



Port of Lyttleton New Zealand

IAPH Conference Singapore March 1975

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PORTS and HARBORS

Editor: Yoshio Hayashi

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The Cover:

An aerial view of the Port of Lyttelton, the largest port in the South Island of New Zealand, showing in the foreground the new eastern extension at Cashin Quay with the recently completed stockpile area for the export of woodchips to Japan in the immediate foreground, and a heavy duty berth for the handling of containers nearing completion beyond the second vessel. (Continued on Page 47.)

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PORTS and HARBORS

IAPH Head Office Announcements: Pages 7~14

Committee on Large Ships met at Le Havre on March 14th and 15th

Secretary General Dr. Hajime Sato received from Mr. Paul Bastard a 12-pages Report of the Special Committee meeting on Large Ships which was held on March 14th and 15th, 1974 under the sponsorship of Port Autonome du Havre, France, chaired by Mr. Paul Bastard, Director General of the Port Autonome. As the original report was written in French, Mr. Robert L.M. Vleugels, President of IAPH, kindly took the role of summarizing it in English and send it to the Head Office for this journal, as follows. The membership of this meeting was reported by Mr. Bastard as listed at the end of Mr. Vleugels' summary report. (TKD)

Mr. Paul Bastard, Eng., Director General of the "Port Autonome du Havre", Chairman of the Special Committee, sent in an extensive report on the deliberations of the two days meeting of the experts, members and non-members of I.A.P.H., which he had invited to participate.

In his opening address he expressed clearly the necessity of combining efforts and of exchanging knowledge and experience with other organizations and committees which are active in a similar field.

He mentioned:

a) the O.C.I.M.F. (Oil Companies International Maritime Forum). Mr. M.F.L. Dixon represents this association in the Special Committee.

b) the I.A.L.A. (International Association of Lighthouse Authorities), represented by Capt. Mason.

c) the CIERGNA (Commission Internationale pour l'Etude de la Réception des Grands Navires) (International Committee for the study of the reception of large ships). This is a committee established by P.I.A.N.C. A delegate is to be designated.

Mr. Paul Bastard stressed the fact that the Committee's studies should result in a report which is to be presented to the membership of I.A.P.H. on occasion of the 9th Conference at Singapore (March 1975).

He referred to the deliberations of the I.A.P.H. Conference in Amsterdam (1973) which indicated that special attention should be paid to



Mr. P. Bastard

a) The tendencies in the field of the construction of large shipped, such as: oil carriers, ore carriers, gas-carriers, container vessels, combination carriers (ore/oil, and ore, bulk, oil) etc . . .

b) Control on and traffic regulations relative to the access of large ships.

Three working groups were installed. Each of them shall report on specific problems of the very large ships' operation and of the corresponding port structures.

The working committees will meet again on November 18, 1974 previous to the plenary session of the Special Committee on November 1974. On that occasion the reports of the working groups shall be submitted. The meeting place probably is New Orleans, U.S.A.

(Robert L.M. Vleugels)

List of the Membership of the Committee:

Chairman:

Mr. P. Bastard, Directeur Général, Port Autonome du Havre (France)

Members Attended:

Mr. R. Boudet, Président Directeur Général de GAZOCEAN (France)

Mr. F.W. Broad, Chief Marine Superintendant, BP Tanker Co., Ltd. (U.K.)

Mr. J. Coune, Directeur, Chantier Naval de Saint-Nazaire (France)

Mr. F.L. Dixon, Senior Analyst, Logistics Department,

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Standard Oil Company (U.S.A.)

Mr. J. Dubois, Directeur des Travaux, Port Autonome du Havre (France)

Mr. H. Ekwall, Technical Director, Granges AB, Granges Shipping (Norway)

Mr. Oosterbaan, Harbour Master Deputy, City of Rotterdam (Netherlands)

Mr. R.N. Tikkoo, Globtik Tankers (U.K.)

Members Represented:

Mr. G. Beaudet, represented by Mr. Lightermoet, Directeur de L'Expoitation, Port of Montreal (Canada)

Mr. J.P. Davidson, represented by Mr. Young, Clyde Port Authority (U.K.)

Mr. G. Tsuboi, represented by Mr. Kagami, Tokyo Tanker Co., Ltd. (Japan)

Mr. Boudet, represented by Mr. Detrie, GAZOCEAN (France)

Members Absent:

Mr. E.E. Black, Executive Vice-President, Sealand Co., Ltd. (U.S.A.)

Mr. Goh Choo Keng, Port of Singapore Authority (Singapore)

Mr. A. Hammon, Supervisor, Planning and Development Dept., Port Authority of New York and New Jersey (U.S.A.)

Mr. T. Hida, Counselor, Nippon Steel Corporation (Japan)

Mr. G. Horscroft, Nautical Adviser, Department of Transport (Australia)

Mr. R.T. Lorimer, General Manager, Auckland Harbour Board (New Zealand)

Mr. Nemoto, General Manager, Ship Export Dept. Ishikawajima-Harima Heavy Industries Co., Ltd. (Japan) Mr. Prunieras, Directeur du Services des Phares et Balises (France)

Mr. Spryrou, Technical Director, Olympic Maritime SA (U.S.A.)

Mr. Ullman, General Manager, Port of Gothenburg (Sweden)

Observer:

Captain Mason, Corporation of Trinity House, International Association of Lighthouses (U.K.)

Assistant at the meeting:

Mr. R. Bidet, Secrétaire Général, Port Autonome du Havre (France)

Mr. J.P. Lannou, Attaché au Secrétariat Général, Port Autonome du Havre (France)

Supplementary Note to W & M Committee Report

With reference to the report by Mr. Thomas J. Thorley, Chairman of the Ways and Means Committee appeared on Page 12 of the June issue of this journal, we announce hereunder at Mr. Thorley's instruction the list of those who attended the Auckland Committee meeting:

Committee Members: Mr. J.H. W. Cavey, Officer, Ministry of Transport, Canadian Marine Transportation Administration, Ministry of Transport, Canada

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

Mr. J. McConnel, J.P., Commissioner,

Fremantle Port Authority, Western Australia

Count C. Moltke, City Prefect, Chairman, Port of Copenhagen Authority, Denmark

Mr. Gengo Tsuboi, Vice President, The Japanese Shipowners' Association, Japan

Executive Member: Mr. George W. Altvater, Executive Director, Port of Houston, U.S.A.
 Secretariat: Mr. Toru Akiyama, Secretary General Emeritus
 Dr. Hajime Sato, Secretary General Mr. Katsuya Yokoyama, Deputy Secretary General

Visitors

Mr. K.R. Trueman, Secretary, and Mr. R.P. Alexander, Principal Construction Engineer, of the Melbourne Harbor Trust Commissioners, visited Tokyo on their way from Antwerp, where they represented the Harbor Trust at the Sixth International Harbour Congress held from 12th to 19th May, 1974.

