakistan Steel Mills Corporation (PASMIC) and will ultimately accommodate vessels up to 75,000 dwt. About 3.36 million tons of iron ore and coal would need to be imported for the mill.

The semi-bulk wharfs at Port Kasim will be used mainly for the export of rice and cement and the import of phosphate rock totalling about 2.5 million tons moving in vessels up to 25,000 dwt. Phase I of the project for Kasim consists of construction of seven semi-bulk wharfs and one iron ore and coal terminal, dredging the channel, procurement/installation of other facilities and equipment, including floating craft, navigation aids and related consultancy services. Phase I is designed to meet requirements up to 1980 and Phase II up to 1985. The total cost of the project is estimated at \$US 220 million, including a foreign exchange component of \$US 118 million. The loan of \$US 37.8 million from the Asian Development Bank's ordinary resources will bear an interest rate of 8.9 per cent per annum and an amortization period of 25 years. The loan of 10.8 million from the Bank's special fund carries a service charge of 1 per cent, with an amortization period of 40 years.

Sri Lanka

The port of Trincomallee provided berths for laid-up vessels during the oil crisis. Since the opening of the Suez Canal, the number of vessels calling at Colombo for bunkers has increased substantially. An agreement was signed in 1975 with a United States LASH operator for the provision of services to the country; this constituted the second agreement entered into for Specialized Shipping Services, the first being full container operations, also with a United States Company.

OCEANIA

Australia

Fremantle. This west Australian port now has additional facilities. At the container terminal, the portainer crane can now traverse the full extent of Nos. 11 and 12 quays, and 468 metres of heavy duty berthage is available

for container vessels. At the North Quay, rails were installed so that the container crane can service berths Nos. 6, 7 and 8 (a length of 530 metres). In this way a total of 1,000 metres of wharf along the north quay can handle containers. In December 1976 the jetty structure for the Kwinana grain terminal was completed.

Queensland Sugar Ports. Bundaberg and Lucinda are both undergoing extensions to their loading facilities. In the former, the extension involves a shed capacity increase of 200,000 tons, bringing the total storage capacity up to 300,000 tons. It is also intended to increase loading rates, and to extend the present loading wharf by 56 metres at each end to a total length of 190.8 metres. Additional piling under the existing wharf is being provided to enable a mobile gantry loading to be erected in place of the existing fixed loader. The completion date is late 1977.

Lucinda Port. Bulk terminal development is now under way and due for completion late in 1979. The project will change the port from a domestic supply terminal into one capable of handling overseas ships lifting 40,000 tons of sugar. It will be a new 5.5 km offshore loading facility capable of delivering sugar to the ship's hold at the rate of 1,400 tons/hour. The conveyor will hold 600 tons of sugar travelling at 300 metres per minute. A third bulk storage shed to hold 79,000 tons is also under construction.

New Zealand

Wellington. To meet the requirements of container shipping, the harbour board commenced the staged development of the Thorndon container complex. The new terminal, of stressed pile and reinforced concrete structure, 25.6 metres wide, extends for 580 metres which provides two berths, each of 290 metres and water depth 12.5 metres. Behind the breastwork, the harbour board has reclaimed 17 hectares with 4 million cubic metres of fill. A further 2 million cubic metres will increase the back-up area to 24 hectares by 1978. The container handling and storage area will be increased from 8 to 18 hectares in 1978.

South Island Container Ports. In line with the introduction of fully cellular container services to both islands of New Zealand in 1977, the Port Chalmers Container Terminal was partly completed in January. The terminal comprises a 1,000 ft berth equipped with a single lift portainer crane, backed by a total area of 31 acres, approximately 7 of which have yet to be fully reclaimed. When completed by mid-1977, the yard will have a stacking capacity of 3,500 TEU with provision for 950 reefer containers. The first three large ships were handled at a gross rate of 15, 19 and 33 containers per hour respectively, and the estimated annual throughput will be 11,000 containers by September 1977, 33,000 containers by September 1978, and 38,000 containers by September 1979.

The Port of Lyttleton has also largely completed container port development. Both ports will carry all the South Island cellular traffic for the foreseeable future.

Industrial Ports and Economic Transformations

Series No.2

By Paul Hanappe and
Michel Savy

CHAPTER II

THE GROWTH MECHANISMS OF THE PORT INDUSTRIAL ZONES AFTER THE SECOND WORLD WAR

CONTENTS

2.1 THE UNDERLYING TRENDS IN PORT INDUSTRIALISATION

- 2.1.1 The dominance of the
petroleum branch
- 2.1.2 The insertion of public capital
into the economy
- 2.1.3 Scale economies

After having summarised, in the first chapter, the main traits of those port industrial zone developments observed after the Second World War, together with the fundamental economic characteristics of this period, interpreted as an ascendant phase of a long-term Kondratieff movement, we can now identify the economic laws which may explain these developments, and see how their operation is related to the main characteristics of this period. To this end a first section is devoted to an examination of the basic tendencies which brought about port industrialisation; in a second section we will attempt to identify the limits imposing themselves on the development of these tendencies; then we will see in what ways they correspond to the fundamental traits of this period. This latter aspect of matters will introduce the subject of chapter III: the identification of the new characteristics which one can see developing in the port zones and the identification of their links with the Kondratieff reversal, the effects of which have been seen for some years.

2.1. THE UNDERLYING TRENDS IN PORT INDUSTRIALISATION

The object of this chapter is to identify and to explain the fundamental characteristics of the port industrial phenomenon. It does not claim to be an exhaustive survey, which would involve taking into account the particular characteristics of each port zone and the economic environment in which it is located, together with covering the entire range of industrial activities which are of importance for port activity. The tendencies which are being examined will explain, we feel, the principal characteristics of the phenomena; they cannot, however, account for all its aspects and in all places.

Four fundamental tendencies, linked one to another, appear to us to be the basis of port industrial development as it took place in the ascendant phase of the long-term movement:

- the dominance of the petroleum branch which, both for its own needs and also as a result of the developments induced by it in economic activities, upset the maritime and port economies;
- the technical and institutional characteristics of the port function which made it a particularly favourable place for the **insertion of public capital into the economy**, with little or no return and relieving private capital of a considerable part of those investments required for their profitable installation;
- the considerable influence of scale economies, in particular in maritime transport and in production, which was particularly noticeable during this period, left the field open to the application of scale economies; certain modes of internationalisation of the economy initiated by the petroleum branch turned the production location factors for many intermediate goods towards port zones: It is these considerations of scale economy which, partly at least, explain port concentration.
- the combination of these elements made port zones, or rather certain of them, **preferred areas for the investment of dominant capital**. This brought along in its wake, by various mechanisms, considerable fractions of less autonomous, if not dominated, capital.

2.1.1. The dominance of the petroleum branch

The concept of the dominant branch, and the way in which these branches operate within the economic system within the long-term Kondratieff movements, have been examined in the first chapter. There it was pointed out how petroleum activity (extraction, transport, refining and distribution) assumed the attributes of a dominant branch during the last ascendant Kondratieff phase.

It remains to be seen how this dominance has affected maritime and petroleum activities and to what extent it has contributed to the development of the port industrial phenomenon.

a) Upstream of a process, which is obviously not linear, but within which one can discern particularly powerful lines of force, one finds the vigorous growth of consumption of petroleum products in economically developed countries. This is not the place to investigate the genetics of this growth, brought about in particular by the development of the automobile industry; it is enough to state that petroleum activity has shown itself to be attractive for certain dominant fractions of capital, and that the latter have practised a policy of expanding their markets by a policy of almost continual price cutting, up to and beyond the end of the ascendant Kondratieff phase¹. This has resulted in a doubling of the tonnage consumed every ten years.

Now the location of petroleum deposits is such that a large part of the needs, and in fact practically all of these as far as Western Europe and Japan are concerned, have to be imported from overseas. The increase in the volumes to be transported, together with the necessity to effect scale economies at all levels, since these were necessary to make the policy of low prices profitable, have resulted in the move towards giant oil tankers.

¹ This policy of low prices does not necessarily mean that profits have to be modest; in fact the contrary may be the case because of the very low cost of the raw material at its origin, and mainly as a result of the considerable scale economies obtained by rapid growth in the volume of markets, itself a result of this continued price reduction under favourable economic circumstances.

These imports of petroleum largely replaced the traditional energy resources consisting mainly of coal, lignite and hydraulic energy, and often situated inland. In Western Europe the substitution was slow and progressive because of the richness of the coal resources, and also because of the joint resistance by the coal lobbies, both employers and employed, to the closing of mines; furthermore hydraulic energy resources continued to grow considerably, particularly in France. In Japan, on the contrary, the substitution was much more rapid, as has been pointed out in the first chapter, resulting in many closures of mines. Production, which was still fifty million tonnes in 1965, fell to twenty-one million tonnes in 1973, practically all used for the production of electricity. The energy crisis had, as in Europe, posed the problem of a fresh development of coal production; but, as is well known, it is very costly to get abandoned mines back into operation. The reserves are small, and the available grades are not suitable either for coke production or for the production of coal derivatives; under the best hypotheses it would only be possible to stabilise the production at around twenty million tonnes per year, mainly for thermal applications. The growth in oil imports also very considerably retarded the growth of hydroelectric power stations which were fairly numerous in the mountains, and which had attracted a number of industrial activities to those places.

The move towards gigantism is well known, and it is only necessary to recall the fundamental traits in order to pursue the explanation. We know, in practice, that for bulk sea transport the cost of the transport in the strict sense is reduced as the size of the vessel increases¹. This has been shown very clearly by P.M. Fourt², who has in particular emphasised the importance of fixed costs and the need to operate vessels in an almost continuous manner; this has reinforced the trend towards increasingly direct links between the sources of raw materials and users. It also explains the need to reduce the waiting and handling times in ports. The optimum speed of the vessel increases with the distance to be travelled, and decreases when the handling time increases.

¹ At least over long distances at sea. In the case of shorter distances the cost of immobilisation of an expensive and large tonnage vessel in port cancels out the increased cost per tonne-mile in a smaller vessel. When carrying coal from the United Kingdom to Le Havre it is no less costly to use a vessel of 200,000 tdw than a vessel of 30,000 tdw.

² P.M. Fourt—op. cit.

From the point of view of maritime transport in the strict sense there is therefore no optimum size in the true sense of the word: the cost continues to fall as the size of the vessel increases, and only the limitations of maritime technology at any given time are likely to restrain the move towards gigantism. In fact, as P.M. Fourt has shown, decreasing returns are obtained, and one can, therefore, define an optimum when all the operations of maritime transport are taken into account: port investments to receive vessels with a larger draught increase more than proportionately to the tonnage carried by the vessels. Another economic brake on this move to gigantism is

represented by the total volume of tonnage to be carried on a given route.

Other factors have been introduced to an increasing extent since the appearance of the article by P.M. Fourt. The first is of a strategic order: as the vessels composing a fleet are of increasing draughts, so is the range of ports which they can visit restricted, and so does economic and political dependence increase where supplies are concerned. The second is linked to the increasing sensitivity to the disadvantages and the cost linked with marine pollution, disadvantages which become even greater as the unit masses involved become larger. It was as a result of the shipwreck of the Torrey Canyon that maritime insurance companies considerably raised premiums for large tonnage vessels. As a result of a more recent incident of similar size which occurred near Singapore, Malaysia and Indonesia have started a campaign intended to prohibit the passage of giant oil tankers through the Straits of Malacca; if such a decision is taken¹. It would be necessary for carriers linking the Persian Gulf to Japan to make the balance between a considerable lengthening of the route on one of the busiest routes in the world, and limiting it to vessels of a small tonnage.

¹ It is, however, improbable in the short-term, taking into account the political and economic state of the region.

These latter factors have, however, not begun to operate seriously except in recent years. Throughout the whole of the ascendant Kondratieff phase there was a continued expansion in the size of the largest vessels. It is only necessary to recall here a few of the significant dates of entry into service of tankers: in 1937 the "Emile Miguet" was the largest in service at 21,000 tdw; after the War the "Olympic Torch" entered the race in 1949 with 39,000 tdw; in 1959 the "Universe Apollo" exceeded the 100,000 tdw mark and in 1966 the 200,000 tdw barrier was broken by the "Idemitsu Maru": by 1973 the "Globtack London" and other vessels since that time have approached or exceeded 500,000 tdw.

The policy of low price petroleum continued until 1973, ensuring the continued expansion in markets and the volumes to be carried. As far as the port investments required for the reception of these giant vessels were concerned these were much less considerable for petroleum than for solid bulk, as a result of a combined technique of mooring posts and sea-lines; furthermore the port investments were largely taken over by public capital¹; the power of the oil companies, and the strategic importance of oil supplies for the economy, meant that public investments were always made available to meet the needs.

A reduction in maritime freight costs of the same type as that found in the transport of petroleum also occurred for other bulk transport; this will be examined below under d). The phenomenon also had a more immediate repercussion on port economy, linked to the depth of water required by the vessels. In order to accommodate the latter the ports had to make those investments which were necessary to increase the water depth. According to local conditions this could involve the deepening and maintenance of a channel, the construction of new locks, mooring posts and sea-lines, or quays in deeper water, and even the construction of artificial islands at sea. Such investments are considerable and increase more than proportionately to the tonnage accommodated. This resulted in a severe selection process between the ports. This was in fact one of the principal

factors² in the port concentration observed during the period, and which resulted in the emergence of only three ports from amongst the six or seven ports of major importance which France had before the First World War. Even a port as powerful as Antwerp and which retained and even increased all its advantages in other fields, gave up the struggle to follow the massive oil tankers after the opening of the Zandvliet lock in 1967 which allowed vessels of 180,000 tdw³ to enter.

¹ cf. *infra*, paragraph 2.1.2.

² With containerisation, the effects of which did not, however, begin to be noticeable until later. Cf. *infra*, paragraph 3.3.2.

³ Its dimensions are 500 m × 57 m × 18.5 m. This has not been exceeded in size except by the "New lock" at Dunkirk (200,000 tdw; 360 m × 49.2 m × 19.1 m) and by the "François I" lock at Le Havre (320,000 tdw; 400 m × 67 m × 24 m).

b) Between its extraction and its use as a fuel petroleum must undergo refining operations. The cost of the latter is also strongly affected by scale economies.

According to the data for 1967, that is to say near the end of the ascendant Kondratieff period, the cost per tonne refined fell, as shown in the following table, as a function of the size of the refinery:

annual capacity of the refinery (in millions of tonnes)	cost price of refining (in 1967 FF/t)
1	2
0.5	32
2	20
5	16
10	14.6
15	12

The origin of these scale economies arises from the fact that investments increase approximately according to the formula:

$$\frac{I}{I_0} = \left(\frac{C}{C_0} \right)^{2/3}$$

where I is the investment cost of a refinery of annual capacity C , I_0 and C_0 being the parameters of the base refinery. As far as the labour cost per tonne refined is concerned this drops sharply up to an annual capacity of five million tonnes, and then falls off more gradually.

The slope of the curve explains why the oil companies refuse to construct refineries with a capacity less than three million tonnes per year and that, all other things being equal, they prefer to increase the capacity of existing refineries rather than build new refineries.

Furthermore the cost of transporting crude oil is lower than that of the refined products. This is true for maritime transport: the transport of refined products requires the division of vessels into compartments, and this operates in the opposite direction to the full exploitation of scale economies; it involves precautions during loading and unloading, so extending the costly time of immobilisation in the ports; in the case of the light fractions the fire risks are much higher during the whole of the voyage. As far as land transport by pipeline is concerned its cost also falls with the volume carried¹; if refined products² are carried the cost per tk is multiplied by two or three, or even more, as a function of the flow rate and the distance, as compared

with the transport of crude. It should also be remembered that the volume of finished products leaving the refinery represents approximately 90% of the volume which enters it (including 93% energy products; amongst the latter two-thirds approximately can be carried by pipeline without heating).

¹ still under 1967 conditions, and in 1967 Francs, and for crude oil, a twenty-inch pipeline gives an annual throughput of 3.6 million tonnes for a cost price of 0.014 FF per tk, whereas with a thirty-inch pipeline, which corresponds to an annual output of about 12 million tonnes, the price falls to 0.0063 FF per tk.

² At least those which can be carried easily. For certain products, such as heavy fuel oil, it is necessary to provide for reheating stations every twenty or thirty kilometres.

These, with the strategic considerations of companies, are the fundamental factors in the choice of the location of refineries.

Other factors also come into account when it is a question of making a definite decision; firstly it is necessary to have an available site, but also to have water available, the possibility of disposing of by-products, of technical complementarity between refineries, the availability of skilled labour, considerations of safety and nuisances, etc. Their role is important when deciding between competitive sites for a given project. However they cannot be taken into account when, as here, it is a question of identifying the fundamental trends and explaining them.

Comparison between the cost of transporting crude petroleum on the one hand and of refined products on the other leads to minimising the second. In Weberian terms this industrial activity is therefore "attracted" towards the market sites. This is, however, held back by considerations of scale economies: the crude comes from a limited number of producer countries, the petroleum products are distributed to numerous markets; furthermore the more the refinery is located upstream, on the routes for bringing in the crude, the more it can have a larger capacity. For a given state of the economy one can therefore determine, by a quasi-Weberian logic, the optimum locations for refineries¹. If the general volume of consumption is fairly low it is necessary to wait until this optimum is situated well upstream on the incoming routes: by approaching the markets too closely one is therefore confined to refineries of too small a size, falling below the critical three million tonnes per year². If the general volume of consumption increases the optimum location moves downstream, in the direction of the principal markets.

It is in fact these mechanisms which have operated in petroleum history during this century. In the first decades the consumptions in a country such as France could not justify the construction of a refinery³; these were located upstream, often at the port of departure in the petroleum-producing countries: Abadan and Iran in this way were the location for refineries, the capacity of which is still twenty-five million tonnes per year. Other factors reinforced this tendency; in this way one avoided the transport of the fuel required by the refineries themselves, and also the treatment losses, which were higher than today; there was hardly any market for the by-products which were generally lost; the techniques were simpler, and required a lower level of technicity in the labour force than today.

With the increasing consumption, already considerable between the two World Wars, it became economically possible to build refineries of a satisfactory size in the European ports serving the main areas of consumption.

Other factors contributed to this movement: the appearance of a market for by-products in the industrialised countries, the resultant complex nature of the refining operations and the increase in the skilled requirements of the personnel, the reduction in consumption of the refineries themselves and the losses due to refining and, particularly after the Second World War, the progressive reduction in the control exercised by the industrialised countries over the producer countries.

¹ Leaving on one side for the time being the strategic considerations of companies.

² This explains in particular the resistance of the oil companies to the proposal for a refinery at Brest.

³ One can obviously not take the cost factors given above as constant: technical progress, developments in relative prices, etc. alter them in the long-term. The general sense of the comparisons does, however, remain valid.

The port refineries were therefore largely developed in the major European ports. French oil policy launched this movement from 1930 onwards, but it was mainly after the Second World War that it underwent its real expansion, both in France and in the other countries of Western Europe. At the beginning of the Fifties the refining capacity in France was still considerably less than the consumption; it now exceeds a greatly increased consumption.

Location in the ports had another advantage. Generally a refinery is only equipped to handle four or five of the two hundred or more types of crude petroleum which are available in the world. This characteristics, coupled with the variety of ranges of final products which were required by the local consumption, meant that each refinery produced a very varied and individualised range of products. Technical and commercial complementarity between these products is considerable, and therefore calls for exchanges between refineries. This is a factor which led to the port concentration already indicated above. Coastal trading gave the coastal industries a major advantage from this point of view, in respect of the transport of the finished products to the coastal points of unloading. It should be emphasised that this advantage is particularly important for the large multinational oil companies which, as a result of the size and multiplicity of their installations and of their sources of supply, involve a much larger range of complementarities of this type.

As far as the ports were concerned the establishment and multiplication of the refineries had considerable consequences: we have already seen their role in the major phenomenon of port concentration. In the ports where refineries were established it was not only necessary to construct port equipment suitable for tankers of steadily increasing size; it was also necessary to provide, for the refineries and depots, sites of a size bearing no relation to the size of port zones as they were known up to that time. An absolute explosion of the port zones took place; whether at Marseilles or Antwerp, Rotterdam or Bremen, it was up to tens of kilometres from the port of origin that the latest arrivals in the refining industry were located. In a very precise and geometrical sense the port zones had changed their order of magnitude.

These developments occurred mainly in the ports which combined a good location in relation to shipping routes and domestic markets with adequate facilities for the reception of vessels. In Europe the principal markets are often located inland; it was because of the Parisian region that the

petroleum role of Le Havre developed; in the case of central Germany it was Rotterdam, in the case of Belgium Antwerp, etc.; supplies for South Germany, far from any seaways, involved considerable though and the construction of pipelines from Rotterdam, Marseilles and Trieste. In Japan the geographical configuration of the country made the large urban coastal zones (the regions of Tokyo, Yokohama, Nagoya, Osaka-Kobe and the north of Kyushu) the principal centres of consumption. This factor was reinforced by the much more rapid movement to imported raw materials than in Europe and by the importance of the infrastructures of the ports which already existed, whether they dated from before the war (in addition to the large urban zones already mentioned these included Akita, Niigata and Wakayama, which already had refineries) or whether they were developed by the Americans after the Korean War (Kure, Sasebo-Yokosuka, etc.); to these have to be added the more recent developments on the inland sea at Kashima and, even more recently, at Tomakomai.

c) When a branch is dominant it imposes economic and technological changes on other branches in accordance with its interest. This is what occurred between petroleum and the chemical industry.

The activities, the industrial processes and the types of products covered by the term chemistry are very varied and are constantly changing. Three fundamental facts characterise the development of this industrial branch after the Second World War: its high rate of growth, the increasing contribution of the so-called organic chemistry based on carbon, the progressive substitution of petroleum by-products for those from coal as raw materials for the organic chemicals industry; petrochemicals progressively replaced the chemistry of coal derivatives and underwent a staggering development in fields as varied as detergents and artificial textiles, paints and plastic materials.

This is not to claim that these developments have no other fundamental cause than the dominance of the petroleum branch. The latter, however, contributed very greatly. The growth of petroleum activities made available, at steadily falling prices, major quantities of by-products the technical and economic characteristics of which made them interesting substitutes for products derived from coal. The power of the petroleum branch allowed it to favour those developments which ensured fruitful outlets for its by-products; the oil companies in fact launched themselves into petrochemical activities, in competition with the traditional chemical companies¹.

¹ The oil companies and the chemical companies are involved in a continuous struggle to extend the field of their control over petrochemicals. The final result of this struggle still remains uncertain, even after many years: the oil companies have the advantage of the regularity and the massive character of their supplies, an important factor in respect of prices of supplies and in order to guard against the shortages of products which are frequent in an activity which is highly sensitive to the economic situation; however the traditional chemical companies have better control downstream and of the markets, and this enables them to weather periods of unsatisfactory economic conditions rather better.

Some characteristics of the petrochemicals activity should be referred to here, insofar as they influence the location of the industry. Firstly the petrochemicals production process is in no way linear from the petroleum by-products to the final chemical products which as we have seen, is often a mass consumption product. On the contrary there are many transfers of products between

various production lines; returning by-products upstream of a given production line, or to another, is frequent; inter-industrial trading within the petrochemicals process itself is particularly complex and extensive. This is shown physically in the large chemical platforms by the inter-linking of pipelines which ensure the multiplicity of exchanges between production units, belonging to one industrial group or not, whilst other exchanges are carried out by road, rail or water. This expansion of inter-industrial exchanges is not confined to petrochemicals: it also has many links with petroleum refining and other chemical activities including inorganic chemistry. This explains the tendency towards the concentration of a large number of chemical units into fairly small zones. The cumulative mechanisms of concentration operate fully here, since the new unit finds it advantageous to locate itself where it can find a very wide range of supplies and where it can easily find outlets for its by-products. This factor applies increasingly as the world of petrochemicals changes more rapidly, both technically and economically; a unit designed for a given product may, some years later, be converted to another product with different requirements upstream and downstream of the operation to which it is now devoted; these new requirements can be more easily met if the plant is located on a massive and diversified chemical platform.

The other important consideration is that of scale economies, particularly noticeable upstream of the petrochemicals process. In this way the optimum capacity of a steam-cracker, a key unit between petroleum refineries and all the downstream petrochemicals, has continued to increase during this period, finally levelling out towards the end of the sixties at about half a million tonnes per year. The influence of increasing yields is not the same throughout the production chain; it is nevertheless considerable in a number of them, generally the more so when they are upstream in the production chain.

It is not therefore surprising that petrochemicals developments have a tendency to concentrate themselves on a restricted number of zones, now generally termed "petrochemical platforms", and that most of the latter are located in the port industrial zones. It is there that the largest volume of oil refining is carried out, which is necessary to supply the large steam-cracking units; we have seen how the actual petroleum developments led the port organisations to create vast industrial zones; these are in general suitable, by their location some distance from the larger urban agglomerations, for industries which are often polluting and unpleasant, and of which the quantitative requirements for labour are fairly limited, the more so as the progress towards improved productivity is almost as important as the increase in production. These considerations are in general even more true when one considers elements situated upstream in the process.

These petrochemical concentrations appeared both in Europe and in Japan, where the refining capacities exceeded about ten million tonnes per year. The phenomenon experienced less constraints in Japan because the widespread practice of recovering land from the sea made the land which was necessary available as and when the needs were felt, and also made it possible, to an extent which was however considerably limited, to reduce the nuisance due to pollution.

d) The influence of oil company power is not limited to related technological activities. It is more or less the whole economy which is affected by developments in the

dominant branch.

As the first phase of this research work¹ has shown transport constitutes a privileged vector of this dominance of one branch on the others, particularly because of its ubiquity in the economy. Recent history of the iron and

¹ op. cit.

steel industry clearly indicates this process. As we have seen the oil companies needed vessels transporting bulk in very large quantities, well in excess of what could have been imagined earlier in maritime history; they required from shipyards and maritime carriers the designing, construction and use of these giant vessels. The existence of the latter, the ease of adaptation of their principles to the transport of other bulk goods, both liquid and solid (coal, iron ore, bauxite, cereals, etc.) had the effect of reducing the cost of sea transport of heavy goods in bulk to a spectacular extent. This modified the terms of the Weberian equation of the location of heavy industries such as iron and steel: high grade iron ores from Africa, South America, Canada, etc., became less expensive to use than low grade ores from the old European deposits; the same applied to American coal; this substitution of sources of supply involved a movement of the optimum location of plants from the coal and iron ore areas towards the European port zones¹. It was in this way that another major factor of recent port industrial developments finds its origin, undoubtedly indirect, in the growth and dominance of the petroleum branch.