The two Trust Officers called on the IAPH Head Office on May 28th and were met by Mr. Katsuya Yokoyama, Deputy Secretary General, and other staff of the Secretariat.

In the evening of the same day, they were invited to an informal gathering of the IAPH Japanese members at the Club-Room of the World Trade Center Building, Tokyo, and spent pleasant hours with local Japanese Port men.

Mr. Trueman and Mr. Alexander travelled to Nagoya, and then to Osaka and Kobe to inspect the ports. On the June 5th, the couple left Osaka for Hongkong, completing all the scheduled mission in Japan (TKD)

Conference Chairman and Registration Fees Formally Decided

In accordance with the provisions of the By-Laws of the Association, the Board of Directors of the Association has decided unanimously at its voting by correspondence which was closed on May 10th, 1974.

1) Conference Chairman of the 9th Conference at Singapore in 1975

Mr. Howe Yoon Chong

Chairman/General Manager

The Port of Singapore Authority

2) Registration Fees for the 9th Conference

- a) Regular Members, Honorary Members, Founder-Honorary Members, Class E Associate Members and Life Supporting Members
- Strait Dollars 500.00 or equivalent b) Associate Members (Except Class E Members)
- c) Non-Members

Strait Dollars 1,000.00 or equivalent (Reference: US1.00 = S2.4625 as of June 28,1974) (RIN)

IAPH Proposal to IMCO on "Wreck Removal" Now Submitted

The IAPH Proposal on "Wreck Removal" which was being deliberated by the members of the Board of Directors has been voted for with unanimous concurrence by the voting by correspondence which was closed on June 10, 1974, and is now being submitted to the Secretary-General of the IMCO. (Reference: Page 21, June issue) (RIN)

Membership Notes

New Members

Regular Member

Ports Department, Ministry of Communication & Transport, State of Qatar P.O. Box 313, Doha, Qatar Office Phone: 23104 Cable Address: PORTS AUTHORITY (Mr. Ali Al Saad, Director of Ports)

Associate Member (Class A)

Qatar National Navigation & Transport Co., Ltd. P.O. Box 153, Doha, Qatar Office Phone: 22245 Telex: 4206 Cable Address: NAVITATION (Capt. M.B. Mandour, General Manager)

Status Changed

Crois Vainer France.

from Associate Class D to Associate Class E Member Mr. George Charles Louis Maffait Ingenieur des T.P.E. - Expert en Administration, Portuaire de la C.N.U.C.E.D. 126, Lotisrement de la Vallei, 83, La

W & M Committee Chairman Visits Head Office

Pursuant to the decision taken at the Executive Committee Meeting at Auckland, New Zealand, Mr. Thomas J. Thorley, Chairman of the Ways and Means Committee, visited the Head Office on June 27th (Thursday), 1974, during his 7 days visit to Japan as a member of a four men delegation from the Port of Long Beach, as reported in the July issue of this journal.

Mr. Thorley, together with Mr. Gengo Tsuboi, a resident member of the Committee, was met by Mr. Toru Akiyama, President of the IAPH Head Office Maintenance Foundation and Secretary General Emeritus, Dr. Hajime Sato, Secretary General and Mr. Katsuya Yokoyama, Deputy Secretary General, and given a thorough explanation on the present situation of the Head Office.

Based upon a 17-pages report prepared by the Secretariat, Mr. Thorley conducted an extensive study and examination, including a spot-checkings of the office quarters.

After, completing a 3 hours examination, he opined that



(From left to right) Front - Dr. Hajime Sato, Secretary General, Mr. Thomas J. Thorley, Chairman of the W & M Committee, Mr. Toru Akiyama, President of the IAPH Foundation and Secretary General Emeritus, and Mr. Gengo Tsuboi, Executive Committee Member and Member of the W & M Committee pose for a commemoration photo with staff members (back row) of the IAPH Secretariat, upon Mr. Thorley's visit on June 27th, 1974. (TKD)

the Head Office was being reasonably and efficiently maintained.

He, upon leaving Japan, has instructed the Secretariat to send his report to the President, 1st and 2nd Vice-Presidents, members of the Ways and Means Committee as well as to members of the Executive Committee. (RIN)

CORRECTION

Wordings of III-3-1 of the Annex 3 (on Removal of Wrecks) of the President Vleugels' Report on the Auckland Meeting of the Executive Committee should be replaced by the wordings as shown in the corresponding paragraph on the page 21, of the IAPH Proposal to IMCO on Wreck Removal. The change of the wordings was decided by the decision of the Board of Directors at its voting by correspondence closed on June 10th, 1974, based upon the suggestion raised by Mr. Andre Pages, Chairman of our Special Committee on Legal Protection of Navigable Waterways. (RIN)

Extracts from the IMCO Annual Report 1973/1974

Since Mr. A.J. Smith of British Ports Association, was appointed as an IAPH Liaison Officer with IMCO in June, 1973, the relationship between IAPH and IMCO has been strengthened remarkably.

All IAPH members and readers of this journal have constantly been informed of what issues of international importance related to ports are under the IMCO's examination, through "IAPH Head Office Announcement" of this journal.

The extracts from the IMCO Annual Report 1973/1974 Part II "Development in Major Programmes" show the gist of its "Technical Work" and "Legal Work" during the period between April 1, 1973 to March 31, 1974. The following is the full text of the Part II above, which will be of help to IAPH members, for studying. (K.Y.)

II. DEVELOPMENTS IN MAJOR PROGRAMMES

A. Technical Work

Marine Pollution

16. A major element in the work of the Organization during the period under consideration has been to combat marine pollution, which culminated in the convening of the International Conference on Marine Pollution (8 October to 2 November 1973). By concluding a new International Convention for the Prevention of Pollution from Ships, 1973, the Conference substantially succeeded in achieving its main objectives, laid down by the seventh Assembly, to achieve, by 1975 if possible but certainly by the end of the decade, the complete elimination of wilful and intentional marine pollution by oil and other noxious substances and minimization of accidental spills.

17. The Convention consists of Articles, Protocol I (Provisions concerning reports on incidents involving harmful substances) and Protocol II (Arbitration) and the following five Annexes:

- Annex I Regulations for the Prevention of Pollution by Oil
- Annex II Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk
- Annex III Regulations for the Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form, or in Freight Containers, Portable Tanks or Road and Rail Wagons
- Annex IV Regulations for the Prevention of Pollution by Sewage from Ships
- Annex V Regulations for the Prevention of Pollution by Garbage from Ships.

18. The Convention, on entry into force twelve months after it has been ratified by fifteen States constituting at least 50 per cent of the world's merchant fleet, will supersede the existing International Convention for the Prevention of Pollution of the Sea by Oil, 1954. The Convention, when in force, will cover any ship of any type, including hydrofoils, hovercrafts, submersibles, floating craft, and fixed and floating platforms operating in the

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marine environment.

19. In Annex I of the Convention, the oil discharge criteria prescribed in the existing Oil Pollution Convention as amended in 1969 and 1971 will remain without substantial changes but its application will be extended to cover non-persistent (white) oils as well as persistent (black) oils which the existing Convention covers.

20. A new feature of the Convention is that the Mediterranean, the Baltic Sea, the Black Sea, the Red Sea and the Gulf area including the Sea of Oman, are designated as special areas into which discharge of oil from ships will be totally prohibited, except for very small ships. Special provisions will also apply to ships carrying noxious liquid substances in bulk while navigating in the Black Sea and the Baltic Sea. 21. IMCO has taken steps to follow up the Conference, in particular the implementation of twenty-six Resolutions adopted by the 1973 Conference which called upon the Organization and Governments for further action aimed at effective implementation of the comments and other related measures for the prevention of pollution from ships. 22. To this end, the Organization now disposes of a new Committee - the Marine Environment Protection Committee - a subsidiary body of the Assembly open to all Member States of the Organization. The origins of this Committee have been referred to in paragraphs 4 and 11 above. Its terms of reference, as determined by the Assembly, appear in Annex III to this report. The Committee held its first meeting from 4 to 8 March 1974 and adopted its Rules of Procedure and its plan of action.

23. IMCO has actively collaborated with other agencies in sponsoring GESAMP, whose scientific work has contributed significantly to the development of anti-pollution measures. In particular the Panel of IMCO and GESAMP Experts convened by IMCO has developed a rationale for hazard evaluation of noxious substances other than oil transported by ships and compiled hazard profiles of some 400 substances; this work was used by the 1973 Conference in the preparation of Annex II to the Convention. The Organization has also been participating in ICSPRO and in intersecretariat activities under the auspices of the ACC.

Routeing of Ships

24. A number of maritime countries have introduced national legislation making it mandatory for ships under their flag to follow the general direction of the traffic when navigating within a traffic separation scheme. The Assembly has adopted revised traffic separation schemes whereby ships are provided with navigational aids enabling them to determine their exact position more easily. The Organization is in the process of preparing a publication containing a description of all these schemes and defining the areas which should be avoided by ships that would otherwise constitute an unacceptable environmental hazard. IMCO continues to co-operate closely with the International Hydrographic Organization in transmitting up-to-date information to mariners by means of charts, notices to mariners, etc.

Shipboard Navigational Aids and Training of Seafarers

25. The general regulations applicable to the electronic navigational aids to be carried by ships have been adopted by the Assembly.

26. The training of sea-going personnel and their qualifications for certification are at present under consideration.

27. The ultimate aim is to conclude a Convention on maritime training and a Conference is planned for 1977. IMCO is in contact with the ILO in this connexion.

28. The Assembly, however, has now passed two Resolutions, one recommending the basic principles and guidelines on the handling of the ship to be observed during watchkeeping, the other containing recommendations on the training and qualifications of the officers and crew of ships carrying hazardous or noxious chemicals in bulk. Particular attention is given to the qualifications of the personnel serving on ships carrying hazardous or noxious cargoes, and the need, if any, for special provisions concerning watchkeeping at sea and in ports, cargo handling and related operations of such ships. Recommendations have been adopted on these various subjects. The ILO is working in close co-operation with IMCO and progress is reviewed at the meetings of the joint IMCO/ILO Committee on Training of Seafarers.

Ocean Data Acquisition Systems (ODAS)

29. IMCO has continued to work closely with UNESCO on the second preparatory conference of governmental experts which is to precede the Diplomatic Conference on the Legal Status of Ocean Data Acquisition Systems. No date has been fixed for this second preparatory conference. IMCO has meanwhile published, in agreement with the IOC Executive Council acting on behalf of the Executive Board of UNESCO, the technical annexes to the draft ODAS Convention, recommending their voluntary use as provisional guidelines by Member States of the two Organizations.

International Regulations for Preventing Collisions at Sea. 1972

30. The Assembly has urgently requested the governments of Member States to examine without delay Resolution II of the Conference inviting those States which contemplate becoming Party to the Convention to deposit their Instruments of Ratification, Approval, Acceptance or Accession at as early a date as possible.

Radiocommunications

31. At its eighth session, the Assembly approved a number of amendments to the Convention on the Safety of Life at Sea and related to the radiotelegraph service and radio logs. In view of the Maritime World Administrative Radio Conference IMCO, in close collaboration with the ITU and the ICAO, is working on the improvement and reinforcement of the existing Maritime Distress System, and, at the same time, has furthered its studies on a future maritime distress system. The Assembly has passed a Resolution on these various matters which has been transmitted to the ITU.

International Maritime Satellite System

32. Work on an international maritime satellite system has been continued and the Assembly, in adopting the Organization's work programme for 1974/75, has decided to

convene an international conference on this subject in 1975. The conference is expected to last for two and a half weeks and could take place during the second half of April, 1975.

Life-Saving Appliances

33. During the period under review, in addition to bringing up to date the 1960 International Convention for the Safety of Life at Sea, the requirements for life-saving appliances have been further updated with the enlargement of the existing provisions concerning pilot ladders and the inclusion of general requirements regarding mechanical pilot hoists.

34. A recommendation on compliance with the existing provisions regarding pilot ladders was adopted by the Maritime Safety Committee.

35. Work has been initiated for a radical revision of the whole of Chapter III of the above cited Convention.

Facilitation of Maritime Travel and Transport

36. During the period under review, the number of Contracting Parties to the 1965 Convention on Facilitation of International Maritime Traffic has risen to thirty-four.

37. A number of new Standards and Recommended Practices have been developed, and certain amendments to the Annex to the Facilitation Convention have been circulated to Contracting Governments for their acceptance.

38. Current work includes further facilitation measures for foreign members of ships' crews, simplifying formalities for the emergency landing of sick or injured crew or passengers, and international signs for use at marine passenger terminals and on vessels carrying passengers.

39. The amendment procedure of the Convention was recently modified by a Conference to allow for speedy acceptance and coming into force of amendments.

Containers and Cargoes

(a) Container Transport

40. The eighth IMCO Assembly accepted the depositary functions for the International Convention for Safe Containers (CSC), 1972. The Convention has been signed by some twenty countries. It is at present in the process of ratification. Amendments of the CSC will be studied in the future within IMCO.

41. The Assembly also adopted the Recommendation on the Safe Stowage and Securing of Containers on Deck on Vessels which are not specially designed and fitted for the purpose of carrying containers.