Both in Europe and in Japan the new extensions of iron and steel production which, with a few exceptions such as the blast furnaces of Rouen or the steelworks of Mondeville in France, those at Nagoya in Japan² and Piombino near Rome, etc., was located on the site of coal or iron ore deposits, took place in the port industrial zones. The major European plants of this type were listed in chapter 1. The situation was similar in Japan, which before the war imported iron ore from Malaysia and the Indies, coal from Korea, China and Vietnam; the post-war period saw the reconstruction of the pre-war plants (Yawata, Hirohata, Kobe, Amagasaki, Osaka, Kawasaki, Kamaishi and Muroan) and the construction of new plants, all in port zones: Oita, Fukuyama, Mizushima, Kakogawa, Sakai, Wakayama, Nagoya, Chiba, Kimitsu and Kashima; all, except the latter, were built on land regained from the sea, all have annual capacities considerably greater than those which were normal before the war, none being of less than six million tonnes annual capacity; more than half exceeded ten million tonnes annual capacity.

¹ In certain cases the port zones in the countries producing ores could also have claimed optimum Weberian characteristics; considerations of the availability of skilled labour and political strategy prevented the iron and steel companies from adopting this approach at this period.

² or semi-iron and steel coastal industries such as that at Muroan, in the island of Hokkaido, which operated before the war with local coal.

One can relate similar events in respect of the production of aluminium or fertilizers. Economies in energy (particularly for aluminium) and inter-industrial relations in the chemical field (for fertilizers) also have their place in the explanation. But in these various cases the reduction in the cost of bulk transport by sea was also one of the factors for establishment in port zones.

A result of the interplay of these factors was the considerable extension in the volume and range of port industries. Carlo Beltrame¹ sets out a striking table for Western Europe; the major traits of the phenomenon are similar in Japan; we will see later, in paragraph 2.1.4, the concrete composition of the industrial zones of some major European and Japanese ports. However the geography and the nature of sea routes were profoundly affected, as A. Vigarié² has shown.

These developments were certainly beneficial to the oil industry not only because the massive vessels with which it is associated are consumers of fuel. It would, however, be to impute exaggerated Machiavellianism to believe that in fact this was desired by those controlling the oil industry and imposed, by the application of major strategies, on the industrial branches influenced in this way. It is more interesting to observe that, when a branch is dominant, it imposes transformations on the whole of the economy, well beyond what it consciously seeks to meet its own interests. Whilst the petrochemicals developments were consciously sought by those in control of the oil industry it is nevertheless more realistic to assume that the displacement of the production of steel and aluminium to the ports are indirect consequences, not explicitly sought, of oil dominance, even if in several respects the oil industry extracted some benefit from them.

From our point of view it is more important to conclude that the growth and dominance of the oil industry were a powerful factor in port industrial development, well beyond their immediate industrial effects (petroleum refineries and petrochemicals), before analysing the other underlying trends which have operated in the same direction of this development.

The port industrial zones do not only include heavy industries; they also produce the major intermediate products³, attracted there by the revolution in maritime

¹ Carlo Beltrame, *Coastal industrialisation in the countries of Western Europe*, Rome, Centre for studies on port problems, 1973, 138 p (in Italian).

² André Vigarié, *The geography of traffic*, volume II, Maritime traffic, Paris, Ed. M. Th. Genin, 1968, 492 p (in French).

³ in the sense of Alain Desrosières, *Dividing industry into three sectors*, *Economie et statistique*, no. 40, December 1972 (in French).

transport. The latter do, however, constitute the essential core, and with variants one finds them everywhere¹. The "induced effects" sometimes operate, but only when the port industrial zone is created around a town with industrial and commercial function which are already complex and developed; when this is the case one can sometimes find very diverse industries situated further downstream of the production process. This may sometimes be a part of the automobile construction industry (Ford and General Motors factories near Antwerp, Renault near Rouen and Le Havre, Toyota near Nagoya, Mazda at Hiroshima, etc.), which move there when their exports increase as a proportion of sales, but well after the development of industry in the port has become a fait accompli. It was for similar reasons that the Japanese engineering industry, under the influence of its strong relationships with American companies, also developed in the port regions; but what is the share of the port function as compared with that of the existence of an industrial fabric, a source of labour, and of the major part of the domestic market?

Whether in Europe or Japan one finds the same contrast between the appearance of these "induced effects" and the development of a diversified downstream industrial fabric when a rich industrial fabric with varied commercial networks and a large final market pre-existed: such is the case with the regions of Bremen, Hamburg, Rotterdam, Antwerp, Le Havre, Tokyo-Yokohama-Chiba², Nagoya and Osaka-Kobe. On the other hand one finds the "cathedrals in the desert" built at Bari-Taranto or at Tomakomai; the "induced effects" expected from the installation of heavy industries are still awaited there. Marseilles-Fos and Kashima, better situated in relation to the major economic circuits, represent intermediate cases: their future will be much more sensitive to the general economic situation³.

¹ see paragraph 2.1.4. below where a list of the companies established in some major port industrial zones is given.

² A typical extreme case of the spectacular development of heavy port industries, where only a fishing village and marshland existed twenty-five years ago; but this is some dozens of kilometres from Tokyo. Despite this the downstream industries are much better represented there than in the other ports in the bay of Tokyo.

³ In this connection we may refer to our article on this particular point—P. Hanappe, "Industrial development around ports", *La Vie Urbaine*, 1971, Nos. 1 and 2, 48, 127 (in French).

2.1.2. The insertion of public capital into the economy

At the end of the major crisis of 1929–1934 different formulae for direct financial intervention of the State in the economy were experimented with in various countries. The most famous case is undoubtedly that of Franklin Delano Roosevelt's New Deal in the United States. Shortly after this John Maynard Keynes put forward his "General Theory" with its theoretical justification based, in particular, on secular reductions in the marginal efficiency of capital.

Another, older, theory had highlighted the trends towards a reduction in profit levels, based on the development of the organic composition of capital. It was in fact the Marxists, Paul Bocarra and Ernest Mandel, who linked these secular trends with the long-term Kondratieff movements¹. They did this after the Second World War, during the ascendant phase of the fourth industrial Kondratieff cycle, and at a time when injections of public capital into the economy had reached a volume and an institutional stability which greatly exceeded the experimental attempts of the thirties.

Whether one accepts the theoretical basis of the explanation of the phenomenon or not it can hardly be ignored. From the end of the Second World War until recently the capitalistic economies of the western type experienced a period of great austerity, within which the assumption of vast areas of investments by the State played a key role.

Whatever the flexibility of the institutions may be from this point of view, it is far from being absolute. The injection of public capital into the economy is easier and more effective in certain directions than in others. And for reasons which undoubtedly relate to the nature of the service given than to the history of the institutions transport formed a particularly widely used means for the injection of public capital.

¹ Paul Bocarra, *op. cit.*
E. Mandel, *op. cit.*

One finds very clear illustrations of this in the study of A. Le Pors on State transfers to industry¹. A first and interesting indication of this is the influence of the public sector in industry. Measured by the percentage of the added value of the public sector on the total added value of the sector, this rose to 11% in 1969 for the whole of industry. In the case of transport the share of the public sector was 47%; higher values than this are only found for telecommunications (100%), solid mineral fuels (99%), gas and electricity (89%) and housing (54%); in shipbuilding, aerospace and armaments the public share is 45%, similar to that for transport.

¹ A. Le Pors, *State-Industry Transfers, Statistiques et études financières, "Série orange" (1971-1972)* (in French).

The assumption of part of the sector by the State is not, however, the only method for injecting public capital into the economy. To make an overall inventory would be a very difficult operation. According to the studies of A. Le Pors the total transfers, expressed as a percentage of the added value of the sector, is steadily increasing, from 3% for the whole of the economy in 1963 to 3.9% in 1968. For the transport sector the absolute level and the increase are greater, rising from 13.4% in 1963 to 17.9% in 1968. The sectors where the relative importance of the transfers exceeds that of transport are, in decreasing order of the ratios in 1968, solid mineral fuels (86%), gas and electricity (47%) and chemicals (19%); in the case of housing the share is 13.1%, for shipbuilding, aerospace and armaments 8%, for iron and steel 6.2% and for agriculture 5.2%. It is necessary to draw particular attention to the case of telecommunications where the size of the transfers was similar to that of transport and housing in 1963 (13.6%), but had fallen to 2.5% by 1968. For all the other sectors the share of transfers in the added value was less than 3% or negative.

However the ultimate recipient of the transfer is not necessarily the initial recipient. In order to measure this repercussion effect A. Le Pors and his team used technico-economic relationships as they are described in the table of interindustrial trading, and looked for the consequences of a marginal variation in the transfers.

The table on the following page measures, in this way, the initial and ultimate impact of the loans from the Economic and Social Development Fund. In this table we give the values for 1968: the study by A. Le Pors gives similar data for the years 1962 to 1968.

The role of transport as a vehicle for transfers can be seen in a most striking manner, and the same applies to gas and electricity; these sectors together receive 60% of the transfers associated with loans from the ESDF, and practically nothing as final recipients. Of the large initial recipients only the iron and steel industry retains and in fact doubles its share at the final level.

Other recipients, modest at the initial level, are seen to be well placed at the end; these are, in particular the chemical and automobile industries, shipbuilding, aerospace and armaments. One is not surprised to see in this list branches such as the chemical and automobile industries which have the characteristics of dominant branches¹. One may therefore consider the fact that transport constitutes one of the important channels by which the State transfers subsidies to the whole of the economy, and in particular to the dominant branches, as established.

Another way of understanding this phenomenon in-

volves examining the secular development of State expenditure by major categories. This was done by three research workers of CEPREMAP, Messrs. André, Delorme and Kouevi, for the French State from 1870 to 1970². It

¹ It is undoubtedly difficult to carry out analyses on the petroleum branch, limited to the national accounting of a single country. The petroleum economy is profoundly internationalised and it is known, in particular, that it is the constant policy of the companies to show nil profits, if not losses, in subsidiaries in the consumer countries.

² C. André, R. Delorme and A. Kouevi, *Analytical study on significant trends and explanatory factors for the evolution of public receipts and expenditure in France during the period 1870-1970*, Paris, Cepremap, 1974, duplicated. (in French).

appears from this that public expenditure (State and local collectivities, excluding social security) considerably increased its proportion in relation to the domestic income, increasing from 11.5% in 1872 to 40.8% in 1968. Within these public expenditure on transport (for the infrastructure and for the transport itself) also showed a considerable increase: taking the average over the following periods State expenditure on transport, expressed as a percentage of the domestic revenue, increased as follows:

— from 1872 to 1912	0.9%
— from 1920 to 1938	1.6%
— from 1947 to 1967	2.6%

It should be noted, however, that the increase was greater for public expenditure taken overall than for the single item of transport. Relatively greater growth was shown in education, social actions, and the whole of building-town planning-regional planning, together with direct expenditure on agriculture, commerce and industry. It is nevertheless true that transport formed one of the major channels for the growing penetration of public funds into the economy.

By applying these conclusions relating to transport in general to port economy, and stating that the latter forms a particularly effective method of injecting public capital into the economy and that port industrialisation has given a new amplitude to this phenomenon, we will undoubtedly arouse many controversies. "The port services are paid, at cost, by users in the form of tolls and various taxes"; "the major ports are managed like private enterprises and do not represent a cost to the collectivities which own them and which manage them"; many protestations of this type are made, supported where necessary by analyses of balance sheets, extracts from the articles of association of ports, affirmations of the principles of port management, etc.

Without going as far as a detailed and exhaustive analysis of the operating and investment accounts of the major industrial ports, a task which itself would have required more work than the whole of this study, and with less chance of success, one can nevertheless identify a certain number of facts of major significance.

a) The actual articles of association of the French autonomous ports provide that a considerable part of the investment and maintenance work is to be charged to the general budget, without the users of the port having to pay anything as counterpart; this is the case with the deepening and maintenance of access channels and the general maritime protective works, the increasing importance of which is well known because of the increase in the size of vessels.

As far as the construction of wet docks and quays is concerned these are, in principal, charged to the users who

Table 2.1. Transfers from the State to industry in France (1968)

Sectors		First evaluation: initial recipients		Second evaluation: ultimate recipients	
No.	Denomination	Total in thousands FF	Share in %	Total in thousands FF	Share in %
1	2	3	4	5	6
1	Agriculture	88,429	4.5	—	—
2	Agriculture-food industries	8,562	0.4	2,224	1.4
3A	Solid mineral fuels	70,200	3.6	—	—
3B	Electricity, gas	737,100	38.0	250	0.2
3C	Petroleum	—	—	1,861	1.2
4A	Iron and steel	434,167	22.3	82,811	52.1
4B	Non-ferrous	—	—	24	—
5A	Initial converting of metals	9,805	0.5	7,906	5.0
5B	Engineering industries	18,149	0.9	5,645	3.6
5C	Electrical industries	36,220	1.9	3,817	2.4
5D	Automobile	40,542	2.1	17,201	10.8
5E	Shipbuilding, aerospace and armaments	12,323	0.6	13,348	8.4
6A	Glass	—	—	—	—
6B	Chemicals	31,898	1.6	18,015	11.3
7A	Textiles	15,931	0.8	208	0.1
7B	Clothing	824	—	—	—
7C	Leather	722	—	11	—
7D	Wood	—	—	—	—
7E	Paper	4,286	0.2	235	0.1
7F	Printing	253	—	15	—
7G	Miscellaneous industries	—	—	—	—
8A	Building materials	554	—	51	—
8B	Building, Public Works	536	—	148	0.1
9A	Transport	436,901	22.6	458	0.3
9B	Telecommunications	—	—	—	—
10A	Housing	—	—	—	—
10B	Education	—	—	—	—
10C	Service	—	—	—	—
11	Commerce	286	—	5,982	3.8
	Overall total	1,943,688	100.0	158,939	100.0

must pay tolls (certain being the responsibility of the vessels, others of the owners of the goods) supposed to represent the amortisation and maintenance costs of these works. But the fact of relieving users themselves from undertaking the investment costs of works which have such a long life represents a considerable economic advantage, even if in actuarial terms the sum of the toll is the financial equivalent to the amortissement annuities for the works.

For iron and steel works the cost of construction of an ore quay having a depth of water of fifteen metres could vary, around 1965, between about ten and twenty-five million Francs¹, or nearly one half per cent of the total investment costs of the plant for this single item. Similar considerations could be adduced on the subject of the leasing and embanking of the site, of connecting to the transport networks, for water supplies, etc. For all the items listed here the investment requirements may be estimated, very conservatively, at least two per cent of the total investment. This is far from being negligible when one appreciates the size of the investments² and the small level of profits in the iron and steel industry.

¹ In 1965 Francs, or around the apogee of the period which sustained this phase of port industrialisation.

² Estimated at some five thousand million 1965 Francs for a plant with an annual capacity of four million tonnes.

However one should not limit this single consideration to the strictly port investments. The creation of industrial zones in virgin port sites involves other categories of investments such as the creation of transport infrastructures on land, roads, autoroutes and railways and urbanisation costs. In the case of Fos, during the Sixth Plan, public investments rose to about two thousand two hundred and fifty million Francs, divided into three effectively equal parts:

- the port and the port infrastructures (entirely the responsibility of the State),
- the roads and telecommunications (half the responsibility of the State, half the responsibility of the local collectivities),
- the urban equipment—excluding housing—(three-quarters the responsibility of the State, a quarter the responsibility of the local collectivities).

These figures are to be compared with investment costs in private plants for the same period: nearly seven thousand million Francs for an iron and steel factory and about four thousand million for all other investments (I.C.I., Air Liquide, Ugine-Kuhlmann, and Gaz de France).

b) The distinct legal statutes of the North Sea ports, and the differences in presentation of the accounting documents, make it difficult to carry out comparisons between

the two municipal ports of Antwerp and Rotterdam, and the two ports of the Town-States of Bremen and Hamburg. Bremen states clearly that the port is the object of capital grant public investment; Hamburg rejects such a "socialist" policy, or at least states that it rejected it in 1967; however public presence is considerable and massive since the town is the owner not only of the port but also of the main transit company¹, a shipping company and a shipyard, and has not hesitated to finance to the extent of one-third (DM 500,000,000) the construction of a canal to link the town to the iron and steel area of Salztitter which has abandoned its local ore to change over to ore imported from overseas.

¹ Through which half the port traffic passes, and which has several branches abroad which are in fact promotional organisations for the port as well as being the agencies or branches of a transit agent.

As far as the two municipal ports of Rotterdam and Antwerp are concerned they both state that they are not subsidised by the corresponding town or State, but allow it to be assumed that this strict financial orthodoxy, under the terms of which all the costs would be borne by the users and no investment would be undertaken if it was not possible to expect appropriate financial returns, was a rare attitude. In Belgium, where linguistic quarrels subject Belgian public investments to rules of community equilibrium, the application of which is scrupulously observed by the parties involved, the plan for the development of the port of Antwerp has withdrawn port investments from this thorny mechanism of distribution.

c) The Japanese ports. The financing of investments in the Japanese ports is structured in a way which may call to mind that of the French ports, in the sense that the financing of the infrastructures is accepted by the State and that of the superstructures by the local collectivities. Only the basic works (quays, etc.) used exclusively by one industrial user must be financed by the latter.

In all cases, however, the intervention of the Ministry of Transport is essential. This ministry controls the technical quality of all works, including those for private investments. Furthermore a favourable opinion is necessary if local collectivities are to obtain the financing necessary for their projects from the Ministry of Finance; such approval is given not only as a function of technical considerations but also on the basis of the conformity of the project with the general management policy of the area and of port development.

It has however been a tradition policy in Japan, since the beginning of the first Meiji era (1867), to have recourse to

public financing as a means of developing international trading. This is true for all the public expenditure, in particular for infrastructure investments. This policy was of one of unequalled and increasing importance: since 1955 the contribution of public investment expenditure increased from 6.3% of the domestic revenue in 1955 to a maximum of 9.3% in 1966; from 1967 onwards it has fallen off slightly¹.

¹ Statistics of the Bank of Japan and of the Office of the Prime Minister, cited by Heide and Udo Ernst Simonis, *Japan, economic and social studies in Development*, Weisbaden, ed. Otto Harrasowitz, 1974, 339 p. See in particular the article by U.E. Simonis, *Infrastructure policy in Japan*, pp. 53 to 85.

As to the share of users in the cost of the transport infrastructures, this is a minority one, particularly where the ports are concerned, as is seen by the following table, drawn up by the Ministry of Transport, which refers to the year 1973.

The massive participation of the State in investments, without any full counterpart by the users, is not the only way of injecting public funds to facilitate the operation of the economy by allowing the profit levels to be raised. The concrete case of the port industrial zone of Mizushima makes it possible to illustrate the operation of this mechanism¹.

This industrial complex, situated on the inner sea, was decided on in 1955; it is established in a zone where no prior industrial or urban activity existed. The recovery of the site from the sea² cost the State about 15.50 FF/m²; Mitsubishi acquired part of this at a price slightly below 9 FF/m². At the request of this company the channels and basins were dredged to a depth of 16 m whereas at that period, in 1958, a depth of 13 m had never been exceeded. The neighbouring municipality directly financed the extension of the railways and the roads up to the industrial zone. The province constructed the dams and the pipelines which provided the water supplies. The tax on industrial firms was reduced by 90%, and these also benefited from exoneration from royalties for a period of three years. Similar advantages were granted for most of the creation of new port industrial zones; initially they were reserved for the major companies; since 1965 small and medium sized companies have benefited equally.

¹ The factors mentioned above are dealt with by Winfried Flüchter, *Land recovery and industrial promotion on the Japanese coasts*, Paderborn, Ed. Ferdinand Schöningh, 1975, 179 p (in German).

² The "Umetate-chi"; see paragraph 2.1.5. below.

Table No. 2.2.

Japan Origin of resources for investments for improving transport infrastructures (1973)

Unit: 100 million Yen

Method of transport	Public funds		users		others		total	
	sum	%	sum	%	sum	%	sum	%
1	2	3	4	5	6	7	8	9
maritime ports	2,322.6	74.3	363.9	11.7	436.3	14.0	3,122.8	100
roads	9,807.0	32.2	13,402.0	44.0	7,262.0	23.8	30,471.0	100
airports	188.4	24.1	360.1	46.1	232.3	29.8	780.8	100
fishing ports	726.8	96.8	23.7	3.2	—	—	750.5	100
total	13,044.8	37.1	14,149.7	40.3	7,930.6	22.6	35,125.1	100

In a similar way to many other mechanisms of the ascendant Kondratieff phase this system of financing met, at the beginning of the 1970s, its own limits, because of the increasing weight which was imposed on public financing. Whilst the slowing down of growth reduced the available fiscal resources the cost of port investments was found to be considerably weighed down by the increasing share of the investments required by the works for nautical safety, by anti-pollution measures and by the general improvement of the environment (imposition of green belts, etc.), and of the living conditions of the workers and residents who no longer tolerated the excesses of previous years. We will be returning to this subject in paragraph 2.2. The concept of the users accepting the greater part of the costs is increasingly put forward; however it comes up against the necessity, in an ascendant Kondratieff phase, of improving the quality and flexibility of the transport system without increasing the costs of importers and exporters, who are often in a difficult position.

2.1.3. Scale economies

The constant increase in the size of the production apparatus, motivated by the pursuit of constantly increased scale economies, constitutes a major characteristic of certain economic activities during the period studied. This is a highly efficient way of fighting the trend towards a reduction in profit levels, and one to which it is easy to have recourse when the technical-economic data allow and when one is in a phase of major increase in the demand.

The particularly striking cases of marine bulk transport, of petroleum refining and of the iron and steel industry have already been dealt with. The same phenomenon is observed in the case of products such as aluminium, the major chemical intermediates, cement, etc., and also in the case of the production of electrical energy. Examples are much more difficult to find downstream of the production process, where techniques become more complex, where the skill of the labour force plays an increasingly important role and where the specificity of the products and the relative narrowness or instability of the markets makes long production runs impossible. Even the automobile industry has moved away from the gigantism of the production units of the inter-war years, partly for technical reasons and partly for reasons of personnel management in an industry where the requirements in labour are very considerable and varied. One does not find the phenomenon of mass production in any general way except in the final phases of the mass consumption products, which are large consumers of labour, but it is the only slightly capitalistic structure of this part of the production process which makes it less sensitive to the phenomenon of scale economies.

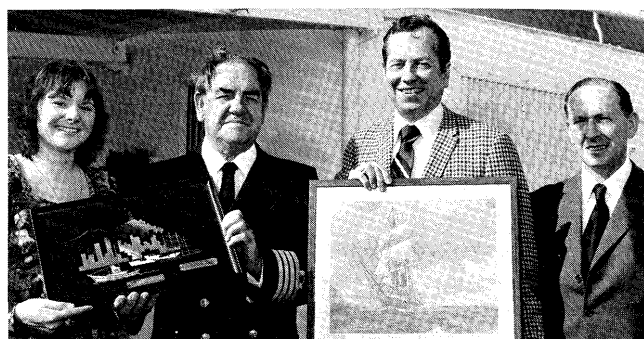
This operates mainly therefore in the production of intermediate products. Now it is these which have been affected most directly by the reduction in maritime freights and the extension of the market for raw materials to a world scale. The mechanism which encouraged them to increase the size of their apparatus therefore operated at the same time as that which moved them towards the port zones. This double movement was even more facilitated by the relative ease with which it was possible to find the enormous areas necessitated by these projects in these zones (in particular as a result of the technique of land recovery practised on a vast scale in Europe, and even more so in Japan) and the relatively low costs of this land as

compared with the price of land in urban industrial zones¹.

¹ It is to be recalled that, according to the estimates of Doctor Flüchter (op. cit), these prices are, on average, in a ratio of one to two for the Japanese industrial zones.

Finally it was necessary, in order to benefit from the potentialities of scale economies, to ensure the outlets for the productions resulting from it. The concentration of companies could provide this to a certain extent; it was not however sufficient since, concentrated or not, the old and amortised production capacities often compared favourably, in cost terms, with the new production capacities which benefited from technical progress and scale economies, but which had to support the financial costs related to their capital investments. For this reason new production capacities do not have any serious chances of being constructed unless the growth of the market is considerable. Now it is known that this was the case, in a continuing manner, during the fourth ascendant Kondratieff phase of the industrial era, the same phase which resulted in the growth and expansion of the port industrial zones. We will see subsequently that the course to gigantism slowed down at the end of this period, both in respect of the size of vessels and of steam-cracking units, when the flattening out of the demand began to be seen by investors.

Appreciation of the phenomenon of scale economies by economists and industrialists is therefore a phenomenon which is appropriate in phases of considerable expansion. Whilst today it occupies the forefront of the thoughts of all industrial economists who are concerned with it was very much absent from the views of economists of the period between the wars or immediately after the War, even amongst the most influential of them.



San Francisco, Calif., 3/2/78 (Marine Exchange of the San Francisco Bay Region):—LADY OR THE TIGER? Oakland—On hand to greet the Blue Star container liner MV SOUTHLAND STAR and to welcome Capt. W.T. Pitcher were the Marine Exchange's Kathy Pisani and the Port of Oakland's Gerry O. Pope, with G.J. Gibson, Blue Star Line general manager from Albion House, London. On her maiden voyage to the Golden Gate, the sleek vessel—for which General Steamship Corp., Ltd. are agents—turned around at the port's public container terminal, where Capt. Pitcher and his ship were feted.