(b) Carriage of Bulk Cargoes

42. The updating of the IMCO Code of Safe Practice for Bulk Cargoes including ores and similar bulk cargoes, concentrates and similar materials is under constant review. (c) Carriage of Grain

43. The Assembly adopted the new Chapter VI - Carriage of Grain - of the International Convention for the Safety of Life at Sea, 1960 which has been based on the 1969 equivalent to Chapter VI. The amendment has been circulated to Contracting Governments for their acceptance.

(d) Timber Deck Cargoes

44. The Code of Safe Practice for Ships Carrying Timber Deck Cargoes has been adopted by the Assembly. It has been recommended that governments implement the Code. The Maritime Safety Committee has been authorized to keep the Code up to date by considering and adopting such amendments as may be necessary. The Code recommends proper techniques for the stowage and securing of timber cargo to ensure the safety of the crews and vessels engaged in the timber trade and will be available as a separate IMCO publication.

Carriage of Dangerous Goods

45. Some thirty Governments informed the Organization that they have so far adopted the International Maritime Dangerous Goods Code in its original form, or are using it as a basis for their national regulations. Work will continue to keep the Code and other publications up to date by taking into account new tochnological developments.

46. The Supplements 1972 and 1973 containing the Amendments 7-72, 8-72 and 9-73 to the three volume edition of the Code have been published.

47. An Annex to the Code containing recommendations in respect of the packing of dangerous goods (performance tests) and an illustrated glossary of packagings intended as a guide to mariners as well as to competent authorities and manufacturers is being printed.

48. The eighth IMCO Assembly adopted Recommendations on Safe Practice on Dangerous Goods in Ports and Harbours intended to provide a standard framework within which port authorities or other relevant organizations can formulate regulations to ensure the safe stowage and handling of dangerous goods.

49. The future work programme includes the carriage of dangerous goods in unitized forms and in freight containers, road tank vehicles for dangerous substances carried by sea, portable tanks for gases, multimodal tank containers, the revision of Classes 5.2 and 7, the insertion in all Classes of information on UN Packaging Group, the carriage of dangerous goods in limited quantities and emergency cards for ships carrying dangerous goods. The Organization is also pursuing the studies on the impact that harmful substances carried by sea in packaged forms, or in freight containers, portable tanks or road and rail tank wagons may have upon the marine environment. The studies are directed towards the revision of the scope of the International Maritime Dangerous Goods Code, taking into account the various marine pollution aspects, particularly those indicated by the International Conference on Marine Pollution, 1973.

International Conference on Safety of Life at Sea. 1974

50. During 1973-1974, priority has been given to the preparatory work for the International Conference on Safety of Life at Sea which is scheduled to be convened in October 1974 in London.

51. The principal objective of this Conference is, as decided by the eighth Assembly of the Organization, "to replace the existing 1960 Safety Convention by a new Convention, substantially in conformity with the technical provisions of the 1960 Convention, which shall incorporate:

- (a) provisions for rapid entry into force of the Convention;
- (b) improved and accelerated amendment procedures;
- (c) amendments to the 1960 Convention which have already been adopted by the Assembly, and
- (d) new Regulations which are recommended by the Assembly for inclusion in the new Convention."

52. The technical bodies of the Organization have finalized a draft of the new Convention. This draft includes, inter

alia, a new text of the Article dealing with the amendment procedure, all the amendments to Regulations which have so far been adopted by the Assembly, as well as Chapter II bis - Fire Protection, Fire Detection and Fire Extinction, including safety measures for new tankers and combination carriers, and a new text of Chapter VI - Carriage of Grain. 53. The draft text of the Convention is being circulated to governments and organizations invited to the Conference.

Fire Protection

54. The eighth Assembly adopted a Resolution concerning safety measures for new oil tankers and combination carriers which supersedes the previous recommendation on this matter. It also adopted a Recommendation concerning test methods for qualifying marine construction materials as non-combustible. Further, fire safety provisions for oil tankers, combination carriers and product carriers is under study, for those vessels not covered by the above mentioned Resolution.

55. A new Chapter II bis on fire protection was drafted for consideration by the 1974 Conference for the Revision of the 1960 Safety Convention. Detailed regulations covering fire protection of cargo ships are under preparation for future inclusion in the new Safety Convention.

Safety of Fishing Vessels

56. During the current year IMCO, FAO and ILO have been further jointly developing the Code of Safety for Fishermen and Fishing Vessels. Part B - Safety and Health Requirements for the Construction and Equipment of Fishing Vessels - which has been drawn up by IMCO (being the Agency principally concerned) has been finalized by a meeting of consultants of the three Organizations at IMCO Headquarters in February 1974. This Part of the Code, together with some amendments to Part A, has been passed for final approval by the appropriate bodies of the respective Organizations. Guidelines for the design, construction and equipment of small vessels will now be considered by IMCO in conjunction with FAO and ILO.

57. Preparatory work for the 1976 International Conference on Safety of Fishing Vessels is under way and a first full draft text of the regulations containing, among other things, technical provisions of Part B of the Code of Safety for Fishermen and Fishing Vessels, will be considered this year.

58. The eighth Assembly adopted a Code of Practice concerning the accuracy of stability information for fishing vessels and a Recommendation for guidance to skippers dealing with conditions of ice-formation.

Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk

59. During the year under review, the third set of amendments have been introduced to the Bulk Chemical Code concerning tank vent systems, personnel protection and special requirements.

60. A Recommendation on uniform interpretation of the Bulk Chemical Code has been developed and was approved by the Maritime Safety Committee for the guidance of governments.

61. Recognizing that control of ship movements were of particular importance for chemical tankers and gas carriers, the Maritime Safety Committee adopted a Recommendation to Member Governments to require immediately for such ships of all sizes the carriage of the manoeuvring booklets and that they be subjected to the provisions of pilotage.

62. Further amendments of the Bulk Chemical Code are under consideration and a Code for Gas Carriers is being drafted.

Access to and working in large cargo holds and tanks

63. The Recommendation on the Safe Access to and Working in Large Tanks and a Recommendation on Safe Access to and Working in Large Cargo Holds of Bulk Carriers referred to in the last annual report was adopted by the eighth Assembly.

Revision of Part C of Chapter II of the 1960 Safety Convention

64. Work on the drafting of an up-dated Part C - Machinery and Electrical Installations - Chapter II of the 1960 Safety Convention is being carried out. This new Part will additionally contain basic machinery requirements and regulations for periodically unattended machinery spaces.

Space requirements for Special Trade Passenger Ships

65. The International Conference on Space Requirements for Special Trade Passenger Ships was held in London from 9 to 13 July 1973. The Conference concluded the Protocol on Space Requirements for Special Trade Passenger Ships, 1973, which should be complementary to the Special Trade Passenger Ship Agreement, 1971. Annexed to the Protocol are the technical rules covering the safety aspects of the disposition of passengers on special trade passenger ships.