Ports as Commercial Undertakings

**Address delivered by
Shri V.R. Mehta
Joint Secretary
to the Government of India
to the Maritime Economists' Group of
UK, London School of Economics,
London on 13th May, 1977**

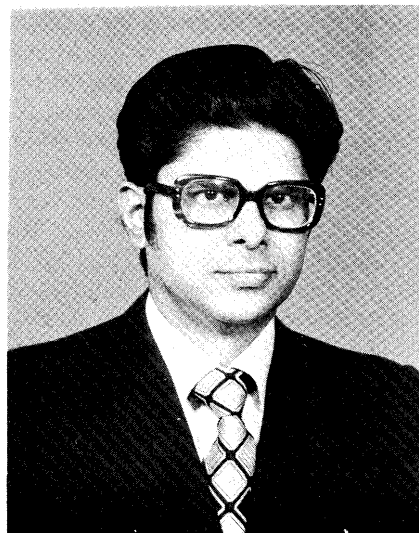
Author's biography

Shri V.R. Mehta, Joint Secretary, Ministry of Shipping and Transport, Government of India, New Delhi, has been responsible for carrying out a comprehensive review of finances of all the major Ports in India. This review covered rationalisation of tariffs, relating them to costs by identification of cost centres with revenue centres etc. Shri Mehta had presented a Paper titled "Economic appraisal of Port Projects and tariff structure for port services and facilities—Identification of revenue centres relatable to cost centres" at SEATEC 77 Seminar sponsored by IAPH held in Singapore in March, 1977.

He was also invited by UK's Maritime Economists' Group to deliver a talk to them in London on 13th May, 1977. Reproduced here is a gist of that talk.

In India, we have undertaken construction of a number of new major Ports or major schemes of port development works in the last 5-6 years. These cover construction of an entirely new dock system down stream of Calcutta at Haldia—this is something similar to the Tilbury Dock Systems down stream of London—construction of a deep draughted outer harbour at Visakhapatnam, Madras and Mormugao with mechanical loading facilities for iron ore and crude oil. In addition, two entirely new major Ports have been constructed at Tuticorin and Mangalore. The Outer Harbour at Visakhapatnam has already been commissioned and the other projects are also nearing completion and are likely to be commissioned during the current year. The commissioning of new facilities necessitated fixation of rates for services provided by these facilities and revision of rates where the quality of services has been improved. The fixation of such new or revised rates involved a fresh economic appraisal of the projects so that a rationale for such a rate fixation could be evolved.

2. The determination of a rate fixation formula involved coverage by tariffs of costs of administration, operation and maintenance and minor improvements, cost of amortization of the assets within their working life, payment of capital servicing charges in the form of interests etc. In addition, it was essential to provide for a reasonable reserve for modernisation, rehabilitation etc. of assets in view of the fast changing ship technology and its concomitant high risks of obsolescence of port facilities and equipment which may have to be replaced before the end of their useful life. These involved identification of cost centres. Fortunately, the major Ports in India are already working on modern management accounting system and the expenditure is classified under various principal activities with a number of sub-activity under each of them. The principal activities are



Mr. V.R. Mehta

(i) cargo; (ii) vessels; (iii) estate; (iv) railways; (v) general management and administration. Each of these principal activities is again sub divided into sub activities. These cost centres had to be related to the revenue centres. In order to ensure that the charges bear a direct relationship to the cost of respective services, the income under each of the revenue centres had to be such that it was directly relatable to the expenditure under the corresponding cost centres. The tariffs and rates could then be worked out taking into account the quantification of service say of traffic throughput or hours of usage etc.

3. All these were absolutely logical steps and unexceptionable. The rationale is also sound. The rub, however, lies in the fact that the results are not sound, at least with the backdrop of canvas of present day rate structure or tariffs in ports. This is more so in respect of charges on ships. The charges if fixed on this basis have to be raised many fold and out of tune with charges in most other ports. Some of the factors which have further accentuated the problems particularly in our ports are—

- (i) The runaway inflation following 1973 hike in oil prices caused considerable cost overruns on the project costs. This led to considerable increase in cost of materials and services.
- (ii) It also necessitated changes in scope of some of the schemes and shortages and delays in supplies of some critical items which resulted in lengthening of construction periods, increasing the burden of capitalised interest. In Indian projects, this ranged from 10.1% to 22.00% of the total project costs.
- (iii) Port capacity of necessity has to be ahead of traffic requirements and this leads to under-utilisation of facilities set up. This in turn sharply raises the charge per unit of traffic or service time. Gestation period for development of traffic thus makes an already acute situation worse.
- (iv) Very much higher proportion of costs on items like capital dredging, breakwaters etc. This is because latest trends in ship technology demand construction of deep draughted harbours involving high

expenditure on capital dredging if the existing harbour area and approach channel have to be deepened or for construction of breakwaters to take the harbour into the deeper waters of sea away from land or construction of sea locks or a combination of any one or more of these factors for providing a tranquil water basin for modern ships. Our analysis in India indicated that expenditure on breakwaters or locks ranged from 1.8% to 33.2% and on capital dredging from 6.6% to 26.2%.

4. Fixation of charges at levels indicated by the total annual costs, as would be done by a wholly commercial undertaking, may well place the export trade in certain sectors of commerce out of international market or force it to reduce its quotations in the international market. Charging at lower port rates will keep the international prices but at a loss to the port. The levy of charges in the port at the appropriate level only transfers the loss to the exporter—and to my mind its appropriate place. This, however, does not carry conviction with the trade or sometimes even Governments. Even where the improved port facilities offer additional benefits to the port users in terms of economies of scale or faster turnaround of vessels resulting in freight benefits the higher port charges are unacceptable as the trade is psychologically not prepared to accept charges which are so different from the present level of charges in that very port and the charges in other world ports. The benefits themselves are not steady due to mercurial nature of ship charter market.

5. There is then a tremendous amount of resistance to fixation of charges in ports relatable to costs of rendering services, raising the very basic issue "Can Ports really function as commercial undertakings"? This question keeps on bobbing up in my mind while handling the cases of Indian ports and I am only sharing my thoughts with you this evening.

6. If Ports are to function as true commercial undertakings, the fixation of these charges is inevitable. The point for consideration, however, is whether these would help or hinder the country's international commerce.

7. There are strong views both in favour of and against treating ports as commercial undertakings. Those who favour management of ports as commercial undertakings put forward the following broad arguments:

- (i) Ports can maintain their autonomy and financial independence as they do not have to depend on Government subventions or grants.
- (ii) Ports as economically health units can meet the legitimate needs of shipping and shippers in the form of independent, well conceived development plant—this will ensure timely action and will obviate the congestions and queuing which are highly expensive to ship owners. With more and more expensive ships, even a day's extra waiting is very costly.
- (iii) Ports make investment which confer benefits on shipowner/shipping in the form of faster turnaround, economy of scale. Ports are entitled to recover their costs from such beneficiaries.
- (vi) Fixation of port charges at levels dictated by a commercial costing principles ensure that costs of services are real and not artificially depressed. The assessment of profit or loss on export/import deals on the basis of such real charges is also real.
- (v) Proportion of the total ocean freight costs and the

fixation at correct levels would not very seriously alter the freight rates. A study carried out in India on the basis of the freight earnings and expenses of shipping lines indicated that marine dues in ports as distinguished from total port costs of ships (which would include standing charges) ranged between 3 to 4 per cent of the freight earnings. Since this relates to port charges or marine dues at both ends, the charges at each end would be roughly 1.5 to 2.00 per cent. This figure is also confirmed by the results of a study undertaken some years ago by UNCTAD in which it was brought out that the port charges are less than 4 per cent of the total ocean freights.

- (vi) Low charges on vessels unrelated to costs imply subsidy to shipping. And shipping in most developing countries is still largely composed of foreign flag vessels. This implies subsidy to foreign companies. The argument that this comes back to the country in the form of reduced freight is not tenable. Firstly, this does not happen at all on conference rates which function on averaging. Even in tramp market, the freight rates are dictated by market conditions on which port charges have very little effect.

- (vii) The Commission headed by Viscount Rochdale in the United Kingdom and the Major Ports Commission in India which went into this question in some depth have both recommended that ports should generally function as commercial undertakings.

8. As against these arguments, the protagonists of ports being treated as a part of the transport infra-structure of the country have these arguments—

- (i) A large port traffic by itself has a great effect on the economy of the port city and to entire hinterland. It is a great catalyst for economic and industrial development, generation of employment directly and also indirectly in setting up of service enterprises like steamer agents, clearing and forwarding agents, ship repair facilities, commercial and banking facilities and recreational facilities. The investments on ports have a very large multiplier effect and total economic advantages are much more than simple accounting pluses. As such return on port investment should be computed in socio economic benefits and not merely economic benefits to port itself.
- (ii) Low charges contribute to export promotion effort.
- (iii) Competition of other nearby ports forces the ports to keep their charges low lest the traffic gets diverted. You in London have experienced this. Competition from European ports is fierce.

9. It is clear that arguments for and against ports functioning as commercial undertakings have considerable weight. However, we have no doubt that with the larger investments required in port development projects due to the latest trends in ship design technology, it becomes increasingly difficult for ports to really function as commercial undertakings. Most of the Ports undertaking investments in recent have to opt for in between positions i.e. between the two extreme of a total financial self-sufficiency and total financial dependence. The report of Touche Ross & Co. brought out by the National Ports Council, London, brings

(Continued on next page bottom)

Future of Maritime Transport in Korea

by Kang, Chang Sung
Administrator, Korea Maritime
and Port Administration
(Vice-Chairman, IAPH Special
Committee on International Port
Development), February, 1978

FOREWORD

It is our great pleasure to take this opportunity to introduce the status of shipping and port in this country for which we are responsible.

All the staffs of Korea Maritime and Port Administration, on the basis of the past good achievements and experiences, take a full pledge to accomplish their given assignments with sincerity, initiative, and harmony of human relations.

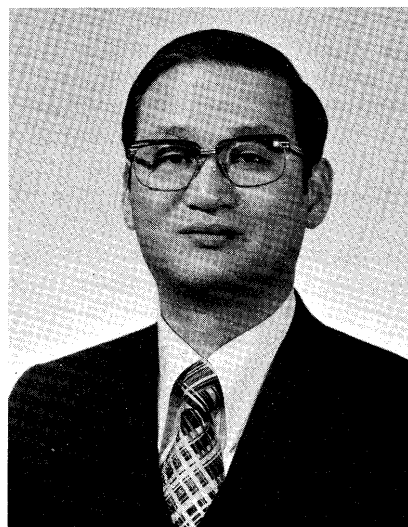
GENERAL

First of all, we have set our Korea Maritime and Port Administration's policy objective of this year as "the year of shipping and port moving out across the world."

In order for us to reach to this policy objective, we have established our basic policy as; first, strengthening of marine transport capabilities, second, expansion of port facilities, third, efficient port operation and management, and fourth, renovation of shipping and port administration. (Thus, we pledge ourselves to faithfully carry out each policy.)

ESTABLISHMENT OF KMPA

In the past, due to the fact that the functions of the



Mr. Kang, Chang Sung

Korea Maritime and Port Administration were either shared or passed around among Ministries of Transportation, Home Affairs, Construction, and Commerce and Industry, achieving its effective management and operation was not possible.

However, the urgent requirements of the development of shipping industry and of port facilities to cater for the tremendously increasing cargo traffic volume could not be met under such division of responsibilities.

At long last, for the first time, since March 13, 1976, the Korea Maritime and Port Administration has been established, in which the functions of shipping promotion and

(Continued from page 33)

out clearly how the large continental ports are doing this in different ways and in different degrees. This would also seem to bring the port sector of transportation industry on par with other limbs of transportation viz. highways and railways where the State meets the entire expenditure on infra-structure or gives considerable subsidies and grants. There is, however, no doubt that no port should be in such a position where current revenue from its tariffs, rates and charges for services is not sufficient to cover administrative and operating expenses, including running and maintenance. It would also be unexceptionable to state that after meeting its current administrative and operating expenses, the port should strive to have revenue sufficient to provide for amortization of initial capital investments and for meeting its different servicing facilities. Where, however, the achievement of such a goal hinders rather than helps the free flow and development of traffic through the port, the manner of support in the form of grants or subsidy has to be decided.

10. Some of the possible alternatives depending on circumstances of each case could be to treat the total or partial expenditure on anyone or two or three of the following expenses as grants:

- (i) expenditure on capital dredging;
- (ii) expenditure of breakwaters and locks; and
- (iii) amount of interest capitalised during the period of construction.

11. As I have mentioned in the earlier part of my talk, the expenditure on capital dredging or construction of breakwaters, varies from port to port, depending on the natural topography, hydraulic and hydro-dynamic conditions in and around the port site. Take, for instance, your own case in U.K., where South Hampton with a natural deep draught harbour has natural high draught and does not require substantial expenditure on dredging or breakwaters. Another port due to its locational disadvantages may need considerable expenditure on this score. Grants covering these two items would, therefore, serve only to nullify the impact of natural advantages/disadvantages. In America, the federal Government meets the total expenditure on the capital and maintenance dredging of approach channels of all its ports. In Rotterdam, Hamburg, Bremen, Antwerp, Le-Havre, Marseilles and many other ports, the expenditure on capital dredging and construction of locks is met at least partially, if not totally, by the State. As far as the question of capitalised interest is concerned, this is dependent on the period of construction, which is governed by prevailing economic conditions of the country, state of technological advancement etc. The real productive value of the assets does not increase with the addition of capitalised interest to the original capital investment. It may, therefore, be an area of relief where instead of capitalising the interest during the period of construction and possibly for some period, after the initial commissioning, there is an interest holiday on loans raised by ports from Government so that the productive value of assets is not unduly inflated.



Port of Busan

construction and operation of port facilities are unified.

Thus, the prime functions of Korea Maritime and Port Administration can be summarized as;

- a) shipping promotion
- b) port construction and maintenance and
- c) port operation and management.

Now, to explain the table of organization, the organizational structure has a Head Office comprising Planning and Management office, 3 Bureaus, 23 Divisions, and Having Busan, Incheon, Masan, Mugho, and the like up to 10 District Maritime and Port Authorities, reporting directly to the Head office.

Aside from this organization, we have assigned resident officers to London, New York, Tokyo, Jeddah and Singapore to cope promptly with international trends of the world sea-borne industry and port affairs.

Relating to the organization, we have 238 staffs in the Head Office, 1,386 staffs at regional offices, totaling 1,624 authorized staffs.

Each individual carries out his given job assignment with enthusiasm.

MARINE TRANSPORT

Recent continuous economic growth of Korea, if we might use the word "economic Miracle" which the journalistic world uses about Korea now-a-days, results inevitably in the sky-rocketed sea-borne traffic increase that demands rapid expansion of shipping industry and of port facilities.

Particularly, sea-borne cargoes are in accordance with international trade promotion, and the shipping demand is annually increasing sharply.

Especially, we have established another milestone in Korean Economy by achieving U.S. \$10 billion export target last year, 4 years earlier than expected.

The total sea-borne cargo traffic volume is estimated at 91 million tons this year and that 107 million tons in 1981 from 83 million tons of last year.

Accordingly we can find out the role of maritime transport is gradually increasing. Among sea-borne traffic volume which is on gradual increase, the export cargoes are expected to reach 21 million tons, 23 percent increase comparing with 17 million tons that of last year.

The major export commodities are container freight, iron and steel, timber and cement etc., which form our principal exports. On the other hand, in the case of import cargoes, the major items are petroleum, iron ore, timber and general cargoes etc., and it can be said that trade pattern resulting from the national policy of petrochemical and heavy industrial development is reflected therein.

In 1977, we have gained a surprising figure of U.S. \$714 million, which is 89 times as much as that of 1962, U.S. \$8 million, and this year we have planned to earn U.S. \$941 million which includes U.S. \$600 million of freight by national flag vessel, ship crews and port facilities revenue. In 1981 when the fourth 5 year economic development plan terminates, it would be expected to earn U.S. \$1.5 billion from freight by national flag vessel alone. We pledge our continuous efforts to improve the nation's international

balance of payment. Under such an environment like ours, with a lack of endowed natural resources, the future of the national economy has no alternative but to rely on export, and since our geographical condition is surrounded by ocean in three directions, we have to depend on marine transport for the traffic.

Taking this situation into consideration, you can readily appreciate with ease the great importances of marine transport in this country.

SHIPPING PROMOTION

Under such condition as has been explained, having in mind that expansion and promotion of shipping power is directly connected with national strength, we have set the shipping promotion policy to make the consolidated sound development in the field of shipping industry as well as shipbuilding industry now on the bottom, under the banner of "our own cargoes by our own ships." And we are very strongly driving forward to that goal.

The gist of this policy is to increase the national fleet up to 6 million gross tonnage of vessels by 1981 from that of 3.4 million in 1977, to bring up the present shipment ratio of 42% in terms of total sea-borne trade to 50% and at the same time to attain the target of U.S. \$1.5 billion of freight by national flag vessel in 1981 from U.S. \$600 million that of 1977.

We will spare no efforts to successfully meet and reach to our national goal, both in name and reality, and will restore this nation as one of the advanced maritime countries.

To enhance our national fleet, a governmental fleet reinforcement plan has been favorably developed, and as of the end of 1977, we already exceeded 3.4 million gross tonnage of vessels in ocean going service and 250 thousand gross tonnage of vessels in coastal service, totaling 3 million 630 thousand gross tonnage of vessels.

Comparing this figure to 12 thousand tons that of 1948 in the beginning of the Republic, you can easily realize how greatly our maritime strength has been developed. Going into a little further, by studying our position in the world maritime nations, following Japan, England, Norway and other maritime nations, we are the 19th in the world (whereas North Korea has only 170 thousand tons and is the 77th).

However, we can not contend at the present, but we would continuously challenge the world of advanced maritime nations to be able to rank with them in the near future.

The reinforcement of national fleet has been our utmost important task, and at the same time it is one of the hardest tasks in which we have to overcome many difficulties and hardships.

As has been mentioned, in pursuance of fleet expansion plan, we have set forth the basic objective,—"our own ships by our own ship-yards" and accordingly we have planned to increase the national fleet up to 4 million gross tonnage by the end of this year through adding another 500 thousand tonnages including full containers and bulk carriers, and to raise the shipment ratio of national flag vessels to 44 percent.

Having the objectives—"our own cargoes by our own ships," and "our own ships by our own ship-yards."—"in mind, we have planned to build 1 million tons of vessels in local ship yards, and the remainder will be outright purchased or chartered from overseas during the period of



Port of Busan

the 4th 5 year Economic Development Plan to ensure our national fleet reaches 6 million tons by 1981.

Since the local planned shipbuilding program requires a huge capital, the Government has determinedly provided capital supportive measures to overcome the shortage of funds. For instance, during 3 years from 1975 to 1977, under the planned 41.5 billion Won equivalent to roughly U.S. \$80 million in building 235 thousand tons. In addition, we have improved various kinds of local loan conditions such as interest rate, grace period, repayment period and local tax system to encourage local planned shipbuilding that is the core of national fleet reinforcement program.

Next, we shall look at the expansion plan of overseas liner service, 21 container vessels which are secured through fleet expansion plan, are to be put into service in the major lines in America and Europe, to establish a shipping structure of export and import cargoes by the national fleet. We have so far put 2 container vessels into North Atlantic of America and inaugurated full container services into Europe last year.

In this year we have planned to put another 3 container vessels into North Pacific and European trade to containerize every major trade route, inducing some big enterprises to participate in shipping industry, and at the same time searching the possibility of joint venture with the advanced shipping companies abroad.

Next, we would like to comment on the augmentation of shipment right of major import raw materials such as crude oil, iron ore, and fertilizer.

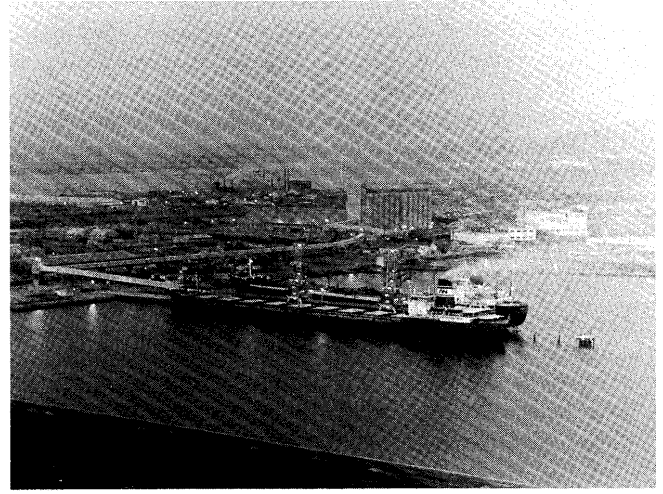
We achieved 60% shipment of total 26 million tons of such imports last year by national fleet, and this year we have a plan to bring up the shipment ratio to 65% of expected total import volume of such materials, 32 million tons.

Achieving the shipment right by national fleet is another important task we are facing with to overcome the shipping business recession in terms of freight revenue.

Now, in order to promptly respond and counteract to the rapid changes now and then occurred in the world shipping, we have recognized that we have to do every effort to seek the international cooperations with the advanced shipping countries such as England, French, Denmark and Japan etc, by means of concluding bilateral marine transport agreement and of closer ties and relations with the noted international organizations such as IAPH, UNCTAD and so forth.



Port of Incheon



Port of Incheon

COASTAL SHIPPING SERVICE

Our inhabitable islands are accounted for 666 and among them 114 islands are not having vessel service yet. In this year, we are planning to put passenger shipping service into the first 25 islands, and the rest will be serviced annually with passenger shipping by 1981.

At the same time, to promote modernization and regional social welfare development, we are going to put into service a 3 thousand tons car-ferry between Mogpo and Jeju and some high-speed passenger vessels into major passenger line between Busan and Yeosu, Wando and Jeju, Yeosu and Jeju, while we put into service a 3,800 tons car-ferry between Busan and Jeju from April 14 and an 800 tons high speed motor boat in service between Pohang and Ulryong-do in July last year.

SHIP CREWS

Shipping promotion cannot be achieved only by increasing the number of vessels. Securing competent crews for operating increased number of vessels is another imperative requirement.

Fortunately enough, our Merchant Marine College is graduating many excellent crews, and these crews are enhancing the national dignity in both domestic and overseas operations.

8,500 merchant marine officers will be trained this year, and these will greatly contribute not only to domestic demand for crews but also to that from abroad, and we are very much confident that this will play a great role in earning foreign currencies. Along with this exercise, we have felt the necessity of reeducation for enhancement of skill of crews, and to fill this desire we have already established "Korea National Seamen's school" and it will open in March this year to train some 120 crews annually and to reeducate the merchant marine officers now in service.

Along with this program, to promote seamen's welfare, we are concentrating on a seamen's insurance policy, and reinforced labor condition supervising activities.

PORT OPERATION AND MANAGEMENT

This nation, surrounded by seas from three directions, has 1,350 odd ports in a variety of size along 13.2 thousand Kms of coastal line.

Among the ports, this Administration is in charge of the functions to develop and operate 21 First Class Designated

Ports, and 23 Second Class Designated Ports of which operating functions at the moment are transferred to the regional governors concerned.

From the point of view that port conditions and operational systems affect gravely to the vessel operations, port operation and maintenance direction are being defined, along with an acceleration of stevedoring, upgrading efficiency of navigational operation and specialization of cargo handling by commodities and berths, to reduce expenditure of trade concerned industries so that we may be reinforced with ability to challenge the world.

As to the Newly developed Busan Port Operational system, which port phase 1 Development plan will be finished in the later part of this year, the Government is to operate and manage the basic facilities of wharf and land of the New Composite Pier which will accommodate containers, grain, and iron ore and of the International Passenger Pier and we will introduce "Terminal operating companies" to get them to be in charge of operations of the functional port facilities such as buildings and cargo handling facilities after leased, in order for us to assure the best efficiency of the port facilities through the international standardization of operational system and through specialization of the pier by commodity.

Meanwhile, our national port stevedoring capabilities are being recognized worldwide for their superiority and recently our stevedoring companies participation in the Middle-East Asia has been increased remarkably.

So far, 8 stevedoring companies have been forwarded into 6 countries such as Saudi Arabia and Iran, and have obtained contracts which amount to U.S. \$293 million. In order to increase another contract amounts in this year up to U.S. \$200 million, we are deploying our strategic efforts, for instance, financial supports, tax exemption, and administrative support by stationing a maritime attache in the region, in securing contract orders.

The honesty and diligence of our stevedoring companies is being highly praised by the Middle East Asian countries, and their expansion of business activities in the region looks even more bright for the future.

PORT FACILITIES EXPANSION

Our export target of U.S. \$20 billion in 1980 has resulted in requirements such as exclusive wharfs by type of cargoes, and modernized cargo handling equipment and

facilities.

In this context, this Administration, rather than increasing the volume of freight cargoes, is emphasizing the concentrated investment of total local and foreign currencies which amount to 251.2 billion Won equivalent to U.S. \$518 million in major ports during the period of the 4th 5 year Economic Development Plan, and by 1981 we are planning to increase the present cargo handling capacity of 41 million tons to 93 million, more than double, to contribute to rapid and efficient transportation of export and import cargoes by developing the berths and facilities with the money. In this, we are planning to invest 41.1 billion Won equivalent to approximately U.S. \$80 million in 7 major ports including Busan Port, to push forward port development. Next, I would like to brief you on the status of port development of two major ports.

BUSAN PORT

The Port of Busan was the very first Korean port that opened to the world trade in 1876, it is a natural port blessed with excellent geographical conditions, and has been exerting its role as a major gateway to international trade.

Changes of maritime transport system affected by the recent trend in the world sea-borne trade occurring in the type of vessels such as larger sized, specialization and containerization etc, has made it imperative to develop Busan Port which has large industrial back-up areas.

Resulting from this, the Government has made haste in establishing the development plan, and has defined the investment scope, including Phase II development, of a total 153.9 billion Won equivalent to U.S. \$308 million. In 1974 this important development has begun.

To summarize the status of development of Busan Port, the three stages of development, the first phase development in for 5 years from 1974 to 1978 with the investment of total local and foreign currencies of 91.2 billion Won equivalent to U.S. \$182 million to construct and develop a composite pier for containers and grain, Pier 7 for coal and iron ore, international passenger pier and cargo handling equipment such as container cranes. The Phase I Development will be completed in the later part of this year and every new pier will open then.

The second phase development from 1978 to 1981 is mainly concentrated on the development of additional 2 container berths to cater for the container traffic volume now increasing rapidly.

Furthermore, the third phase development plan now under study is to develop the outer-harbor of Busan Port that enables to accommodate more cargoes.