66. The Protocol will enter into force six months after three Governments Parties to the 1971 Agreement have accepted it provided that at least two such Governments are Governments of States in which special trade passenger ships are registered or whose nationals are carried in ships engaged in these trades.

67. The Protocol provides that the Organization shall assume responsibility as the depositary of the Protocol and of duties associated therewith.

Subdivision and damage stability of passenger ships

68. The eighth Assembly of the Organization adopted Regulations on Subdivision and Stability of Passenger Ships as equivalent to Part B of Chapter II of the International Convention for the Safety of Life at Sea, 1960, and recommended that governments, through the Organization, should exchange experience gained as a result of using these Regulations. The Maritime Safety Committee was requested to consider comments submitted as a result of the application of those Regulations with a view to practical evaluation of the Regulations and determining their suitability and related necessary changes to Chapter II of that Convention, as amendments to that Chapter.

69. The Assembly, in adopting the Regulations, considered also explanatory notes ensuring the uniform application of these Regulations and requested their circulation to Member Governments of the Organization and Contracting Governments to the 1960 Safety Convention for guidance and information.

70. A Recommendation on a Standard Method for Establishing Compliance with the Requirements for Cross Flooding Arrangements in Passenger Ships has been developed and adopted by the eighth Assembly.

B. Legal Work

71. In five sessions of the Legal Committee (the eighteenth to twenty-second) during the period under review, the following substantive agenda items were examined:

- (a) Consideration of draft Articles of a Convention relating to the Carriage of Passengers and their Luggage on Board Ships.
- (b) Consideration of the extension of the 1969 Convention on Civil Liability for Oil Pollution Damage to noxious and hazardous substances other than oil.
- (c) Consideration of draft Articles of a Convention on Wreck Removal and Related Issues.
- (d) Consideration of a work plan on the review of the Convention relating to the Limitation of Liability of Owners of Sea-Going Ships, 1957.
- (e) Consideration of the draft Internal Regulations of the International Compensation Fund for Oil Pollution Damage, 1971.

72. In addition, contributions were made to the International Conference on Marine Pollution, 1973, at which the Protocol relating to Intervention on the High Seas in Cases of Marine Pollution by Substances other than Oil was adopted. This Protocol was developed between the twelfth and sixteenth sessions of the Legal Committee in 1972 and represented a further significant advance in the environmental work of the Organization.

Consideration of draft Articles of a Convention relating to the Carriage of Passengers and their Luggage on Board Ships

73. The draft Articles under consideration in respect of passengers and their luggage are designed to consolidate and revise two existing Conventions dealing respectively with passengers (1961) and baggage (1967). The Legal Committee examined observations of governments in May 1973 and devoted the greater part of its twentieth and twenty-second sessions, held later in that year, to drafting these Articles. It is intended to submit this draft to a diplomatic conference in December 1974 for adoption.

Consideration of the extension of the 1969 Convention on Civil Liability for Oil Pollution Damage to noxious and hazardous substances other than oil

74. At its eighteenth session in May 1973, the Legal Committee prepared a questionnaire on this subject for governments, in order to acquire information on which to base its future work. The extension of this liability Convention is an important project of IMCO's environmental programme.

Consideration of draft Articles of a Convention on Wreck Removal and Related Issues

75. At its nineteenth, twenty-first and twenty-second sessions, held in 1973 and early 1974, the Legal Committee prepared guidelines and some preliminary drafts of articles for a prospective convention intended to eliminate the maritime hazard of wrecked and abandoned ships and other objects. The articles are to be further developed in 1974.

Consideration of a Work Plan on the review of the Convention Relating to the Limitation of Liability of Owners of Sea-Going Ships. 1975

76. At its nineteenth session in June 1973, the Legal Committee discussed its work plan regarding this subject,

which concerns the rights extended under a treaty of 1957 to shipowners, allowing them to limit their liability for certain forms of damage to persons and property. A questionnaire was sent to governments in 1972 and the matter is being considered by the Comité Maritime International which has also canvassed its members. The matter will be taken up again at the twenty-third session of the Legal Committee (June 1974) and a diplomatic conference is expected to be held in 1976 for the revision of the 1957 Convention.

Consideration of the draft Internal Regulations on the International Compensation Fund for Oil Pollution Damage. 1971

77. The Council has requested the Legal Committee to monitor the work of the Secretariat in preparing regulations and rules for the operation of the Compensation Fund established under the 1971 Convention. From its fifteenth session (November 1972) onward, the Legal Committee has examined successive drafts of these regulations and rules and will again consider them later in 1974.

Co-ordination

78. Throughout the period under review, the co-ordinated activity of IMCO and other bodies in the United Nations system has been carried out at the inter-secretariat level.

79. Progress in the implementation of Resolution No. 7 of the UN/IMCO Conference on International Container Traffic was made with the creation by the Trade and Development Board of UNCTAD of a preparatory group for the preparation of a preliminary draft of a convention on international intermodal transport. While no substantive contributions were made by the Organization to this work during the period under review, the Secretariats concerned were in communication about the matter, and IMCO remains available for consultation in accordance with the ECOSOC Resolution on the subject.

80. Secretariat representation at sessions of the Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor Beyond the Limits of National Jurisdiction during 1973 ensured that the work of the Organization was made known and explained (in particular the environmental work) for the benefit of the UN preparatory work for the Law of the Sea Conference scheduled for 20 June to 29 August 1974 in Caracas. The Secretary-General and certain members of the Secretariat are expected to attend the Conference at selected times during the summer of 1974.

81. The Secretariat was also represented at sessions of the Working Group on International Shipping Legislation of the United Nations Commission on International Trade Law (UNCITRAL) and at the session of the Commission itself held in April 1973. The work of these and other bodies of UNCITRAL is being followed in 1974.

82. In addition, inter-secretariat collaboration continued between IMCO and other bodies interested in the legal work of the Organization, notably the United Nations Environment Programme and the Intergovernmental Oceanographic Commission of UNESCO.

Future work programme of the Legal Committee

83. The subjects presently on the agenda of the Legal Committee will provide a substantial part of the immediate future work of the Organization on legal matters. In 1974 the Committee will continue its consideration of the revision of the 1957 liability Convention, and the subject of

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wreck removal and related issues. It will also continue to monitor the work of the Secretariat in preparation for the entry into force of the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971.

84. At its twenty-fourth session, scheduled for 11-15 November 1974, the Committee will discuss its future work programme and will then select the matters to which priority is to be given in the near future.

85. A long-term work programme of the Committee is expected to include the study of the legal status of novel types of craft such as air-cushion vehicles, in particular hovercraft.