Now, let's picture the Busan Port of 1978 when the phase 1 development is to be completed.

Annual cargo handling capacity, which up to date has been only 7 million tons, will be doubled to 14 million tons upon the completion of construction; berthing capacity for only one ship of 20 thousand tons at present will be improved to facilitate simultaneous berthing up to 3 ships of 50 thousand tons at one time; and efficient cargo handling by modernized equipment will solve inefficiencies and squanderings which have prevailed up to date.

Now, with these improvements, the Port of Busan will be fully accommodated with its modernized facilities and capabilities as an international major port, and will contribute its role in the export and import cargo handling in 1980's.

INCHEON PORT

Incheon Port, since its opening in 1883, has been conveniently located as a gateway to the capital City of Seoul, however, because of its most characteristic feature, a tidal difference as great as almost 10 meters, we never had been able to develop this port.

Up until 4 years ago, large ships having difficulties in berthing directly at Dock number 1 were anchored at the outer harbour, and by means of barge, repetitive duplication of cargo handling had to be carried out. Resulting from this, we had no choice but to sustain an annual loss amounted to as much as 3 billion Won equivalent to U.S. \$6 million.

To break away from these problems, the Government planned a total enclosing of Incheon Port over the period of 8 years from 1966 through 1974, and invested a total of 19.3 billion Won equivalent to U.S. \$40 million to accommodate 50 thousand ton ships without difficulties in entering and exiting the port irrespective of its severe tidal difference.

Thus, the Port of Incheon has been built as the largest lock type dock in the orient.

The development project now going on includes construction of modern warehousing facilities, pavement of access roads and open storage areas within the vicinity of the port area, and construction of the outer breakwater and so forth so that the functions and operations of the port can be harmoniously carried out. In this project, we have been investing 24.1 billion Won equivalent to U.S. \$48 million since 1973.

In this year, when all these projects are completed, the port will be able to accommodate 29 large vessels at one time, and cargo handling will be done by modernized equipment and facilities that will bring a renovation to the port as an international port, cargo handling capacity will also be improved to handle 91.8 million tons annually.

CONCLUSION

You have seen our future plan to meet our challenge in the world maritime industry and to renovate our ports on an International level.

We as a nation that should have a firm conviction that "where there is a will, there is a way", and that the fruits of a nation's sincerity in blood and sweat, can not be over-looked.

The entire staff of our KMPA and all who are working at maritime transportation and port facilities will bear in their minds that challenging the world maritime industry, and developing our ports is the one and only short cut to the cultivation of our national strength, and they will take all the necessary steps and exert every effort to attain these goal.

Presidential complementary speech, made on the occasion of the inauguration of the Incheon dock facility:

"Our promotion of maritime transportation means a strengthening of our competitive power worldwide, and an acceleration in the cultivating of our national strength, furthermore, in accordance with our continuous expansion in the exports, the freight movement volume will considerably increase and it will cause a significant rise in marine transportation volume. Therefore, our promotion of marine transport we can not help but say, is very urgent and one of the most important tasks we are facing today."

Thank you

Port of Oakland News Releases, February

1. 15 years After Containerization

Oakland, California, February 7, 1978:—1977 was the year 15 A.C. at the Port of Oakland—fifteen years After Containerization—as well as the 50th anniversary of its airport and of its political stability under the Oakland Board of Port Commissioners. The occasions were celebrated in fittingly expansive fashion.

On the waterfront, Oakland handled over 9 million revenue tons of cargo in 1977, and lengthened its leadership among West Coast ports in container facilities by opening two new container terminals comprising 48 acres, and beginning construction on a third, scheduled to open in autumn, 1978. Its 40 acres will bring Oakland's container terminal total to over 400.

Four long-term Oakland callers—the Japanese consortium of Japan Line, “K” Line, Mitsui-O.S.K. Lines and Y.S. Lines—shifted operations to the newly completed Oakland Container Terminal in January, 1977, gaining two berths, 31 acres of container marshalling yard and two 40-ton gantry cranes valued at \$2.4 million apiece.

One of these cranes—the 16th in Oakland's cargo-handling arsenal, also greatest among Pacific Coast ports—is shared by the adjacent 16-acre Outer Harbor Public Container Terminal Berth 4, whose principal user, Maersk Line, formally opened the facility in September, 1977.

The movement of these two lines enable other established Oakland callers to expand operations in 1977. Johnson Scan Star Service to Europe assumed quarters vacated by the Japanese lines at the Seventh Street Public Container Terminal, Berth G, while United States Lines eagerly incorporated the Middle Harbor Terminal berth Maersk Line had occupied previously.

While quick to respond to the growing pains of longtime Oakland services, the Port also attracted a half-dozen important new marine callers, including Hoegh Container Line, an allwater container cargo service to Europe.

In December, Hoegh began sailings every three weeks from the Sea-Land Terminal while awaiting completion of Outer Harbor Berth Six next door—a \$5 million conversion to container operations of a 19-acre site formerly devoted to conventional uses.

Other new Oakland callers in 1977 included Polynesia Line, offering 35-day service between Oakland's Matson Terminal and Tahiti and Samoa; Japan Line breakbulk services, Pan Ocean Bulk Carriers, Star Shipping and Vassa Line. Each of the latter calls at the Port's Ninth Avenue Terminal, where they combine with seven other lines to create the most regular non-scheduled “tramp” services available at any West Coast port.

Fifty years after its dedication by Lindbergh in 1927, Oakland International Airport also made headlines last year with an aggressive bid to win improved—and more equitable—scheduled airline service to 22 major U.S. cities where nonstop Oakland route authority has been granted but is unused or underused by its holders.

In April, the Oakland Board of Port Commissioners petitioned the Civil Aeronautics Board for an investigation of this failure by certain air carriers to provide Oakland International with flight schedules commensurate with its

capacity and status. Oakland International is the most convenient airport for 1.99 million people, a four-county East Bay populace whose numbers and buying power equal those of the cities of Cleveland, Atlanta or Minneapolis/St. Paul.

That Oakland's flight service resembles, rather, what is accorded Boise or Grand Rapids is a disservice to this 40 percent of the Bay Area metropolitan populace, the Port Commission argued. It adversely affects traffic patterns and air quality by necessitating long commutes to more distant airports, and thwarts an agreed-upon regional plan to allocate more flights to Oakland to relieve San Francisco's increasingly serious congestion.

The Port Commission asked the CAB to make Oakland a separate listing on route authorizations, (divorcing it from San Francisco and San Jose to which it is now linked by hyphens), to grant new nonstop authority for the 22 poorly served cities to other airlines wishing to fly these routes from Oakland, and to remove nonstop authority from carriers who fail to utilize it.

The Port was supported in this action by several cities and seven airlines, all of whom asked the CAB to award them one or more of these “dormant” Oakland routes. Included were Allegheny, Braniff, Frontier, Hughes Airwest, Northwest, PSA and Texas International.

Meanwhile, service showed dramatic improvement at Oakland International in 1977, with new flights by Hughes Airwest to Las Vegas, Phoenix and the Mexican Riviera; United to Honolulu; TWA to Chicago and Washington; and Delta to Las Vegas, Dallas and New Orleans. Service improvements were also instituted by United to Seattle, PSA to Burbank and San Diego, and Air California to Orange County.

Passenger traffic also hit an alltime record as a result at Oakland International, topping 2.499 million for the year. Some 35,000 of these travelers took advantage of Oakland Air-BART during the six months since it was introduced—a unique shuttle system between the Oakland passenger terminal and the Oakland Coliseum/Airport station of the Bay Area Rapid Transit District.

Use of Oakland Air-BART increased monthly, reaching some 8,200 riders in December, and its convenience for handicapped travelers as well will be augmented in April, 1978, when a vehicle especially designed to accommodate wheelchairs is scheduled to enter operation. Oakland Air-BART puts the Oakland International check-in gate within seven minutes of the BART system on a continual basis during hours of rapid transit operation, with easy connection to 15 Bay Area communities along 71 miles of track.

Addition in 1977 of a third baggage carousel and the introduction of Mobile Passenger Transporter Vehicles—or Planemates—for boarding of international charter flights contributed both to the flexibility of Oakland International at hours of high passenger and aircraft density, and to the comfort of travelers themselves, especially those who make Oakland International a center for worldwide charter operations.

The past year was equally busy elsewhere on Port of Oakland properties. Construction began on a \$4 million redevelopment in the Embarcadero Cove area of the

Oakland Estuary which will eventually provide some 400 new pleasure boat berths, public access and amenities, paving and landscaping improvements, at least two additional restaurants and an upgrading of commercial fishery facilities.

This three-phase project, scheduled for completion in 1979, is financed by low-interest loans from the State of California Department of Navigation & Ocean Development, repayable from the major new revenues expected to be generated as a result of the improvements.

Just south of the Embarcadero Cove project's one-mile Estuary frontage—and just north of Jack London Village—the Oakland Board of Port Commissioners also authorized the purchase of a vacant 16-acre site where preliminary development plans call for a 300-room motel, a television station, another 50-berth marina, a restaurant, a theater or night club, shops and offices.

Public plazas and malls along the shoreline on this property—to be purchased for \$2.6 million from Santa Fe Plaza Corporation—will tie in with Jack London Square and Jack London Village walkways to create a pedestrian network extending for 10 blocks along the water's edge.

Half a century after Oakland voters amended the city charter to remove their port from direct political influences, Oakland Port Commissioners past and present were honored at a civic dinner hailing their success in building the harbor into a containerport of world ranking and the community's single most important economic resource.

But while one in three jobs in Oakland is today portrelated, joblessness remains sufficiently grave among the city's residents that special efforts are needed to encourage Port tenant firms to hire local applicants, the Port Commission agreed.

Swinging full weight behind just such a program, the Port of Oakland joined Mayor Lionel J. Wilson in urging its 242 major tenants to coordinate job openings with a special task force within the State Department of Employment Development, and to accord special consideration to Oakland applicants referred by that office.

Port Executive Director Walter A. Abernathy noted that a majority of the Port's own employees are Oaklanders, and that financial incentives including tax credits and generous on-the-job training grants are available to make the Port-wide and city-wide "Hire Oakland" program even more attractive.

Abernathy, in his first year as Executive Director, succeeded Ben E. Nutter upon the latter's retirement in July after a distinguished engineering and administrative career whose last 20 years were devoted to the Port of Oakland. Nutter has been widely praised as the man whose foresight and leadership were instrumental in shaping Oakland's modern container facilities and the jet-age Oakland International Airport.

Two well-known community leaders were appointed to the Oakland Board of Port Commissioners in 1977 by the newly-elected Mayor Wilson and the Oakland City Council. Norvel Smith, Associate Vice-Chancellor-Student Affairs at the University of California, Berkeley, and Henry Rodriguez, an Oakland attorney, joined five incumbent colleagues who set policy for maritime, aviation and commercial activities of the independent city Port department.

If these highlights made 1977 a landmark year, 1978 already looms in its first weeks as another banner twelve-months.

Five new shipping lines have confirmed plans to make Oakland their Northern California base. Hamburg-headquartered Hapag-Lloyd began transpacific container service from Oakland in January with four 1,100-TEU ships, as did Scindia Line combination vessels, serving India and Southeast Asia with monthly Oakland sailings. The Singapore national line Neptune Orient will inaugurate transpacific container service from Oakland in February, and Britain's Blue Star Line Crusader service now links Oakland with New Zealand. Ace Lines will also offer direct independent service between Australia and Oakland this year.

To meet such growing demand, the Port of Oakland will itself continue the physical growth that has led to its Pacific container-traffic dominance. Contrary to competitors' claims, Oakland has not approached the limits of expansion.

Negotiations leading to acquisition of the privately-owned Howard Terminals on the Oakland Estuary are expected to be concluded early this year, laying the foundation for the next major container terminal development planned in the Oakland Inner Harbor—incorporating Howard property and the adjacent Grove Street Terminal to create a 46-acre combination container/breakbulk marine facility.

A positive decision is also near on the availability to the Port of Oakland of wharf and warehousing space at the Oakland Army Base, little used since the cessation of Vietnam hostilities.

Concerning Oakland International Airport, public hearings were held this month on a new 10-year Master Plan designed to cope with anticipated increases in passenger traffic—at least 6 million annually by 1986—resulting from normal growth and perhaps accelerated by the outcome of pending CAB actions like World Airways' bid to begin low-cost transcontinental flights, and low-fare service between Oakland and Reno which United Airlines will kick off May 1.

2. Port acquiring property

Oakland, Calif., February 7, 1978:—One of the last privately-owned shipping terminals on the Oakland Estuary—the historic Howard Terminal at the foot of Market Street—today moved a giant step forward toward modern maritime usefulness when the Oakland Board of Port Commissioners agreed to acquire the property for \$3.29 million.

Negotiations leading toward acquisition of the 16-acre Howard property have been underway since late 1975, when the Port of Oakland announced its intention to convert the little used Howard piers and its own adjoining Market Street Terminal into a major new marine cargo-handling facility.

Under the terms of the acquisition agreement given first public reading by the Port Commission today, the Port of Oakland will pay \$3.24 million for the land and improvements at the Howard Terminal, and another \$48,000 for various items of machinery and equipment, including a compact, self-contained railroad system boasting its own diesel locomotive, 1.6 miles of track and switching connections to the Southern Pacific and Western Pacific main lines.

Since the little railroad, known as Howard Terminal Railway, operates under provisions of the Interstate Com-

(Continued on page 47)

Orbiter Probe

"Portos e Navios" October '77

Rio de Janeiro, Brazil:—

Articles

- Southamerican Inland Waterways
- Highway Transporters ignore "Ro-Ro" Transportation
- Quayside Cranes for Developing Countries

Ports & Waterways

- The State of Sergipe studies the construction of a Shipping Terminal.
- On September 15 Petrobrás inaugurated its Marine Terminal Baía da Ilha Grande (TEBIG), the largest of Latin-America, near Angra dos Reis, in the State of Rio de Janeiro.
- Shipyard Só's Vice President Edson Batista Chaves indicated in a recent speech that the Port of Rio Grande is now one of the most important export ports of the Country, wherefore the Center for Shipbuilding Repairs in Rio Grande shall receive priority treatment.

Port of Halifax Bulletin

DECEMBER 1977

• Port of Halifax holding its lead

According to listings published in the 1977 Containerisation International Yearbook, based on 1975 figures, the Port of Halifax is still Canada's largest containerport. The port has also moved up a place to become 5th on the East Coast of North America. It is 13th overall in America and 33rd in the world.

• Increase in transshipment cargo to Newfoundland

In last month's Bulletin, we reported that Mr. Norman Morgan hoped for increased international business for his company, Newfoundland Container Lines Ltd., as a result of a 3-week trip to Europe. Results are already beginning to be noticed, he says, and a Dart container is shown being loaded aboard the Newfoundland Container for transshipment to St. John's.

"The rate of success of the service is exceeding initial expectations," said Mr. Morgan, "and on voyage 39, the ship was loaded to 85% capacity."

• Recent activity brisk at terminal

Operations have been carried out with great efficiency at the container terminal during October and November in response to an extraordinary increase in both import and export traffic.

The trouble free operation resulted from pre-planning on the part of Halterm Ltd. and CN who allocated each Line a significant increase over its normal average throughput.

Everyone concerned demonstrated maximum flexibility.

• Province to study free trade zone idea

The Nova Scotia Department of Development is studying the possibility of setting up a free trade zone for the province. The establishment of such an area would mean that goods could be imported into it, manufactured, packaged and re-exported without payment of tariffs to Canada.

The study will assess the nature, size and scope of the opportunity, government costs involved in attaining its potential, effects of a free trade zone on existing enterprises in Nova Scotia and possible implications of such an area. It will also look at potential benefits such as employment opportunities.

• Hapag-Lloyd will offer direct weekly service to Europe

On January 23, Hapag-Lloyd will begin their direct weekly service eastbound from the Port of Halifax to the U.K. and Continent. It will mean a 6-day cut in transit time from the present 14 days to 8 days.

New Year's Day will see the start of a weekly feeder service by the Line to Acton Grange/Manchester, the heart of the industrial area of the U.K. A spokesman for the Line said that their feeder ships will travel through the Manchester Ship Canal thus enabling cargo to reach receivers in that area 9 days after leaving the Port of Halifax.

Building of Hapag-Lloyd's new vessels is on schedule and two more ships have been launched. The Dusseldorf Express left Hamburg on December 8 to enter the North Atlantic Service and fulfill her Canadian loading programme. The Nurnberg Express will enter service in February.

New Customers Select Montreal

Montréal, Québec, Canada, Fall 1977 (Port of Montréal Bulletin):—Among the most important criteria of a great port is its ability to attract new business and in this respect the Port of Montreal continues to demonstrate that it merits ranking among the world's best. Several recent developments have underlined this fact.

One such was an announcement by Atlantic Container Line that it will transfer its operations to Montreal early in 1978 with one sailing per week. The increased capacity will be more than three times the existing one.

A similar announcement was also made by Chase International, a new container line, which will begin operating out of Montreal in the first half of next year.

Manchester Liners Ltd. inaugurated the first container service to Canada in 1968. Since then it has operated one ship per week, each with a capacity of 550 containers to Montreal. This line has a new generation of container ships, with a capacity of 946 containers each, coming out of the shipyards. The first of these, the "Manchester Venture" has already made two voyages to Montreal. It is possible that vessels of this class may return again to Montreal as cargo and conditions warrant in the future.

Several other new development, which will bring an

appreciable amount of new business to Montreal, are in the advanced planning stage and information concerning them will be made public shortly.

Earlier in the year Cast North America Ltd, which has provided container service to Montreal since 1970, transferred part of its business elsewhere, due to a disagreement with the Maritime Employers Association. After a short absence this business is back in Montreal.

With all these developments it is obvious that additional container handling facilities are required. In these times of austerity the Government of Canada has required clear proof of the necessity for new capital expenditures. There is no proof more convincing than a substantial quantity of new business and I am confident that the required facilities will be forthcoming.

With these favourable indicators I look toward the coming year with great confidence and with a deep sense of satisfaction that shipping lines continue to view the Port of Montreal as a competitive port and a desirable base of operations.

N. BESHWATY
Port Manager

Nanaimo Harbour News

• Going Metric (December 1977)

New tariffs to be issued by Nanaimo, and all other Canadian ports, in the near future will be in metric.

All weights will be in tonnes and lengths in metres. Wharfage will also be based on tonnes. However, because major markets for lumber are in the United States, f.b.m. will continue to be used as a measure for lumber.

The tariffs are due early in the New Year. (There are 2,204.6 lbs. in a metric tonne.)

• Largest Single Shipment (January 1978)

On her maiden voyage to Nanaimo, the forest products carrier Thamesfield took on more than 28,000 tons of pulp, lumber and plywood, a record for any one ship loading in the port.

The Thamesfield, 50,000 tons, is the fourth of the Flensburg vessels and the only one to be registered in England, at Newcastle. The other three, the Warschau, Dresden and Emma Johanna have previously visited Nanaimo. They are all registered in Germany.

Like her sister ships, the Thamesfield is 700 ft. long, 99.9 ft. wide and has 12 hatch covers each weighing 100 tons.

The ship is powered by a 16,000 horsepower diesel, driving a single variable pitch propeller which turns only twice a second. Consuming 50 tons of fuel every 24 hours, she can maintain an ocean-going speed of 16 knots.

The Thamesfield, on charter to Mac-Millan Bloedel, is owned by Hunting and Sons, a British engineering and transportation conglomerate. Captain Peter Robinson has a 36-man crew, each one accommodated in individual cabins with showers. There are spacious lounges for both officers and men.

There are a couple of innovations on the Thamesfield not to be found on the other three ships. On the top deck is a fresh water swimming pool while in one of the upper decks is a well-equipped two bed hospital, complete with the only bathtub aboard. "That's because British shipping

regulations stipulate that hospitals on ships must have bathtubs" says John Robson, a superintendent of Hunting and Sone, travelling on the maiden voyage. "Don't ask me why."

Official welcome to the Thamesfield was by members of the Nanaimo Harbour Commission and officials of Canada Transport, the shipping arm of Mac Millan Bloedel. Captain Robinson was presented with a coloured aerial photograph of the harbour by Don Beaton, on behalf of the Commission and with a miniature totem pole by George Adams, Canadian Transport.

The Thamesfield left for Port Alberni to pick up the balance of her cargo and then sailed via the Panama Canal to U.K. and European ports.

Saint John Port News

Port of Saint John, New Brunswick, Canada, November-December 1977:

• Port Day '77

Saint John has its advantages both geographic and human which cannot be ignored by shipping lines interested in the Canadian trade, said F.S. Burbidge, president of Canadian Pacific Ltd.

He pointed to Saint John's advantageous location in Eastern Canada and its reputation for having the most productive labour force. "We, the Port of Saint John and Canadian Pacific have been participants and partners in quite a remarkable growth story," he said.

In keeping with the theme of Port Day '77, "Saint John; Canada's Growth Port", Mr. Burbidge pointed to the "transformation of Saint John from its role as a small coastal town into the new Saint John and its role as an important Canadian gateway."

• Maiden call

A replica of the coat of arms of the City of Saint John was presented to the captain of the German vessel *Rauenfels*, when the ship arrived in port for her first visit.

Coming to Saint John from the builders in Sasebo, Japan; the container/roll-on-roll-off ship sailed to Europe and then with a similar ship will begin a service between Saint John and Persian Gulf ports. Captain P. Ramm, New York representative for the ship's owners, Hansa Line, said he was pleased that Hansa has become the tenth container carrier to choose Saint John as its Canadian terminal port.

When making the presentation, Dennis R. Knibb, a member of the city council, said Hansa Line will be the port's first container/ro-ro service to the Persian Gulf area. The line will join several direct break-bulk services operating between Saint John and that area, he said.

Increase of Seaway tolls

Toronto, Ontario, Canada, January 25, 1978 (Toronto Harbour Commissioners):—Port of Toronto officials do not anticipate any diversion of general cargo due to the increase of Seaway tolls announced recently by the St. Lawrence Seaway Authority and its United States counterpart, the St. Lawrence Seaway Development Corporation.

Instead of a sudden, total increase in 1978, the rise in tolls is being spread over a three-year period.

While the Toronto Harbour Commission is still opposed to the principle of tolls, it feels that from a trade

standpoint the program for phasing in the proposed increase is an improvement over the original proposal.

Under the new Canada-U.S. agreement, general cargo rates on the Montreal-Lake Ontario section will increase from 90 cents a ton to \$1.15 a ton in 1978, to \$1.35 in 1979 and to \$1.50 in 1980. Bulk cargo rates, now 40 cents per ton, will be 45 cents a ton in 1978, 56 cents in 1979 and 62 cents in 1980.

The proposed reduction in tolls on containerized cargo (90 cents to 62 cents per ton) and on Government Aid Cargo (90 cents to 37 cents per ton) will come into effect in 1978 and remain at the reduced level until at least the end of the 1980 shipping season.

"The reduction in tolls on containerized cargo should provide the further incentive needed to ship more general cargo in containers," said a port spokesman.

Beginning in 1978, a vessel charge of seven cents per gross registered ton will be assessed in both the Welland Canal and the Montreal-Lake Ontario section. The present Welland Canal lockage charge of \$100 per lock (eight locks) will be discontinued.



Specially designed Paceco Portainer Crane will turn corner at Port of Long Beach.

New Crane Turns Corner

Alameda, Calif., January 26, 1978 (Paceco News):—A 40 Long Ton capacity Paceco Portainer® crane with specially designed features has been erected for Crescent Wharf & Warehouse Company at the Pacific Container Terminal, Port of Long Beach, California. Designed and built by Paceco, Inc., A Subsidiary of Fruehauf Corporation, Alameda, California, the Rail Mounted crane is able to negotiate a curve of 150-7½" minimum radius on Pier F at the Long Beach facility. Special articulating equalizer beams and trucks were designed into the Paceco Portainer crane to facilitate this maneuver.

The crane has a 115' outreach and 50' backreach over the terminal. A Quick Change Headblock makes the crane adaptable to various sized spreaders and cargo beams to handle a wide variety of containers and general cargo. Fabricated at Paceco's Alameda plant, the huge crane components were barged through the Golden Gate and

down the West Coast to Long Beach. Paceco was in cargo of erection on site.



3rd Paceco Portainer crane delivered for Port of Los Angeles.

Crane delivered to Los Angeles Port

Alameda, Calif., February 3, 1978 (Paceco News):—Paceco Inc., A Subsidiary of Fruehauf Corporation, Alameda, California recently delivered a 40 Long Ton capacity Portainer crane to the City of Los Angeles Harbor Department to be used in the Port of Los Angeles. Erected for use on Berths 229-233-235, the rail mounted ship unloading crane is similar in design to two Paceco Portainer cranes put into operation in 1976. A specially designed articulating gantry drive allows crane movement through a 300° radius curve between Berths 229 and 233.

With a 115' outreach and 40' backreach over the terminal, the crane will utilize a 40 Long Ton capacity Telescopic Spreader to handle 20', 35', and 40' containers.

Manufacture of the Portainer crane was coordinated between Paceco's Alameda, California and Gulfport, Mississippi plants.

New Container Cranes Installed

Alameda, Calif., February 23, 1978 (Paceco News):—Three new Paceco Transtainer cranes are speeding container handling operations at Savannah, Georgia. The 40 Long Ton capacity Rubber Tired Transtainer cranes have recently been installed at Garden City Terminal for the Georgia Port Authority. Paceco, Inc., A Subsidiary of Fruehauf Corporation, manufactured the modern terminal cranes at its Gulfport, Mississippi plant.

With a 78 ft. span, the Transtainer cranes have a container stacking capacity of 4 high and 6 wide plus



All Weather Port—Rainy, foggy weather doesn't slow down work at the Port of Charleston. Here one of the South Carolina State Ports Authority's five container cranes works the ASD Hektor of Contract Marine Carriers.

tractor roadway. Each crane is equipped with telescopic spreaders to handle 20 ft. and 40 ft. ISO containers. Also featured is an anti-sway system for smoother and faster handling operations.

The Savannah port has been successfully using Paceco 40 Long Ton Transtainer cranes in its container handling system since 1970. The three new Paceco cranes have added new dimensions of speed and volume to the Port's container terminal facilities.

1510 Datsuns inaugurating new service

Baltimore, Md., February 14, 1978 (News From Maryland Port Administration):—One of a series of specially-built Japanese automobile carrying ships will unload 1510 Datsuns in the port of Baltimore this week inaugurating a new service which is destined to boost long-range trade development in the port.

The ship, M.S.Y.S. I Trader, will be followed in the next few weeks by a total of four additional vessels discharging nearly 5,500 more vehicles. The ship's are under contract to Nissan Motor Company, Ltd., manufacturers of Datsun automobiles and trucks.

A minimum of 70,000 Datsun units is expected to be moved over the pier at Atlantic Terminals, located in the Fairfield area of the port during the first year of the contract.

Gradual increases to more than 100,000 units annually are projected. If the projected increases come as scheduled, the Datsuns alone will nearly total the entire number of imports through the Port of Baltimore in 1977, which amounted to 138,200.

Atlantic Terminals is a 32-acre tract of land and pier leased by the Maryland Port Administration from Weyerhaeuser Company for five years with an option for renewal. The MPA has sub-leased that property to Nissan with improvements necessitated by the company's requirements for an equal period of five years.

To the port and city of Baltimore, and the state of Maryland, this new five-year arrangement with Nissan will mean not only a boost to the economy in the form of new

business and more jobs, but also an efficient use of an idle terminal that otherwise would have been unproductive.

Nissan used the Port of Baltimore previously, but left about six years ago for a more southerly port. Restructuring of Nissan's U.S. sales regions, combined with terminal congestion elsewhere, resulted in Datsun executives taking a new look at Baltimore with its superior rail and highway connections in all directions.

Hobelmann Port Services, Inc. is the local Warehouseman while Rice, Unruh Company is Nissan's local representative for ship operations of the chartered vessels.

Welland Canal Shows Tonnage Increase

Buffalo, N.Y., November, 1977 (Newsletter from Niagara Transportation Authority):—Shipping tonnage on the Welland Canal for the April-October period this year has posted a 7.7 percent increase from the same period in 1976 and a 3.7 percent increase from April-October 1973, the last record-setting year for the Canal. More than 4,300 ocean and lake vessels passed through the Canal in those seven months, carrying more than 50 million tons of grain, iron ore, coal, fuel oil and other products. Container shipments were up 53 percent; iron and steel products rose 106 percent. Cargoes of fuel oil, grain and coal also increased, but iron ore and general freight declined. St. Lawrence Seaway officials at St. Catharines, Ontario predicted that tonnage levels might rise to 8 percent above those for 1976, if the present trends continue until the Canal closes for the 1977 shipping season on December 30. High winds and the annual late season rush by salt-water freighters on their way to pick up their last cargoes of the 1977 season combined, in late November, to cause minor delays in the trip through the Canal. Canadian Transport Minister Otto Lang recently said that he is confident that cargo shipped through the St. Lawrence Seaway will increase substantially in the future. He pointed out that the new higher tolls arising as the result of U.S.-Canadian meetings will actually take a smaller share of total transportation costs than the original tolls did in 1959, when the Seaway opened. The Seaway will close to navigation this year on December 15.

Port Everglades News Release

Port Everglades (Hollywood-Ford Lauderdale), Florida, January 30, 1978:

• Port Everglades Commissioner Michael J. Marinelli said that the number of embarking, debarking and intransit passengers increased nine per cent, or 18,330 passengers in 1977.

The passenger total was 216,691, compared with 198,361 in 1976. Sailings also showed an improvement, up 21 per cent to 207 in the year, Marinelli noted.

The Port Commissioner predicted a further upswing in cruises and passengers this year as the full impact of two additional ships, the Leonardo da Vinci and Cunard Princess, is felt. Both liners now sail the year-round from the Port.

• Ernest J. Pinto, Port Everglades Commissioner who served as Vice Chairman last year, was elected 1978 Chairman at an organizational meeting of the Commission.

Pinto, a building contractor and former city official of

Hallandale, was elected to the Port board in 1976.

June M. Silvernale, the first woman elected to the five-person board, was named Vice Chairman. A Dania resident, she also was elected to the Commission in 1976.

Other members of the Port Commission are Jack C. Behringer, of Fort Lauderdale; Michael J. Marinelli, of Pompano Beach, chairman in 1977, and Fred J. Stevens, of Port Lauderdale.

- A decision on an application by the Port Everglades Authority as Foreign Trade Zone sponsor to expand the permanent zone site from 30 to 82 acres is expected shortly from the U.S. Dept. of Commerce.

William C. Blood, manager of the trade zone, said the application was filed with the Foreign Trade Zones Board in Washington, D.C., last November.

The Port's permanent trade zone, located at the intersection of Eller Drive and McIntosh Road, is nearing 70 per cent completion with tenant occupancy anticipated by mid-year, Blood stated.

The \$2.6 million complex will provide 140,000 sq. ft. in two buildings. A 47,000-sq. ft. temporary zone has been in operation since last August.

- Fred J. Stevens, Port Everglades Commissioner in his 20th consecutive year on the Port board, was selected as recipient of the "Good Government" award by the Fort Lauderdale Jaycees.

Stevens was first elected to the Port Commission in 1958 and served as Chairman in 1960, 1965, 1972, 1975 and 1976.

All-time tonnage record in 1977

Houston, Texas, (Port of Houston News Release):—The Port of Houston broke its all-time tonnage record in 1977 when more than 100 million tons of cargo moved across the wharves.

The 1977 total of 102,410,601 tons was 13.8 per cent higher than the previous record total of 90,001,400 tons handled in 1976.

An 18 per cent increase in bulk cargo movements helped push the tonnage total to the record high. In 1977, 85.7 million tons of bulk cargo, other than grain, moved through the Port as compared to 72.6 million tons in 1976.

Grain shipments for 1977 were down 13 per cent at 7.8 million tons as opposed to 9 million tons for the previous year. A worldwide decrease in demand for U.S. agricultural products was partially responsible for the drop in grain shipments.

Foreign crude petroleum imports showed a 29.5 per cent increase at 27.3 million tons coming in during 1977, up from 21 million tons in 1976.

The growing importance of imported crude petroleum is demonstrated dramatically in the tonnage increase of this commodity since 1972. In that year, only 354,796 tons of petroleum were imported at the Port of Houston. The 1977 figure represents an increase of 7,590 per cent in five years.

During 1977, the many refineries along the Houston Ship Channel shipped out 26.5 million tons of petroleum products in both foreign export and domestic trade. This shows a 6 per cent increase over the 1976 total of 24.8 million tons.

Total 1977 general cargo was up 2 per cent at 6.8 million tons as opposed to 6.7 million tons for 1976.



San Francisco, Calif., 1/27/78 (San Francisco Customs Brokers & Freight Forwarders Association):—**BONNIE BEIJEN TO HEAD S.F. BROKERS & FORWARDERS** Bonnie L. Beijen (left), vice president of W.J. Byrnes & Co., has been elected president of the San Francisco Customs Brokers and Freight Forwarders Association; also selected to lead the active Golden Gate group are vice presidents Ted L. Rausch, Ted L. Rausch Co., Jean Cordoba, Harper, Robinson & Co., and Chris Coppersmith, L.E. Coppersmith, Inc. Not pictured are new directors Lee McCarthy, Berry & McCarthy Shipping Co.; Duane Wiesen, S.F. Seaport Shipping and Nick E. Vacakis, Seamodal Transport Corp. Robert Langner was reelected executive director and corporate secretary.

There were 160,125 containers handled at the Port of Houston during 1977, a 13 per cent decrease from the 1976 total of 183,273 containers. The drop was due to the 60-day strike against automated carriers during which no full container ships were loaded or unloaded at any U.S. Gulf or Atlantic port.

Automobile imports increased by 7 per cent, with 192,171 foreign cars coming in during 1977 as compared to 179,886 cars imported through the Port in 1976.

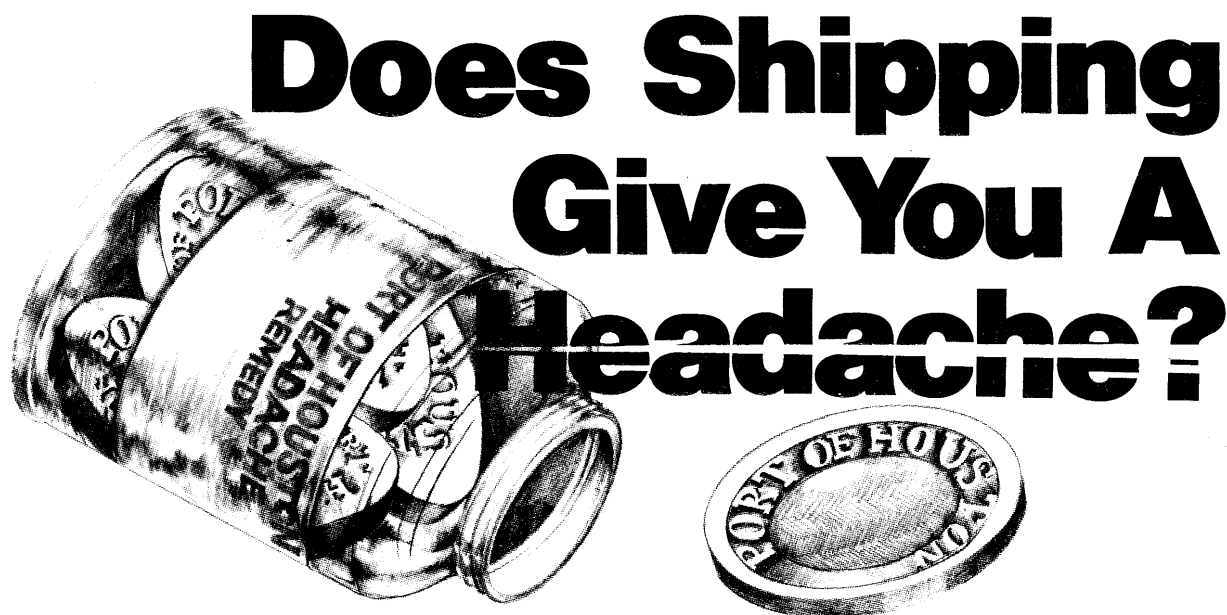
A record number of vessels also called at the Port in 1977 when 4,882 ships were handled, 353 more than had called at Houston during 1976.

Of the total, 2,816 were dry cargo vessels, 1,930 were tankers, and the remainder were container, barge-carrying, or barge and container carrying vessels.

American flag ships represented 21.5 per cent of the total and were the most frequent callers with 1,051 ships entering in 1977. They were followed in frequency by ships under the flags of Liberia at 705; Great Britain at 424; Greece at 398; and Norway at 382.

A total of 189 vessels registered under the flags of Communist countries entered the Port in 1977, 31 more than had called in 1976. The 1977 figure represents a 340 per cent increase in the number of Communist flag vessel calls in the ten years since 1967 when only 43 such ships were handled at the Port.

Vessels representing a record total of 61 foreign countries entered the Port in 1977, one more than had been represented in 1976. In 1967, ships under the flags of only 46 foreign countries were loaded and unloaded at the Port.



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Japanese industrialists briefed on advantage of N.Y. market potential

New York, N.Y., February 21, 1978 (News from The Port Authority of NY & NJ):—"The natural advantages of the Port District of New York and New Jersey offer a profitable production environment," Chairman Alan Sagner told a group of 63 executives from member companies of the Japan Auto Parts Industries Association (JAPIA), at a special briefing held today in the World Trade Center. The Japanese are on a nationwide tour which includes inspections of potential industrial development sites.

"We advised the Japanese auto parts executives of the many advantages to them of locating their factories in the New York-New Jersey region," said Chairman Sagner. "We pointed out the vast array of modern land, sea and air terminal and transportation facilities that would enable them to take advantage of the enormous market potential of this area and surrounding states."

Chairman Sagner advised the visiting group from Japan that the Port Authority is now embarking on a major industrial development program which will aim at the creation of industrial parks within the cities of the Port District in New York and New Jersey. The Authority's program will utilize the technical expertise and fiscal resources of the Port Authority, he noted, to create industrial parks which will offer manufacturers "the lowest

possible production costs in the midst of the finest possible markets."

"We emphasized the availability of sizable tracts of land in this region suitable for industrial development and well serviced by transportation and distribution facilities. The Port Authority is studying potential industrial park sites in Newark, Jersey City, Brooklyn and The Bronx," Mr. Sagner said.

"The New York-New Jersey Port has an abundant pool of labor to work in auto parts and assembly plants," the Chairman said, adding that "some 450 Japanese companies of all kinds are already located in this region."

"Our presentation also highlighted our plans for resource recovery from solid waste, which would enable us to provide manufacturers locating in the new industrial parks with cheaper energy than is presently available."

"The industrial development program under study by the Port Authority is designed to help the major cities of our Port make use of abandoned, undeveloped or under-utilized land for the generation of jobs—and taxes—through the organization of urban industrial parks oriented to manufacturing industries," Chairman Sagner concluded.

Following their briefing by the Port Authority staff, the Japanese delegation visited the General Motors assembly plant in Tarrytown, New York. En route to Tarrytown, they viewed the Port Authority's marine terminal complex at Port Newark and the Hartz Mountain industrial develop-

(Continued on next page bottom)

Oakland — (Continued from page 40)

merce Act, the Port Commission said it will apply to the California Public Utilities Commission for authorization to acquire and maintain it in use. The Port also said it may seek—with Civil Service approval—to shift two longtime Howard Terminal employees to its own payroll after the acquisition, since they are uniquely qualified to operate the railroad, and have special knowledge of old utility systems on the property.

There are currently 27 tenants occupying the 28 industrial and office buildings on the Howard Terminal site, the Port Commission noted, 11 holding leases and the remainder on month-to-month bases.

Under the agreement approval today, the Port will assume existing leases and will terminate none prior to the expiration dates now in effect. The only exceptions are in the case of Dean's Materials, Inc., a construction materials firm, and Vertex, Inc., dealing in plastic foam products. The former's lease expires in 1983 and the latter's in 1984. The Port could cancel their leases with notice after March, 1980 if the property is needed for marine terminal development, under the agreement.

Total rentals which would accrue to the Port after acquisition of the Howard Terminal amount to \$28,000 per month, the Commission noted. The Port said it would execute license agreements with the 16 monthly tenants after conveyance of the property to the Port.

Also contingent to the Port's acquisition is agreement by the Oakland City Council to amend the boundaries of the "Port Area" to include land portions of the Howard Terminal not already within Port jurisdiction. Under the City Charter, the Port may not acquire title to property outside the "Port Area" as established formally by the City Council.

An environmental impact report on redevelopment of the Market Street Terminal was prepared and approved by the Oakland Board of Port Commissioners in September, 1976. Plans call for conversion of old Port terminal facilities and Howard's 450-foot Estuary frontage, with backup area, into a 46-acre combination breakbulk/container terminal.

All provisions of the agreement announced today must be met by June 30, 1978 for the transaction to be concluded.

ment in the Meadowlands at Secaucus, New Jersey. The Japanese visitors were scheduled to leave New York on Wednesday, February 22, for a flight to Toronto, the next stop on their inspection trip, which also includes visits to Detroit, Chicago, Los Angeles and Honolulu.

Also attending the briefing for the JAPIA group, held at the World Trade Institute of the World Trade Center, were representatives of the New York State Department of Commerce, New York City Business Marketing Corporation, and the State of New Jersey's Division of Economic Development and Office of International Trade.



Oakland, Calif., February 7, 1978 (Port of Oakland):—**OAKLAND ATTRACTS INDIA'S LARGEST**—The Port of Oakland this month added the Scindia Steam Navigation Company to its list of regular general cargo services, the most extensive on the Pacific Coast.

With the arrival of M.S. Jalayamuna in Oakland February 1, Scindia inaugurated monthly voyages between Oakland, the Far East, Southeast Asia and the Indian subcontinent.

Welcoming the Jalayamuna's master, Captain H.F. de Souza, was Marvin Garrett of the Port of Oakland, right. Looking on during the presentation of a signed, limited-edition lithograph of the famous sailing ship Bear of Oakland was Richard Geiselhart, of Furness InterOcean Corporation.

Founded in 1919 and privately owned, Scindia—with 55 active vessels worldwide—is the oldest and largest shipping company in India.

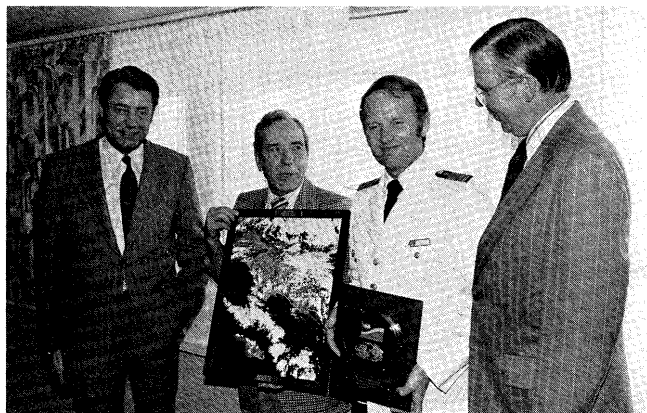
Scindia vessels call at Berth 5 in the Oakland Outer Harbor, and the combination vessels in the new service will accept container, breakbulk and bulk liquid cargoes. Principal commodities loaded on the first call included tin plate, bagged clay and textile products.

Scindia ships previously served the Bay Area through the Port of San Francisco.

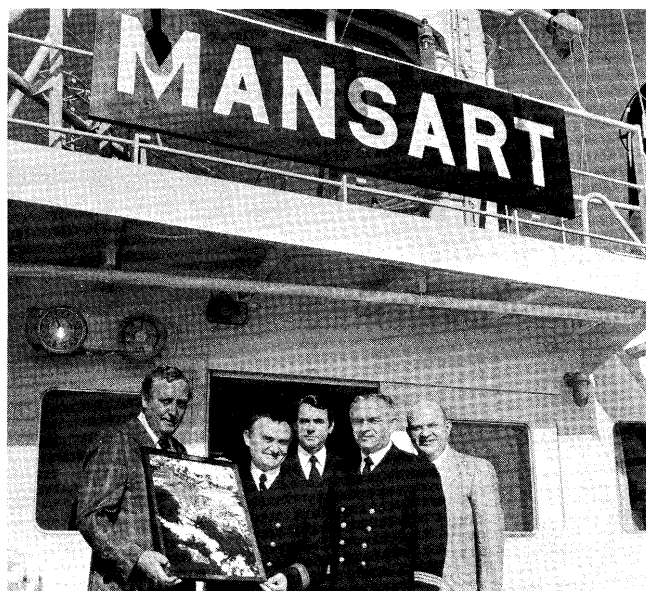
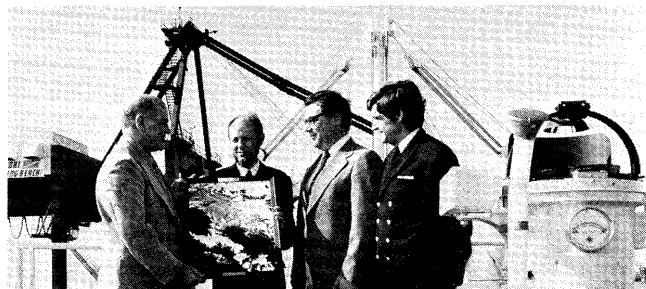


Model of the proposed Los Angeles Harbor Department administrative head-quarters is examined by employees Robert Kroll and Faye Antonucci as Department architect Joe Taylor points out many of the building's features. The nearly 265,000 sq. foot structure and parking facility is scheduled to be completed in San Pedro by the first part of 1980. (012578)

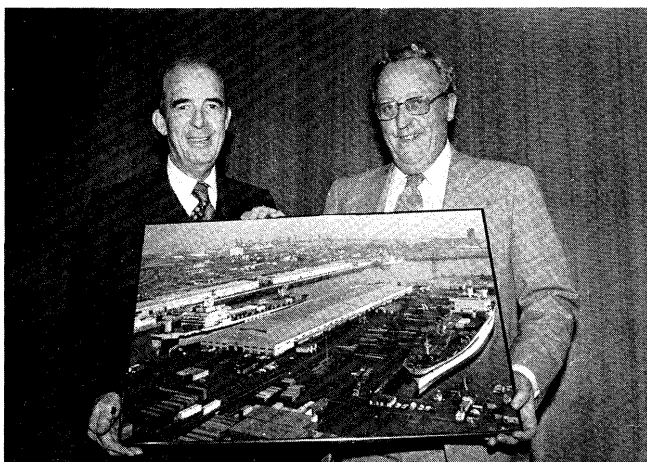
Port of Long Beach Photos



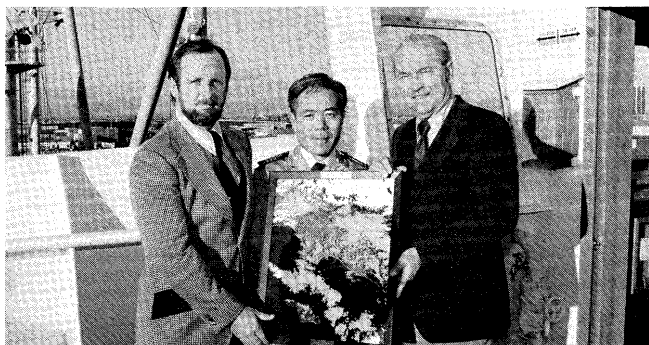
HAPAG-LLOYD LAUNCHES NEW TRANS-PACIFIC CONTAINER SERVICE—With maiden voyage arrival of the MV Alster Express at the Port of Long Beach recently, Hapag-Lloyd launched a completely new Trans-Pacific service linking West Coast points with the Far East ports of Tokyo, Kobe, Pusan, Hong Kong, Kaosiung, Keelung, Manila, Singapore, Bangkok, Port Kelang and Penang. The fin-stabilized fleet of four fully-celular 1100 TEU capacity vessels boasts 20-knot service speed and 10-day sailing frequency. In the photo, Karl H. Sager, left, Spokesman for the Board of Directors of Hapag-Lloyd, is presented with Apollo-views of Southern California by Harbor Commissioner H.E. Ridings, Jr., while Captain Hans Hansen holds plaque marking the new service presented by Long Beach Mayor Thomas J. Clark. (012478)



FRENCH LINE PUTS TWO NEW CONTAINER SHIPS IN EURO-PACIFIC FLEET—Arrival of two new French Line (Compagnie Generale Maritime) container ships at the Port of Long Beach on their maiden voyages as part of Euro-Pacific Service early in the New Year found Harbor officials making back-to-back inaugural call presentations of Apollo photos of Southern California taken from 105 miles in space. Photo 1 shows George D. Gray, Asst. Traffic Manager, left, with Captain Michel Pesme of the MV Soufflot, while H.J. Scholz, Operations Manager for Balfour, Guthrie & Company, and Chief Officer Jean-Francois La Gall watch. In second photo, Harbor Commission President Richard G. Wilson, left, makes presentation to Captain Alexandre Ezanno, of the MV Mansart, along with Chief Officer Yvon Perez and Jess Miller, Balfour, Guthrie District Manager. Fully cellurized, the vessels are convertible to tween-deck configuration with over one million cubic feet of capacity. (013078)



States Steamship Company president J.R. Dant was among recent visitors to the Port of Long Beach to inspect States Line's omni-cargo terminal on Pier B. He is pictured at left as Long Beach Harbor Commission President Richard G. Wilson presented him with a color photograph of two of the line's four new Roll On/Roll Off vessels berthed at the Long Beach facility. (012778)



JAPAN LINE VESSEL "KEY GLORY" MAKES MAIDEN VOYAGE—Japan Line's new bulk/log carrier, the MS Key Glory, has made its maiden voyage call at the Port of Long Beach with a load of plywood from Japan, discharging 7500 R/T through its 62-foot-long main hatches. Pictured at arrival ceremonies on the bridge are, from left, G.M. "Mike" Hubbard of Japan Line office in Long Beach, Captain H. Uesake and Long Beach Harbor Operations Director Harvey H. Harnagel. (013078)



CANADIAN PACIFIC BULK CARRIER IN FIRST CALL AT LONG BEACH—Canadian Pacific Steamship Company's 57,164 ton bulk carrier W.C. Van Horne made its first call at the Port of Long Beach to load petroleum coke at the Metropolitan terminal and calcine coke at Pier D destined for delivery in Rotterdam and Amsterdam. The British-flag, Hong Kong-registered vessel is one of the largest bulkers to load in Long Beach this year. Pictured at Port welcome ceremonies on the bridge are, from left, Chief Engineer Stan Lloyd; Michael Powers, asst. traffic manager for the Port; Captain John Barton and Chief Officer Mike Caine. Pacific Shipping served as agent. (020178)



PEOPLE'S REPUBLIC OF CHINA PETROLEUM DELEGATION TOURS THE PORT OF LONG BEACH—A 33-member delegation from the Petroleum Corporation of the People's Republic of China visited the Port of Long Beach Administration Building during their recent U.S. tour, where they were briefed on the Sohio Tanker Terminal and pipeline project and related areas of interest. Pictured on the Observation Deck atop the building as they viewed the unique mixture of cargo-handling terminals and oil production for which Long Beach Harbor is world-famed are Lee Sellers, left, Assistant General Manager for the Port, seen as he explained the joint operation to Sun Ching-wen, President of the Petroleum Corporation, right, through an interpreter. The delegation is the highest-ranking group from the People's Republic ever to come to the United States. The hour-long briefing followed luncheon aboard the Queen Mary as guests of Union Oil Company. (021478)



HAPAG-LLOYD COMPLETES EASTBOUND TRANS-PACIFIC CONTAINER SERVICE—Hapag-Lloyd's new trans-Pacific service was inaugurated on its eastbound leg with the maiden arrival in Long Beach of the M.V. Elbe Express from Hong Kong. On hand for the ceremony was, from left, Jessie Miller, District Manager for Balfour, Guthrie & Company; Douglas Jones, Chief Deputy Agent for the Port, who presented Captain Gerdt Schmerdtfeger an Apollo-eye photo of Southern California; and Dieter Lehmann, operations assistant for Balfour, Guthrie & Company. (021778)



PORT FILM WINS ITALIA SUL MARE AWARD—The Port of Long Beach film, "Tomorrow's Port Today," produced by Clete Roberts Film Group, was awarded the (Continued on next page bottom)

Port of Los Angeles News

1. Gains in services and tonnage revenues

Los Angeles, Calif., February 8, 1978:—Gains in shipping services revenue totalling more than \$5 million and revenue tonnage increases of approximately three million were reported by the Los Angeles Harbor Department for the first half of fiscal 1977-78.