86. At some time in the foreseeable future the question of the legal status of Ocean Data Acquisition Systems (ODAS) is expected to require further examination, based on inter-secretariat studies now underway.

87. The Legal Committee is also prepared to give consideration to the development of international and enforceable legal machinery for countering pollution of the marine environment.

88. On both of the preceding subjects, the Committee continues to recognize that the results of the United Nations Conference on the Law of the Sea will influence any consideration given in IMCO to them.

Annual Report of The National Ports Council

Statement by the Chairman Mr. Philip Chappell

London, 6th June:- Presenting the Annual Report of the National Ports Council for 1973, Mr. Philip Chappell, the Council's Chairman, both looked back over the ten years the Council has been in existence and drew attention to the events of 1973, a further year of progress for the ports in both human and financial terms. At the same time there was no room for complacency and the Council were aware of the criticisms of some shipowners and port users, believing that these must be remedied, or when unjustified, rejected. Mr. Chappell's statement was as follows:

Tenth Anniversary

It is ten years nearly to the day - the actual anniversary falls on 10 June - since the Council was established on a statutory basis and it is no exaggeration to say that in that decade the British ports industry has been transformed. Obviously, the Council does not seek to take even the main, let alone the sole, credit for that transformation, which belongs to port managements, but it does claim to have played an important role in the process, and not only through its specific and statutory functions of shaping the pattern of physical developments and bringing about the reorganisation and restructuring of estuarial authorities.

It is therefore appropriate to start this statement with a review of the availability of physical facilities; here a comparison between the present situation and the state of affairs ten years ago is facilitated by the availability of the Rochdale Report. For example, the Report noted that capital expenditure at British ports since World War 2 had been devoted mainly to minor projects and added "No single additional deep water berth for general cargo has been started since the 1930s, apart from those now nearing completion at Teesport."

There is a very different picture today and if Lord Rochdale were called upon to produce another report he could not seriously criticise the ports for any current general lack of modern cargo-handling facilities. Capital expenditure by port authorities over the period is not far short of £400 million, and this figure excludes major expenditures by oil companies and similar important industrial users on their own marine terminals. Investment of public funds in the industry now totals some £250m., of which half represents the investment in BTDB and the balance loans to ports under the Harbours Act.

For general cargo (about the provision for which the Rochdale Report was so critical), most - although not all of the new facilities have been provided for unitised services, 22 deep-sea container berths, 50 short-sea container terminals and 76 roll on/roll off berths. These unitised service facilities are already handling some 22m. tonnes. It is difficult because of the varying suitability for



Mr. Philip Chappell

such services of some cargoes on some routes to put this figure into overall perspective, but it was 32% of all non-fuel cargo other than commodities typically handled in bulk. Over this decade, however, the total of such cargo movements increased by only 11 m. tonnes ie. from 58 to 69 m. tonnes, with the inevitable results of redundant facilities at conventional berths; clearly the ports can hardly themselves be blamed for this lack of traffic growth.

In the oil trade, at the time of the Rochdale Report there were forecasts of "supertankers" of 100,000 tons deadweight, a humbling warning to all of us not to be short-sighted in our forecasting. In the event ports have had to accommodate substantially larger ships and for this traffic there has also been a growth in actual tonnage, from 157 m. tonnes of crude and refined petroleum traffic in 1965 to 218 m. tonnes in 1972. In consequence, Milford Haven has grown to a point at which its throughput in total tonnage terms rivals that of London. Similarly, new iron ore, alumina and grain terminals have had to be built for other bulk traffics, to accommodate vessels of increasing size.

These examples demonstrate the ability of and need for the ports to meet changing requirements. For their part the Council, in exercising their statutory duties under the Harbours Act, have been concerned to see that the new facilities provide a good match for potential traffic - we believe, with reasonable success in the case of major schemes and the Council's powers of control do not extend to minor schemes. For instance, the number of deepsea container terminals to be provided nationally was difficult to decide, but the evidence now available to us is that we in Britain have been more successful in matching supply with the demand for these facilities than most Continental ports. This is clear from a survey of container berth throughputs at 19 North-European ports in 1972. The average throughput per metre of quay at British ports was second highest only Rotterdam did better.

In terms of constant 1965 prices capital expenditure by port authorities has now eased, levelling off at the 1965 equivalent of about £30 million a year. This reflects the fact that the backlog of investment noted in the Rochdale Report has now been caught up, and the emphasis now lies on improving and maximising the throughputs of these extensive facilities. In future, capital projects will be mainly initiated to meet new requirements by shipowners and changing traffic patterns, including especially the increased penetration of containerisation and the varied effects of North Sea Oil developments.

Manpower

A year ago I referred to signs of a better climate of industrial relations in the ports following the winding up of the Temporarily Unattached Register as a result of the work of the Aldington/Jones Committee. The indications are that for the year as a whole that optimism was justified. Final figures are not yet available, but it seems clear that the number of working days lost in the ports in 1973 through disputes was the lowest since 1968.

The Aldington/Jones Committee continued its work throughout 1973, and published its final report in April 1974. In one important passage the report notes that a correct balance between recruitment and future requirements is vital if the better industrial climate is to be maintained and further improved in the industry, and forecasts of reasonable precision are essential in striking such a balance. The Council have noted the Committee's recommendation that standing arrangements be devised to facilitate such forecasting. The statutory responsibility for this rests with the National Dock Labour Board, but the Council have also a special expertise in the area of forecasting traffic and technological developments and in its manpower forecasting work for the Aldington/Jones Committee a major exercise was prepared to relate traffic forecasts with manpower needs for mid-1975. A joint working party is being set up with the NDLB to ensure that the Council's expertise is made available to the Board in the most useful manner.

Again, with the benefit of hindsight over the past decade, it is clear that the existing manpower forecasting machinery was quite inadequate; the need for the best possible forecasting becomes obvious, not merely because of the financial cost of mistakes but, far more importantly, because of the damage to morale that inability to provide a full day's work or the introduction of a severance programme must involve.

At the end of 1973 the dock labour force stood at just under 75,000–34,600 registered dockworkers and 40,000 non-registered men (the "other half" of the workforce); in 1965 the total was 129,000 of whom 65,000 were on the register. Getting the industry into a better balance, as it is at the moment, has cost about £50 million in severance payments, £30 million paid by the Government under the Special Voluntary Severance Scheme and the rest by port employers over the preceding five years. If the industry, as it must, is to avoid such burdens in the future, the need for matching recruitment to requirements is obvious.

Finance

In 1970 the problems of the Mersey's financial position brought into the open the inadequacy of the ports' level of profitability and of their cash generation. Since that year, all port managements have made real efforts to improve their commercial and financial position and in 1973, for the third year running, there was a further improvement as shown by the table below. However, most especially at a time of high costs of money and using only the oversimplified criterion of return on capital, no-one can be satisfied with an average return of only 6%.

			£m		
	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>
Capital employed	<u>443.4</u>	<u>458.9</u>	<u>475.6</u>	<u>483.0</u>	<u>513.7</u>
Operating revenue	103.2	114.8	132.2	146.8	168.1
Operating expenses	81.7	90.9	99.6	107.7	123.3
Depreciation	<u>8.6</u>	<u>10.0</u>	<u>11.3</u>	<u>12.3</u>	<u>14.1</u>
Operating surplus after depreciation Interest charged to	12.9	13.9	21.3	26.8	30.7
revenue (less interest received)	<u>11.2</u>	<u>13.8</u>	<u>16.5</u>	<u>16.7</u>	<u>16.4</u>
Net surplus after depreciation and interest	1.7	0.1	4.8	10.1	14.3

The above figures (estimates only for 1973) relate to 19 major port undertakings, and in all cases exclude the figures for the Mersey, a special situation.

These results reflect the determination of the ports to improve their finances and it needs to be stated that improved levels of operating efficiency have played just as great a part in securing this improvement as have increases in port charges. Charges increases have not been as substantial as is sometimes argued by users. Between end-1969 and end-1972, for instance, actual dues received rose on average by 36 per cent from what was still a low base and against a relatively minor tonnage increase. During the same period there was an increase in the Index of Average Earnings of 43 per cent, and a rise in the Retail Price Index of 27 per cent.

The Council will certainly look for further improvements in the future. In particular they believe that still higher provision should be made by most ports for annual depreciation of their fixed assets to take account of higher replacement costs and of the fact that the lives of many assets may be substantially shortened as a result of changing technologies and traffic patterns.

During the past year we have been consulting with the ports as to the financial objectives which might be set for the industry. In common with other nationalised industries the British Transport Docks Board is required to meet certain objectives based on a return on net assets which are laid down by the Government, but there is at present no common policy for the entire port industry. The Council believe that acceptance of agreed financial objectives for the industry will lead to better understanding of the ports' charging policy and need for revenues, as well as acting as a measure of efficiency. We hope later this year to issue a formal statement of objectives and to recommend a date by which the objectives could be achieved, with the emphasis being placed on a cash flow approach and an adequate level of self-financing of capital expansion. A paper on the closely related subject of charging policy is also under study.

North Sea Oil

This subject is sufficiently important to warrant a separate chapter in the Annual Report.

Two years ago the Council set up a special group to study port requirements for the servicing of exploration, production platforms and ancillary operations (pipe-coating etc.) and the impact of North Sea production on existing oil flows. This work has to be continuously updated as exploration continues, the first production platforms are established and estimates of total potential production are uprated. The scale of the operation when the North Sea fields are in full production may be gauged from the forecast that the terminal at Sullom Voe, in the Shetlands, will be handling at least as much, and perhaps double, the crude oil traffic as Milford Haven does now. Not many years from now Sullom Voe will be a household word in Britain. Although expenditure on port facilities may only be a small proportion of the estimated total annual expenditure rising to £1,500 million, the Council recognise the major diversion of national resources that is involved in this programme and the need for the best possible planning for the use of resources. A significant staff effort has been devoted to these projects.

Competition from North European Ports

The year 1973 was our first year as a full member of the European Community - an important milestone for the ports, not only for the stimulus it is expected to give to trade, and thus to port traffic, but also for the urgency it imparts to finding the right answer (whether or not the United Kingdom stays within the Community) to the problem of a common ports policy within Europe, since we must bring about a situation as quickly as possible in which each nation competes for port traffic on equal terms.

Our major concern is the financial conditions under which British and European ports respectively operate. Most major European ports are subsidised to some degree and in a variety of ways; essentially British ports are not except in so far as Government money is available for loans for new investment projects.

Five years ago the Council commissioned a study by Touche, Ross and Company which compared the costs of selected Continental and British ports, and high-lighted the degree of subsidy available to the former. A main purpose of that study was to counter criticisms by users that charges at British ports were unduly high compared with charges at Continental ports, and the Report demonstrated that the extent of the Continental subsidies was such as to make these comparisons quite unfair.

Today the subsidy question has to be considered in the context of Britain's entry into the Community. The extent to which our ports are in fact in direct competition with the major ports of North West Europe is difficult to establish. Of course, our imports and exports must ultimately pass through British ports but, quite apart from the damage to the commercial morale of British managements who may feel they are subject to unfair competition, the growth of major North European ports at the expense of British ports may have wider implications, notably the effect on British shipowners, balance of payments implications, infrastructure (and so environmental) effects and the less advantageous use of deep water.

Any effort we may make towards the establishment of a fair competition policy for ports must be based on measured fact, and as a first stage we are having the Touche Ross report updated to take account of any changes since 1969. We will publish this in full as soon as it is available, to stimulate discussion. When we have that report, we will start on the more difficult task of assessing its implications, looking at the comparative effect on charging policy of any subsidies; the various types of subsidy, and whether the report raises any general issues affecting the national interest. We intend to try to measure the extent of the growth in transhipment, but recognise that this will be a very difficult task.

A Man Made Island In the Arctic

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Geophysical encouragement along with the success of its land based petroleum exploration program in the Mackenzie River Delta, inspired Imperial Oil Limited to seek methods of extending the search for oil and gas into their offshore acreage in the adjacent areas of the Beaufort Sea. The first step in this undertaking was to find a satisfactory method by which drilling rigs could be placed and maintained in these shallow waters under the hostile climatic conditions which prevail in the Arctic. This task was assigned to the Frontier Planning Group, located in the company's Calgary office, who were to be assisted by their research facilities and wherever necessary, outside consultants.

There were several noteworthy reasons for proceeding with caution in this undertaking. Although offshore drilling was being performed in many locations throughout the world it had never been carried out in arctic conditions similar to those existing in the Beaufort Sea. The presence of winter ice which can reach a maximum thickness of 7 ft. in the month of April and the movement of ice during the period from freeze-up in October to mid winter was an important consideration. In addition to this the action of the ice on the island during the spring breakup was also a concern. The isolation of the rig assembly during the long

Related to this issue is the whole question of the location of port-based industrial complexes, eg. oil refineries or major steel-based engineering facilities, which may well be influenced by subsidies in the form of favourable port rates, development grants, or simpler planning procedures: the example of the designated industrial zones of Dunkirk, Fos and Le Havre cannot be too widely publicised.



Aerial photograph of Island construction showing foreshore protection in place.

winter nights required a secure structure not only for the protection of the personnel and equipment but also to ensure that the arctic ecology was not disturbed by the exploration program. An additional hazard over a land based site was the isolation of the island, except for helicopter access, until the ice was sufficiently thick to support transportation equipment.