The increases were highlighted in the Department's recently released Interim Second Quarterly Report.

Total Harbor operations (shipping services plus rentals, oil royalties, interest and concession fees) brought an overall \$5.8 million rise to \$20.3 million, an increase of 40 percent over the prior year's \$14.5 million first half. The high growth rate was led by an increase in wharfage of \$4.3 million, to \$10.2 million, followed by \$.7 million increases in both dockage and rentals.

Net income for the period rose \$5.4 million, or 91 percent, to a new high of \$11.4 million. Much of these record earnings was due to Harbor management's ability to hold operating and administrative expenses to only a modest 11 percent rise.

Total revenue tons for the half-year amounted to 16.8 million, as opposed to 14 million for the prior reporting period. This is an increase of 20 percent. The total tonnage was divided between petroleum of 11.9 million tons, and general cargo of 4.9 million tons.

2. "CONICS": Container Information Control System

Los Angeles, Calif., February 15, 1978:—The Los Angeles Harbor Commission today (Wed. 2/15) authorized the installation of a computerized control system for container handling at two of six Port of Los Angeles container terminals.

Called "CONICS", for Container Information Control System, its installation is expected to benefit both the Port

and its tenants through numerous economic and efficiency advantages.

It would enable Port tenants to increase the efficiency of cargo handling methods, improve safety and security, reduce costs, reduce container movement error and decrease costly documentation delays.

Port benefits from the computerized operation would include the automatic collection of container facility planning data, the strong possibility of increased revenue from the computer service itself, and the automatic computation of demurrage bills (a charge to a tenant or shipper for prolonged use of temporary cargo storage and handling facilities.)

Current proposals call for the computer system to be installed at one existing terminal and at the Seaside Container Terminal complex now being developed on Terminal Island. This is a 135-acre facility that will ultimately provide six berths and seven container cranes.

The system being considered by the Port is compatible with its present computer billing equipment and systems. It will be capable of handling multiple container terminals concurrently, allowing the accommodation of several different tenants simultaneously.

Initial installation cost of CONICS is estimated at \$111,000, with additional monthly operational charges of \$5,800. This is expected to cover computer software and hardware and software maintenance. An as-yet undetermined percentage of this monthly fee may be recoverable through tenant billing.

Having authorized installation of the computer system, the Board of Harbor Commissioners will now be responsible for approving agreements for equipment purchase and rental, as well as negotiations with systems vendors and users.

3. Intermodal system vs. Panama Canal

Los Angeles, Calif., February 22, 1978:—An analysis of shipping trends by the Port of Los Angeles has uncovered what could be the first major change in the maritime industry in 20 years, resulting in an additional 3 million tons of cargo annually for the West Coast port.

According to Los Angeles Harbor Department figures emerging as part of the research for the Port's Master Plan, an increasing number of shippers are including an overland leg in the shipment of cargo between the Far East and the East Coast, Europe and the West Coast, and between Europe and the Far East. This land segment, up to now a cargo routing alternative to an all-water route through the Panama Canal, promises to change the very shape of ships and shipping at the Port of Los Angeles and elsewhere. The last evolutionary step in maritime trade approaching this magnitude was the introduction and acceptance of containerized cargo in the 1950's.

Referred to as mini-bridge, micro-bridge or landbridge, depending upon the cargo's ultimate destination, the combination land and water route frequently provides shippers with a more economical and faster movement of

distinguished *Italia Sul Mare* Trophy recently at the 17th International Review of Maritime Films in Milan, Italy. The film features the world of intermodal transportation, as well as historic footage of the flight of Howard Hughes' Spruce Goose flying boat and the arrival of the Queen Mary in Long Beach.

Pictured above at an award ceremony in the Port are Clete Roberts, who wrote, produced and narrated the film; Ian Masters, Director of the film; Amedeo Cerchione, Italian Consul General; and Richard Wilson, President of the Long Beach Harbor Commission.

"Tomorrow's Port Today," a 27-1/2 minute color documentary, has already been viewed by nearly five million persons in a 17-state region comprising Long Beach's primary market area. Copies may be obtained for screening by contacting Audience Planners, 6290 Sunset Boulevard, Los Angeles, Ca. 90028. The phone number is 213, 463-7888. (021778)



Los Angeles, Calif., 012778 (Port of Los Angeles):—When the M/S New England Hunter made its first arrival at the Port of Los Angeles, Robert Kleist, Left, the Port's Director of Trade Development, presented a plaque in Harbor tradition to the ship's master, Captain Peter Wekemann. New England Hunter is under charter to Seaway Express Lines and taking part in the presentation were Walter Dennison, president of Seaway Express and Ed Grady, Director of Administration, third and fourth from left, respectively. The New England Hunter, will soon be joined by the New England Trapper. They are replacing Seaway Express Lines' three former ships, the Manchester Concept, the Sun Diamond and the Sun Emerald. The two new larger ships will enable the line to continue the same twice a month service between Los Angeles, Taiwan and Korea because of their greater speed and still increase the lines' capacity by 30%.

goods. And port researchers predict the dollar savings will go up as the elements of the intermodal system -ships-trucks-railroads- are improved and expanded.

In many cases, points out Harbor Department Acting Planning and Research Director Bob Weir, the cost of extra handling and expenses associated with intermodal cargo movement is already less than the cost of Panama Canal fees combined with the additional daily operating costs of a ship for the longer voyage time required on the all-water canal route. In fact, Weir suspects, by not using the Canal, shippers will need only six out of every 10 ships now in use.

"But aside from strictly economic reasons," Weir explains, "the growing acceptance of water-land routes for international cargo movement can be traced in part to the possibility of the Panama Canal's future fiscal and physical inaccessibility."

The Canal, opened in 1914 to cut miles and days off the long run "round the horn" of South America, triggered the first great expansion of the Port of Los Angeles. It was highly successful.

However, in the sixty-plus years since that opening, ships have grown in size to the point where a large percentage of recently-constructed vessels, and those in the shipyards or on the drawing boards, exceed the physical limitations of the canal, either in length, in beam or in draft.

(Panama Canal regulations, with few exceptions, prohibit its use by ships longer than 950', wider than 106' or drawing more than 35.5 feet. The latest generations of



Los Angeles, Calif., 011178 (Port of Los Angeles):—Roy Ferkich, center, president of the Los Angeles Board of Harbor Commissioners, presented a special plaque to Captain Tsugio Takasaki, master of the M/S America Maru, when the ship made its 100th arrival at the Port of Los Angeles. H. Maeda, senior representative of the vessels owners, Mitsui O.S.K. Lines, Ltd., is at the left. The plaque was really a double tribute as it incorporated the plaque presented when the ship made its first arrival at the Port on November 5, 1968 mounted alongside the new 100th Arrival award. The America Maru was Mitsui O.S.K. Lines' first full containership and had steamed 1,094,027 miles and carried 134,407 containers when it made this 100th entry into the Port of Los Angeles.

tankers and container vessels and modern Navy aircraft carriers exceed these figures and must therefore utilize all-water routes other than the Canal.)

Also increasing in size has been the bill for maintenance and operation of the Canal—paid from the toll fees charged shippers using the facility. Indications are that this cost will rise even further regardless of the outcome of current treaty negotiations covering control of the Canal.

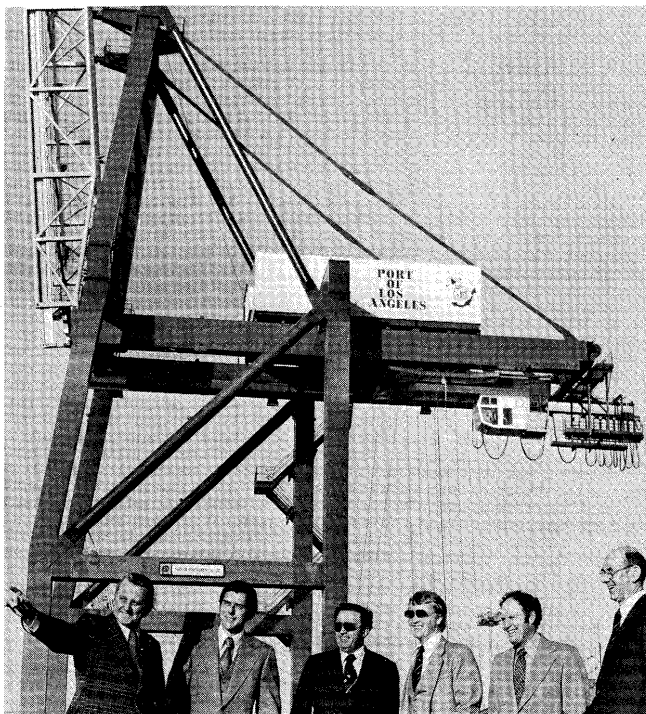
Los Angeles Harbor Commission President Roy Ferkich draws several conclusions based on these factors.

"As shippers are freed of the Canal's size restrictions," Ferkich states, "they are finding that fewer but larger ships, each carrying more cargo, result in a far more economical and profitable operation. Thus, tomorrow's trade routes and Los Angeles Harbor's Main Channel will probably be traveled by fewer but larger ships, each with greater capacity."

"These changes—greater ship size and increased use of West Coast ports as part of water-land routes—will undoubtedly have a great impact on West Coast port facilities and the Southland economy."

Just how great an impact is projected in the Department's analysis of Panama Canal cargo diversions. Prepared by the Planning and Research Division the figures assist port planners in determining what type, size and number of facilities will be needed in the future as shipping trends change. The report predicts that more than nine-tenths of all Far East cargo destined for ports on the East and Gulf Coasts will ultimately use a 'bridge' system beginning on the West Coast. This diverted tonnage is expected to total over three million tons for Los Angeles Harbor Alone.

In order to accommodate this increase, the Port will have to develop more than 250 acres of cargo-handling and



Los Angeles, Calif., 021678 (Port of Los Angeles):—A “tour” of a future Port of Los Angeles facility was recently led by Ron Kennedy, left, Los Angeles Harbor Department Director of Port Operations, who pointed out the planned boundaries of the 135-acre Seaside Container Terminal complex now being developed on Terminal Island. Members of the “tour party” were, from left, Mike Karmelich, manager of Overseas Terminal, which will be a part of the new complex; Brian Harrison of Metropolitan Stevedore Co.; Capt. Leif Gistrand, new Regional Port Captain of Johnson Scan Star Lines, for whom the orientation was held; Jerry Fountain, Asst. Vice President, and Bob Ryan, Vice President, General Steamship Co.

storage area, including the construction of six container berths. To handle this increased cargo, 247 new jobs will have to be filled.

The total economic impact of cargo diverted from an all-water Panama Canal route to the Port of Los Angeles is estimated by the report to be in excess of \$2.3 billion, while the value of the cargo is expected to equal \$5.6 billion.

4. Far East Representatives are active

Los Angeles, Calif., February 22, 1978:—Action by the Los Angeles Harbor Commission today (Wednesday, February 22) to approve the three-year renewal of a contract for Mr. Shin-I Lin to continue serving as the Trade Promotion Representative in Taiwan and Southeast Asia will assure that the Harbor will be well represented in promoting commerce between Los Angeles and the Far East.

Both Lin and Katsuya Yokoyama, the Trade Promotion Representative in Japan, are visiting the Port of Los Angeles and potential Port customers this week in order to see first hand the latest developments at the Port and enhance their effectiveness in the Port's overseas offices.

Taiwan is a major source of general cargo business for the Port and Lin has successfully represented the Port in



New Orleans, La., January 13, 1978 (Port of New Orleans):—Michael J. Molony, Jr. (left), newly elected President of the Board of Commissioners of the Port of New Orleans, examines a world map with Leander N. Lee, newly appointed commissioner to the Board. Bubrig is president of SECO Industries, Inc. of Jefferson Parish and was sworn into office by Senator Fritz Windhorst at the Board's January meeting. Other new officers are: Roy Gross, first vice president; Joseph J. Krebs, Jr., second vice president; John Meghrian, secretary; and John Laborde, treasurer. Laborde served during 1977 as Dock Board president. Appointed as chairman of the budget committee was Frank Strachan, and new commissioner Bubrig was named chairman of the finance committee. The board also confirmed the continued service of Edward S. Reed as executive port director and general manager.

promoting commerce there since June, 1966.

Robert Kleist, Port Director of Trade Development, said: “Southeast Asia is a growing market which has greatly expanded trade going to and from Los Angeles. Lin's services have been valuable in generating new business and have helped to retain the existing business users of the Port.”

He added that there are numerous prospects in Taiwan for increased cargo movements and new carriers which will require Port facilities on the United States West Coast.

Yokoyama made a presentation to the Board on his trade activities in Japan. He has represented the Port in the Tokyo office since September, 1976. Japan is one of the Port's major trading partners, and the Port has maintained a trade development office in Tokyo for more than 15 years.

New Container Berth Leased

New Orleans, La., January 16, 1978 (Port of New Orleans):—A 25-year lease for the Port of New Orleans' new container berth on the Industrial Canal was signed today by representatives of the Puerto Rican Maritime Shipping Authority (PRMSA) and the Board of Commissioners of the Port of New Orleans. The contract was signed in the Board Room of the Dock Board in the International Trade Mart.



Principal's in the January 16 lease signing which turned over to the Puerto Rico Maritime Shipping Authority a new container berth in the Port of New Orleans' tidewater area, are pictured, left to right: Edward S. Reed, executive port director of the Port of New Orleans; Roberto Lugo, executive director of PRMSA; Reinaldo Paniagua, chairman of the board of governors of PRMSA and vice governor and secretary of state, Commonwealth of Puerto Rico; Michael J. Molony, Jr., president of the board of commissioners, Port of New Orleans; and Louisiana Lieutenant Governor James E. Fitzmorris, Jr.

Known as Berth 4 of the France Road Terminal, the new facility was designed and built specifically for its new occupants. It is one of the major capital improvements made possible by approval of the Louisiana legislature of \$75 million in general obligation bonds.

Present for the contract signing were top Puerto Rico and Louisiana government officials and commissioners of the Port of New Orleans.

They included the Hon. Reinaldo Paniagua, Puerto Rico's Secretary of State and also Chairman of Navieras' Governing Board; and the Hon. Jimmy Fitzmorris, Lt. Governor of Louisiana.

Present were Mr. Roberto Lugo D'Acosta, Executive Director of the Puerto Rico Maritime Shipping Authority; Mariano Ramirez, president of the Government Development Bank of Puerto Rico and a member of the Navieras Board of Directors; Michael Molony, president of the Port of New Orleans Board of Commissioners; and Edward S. Reed, Executive Port Director and General Manager for the Port of New Orleans.

Commenting on the signing of the lease, Mr. D'Acosta said:

"The new arrangement will provide our customers using New Orleans with a much more efficient container service and should generate substantial savings for PRMSA."

Up to the end of December, Navieras had been using Sea-Land facilities in New Orleans for its weekly round trip container service to San Juan.

Under the new agreement with the Board of Commissioners, Port of New Orleans, Navieras will use the newly constructed 700 foot long Berth No. 4 totaling 8.6 acres



New York, N.Y., January 20, 1978 (The Maritime Association of the Port of New York):—Planning Navigation/Communication Conference in New York in March—Members of the committee planning the second annual Port of New York Navigation and Communication Conference and Exhibition, sponsored by the Maritime Association of the Port of New York and co-sponsored by the Council of American Master Mariners and scheduled to be held at the Downtown Athletic Club in Manhattan on March 21, 22 and 23, gaze nostalgically at cover of brochure that announced a Marine Exhibition in 1927. Shown above are (1 to r) Saul Schadoff, RCA Globcom, R.E. Wills, Norton, Lilly & Co., Inc., Roy Andres, Western Union International and Stephen Keller, Comsat General Corp. The Conference and Exhibition March 21-23 will consist of panel sessions, conducted by experts, which will discuss current technical developments in navigation and communication aids as they relate to maritime operations. Held concurrently will be a demonstrator Exhibition of the latest equipment in the two fields. Members of Congress and congressional aides and counsels will address the conferees, and prominent authorities will be honored guests and principal speakers on March 21 and 22. Space for display of equipment by manufacturers is now being allocated, according to the Maritime Association. Further information for display reservation space, or for conferees wishing to register, may be obtained by writing to Maritime Association of the Port of New York, 80 Broad Street, New York, N.Y. 10004 or by calling (212) 425-5704.

and a 8.72 acre marshalling yard area with a capacity for 405 vans. Planned is a second marshalling yard area of 6.85 acres with a 263 van capacity.

The term of PRMSA's new lease with the Port of New Orleans is for 25 years with two additional five year periods available as an option.

"Under the contract with the Port of New Orleans, Navieras de Puerto Rico will have modern, ample, and more efficient operational facilities to better serve our growing trade with mid-continent United States", Mr. D'Acosta said.

Executive Port Director of New Orleans Edward S. Reed said the leasing of Berth No. 4 gives PRMSA a sound foundation from which to expand its operations.



Oakland, Calif., 2/8/78 (Marine Exchange of the San Francisco Bay Region):—"Welcome to the second sister" was the toast to the Motorship MANSART upon her maiden voyage arrival at the Port of Oakland. Capt. A. Ezanno was greeted with mementos and raised glasses by Marine Exchange executive director Robert Langer (left) and the Port's Gerry Pope. The Euro-Pacific cargo liner is represented by Balfour, Guthrie and Co. as agents. Second of four, new Japanese-built containerships to be in service here, MANSART is named—as are her sisterships—for a famous French architect.



San Francisco, Calif., 2/22/78 (Marine Exchange of the San Francisco Bay Region):—ANOTHER EXPRESS WELCOMED recently at the Port of Oakland when the Marine Exchange's Bob Langner presented a commemorative engraved tray to Captain Gerd Schwerdtfeger upon the maiden arrival at the Golden Gate of the MV ELBE EXPRESS. Second of Hapag-Lloyd's big cellular ships to be placed in trans-Pacific service, the 17,000-ton, fin-stabilized container vessel was preceded by her sister ship, MV ALSTER EXPRESS, in mid-January. New service will allow weekly sailings by Germany's largest shipping company when the remaining two sister ships are added. Balfour, Guthrie & Co. Ltd. are agents.

7th International Harbour Conference

Antwerp, Belgium, 19.1.1978 (Press Release from Koninklijke Vlaamse Ingenieursvereniging V.Z.W.):—The 7th International Harbour Congress will be held in Antwerp from the 22d to the 26th of May 1978, organized by the Koninklijke Vlaamse Ingenieursvereniging (Royal Society of Flemish Engineers).

The present series of congresses started in 1949 and was repeated at intervals of approximately five years. We are quite confident that this 7th Congress will be a success, sharing herein the tradition of its predecessors.

Experts from all over the world, from developing as well as industrial countries, will gather to discuss the 126 submitted papers (from 23 countries) about harbour techniques and to exchange experiences and knowledge.

The scientific proceedings are spread over six sections:

1. Geology and soil mechanics related to harbour engineering
general reporter: Prof.dr.-ing.E.Schultze, (University of Aachen, Germany)
2. Hydraulic engineering (infrastructure works) offshore and in coastal harbours
general reporter: Prof.dr.ir.E.Bijker (University of Technology, Delft, the Netherlands)
3. Hydraulic engineering (infrastructure works) in non-coastal harbours
general reporter: J.T. Williams, director of technical services, National Ports Council, London, United Kingdom

4. Civil engineering or superstructure works in harbours
general reporter: ir.H.Vandervelden, Director-General of Navigation Secretary-General of the Permanent International Association of Navigation Congresses (PIANC)
5. Harbour appliances and electromechanical harbour equipment
general reporter: Mr. Ph. Grosse, directeur de l'Outilage, Port Autonome du Havre
6. Safety provisions in harbours and the protection of the environment
general reporter: Mr. R. Monti, chief engineer, the Port Authority of New York and New Jersey, U.S.A.

The organizers expect to be the host to some 600/700 delegated from about fifty countries from everywhere. H.M. the King patron the Congress. Its president is Mr.ir.R. de Paepe.

Provision is made for technical visits and social functions.

At the same time of the Congress and in the immediate vicinity will be held the 4th International Harbour Exhibition, on an area of 4,000 m². A fair portion of the free space has already been taken up: it will soon be sold out.

The visitor will also admire in the exhibition a giant mock-up of the port of Antwerp and several exhibits of our National Museum of Navigation.

More information and a detailed programme may be had

from the Secretariat of the 7th International Harbour Congress, Jan van Rijswijcklaan 58, B-2000-Antwerp.

Positive Balance in Trade

Antwerp, 6/12/1977 (Press Release from Port of Antwerp Promotion Association):—From an analysis of the statistics about the Antwerp goods traffic, communicated by the Studycentre for the Expansion of Antwerp, it appears that the seaborne goods traffic is still showing a slightly positive balance, in spite of the restraining international cyclical evolution.

During the first nine months of the year, seaborne goods traffic in the port of Antwerp went up to 52.5 million tons against 50.3 million tons in 1976. Thus traffic improvement in 1977 as compared to the same period of 1976 amounts to 4.5%. As opposed to last year there seems to be a growth in outgoing traffic of about 24.8% (based on figures covering the first 8 months of this year). The increasing iron and steel loadings represent one of the peaks in this growth: + over 40%.

During the first 7 months of 1977 a constant growth was noticed concerning inland navigation. Within that period 4% more cargo was unloaded and 21% more cargo loaded by barges in Antwerp as compared to 1976.

Concerning rail traffic, especially the rhythm of growth of incoming traffic is obvious: +27.2%, besides an outgoing traffic in regression (figures first nine months).

International road traffic to and from Antwerp for its part, revealed an enormous increase during the first 6 months of 1977. Within that period, incoming traffic went up by 45% against 1976, outgoing traffic by 34.7%; resulting in a total increase of 39.3% (from 3.053 million tons in 1976 to 4.253 million tons in 1977).

150th anniversary of canal

Ghent, Belgium (Port of Ghent Information Periodical 9-77):—On September 16th, 1977, more than 200 people belonging to the Ghent circles of maritime navigation, transport, trade, industry and public authorities, invited by the association of the Ghent maritime interests, attended the maritime evening, which took place in the art and culture centre at the ancient abbey of St. Peter, to celebrate the 150th anniversary of the Ghent-Terneuzen canal.

Speeches were held by Messrs J. Vyncke, chairman of the association, Pl. De Paepe, burgomaster, and M. Vanden Bosch, representing the minister of communications.

• Port problems

On the 20th of September 1977, at the invitation of the prof. dr. De Bruyne foundation, Mr. Pl. De Paepe, burgomaster of the city of Ghent, gave an account of the present port problems. He exposed i.a. the altered tasks regarding port management, the settlement of specialized terminals, the possible creation of a free zone in the port area, the sailors' welcoming, the study and the prospection with regard to the transport possibilities between the port and its fore- and hinterland, the extension of the substructure and the equipment. As for the future, Mr. Pl. De Paepe was of opinion that a better maritime access and especially a new lock at Terneuzen of 125,000 tons, should be striven for.

Port of Bristol News

From "Portfolio", A Newspaper for the Port of Bristol, February 8th, 1978

• Surcharge lifted as productivity soars

As productivity soars at Avonmouth, following the introduction of the new pay deal, there came an additional boost to the Port from the East African Conference Lines.

In view of the improved position at Avonmouth, the Line have, from January 30th, suspended the 10% surcharge in respect of cargo shipped through Avonmouth from East Africa, which had been in operation since 28th February 1977.

The Lines warned however, that the situation will be kept under constant review and consideration would be given to re-applying the surcharge should the need apply.

Output increased

If the initial reaction to the new pay deal is indicative however, then Avonmouth need have no fear of surcharge increases in the future.

Recent performances have been excellent and the inclusion in the pay deal of a progressive productivity increment with additional rewards for increased tonnages together with improved handling methods has meant a considerable rise in outputs.

One operation which has been going particularly well is the loading of export flour.

Following a good performance on the Monach, in difficult circumstances, when 2,632 tonnes were loaded at a rate of 18.8 tonnes per net gang hour, came an outstanding effort on the Viki Lam Avonmouth, both from the Dockers and the Authority Management, where the level of co-operation has been extremely good.

"The results here are very good, based on our experience of other ports, and we have recommended Avonmouth as the port to use for the export of Food Aid to poorer nations.

"We have already drawn up a programme of exports through Avonmouth which will take us up to April, and are looking forward to establishing Avonmouth as the export port for the flour industry".

Milk powder

A further export cargo which achieved excellent outputs was the loading of 5,000 tonnes of milk powder destined for Cuba.

The loading of the vessel was completed within ten working days at an output rate of 38.7 tonnes per net gang hour.

• Steamship owners call for fast service

At the annual meeting of the Bristol Steamship Owners' Association held last month its President, Mr. Roger Stevenson, warned that Bristol could not afford another year of disruption and confrontation in her Docks.

"Changes in cargo-handling had hit Bristol's traditional markets and the City could not allow the law of diminishing returns to sink the port without trace", he said.

Efficiency

"A fast efficient and economic service is the name of the game, and without it we stand no chance of repeating the success the port has enjoyed in the past 100 years".

Mr. Stevenson added that Bristol had lost a prime opportunity to celebrate a century of trading at Avonmouth and the opening by the Queen of the Royal Portbury, because of the succession of disputes and stoppages.

"It is vital that everybody at Avonmouth pulls together for the future", he said.

Recent performances seem to indicate that genuine efforts are being made to produce the productivity called for.

"VIEWPOINT"

Glasgow, January, 1978 (Clydeport News):—The Festive Season provides an opportunity to look back over the year which is drawing to a close, to savour the high spots and reflect for a moment on any lessons which can be learned from the lows.

No year can ever be all good and in 1977 Clydeport had its share of difficulties.

Most serious of them were those which upset customers whose goodwill will be so vital through 1978 and beyond.

By its nature, work around dockland goes in fits and starts over which the port itself has little control.

The reality of the hunger-and-burst has been most evident recently at the container terminal which, at certain times, has been bursting at the seams with vessels, with boxes and with lorries.

Sheer volume of traffic can make life difficult, but the problems at the terminal were on occasions worsened by poor performance of equipment and labour difficulties.

Delays cost customers money and so they are expensive, too, in terms of the port's reputation.

The Authority's investment in the terminal increases every year with extensions and with new equipment.

This continuing process of up-grading services does not, however, rely on money alone.

It takes self-discipline and a great deal of effort by all concerned to convince customers that the best possible job is being done.

There is never room for complacency where second-best is unacceptable.



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British Transport Docks Board News

1. (Humber) Closure of grain silo at Hull Docks

Hull, U.K., 31 January, 1978:—The British Transport Docks Board has decided to close the grain silo and land based grain discharging equipment at Hull Docks with effect from 31 March 1978, because of reduced demand for these facilities for the importation of grain.

Mr. Ken Bantock, port director, Humber, said today (31 January 1978) "the Docks Board naturally regret the withdrawal of this facility for the importation of grain into Hull which has been an important part of the port's trade in the past. In view of the lack of demand in recent years, however, the port can no longer sustain this operation and the closure of the facilities will enable the Board to consider alternative uses which will realise the potential of this port of the dock for handling other types of cargo." He went on to say that "the floating suction elevators will be retained to handle the port's continuing substantial trade in oil seeds and nuts and also to discharge grain direct into river craft."

A number of factors have contributed to the decline in the demand for silo facilities at Hull, including the closure of some local mills in recent years. To an increasing extent the deep sea movement of grain is now undertaken in very large bulk carriers often for transshipment to destination in small vessels which are able to navigate well inland and in some cases deliver direct to the mills.

About 1 million tonnes of grain were imported annually through Hull when the trade was at its peak in the early 1960's. In the light of the declining tonnages, half the silo was closed about two years ago in a move to try to make the grain business profitable at the smaller tonnages then moving. There was, however, a continuing decline in business and in a further effort to attract additional trade the Docks Board subsequently offered substantially reduced charges, but these did not produce a sufficient increase in traffic to offer the prospect of a viable operation in the foreseeable future.

2. New container terminal for Garston

London, 2 February 1978:—Work on a second container terminal at Garston Docks has been started by the British Transport Docks Board to meet the rapid increase in traffic through the port to and from Northern Ireland, and to provide facilities for other business.

The site—on the east side of North Dock—will cover just over six acres providing 1,000 feet of quay frontage with a large back-up area adjoining. Two Liebherr 30 ton container cranes will be provided, installed jointly by the BTDB and Irish Sea Ferries, who will operate the terminal in addition to their existing one in Stalbridge Dock.

Demand at the present terminals at Stalbridge and North Docks has risen dramatically over the past five years from an annual throughput of 25,000 container units to 40,000 units in 1977.

Both docks are presently used by Irish Sea Ferries, with the recent addition of Unimar Lines container traffic between the UK and Portugal.



London, 24 February 1978 (British Transport Docks Board):—Minister Visits BTDB's Humber Ports: Mr. William Rodgers, Secretary of State for Transport, made his first official visit to the British Transport Docks Board's Humber ports of Immingham, Grimsby, Hull and Goole recently (Friday 17 February).

The visit, at the invitation of the BTDB's Chairman, Sir Humphrey Browne, C.B.E. was arranged to show the Minister at first hand the operation of the ports, which together account for nearly 40 per cent of the Board's total annual trade.

During his tour Mr. Rodgers met members of various groups within the docks, including management and staff representatives and shop stewards.

His tour, mainly by helicopter, took him to many of the purpose built terminals and quay areas at the docks, including the Tor Line Terminal at Immingham, the Fish Docks at Grimsby and the Container and Ro/Ro Terminals at Hull.

Mr. Rodgers said that the Humber ports were a success story, with enough business for both sides of the estuary to prosper. He said it was good to see a nationalised industry doing so well, making profits alongside other competition in the industry, all of which was a credit to the workers who had played such an important part.

The picture shows the Minister talking with Charlie O'Connor, a tallyman at a Hull groupage shed.

Commenting on the scheme, Mr. Bernard Pearson, BTDB Docks Manager at Garston said: "The rapid increase in container traffic at Garston is a success story in its own right. The need for this expansion, maintaining the high standard of service provided by ISF and the BTDB, is proof that the smaller ports can still hold their own in a competitive market.

"The development of this container terminal will ease pressure on the existing facilities and at the same time provide more scope for attracting new business."

The work on the new terminal is expected to be completed in June this year.

Nigerian Ports Authority



- Nigerian Ports Authority (NPA) generally referred to as the "Gateway to Nigeria's Economy"—
- Imported locomotives to improve the country's railway system are being off loaded at the (NPA) Port of Lagos.

3. Hull to Eastern Mediterranean Ro/Ro service increased

London, 6 February 1978:—Additional sailings by the Adriatica Line's Eastern Mediterranean roll-on/roll-off service from the British Transport Docks Board's Queen Elizabeth Dock at Hull are to start this week.

The service, only started in September last year, has been so successful that it has been increased, bringing an Adriatica ship into Hull every two weeks instead of three at present.

Joining the 'Allemagna Express' on her visits to No. 10 Quay will be her sister ships 'Anglia Express', due in on Thursday (9 February) and the 'Serenissima Express' due in on 27 February.

All three ships will be using their quarter ramps, with stevedoring being carried out by the BTDB's Hull and Humber Cargo Handling Company, using 20ft. and 40ft. roll trailers and tractors for ship to shore movements. Wheeled vehicles, such as earthmoving equipment, will be loaded under their own power.

Worms Cargo (UK) Ltd., Adriatica's general agents for Scotland and the north of England, already have enough cargo waiting on the docks to fill the 'Anglia Express', and are receiving consignments for the 'Serenissima Express'.

4. Southampton dockers accept ten per cent pay settlement

London, 7 February 1978:—A conclusion has been reached in negotiations between the British Transport

Docks Board and registered dock workers at the Port of Southampton on the questions of a 1978 pay deal, and manning arrangements for the operation of the port's newly-constructed container berth.

A ballot of the port's 1,900 dockers has shown a clear majority in favour of accepting the terms of an agreement negotiated with the Docks Board which allows for a pay increase within the Government's ten per cent guideline and for the introduction of a manning arrangement for Berth 206, the fifth deep-sea berth at the Southampton Container Port, which has been constructed to accommodate the traffic of the Southern Africa Europe Container Service.

The first of the nine ships which will operate the new container service made its maiden voyage two months ago and since that time container traffic between the UK and South Africa has been transhipped via the Continent pending the opening of the Southampton terminal.

Mr. J.B. Williams, Port Director at Southampton, welcomed the result of the dockers' ballot. "I am naturally very pleased at this decision," he said, "and am hopeful that parallel negotiations with other sections of our staff will similarly be concluded shortly so that Southampton can begin to handle the South African container trade without any further delay."

Southampton is recognised as being Britain's leading deep-sea container port. The existing terminals regularly service more than 30 very large container ships and last year dealt with well over a quarter of a million container units.

Port of Bordeaux Today

Public Relations Department The Port of Bordeaux Authority

• Mr. Nebout elected president

The Board of Directors of the Port of Bordeaux Authority met on the 23rd. January, 1978. Having welcomed five new administrators, amongst which was the general counselor for the Charente maritime Department, the new Board was elected as follows:

President: MR. LOUIS NEBOUT, Vice-President: MR. ROBERT O'QUIN, Secretary: MR. J. TOUTON, plus the remaining members of the board.

Mr. NEBOUT, first paid tribute to the immediate Past President, MR. ROBERT MATHIEU, who was then given honorary status by the Board of Directors.

Having listened to a summary of the port's general situation, the Board briefly discussed the conditions for placing the upper section of the Left Bank Quays at the disposal of the Bordeaux Urban Community.

The announcement that work had begun on the new vegetable oil processing factory at Bassens was greeted with delight.

Towage charges and ship broking rates in the port were then examined before the Board went on to renew the rights of Private equipment being employed with the obligation that it should offered for Public Service by the owners, Grand Moulins de Paris.

Biography

NEBOUT, Louis Marie,

Born 17th. July 1917 at Aiguillon (Lot et Garonne)

Son of François NEBOUT, horn in Aiguillon

(Lot et Garonne)

Married to Jacqueline MIRIEU de LABARRE;

3 children.

Director of the national company, ELF AQUITAINE

Former pupil of the Ecole Polytechnique—Graduated 1937.

Civil Engineer—telecommunications.

Public Offices held:

- Honorary President of the Chamber of Commerce and Industry of Bordeaux,
- President of the Economic and Social Committee of the Aquitaine Region,
- President for the Bordeaux Society of Industrial and Commercial Credit.
- Vice President of the "Sté BORDEAUX-OLEAGINEUX"

Decorations:

- Chevalier dans l'Ordre national du mérite
- Chevalier dans l'Ordre national de la Légion d'honneur
- Chevalier dans l'Ordre des Palmes académiques.

• Bordeaux-Verdon 1977 trade figures

Maritime trading figures for the Port of Bordeaux-Le Verdon showed a drop of 5.89% in the 1977 port statistics, compared to the 1976 figures.

Whilst the total port cargo figure reached 21,566,000 metric tons, overseas trading represented only 11,356,000 t. of this figure.

The movement of petroleum products through the port fell by 430,000 tonnes, following the regional economic slump, which particularly affected the oil refining industry.

Products other than oil slipped to 2,876,000 t. showing a decline on last years figures of 281,000 t.

Exports provided some cheerful news, showing an increase in general cargo, i.e. non-bulk cargo, of 8.5% on the previous years figures.

IMPORTS

• **Citrus Fruit:** The promotion campaign for import citrus fruit from Morocco did not begin until early 1978, so that this traffic showed a drop of 6,700 tonnes. However, tomatoes were up by 20% and potatoes jumped up by 85.7% (due mainly to the poor domestic crops).

• **Timber:** Tropical timber in trunk form remained remarkably stable (78,700 t. as against 78,000 t). However, timber from the Soviet Union slipped (96,700 t. instead of 102,300 t.), whilst North American timber shot up (24,000 t. as against 12,200 t.) due to receptions in Le Verdon and Bassens.

• **Skins:** The slump in the fellmongering industry caused a slowdown in the importation of sheepskins (25,800 t. as compared to 33,600 t.).

• **Sugar:** Imports rose from 78,900 t. to 86,400 t.

• **Coffee:** The price hike in Spring 1977 caused trade to fall by 45%.

• **Oil seed cake:** The 1977 figures for this commodity reached 386,000 t. as compared with 373,800 t. in 1976. This is a record for this product.

• **Iron ore:** A 6.8% progress was registered (as compared to 1976) in 1977 when the figures for iron reached 188,400 t.

• **Phosphates:** Imports rose by 13.2%, (286,300 t compared to 1976's 252,800 t).

• **Chemical Fertilizers:** The agricultural situation in 1977 was not conducive to importing fertilizers (a fall of 47,000 t).

• **Paper, cardboard, paper pulp:** The drop here was nearly 53% with 18,900 t as opposed to 40,300 t.

EXPORTS

• **Grain:** Although corn exports rose by 35.5%, the overall figures for cereals fell steeply (375,000 t instead of 500,000 t).

• **Apples:** The poor crop in 1977 did not help this traffic (2,000 t. instead of 8,000 t. in 1976).

• **Wines and other beverages:** This traffic showed an increase of 18.5%, mainly because of the development of regular container lines.

• **Flour & meals:** Exports slipped from 59,600 t in 1976 to 53,300 t in 1977.

• **Colza:** A poor crop in 1977 lead to a drop of 71%.

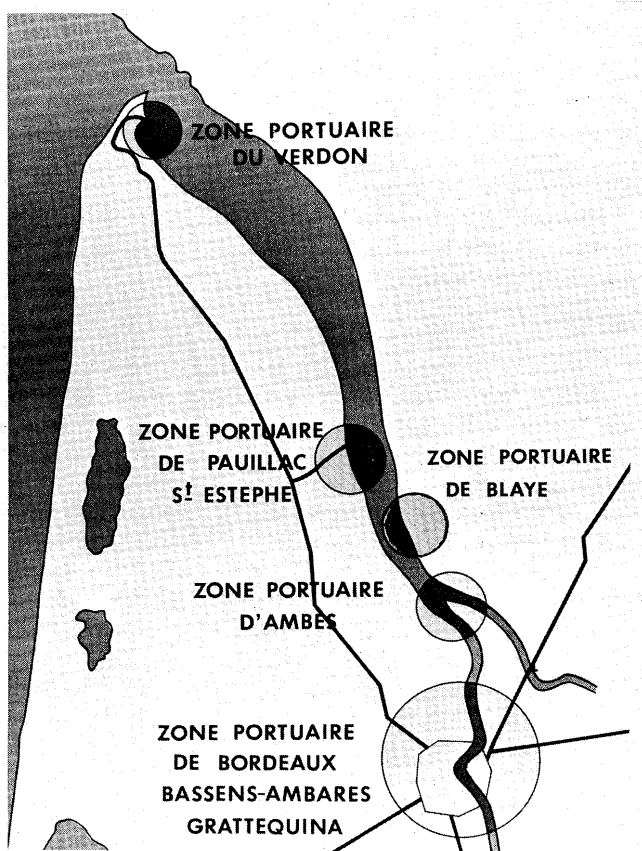
• **Sugar:** Exports, in particular to Mauritania, have developed into a major traffic (21,000 t instead of 17,200 t).

• **Clays and fire clays:** Exports reached 61,600 t instead of

(Continued on next page bottom)

Port of Bordeaux - Le Verdon in Pictures

(See front cover also.)



No. 1. Situated in Western Europe, on the Atlantic seaboard, the Port of BORDEAUX-LE VERDON stretches along the longest estuary in France. 100 kilometres inland, Bordeaux receives vessels drawing up to 10 meters.



No. 2. The left bank quays (Rive Gauche), in the heart of the city, are basically reserved for regular line vessels bringing general cargo. Bordeaux is linked by some 40 regular services to over 70 different countries throughout the world.



No. 3. BASSENS AMONT, 8 kms. outside BORDEAUX, is equipped for bulk cargo carriers and heavy unit loads. A section of the tropical timber storage area, the phosphate silos and the mineral stock yard can be seen in this photograph, as well as the excellent railroad connections. These quays are also directly linked by dual carriageway to the North/South motorway, for easy access to the town or elsewhere.

49,600 t in 1976, i.e. up 24%.

- **Talc:** A stable product (10,000 t in 1977, 9,900 t in 1976).
- **Private cars:** Traffic dropped by 13% (14,600 t as against 16,900 t).
- **Chemical fertilizers:** Contracts with Karachi, Abidjan and the Lebanon, fertilizer exports rose to 65,500 t in 1977 as opposed to 41,400 t. in the previous year.

EVOLUTION OF TRAFFIC IN FRENCH PORTS IN 1977 AS COMPARED WITH 1976

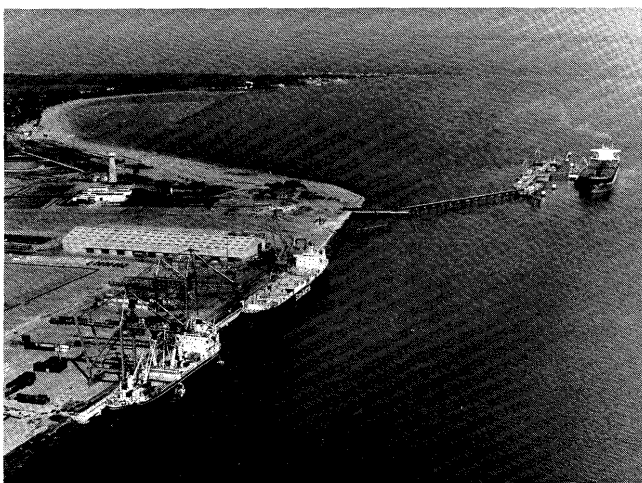
ROUEN	+8.4%
NANTES	+5.5%
DUNKIRK	-2.5%
LE HAVRE	-4.6%
MARSEILLE	-5.0%
BORDEAUX	-5.9%



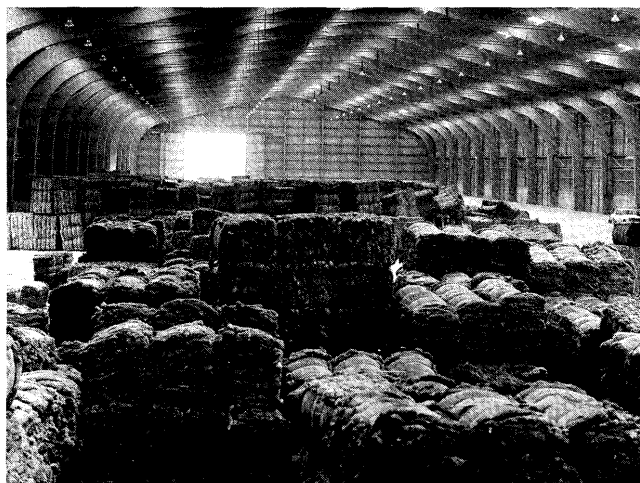
No. 4. This air conditioned shed at BASSENS is served by a double berth for reefer vessels and an axial ramp ro-ro pontoon. On the doorstep of Bordeaux, it serves not only for storage, but as a veritable market for early vegetables and citrus fruits etc. Beyond are the quays catering for containers, oilseed cake and fertilizers and in the distance, the grain terminal with its vast storage silos.



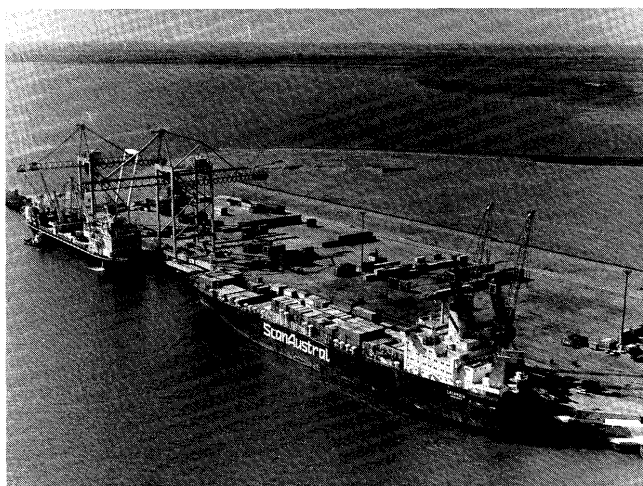
No. 6. Containers stacked in the 12 acres stock yard, equipped with 100 reefer box power points, are transited by lorry as well as by rail. The main road between LE VERDON and BORDEAUX is being progressively improved and much is already dual carriageway. Due for completion by the 1980s, it will link up with the motorways from Bordeaux to the North, South and East of France.



No. 5. An ariel view of the Port of Le Verdon, at the Mouth of the Gironde. In the fore is the new container and ro-ro terminal. To the right, the oil terminal catering for vessels of up to 150,000 t.d.w. fully laden, which supply crude oil to the Gironde refineries.



No. 7. The commercial, industrial and port zone of Le VERDON. The inside of the 12,000 m² shed used for housing general goods and for stuffing containers.



No. 8. A slip for angle stern ramp ro-ros is incorporated in the 240 meter long quay at LE VERDON. A second ro-ro berth is to be built shortly, for axial ramp vessels in the wet dock, the beginnings of which, can be seen in the background. Also seen is the photo, are the powerful floodlights, which illuminate the whole port zone, since the terminal is operational 24 hours a day, 7 days a week, throughout the year.



No. 9. Behind the terminal, the Port of BORDEAUX-LE VERDON already has 500 acres of land available for industrial and warehousing use. The framework of these zones have already been prepared and roads and railways laid. As the port develops, further land can be reclaimed and prepared so that the total capacity is some 25,000 acres.

Speed in European Ports Policy Is Urged

Amsterdam, December 1977 (Haven Amsterdam):— Amsterdam Alderman for the Port Mr. C.H. Goekoop has urged faster action on a common European ports policy. Speaking before a group of foreign economic journalists in Zaandam recently the Alderman said that 'if the work continues at the present pace, there will be no common port policy in Europe before the year 2000.

Mr. Goekoop said that there has hardly been any progress made since the resolutions contained in the Seefield Report were adopted by the European Parliament in 1972. He began by saying that port operators in Western Europe are facing difficult times of a structural rather than a cyclical nature.

'In order to promote employment, local, regional and national governments have invested heavily in recent years in vast industrial sites in port areas. These days, an enormous overcapacity is making itself felt, not only in the shipping trade, the chemical industry, shipbuilding and many other areas of economic activity, but also in industrial port sites.

'To make matters worse, in many harbors plans for new extensions are in the course of development. This in itself would be sufficient to open the door to fierce competition, but the situation is aggravated by the fact that some governments deem it wise to grant large subsidies to attract new foreign investors to their ports. These subsidies are either granted openly or in the form of reductions on the cost of energy or transportation', Mr. Goekoop said.

'This leads to a serious distortion of competition; one might even speak of unfair competition to some extent. And, from a European point of view, one may raise the

question whether this practice is not a waste of taxpayers' money.

In 1972, the European Parliament reached an agreement on the Seefield Report and adopted a resolution in favor of a number of items. These are: non-discrimination; fair competition; productivity of ports; capacity of ports and sound harbor relations. Mr. Goekoop said that there had been endless discussions in Brussels on these matters, but little, if any, progress.

'And in the meantime, this catch-as-catch-can continues. We are not afraid of competition', Mr. Goekoop said. 'But we do feel that the time has come to lay down rules to stop this unfair competition and also to avoid competition which may lead to port monopolies.

'Governments should come to realize that nowadays port and their related activities as a whole are of far greater importance than their national shipping businesses as such. The ports along the North Sea Canal: Amsterdam, Zaanstad, Velsen and IJmuiden handle roughly 35 million tons of cargo, far less than Big Brother Rotterdam, of course, but not at all a bad performance. We have sufficient industrial sites available to cope with demand until between 1990 and 2000.

'Our projects for the improvement of the infrastructure include outerport facilities which will enable us to receive ships of up to 180,000 tons. At present there are some slight difficulties with the provincial authorities, but we trust that these will be resolved in a few months' time', Mr. Goekoop said.

'We offer 'custom-made' facilities and are specialists in a number of commodities, such as cocoa, timber and tropical products. Our accommodation for ships, and not to forget their crews, is among the best in the world.

'Ours was the first port to apply stringent environmental rules. Today we have a clean port with a clean environment,

and that's also good for business. In addition, the relations between the municipal authorities, the employers and the trade unions are excellent.

'We cooperate in the 'Port Consultancy Group' to solve problems, make new plans and promote the harbor. I feel that no harbor can function properly without optimum relations between the social partners involved. In Amsterdam, I am glad to say, these relations are excellent', Mr. Goekoop concluded.

New Office Block for K.P.A.

Mombasa, Kenya ("Port of Mombasa" published by Kenya Ports Authority):—A new office block for the Kenya Ports Authority recently completed at Kipevu, Mombasa, was occupied as from November 11, 1977.

Built at a cost of 15m/—, as Block II forming an extension to the present Block I main Port Offices, the new wing now accommodates the Chairman, the Managing Director and his Deputy.

Other sections moving to Block II include. Operations, Commercial and Personnel staff, leaving room in old Block I for Marine section, Cargo Handling and Railways staff connected with day-to-day operations of the port. But other Kenya Ports Authority sections such as: Engineering, Data Processing, Accounts and Supplies have not been affected by this move.

The new wing is built of six storeys and has a new PABX telephone exchange with a new numbers 312211 which will go along way to relieve congestion previously experienced on the old exchange No. 21211. Additional facilities in the new block include a modern canteen on the sixth floor and a reception and parking bays on the ground floor.

The new offices have taken two years to complete.

Work is to start soon on constructions of block III, adjacent to the new wing, which will form further extension to existing office accommodation at Kipevu. Phase III is planned to accommodate Data Processing Section and Finance Division. The former is presently housed at Ambalal House in town while Finance Division still occupies outmoded structures at Kilindini.

Meanwhile, work still continues on a number of development projects that are geared to provide more and improved facilities at the port of Mombasa.

Gray Mackenzie Monthly Bulletin

DECEMBER 1977

• Abu Dhabi

49 vessels called at Mina Zayed during the month of December discharging a total of 66,354 DWT of cargo consisting of 32,420 DWT of general cargo, 1,000 DWT of pipes, 12,912 DWT of cement, 17,492 DWT of steel and 2,530 DWT of bitumen plus 3,500 live sheep, 580 vehicles and 36 containers.

Additionally, one vessel loaded 485 DWT of general cargo for Hamburg and 1 tanker lifted 6,000 tons of fuel oil.

There were no berthing delays during the month and all vessels received prompt despatch.

Mina Zayed has opened a temporary Ro-Ro berth until such time as its first Ro-Ro opens in March/April 1978. The berth No. 9 is a 366-Metre jetty, but cargo can only be moved at night because of the location and nature

of the berth. Ro-Ro vessels must berth either head on or stern on, and it has no conventional Ro-Ro handling gear.

The Abu Dhabi port authorities have said that No. 13 berth opening March/April 1978 is 250 metres long and will take vessels with a draught of upto 17 feet. The temporary berth can take Ro-Ro upto 150 metres long. At the end of 1978, a proper Ro-Ro berth, No. 1 will be introduced. It will be able to take vessels of any size, upto a maximum draught of 31 feet. It is said that the temporary berthing is being introduced to encourage shippers to use quicker shipping systems.

A draft law on using Arabic in all correspondence with the Government is under review by the Federal Legislation Department. The law states that Arabic being the official language of the U.A.E. all letters, tenders and documents sent to Government departments should be written in Arabic. A translation should be attached to correspondence in any other language. Arabic should be used in all records, minutes books, and all correspondence which government officials have the right to inspect. This would apply to contracts and licences as well. Signboards of shops or companies may be in two languages but Arabic script should be larger. The law exempts diplomats, international organisations and people living outside the U.A.E. There is also an exemption for companies which have no headquarters or branches in the U.A.E. Commodities imported into the U.A.E. should be labelled in Arabic. Fines and imprisonment will apply for repeated offences.

Cruise ship visiting Adelaide

Adelaide, February, 1978 ("South Australian Ports & Shipping Journal" published by the Department of Marine and Harbors, South Australia):— **More may be seen of the Soviet CTC Lines flag in South Australian waters following the successful visit of the cruise ship Leonid Sobinov to the Port of Adelaide on Saturday, January 14, 1978.**

Keen shipwatchers would have recognised her as the former Cunard Liner Saxonia, but for the big crowd which turned out to welcome her at the Outer Harbor cruise terminal, she was just a "happy holiday" affair.

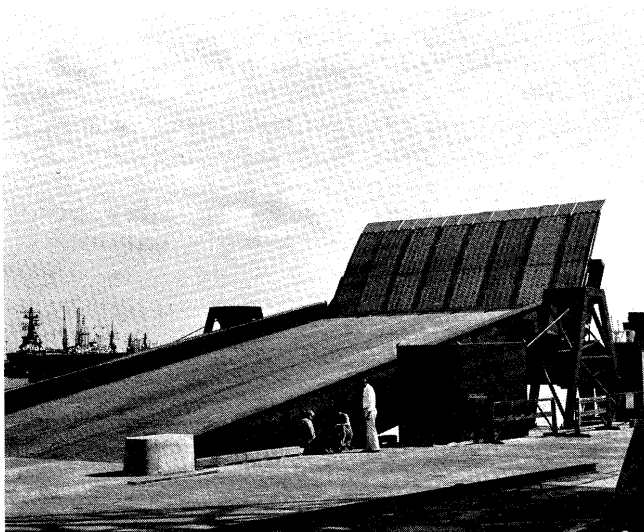
Speaking to the press, CTC's Australian passenger manager, Mr. Tony Kelly, said he would be recommending more Adelaide calls to the company. While the call had meant additional cost to the line, it had been demonstrated that significant demand appeared to exist in Adelaide for such a direct cruise service. This would be given serious consideration in future planning.

As 113 additional passengers embarked and settled in, those already on board were heading ashore to take advantage of the time available for sight-seeing tours. The ship tied-up at 6.15 p.m. and sailed again at 1.30 the following morning. Crew members also took advantage of the visit to go ashore, because it was the first time many had been to the port.

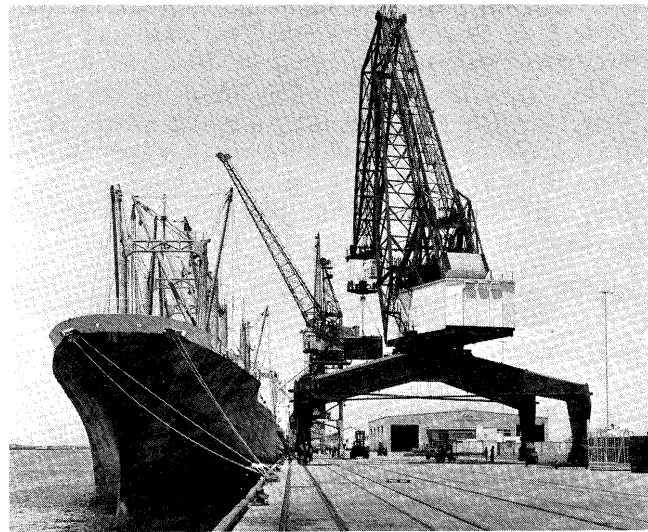
Should additional future calls be made by CTC Lines vessels, it is likely that stopover times may be longer, giving additional time ashore for those on tour. However, the company plans its itineraries up to three years ahead, and it is not yet known how Adelaide would fit into the pattern of cruises if it was included as a more regular port of call.

S.A. HAS MUCH TO OFFER

The marketing and sales manager for Banks Street



Fremantle, Western Australia, 21st February, 1978:—A recent addition to the cargo handling facilities in the Port of Fremantle is an articulated ramp especially built for stern loading roll-on/roll-off ships. The new ramp will be used by the ANRO Service which provides an 11-day frequency between Australia and South-East-Asia.



Fremantle, Western Australia, 21st February, 1978:—In January 1978 a heavy duty luffing crane was brought into operation in the Port of Fremantle. The 35 tonne capacity crane which is capable of lifting 20' and 40' containers as well as other heavy lifts, is situated at the Port of Fremantle's Unit Cargo Terminal at North Quay.

Travel, Mr. Keith Marbrow, whose company acts as passenger agent for CTC Lines, said land tours had been arranged for some passengers as part of the cruise. South Australia had much to offer in terms of weather and sight-seeing for overseas and Australian travellers. There was scope for considerable development of this potential.

He added that the satisfaction of passengers aboard the Leonid Sobinov had made a strong impression on all who had gone aboard. This word-of-mouth recommendation was genuine, and based on the experience of people who had found a way of really relaxing on their holiday.

CTC Lines operates the cruise liners Shota Rustaveli, Fedor Shalyapin, Felix Dzerjinsky and Mikhail Lermontov, as well as the Leonid Sobinov, which was en route from Auckland (NZ) to London when it stopped over in Adelaide.

Cruises include those to Canada and America, Europe and world tours, as well as Mexico, South America and the Pacific, including Asian ports and the major island groups.

The exotic names read like a getaway-from-it-all almanac—Vila (New Hebrides) Suva (Fiji) Honolulu (Hawaiian Islands) Tahiti, Noumea (New Caledonia) Bali (Indonesia) Port Moresby and Rabual (Papua New Guinea) Singapore, Hong Kong, Nagasaki-Kobe-Yokohama (Japan). Fares include shore hotel and bus tour costs in some cases.

At present, South Australian cruise passengers have the inconvenience of travelling interstate to join cruise ships, but direct calls by CTC and other lines would eliminate this. The South Australian community also stands to benefit considerably through the provision of accommodation, tours and other facilities.

CRUISE TERMINAL WINS PRAISE

The assistant manager for Patrick Agencies, Mr. Colin James, told SPJ the Leonid Sobinov visit had gone

smoothly and she'd been handled very efficiently.

Patrick Agencies handles shipping arrangements for CTC Lines, their last CTC Port of Adelaide caller being the Turkmenia in August last year.

Mr. James said there had been a strong and highly favourable reaction to the modern cruise terminal at Outer Harbor.

"We heard the terminal described at various times by ship's officers, the Purser, Master, CTC representatives aboard and passengers as magnificent, very impressive and even amazing," he added. "They were genuinely surprised to see that the Port of Adelaide had such excellent facilities, including rail and road transport at close hand. Naturally, we welcome any move by CTC to increase its frequency."

Mr. James said another thing which had impressed those on the Leonid Sobinov was the big crowd which had turned out to welcome the ship. He said it was unfortunate that the length of the visit was too short to allow the public aboard, but he felt this should be provided for on any future trips.

Mr. James said additional costs faced during the visit, including substantial weekend labour charges, but these could be reduced considerably by long term planning.

Brisbane News

Brisbane, Australia, December/January 1978 (News Bulletin from Port of Brisbane Authority):—

- The Hornibrook Group is gearing up to drive the first of 550 steel piles for the Fisherman Islands' container and Ro-Ro wharves. Driving is expected to commence late in February. Company personnel are moving onto the site and office and work buildings are under construction. The piles,



Fremantle, Western Australia (Fremantle Port Authority):—
The Hon. D.J. Wordsworth, M.L.C., Minister for Transport,
is greeted by Mr. R.E. Bower, Chairman of the 8th

Conference of the Western Australian Port Authorities' Association at the opening ceremony.

which will be up to 30 metres long, are being fabricated at the company's Bulimba yards.

- The causeway-bridge contractor (Thiess Bros. Pty Ltd) is now virtually finished on site. Practically all men and equipment have left the area and the maintenance period as per the contract agreement has commenced.

- Dredging contractor (Dredco Pty Ltd) is well advanced on the pumping of fill for the container terminal site. On January 24, it was estimated that the company's dredger 'Wombat', had pumped ashore more than $\frac{1}{4}$ of the required 1,070,000 cubic metres of fill.

- In addition, 100 metres of the 552 metres of the shore line rock wall which is required at the back edge of the proposed wharves, is in position. The company is placing the rock at the rate of up to 2,000 cubic metres a day. The rock is being carried in by heavy trucks from quarries at Mt. Cotton and Beenleigh.

- Port of Brisbane Authority dredgers, "Sir Thomas Hiley" and "Saurian" are operating non-stop to provide the fill which will reclaim that area of the islands between the end of the causeway and the islands' terminal site. About 1 million cubic metres of reclamation is needed.

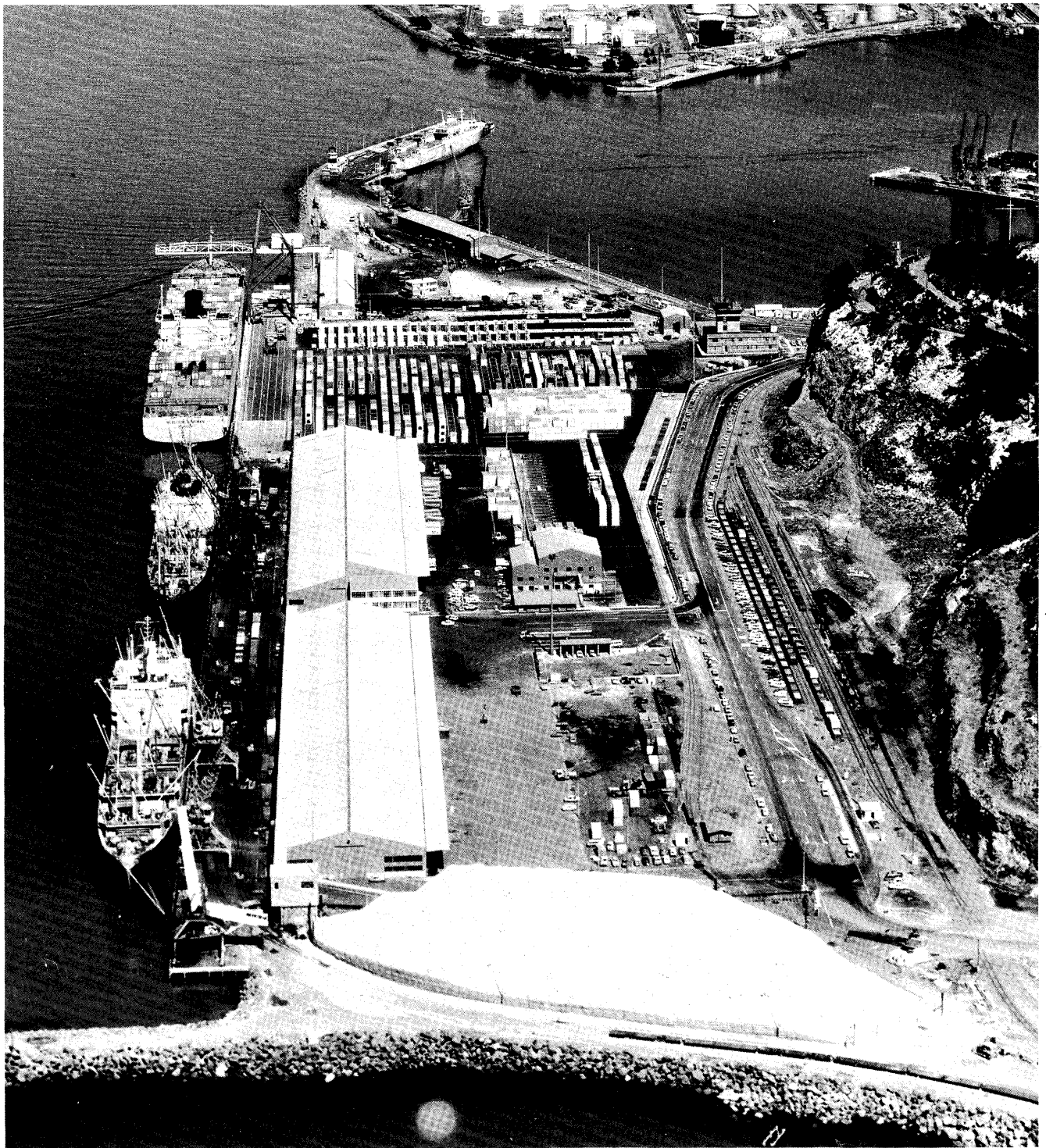
- The authority's site office will be moved in February from its present location (near Ampol Refinery) to a position near the islands' terminal site.

- The mooring capacity of Manly Boat Harbour is being increased. The authority's maintenance section is driving 90 reinforced concrete piles to replace 58 swing moorings. On completion of the project the harbour will be able to accommodate 334 vessels, a net increase of 32.

- One of the more interesting emergencies to come to Cairncross Dockyard in recent years was the container ship, "Andros" (26,204 d.w.t.) owned by Denholm Ship Management of Glasgow.

"Andros" "threw" a propellor blade while steaming off the New South Wales coast, and while on its way to dry dock in Hong Kong. The agents, Southern Shipping Lines, made arrangements to dock the vessel at Cairncross and a trawler intercepted the "Andros" off the northern New South Wales coast to obtain the vessel's docking plans. These were rushed to Cairncross where, within two hours, dockyard workers were positioning the cradles to receive the ship.

(Continued on page 67)



Lyttelton Container Terminal, recently opened, showing "NEDLLOYD HOUTMAN" at the berth on 2 December 1977.

The "NEDLLOYD HOUTMAN", of 52,562 gross tonnage, 258.5 m in length, and displacing 64,200 tons on a fully-laden draught of 13 m, arrived at Lyttelton on her first New Zealand port of call on her maiden voyage, and is the largest vessel to berth at the port to date. She had a ship-exchange of 607 TEU's at an hourly rate of 20.18

TEU's gross and 23.33 TEU's nett, and sailed one day ahead of schedule.

Since its opening last June, the Terminal has handled 21 vessels, exclusive of LASH ships, with a total ship-exchange of 10,000 TEU's. Encouraged by the good performances and patronage recorded at the Terminal, the Lyttelton Harbour Board (the Terminal operator) is making application to the NZ Ports Authority for the purchase of a second container crane.

'Andros' entered the dry dock on December 30 carrying 550 containers weighing 8,500 tonnes. Six days later, the ship undocked, having had the propellor repaired and a "haircut and shave", and was back in service.

- Our congratulations go to Mr. Jim Peel on his appointment as Auditor General. In his capacity as Director, Department of Harbours and Marine, he was an ex-officio member of the Port Authority.

For many years he guided the activities of the Department of Harbours and Marine, including the affairs of the Port of Brisbane. The formation of a Port Authority for Brisbane was one of his objectives, and the success of his efforts culminated in the proclamation of the Port of Brisbane Authority Act on December 6, 1976.

During the first year of operations of the Port Authority, his experience and advice in policy making have been invaluable to the Board.

We wish him every success in his new appointment.

The Week in Hong Kong

Hong Kong, February 11, 1978 (Hong Kong Government Information Services):—

• Global exports up 7.3%

THE value of Hong Kong's domestic exports last year increased by 7.3 per cent, imports rose by 12.5 per cent and re-exports by 10.1 per cent compared with that of 1976.

Trade figures released by the Census and Statistics Department on Sunday showed that domestic exports were valued at \$35,004 million (3,375.5 million pounds sterling) last year, imports amounted to \$48,701 million (6,087.6 million pounds sterling) and re-exports \$9,829 million (1,228.5 million pounds sterling).

The performance of domestic exports improved significantly in December last year. Domestic exports to U.S.A. accelerated at an impressive growth rate of 20.6 per cent last year, with exports of clothing increasing by 18.8 per cent to \$5,426 million (678.3 million pounds sterling).

Singapore and the Netherlands also increased their purchases from Hong Kong in 1977.

Exports to other major markets in 1977 fell below the level achieved in 1976. However, there were indications that demands in these markets picked up towards the end of the year.

• More cargo handling areas planned

FIVE more public cargo working areas will be built by the Marine Department in Hong Kong in the next four years to cope with increasing demand.

Sites in the Western District, and Chai Wan on Hong Kong Island, Cheung Sha Wan in Kowloon, Rambler Channel, and Tuen Mun in the New Territories have been earmarked for the expansion.

According to the Marine Department, the annual tonnage of cargo handled with public cargo handling facilities will increase from the present 3,000,000 tons to 5,000,000 tons by 1981.

Meetings with port users

Kuching, June 1977 (Kuching Port Magazine):—The Management of the Kuching Port Authority in a move to further strengthen relations with the local shipping com-

munity and other port users recently held two separate dialogue sessions with the representatives of Shipping Agents and the Commercial Sub-Committee of the Chinese Chamber of Commerce representing the local merchants. These dialogue sessions provide an opportunity to all the parties concerned to discuss and iron out problems of mutual concern faced by the shipping agents, consignees and the Port Authority.

In a joint communique issued after the three-hour meeting with members of the Chamber's Commercial Sub-Committee the Management of the Port Authority expressed its willingness to help, where possible, the consignees to establish among other things, their claims for compensation from insurance and shipping companies for losses suffered outside of the port premises by making available to them certified copies of appropriate documents. At the same time assurance was also given that where appropriate the Management of the Authority would assist consignees to re-direct their claims to the shipping companies for consideration.

In a separate session with the representatives of Shipping Agents the Management of the Authority likewise assured them that it would welcome discussions on various problems relating to ship's work, discharge of cargoes from ship to shed and distribution of certain types of cargoes to consignees.

Prior to these discussions in which the four main groups of port users were collectively represented individual problems have been promptly investigated and constructive suggestions put forward were implemented where feasible. Thus although no formal machinery has been established for achieving close rapport with port users, these dialogue sessions afforded a good opportunity for all parties involved to discuss matters of mutual concern. It is hoped that such meetings will continue to provide a forum for discussions on matters of mutual interest that may arise from time to time.

In this connection the Port Authority will shortly organise a seminar on 'Cargo Handling Procedure' in which port users themselves will participate so that all parties hopefully will be better informed on the varied services provided by the port and the requirements of the Authority regarding the necessary documentation and procedure with respect to cargo handling and delivery.

Major fishing port planned

Whangarei, New Zealand ("Point North" published by The Northland Harbour Board, Whangarei):—The Northland Harbour Board plans a fishing port for both major and local fishing boats. It could provide 325 metres of quay frontage and include a lay-up, repair and fuelling area at its northern end.

The area considered for this development is opposite the export loading wharf at the southern end of the port.

Provided that land stability investigations now under way do not suggest prohibitively high development costs, the site could provide facilities and land for a major fishing venture in Whangarei.

Already one local firm, Port Fisheries Ltd, of Whangarei, is negotiating and will probably be the first occupier of the 15 acres available.

The chairman of the harbour board's staff planning committee, Captain P.N. McKellar, said that last season

superseiners used Port Whangarei.

Their operators were impressed with the facilities to the extent that it was possible they could be established here on a permanent basis.

"At the same time, the extended fishing zone made it apparent early this year that we could become involved in the fishing industry in a big way," Captain McKellar said.

DISCUSSIONS

"We went to Wellington and had talks with the Fishing Industry Board, the Minister of Agriculture and Fisheries, then Mr. McIntyre, and we had informal talks with Sanfords and JBL.

"We also visited Gisborne and Tauranga to see fish processing, including canning and fishmeal plants.

"There were also discussions with Mr. Philip Vela, the general manager of New Zealand Pelagic Fisheries.

"So we had a good insight into the requirements for any complex in Whangarei.

"We have now had discussions with two local companies and two other major companies that have been recently formed in Auckland and they could be seeking a joint venture licence such as the Government is going to issue in January.

"They would be concerned mainly in pelagic fishing.

"So there are two requirements—the local companies for small areas and the bigger concerns."

INTEREST

In Whangarei three companies were interested.

The area considered for this development is opposite the export loading wharf at the southern end of the port.

Discussing Port Fisheries Ltd's plans for a major expansion to the Port Whangarei site, one of the managing directors of the company, Mr. Colin Sherley, said it planned to shift its entire operations from its present Port Road premises, now too small for the operation.

The company is expanding its snapper production, most of which is exported to Japan, by 400 tonnes this year. Last year production of snapper was 200 tonnes.

"We now have over 50 vessels fishing for us," he said.

The privately owned vessels range from small crayfishing boats to big pair trawlers.

An eight-tonne blast freezer at present being installed at Port Road will later be shifted into the new premises at Port Whangarei.

The port factory will have a freezing capacity of 20 tonnes every 17 hours, 40 tonnes of chiller space, a 500-tonne cool store and a 20-tonne icemaking machine.

The shift to the port area is expected to be completed in about 18 months.

Registration Period Reduced

Karachi, Pakistan, November 1-15th, 1977 (KPT News Bulletin):—The registration period for ships calling at Karachi Port has been reduced to 14 days from 25 days from 25th October, 1977.

KPT has informed the major shipping conference lines that the waiting period will now be less than 14 days which it hoped could be comfortably maintained.

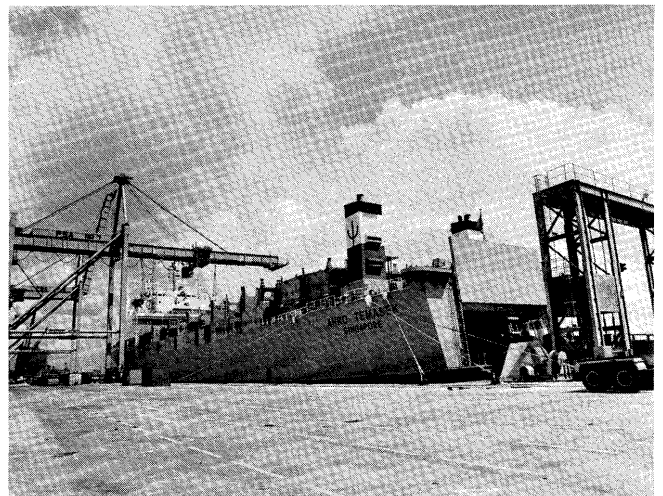
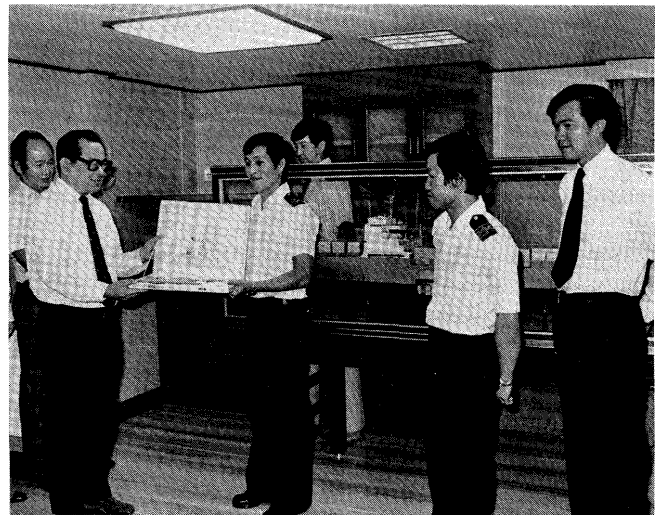
According to a KPT source the port is working smoothly as a result of which the general waiting time for the vessels has been reduced.

Anro Temasek Maiden Voyage to Singapore

Singapore, 9 February 1978 (PSA Press Release):—Mr. Billie Cheng, Director (Operations), PSA (2nd from left) is seen here presenting a commemorative pewter tray to the Master, Capt Lim Gam Hing (4th from right) on the occasion of the maiden voyage of "ANRO TEMASEK" to Singapore on 16 Jan 78. Others in the picture are Capt Goh Choo Keng, Director of Marine, Singapore (extreme left), Messrs Han Tuck Kong, Staff Captain (extreme right) and Chia Chee Kiang, Chief Engineer (2nd from right).

"ANRO TEMASEK" is the second of the three new hybrid type roll-on/roll-off 16,650 DWT containerships introduced by ANRO CONSORTIUM on its Australia/Southeast Asia trade route. The first vessel "ANRO AUSTRALIA" called at the Port of Singapore for the first time in late October last year and the third "ANRO ASIA" is due early this year.

ANRO CONSORTIUM comprises Neptune Orient Lines (NOL) of Singapore, Australia National Line (ANL), Australia Straits Container Line (ASCL) and Nedlloyd Lines. The Consortium vessels service the Straits/Australia ports of Panang, Port Kelang, Singapore, Fremantle, Adelaide, Melbourne, Burnie, Sydney and Brisbane.



Picture shows "ANRO TEMASEK" alongside the PSA Container Terminal during its maiden voyage to Singapore.

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Jet pump.....	800 cubic meters/hour x 2
Dredging depth.....	max 30 meters
Positioning system.....	Coordinate display
Distance meter.....	AUDISTER (electronic distance meter)



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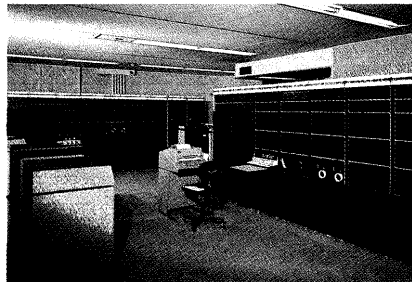
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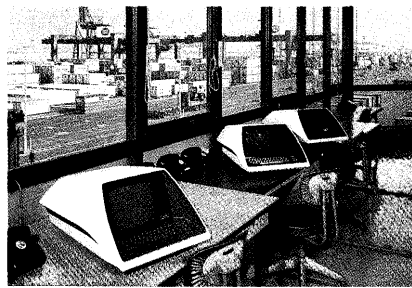
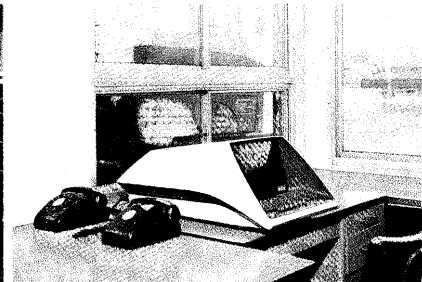
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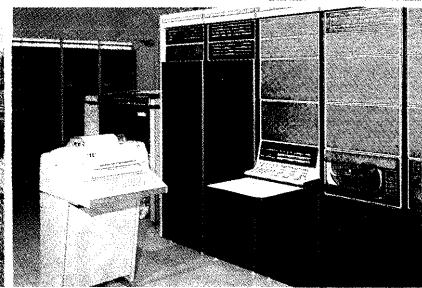
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