The short construction season from early July to the end of September with accompanying high costs, since the equipment would sit idle for 9 months of the year, had a strong influence on any selection of island construction methods. During the latter half of the construction season the weather could close in very rapidly with little warning and storm surges of up to 10 ft. with accompanying high winds and waves would present a further hazard with which a land based program did not have to contend. Finally the high cost of transporting construction material to the area had to be considered.

Therefore, with due regard to these special circumstances the Frontier Planning Group set out in 1970 to gather as much data as possible on the site climatology, fauna and flora of the Beaufort Sea area included in the Imperial Oil Limited (IOL) acreage. This preparation work included studies of the sea ice movements and pressures to be expected from such movements, an environmental impact study to estimate the effect of the exploration program on the environment of the area, studies of winds and the associated storm surges and wave heights, and a study of the nature of the seabed soil, in the 30 mile wide by 200 mile long offshore acreage. By July of 1970 Golder Brawner and Associates had completed a program of bottom soil sampling which provided a general overview of the soils in the acreage area. In addition they put forward a number of suggested methods to be used to construct offshore islands using natural material wherever possible.

To assist in evaluating the recommendations of this report and implementing a program to construct an off-shore island using hydraulic dredging equipment, IOL turned to Swan Wooster Engineering (Swanco) to take advantage of this company's considerable experience in the design of marine facilities. In particular, IOL were interested in that area of Swanco's expertise which was gained from the design and supervision of the Tsawwassen Ferry Terminal and the Roberts Bank Coal Terminal projects. Both of these involved the use of suction dredges to construct offshore islands and their connecting 2 mile long causeways in the Gulf of Georgia near Vancouver, B.C. The seabed soil in the Roberts Bank area, which is part of the delta of the Fraser River, consists of sands and silts intermixed in varying percentages. By using the hydraulic cutter dredge and floating dredge pipe to cut into the marine sediments, lift them to the surface, and transport them to the land fill area, extensive fills were created offshore which consisted primarily of seabed sand. The silt material was induced to flow back into the delta area beyond the works while the heavier sand settled out to form the fill. The causeway was also built in this manner by keeping the dredge pipe parallel with the centerline and moving forward as the fill rose above sea level. In these projects gravel was placed to a slope of 1 on 10 over the 1 on 20 fine sand slopes to provide a wave erosion protection blanket of varying thicknesses. In the berth areas rip rap was used to develop the required steeper slopes.

The area of the offshore acreage which the IOL planning group considered to offer the least risk from the movements of ice was that located inside the offshore island chain formed by Garry, Pelly and Hooper Islands. Here the sea bottom was sloping from the shoreline to a maximum depth of 10 ft. However, the drilling location chosen was still exposed to the storm winds and waves from the Beaufort Sea through a 10 mile gap between Pelly and Hooper Islands. Swanco began the preliminary island design in September 1971. The approach decided upon in association with IOL was to construct a sand and gravel island similar to the adjacent natural islands using local materials, the source of which was still to be located. It was anticipated that this material could be found in the seabed close to a potential drill site.

The project schedule called for the preparation of a report, to be completed by November 1971, setting out the preliminary island design, the method of construction and an outline of the necessary equipment. The design of the island was based on it having a minimum one year life expectancy as an exploration drilling site. If the drilling program proved to be successful it was anticipated that a more substantial system of erosion protection would be constructed to change the concept from an exploration to a permanent production island.

The available weather data indicated that approximately 2 months construction time would be available in the site area in July, August and September when the wind, wave and ice conditions would be suitable for the operation of a suction dredge and its accompanying pipe layout. The land of the midnight sun offered daylight working conditions round the clock for a considerable portion of this construction period.

Another part of the design schedule called for Swanco to outline the soil exploration drilling program to find suitable source of material for the island construction. It was anticipated that this program would be undertaken in February of 1972 when the ice thickness was suitable for the support of equipment and sufficiently land fast to minimize movement.

The third part of the design program assigned to Swanco was to assist IOL in preparing a list of equipment and specifications to enable IOL to call tenders for the site work. The contract documents defined the equipment and crews required to construct islands over a three year period. Northern Construction of Vancouver was the successful bidder and they were awarded the contract in December 1971.

The Contractor was given five months to purchase and mobilize the equipment at Hay River, NWT, to be ready to travel down the river as soon as the spring break-up set in, which was expected near the end of May.

The equipment included a new 24 inch hydraulic suction dredge, a 2 cubic yard clamshell dredge, two tug boats, a crew boat, a supply barge, a 60 man construction camp mounted on a barge and miscellaneous smaller ancillary equipment. The equipment had to be designed for shallow draft to enable it to travel down the Mackenzie River system which contains locations with water depths as shallow as four feet.

The Contractor successfully performed the very difficult task of purchasing, building and assembling the equipment in the short time available. The flotilla of equipment was ready to make the trip down the Mackenzie River as soon as the ice cleared.

Simultaneously with the mobilization and construction of equipment the soil exploration program, to find suitable soil for island construction, was carried out during February and March under typical arctic winter conditions. The technique used was to drill through the ice and sample the soil to depths which would be accessible for reclaiming by cutter suction dredge methods. Approximately a twelve mile square area was sampled by locating holes in a grid pattern. A deposit of sand and gravel was found under an eight foot layer of silt within one mile of a suitable oil exploration location. This was within the transportation capacity of the dredge and pipeline chosen for the work. The soil exploration program was carried out under the direction of P. Andru of Swanco with the assistance of Cook Pickering and Doyle of Vancouver, the soil consultant for the project. The drilling was performed by the Big Indian Drillers of Calgary.

The criteria for the island design was to provide a 300 ft. diameter working surface with sufficient freeboard to ensure that the exploration equipment would not be damaged by storm waves and rafting ice. The island surface was set at elevation +14 ft. to accommodate the most severe storm conditions anticipated. These would consist of the maximum wave height for this water depth during a 10 ft. storm surge at high tide. In the site area, higher high water, under tidal action only is +1.5 ft. and lower low water is +0.1 ft. Since the usual materials for marine foreshore protection, such as concrete, or rock, were not available within the economics of an exploration island concept, the design utilized the readily available seabed sands to build an expendable berm of sand and gravel in front of the island. This berm was to be placed in the direction from which the most severe wave action was anticipated. A simple barge berth to bring in equipment and supplies during the periods of open water was to be constructed on the lee side of the island. Another advantage of the sand and gravel island concept was its availability as a stockpile of suitable material for further island construction if it did not become a base for a production well. Prior to the start of the site operation, Swanco, with the assistance of Northern Construction, organized a seminar to familiarize the IOL staff with dredging techniques and to review the objectives for the construction period.

Concern on the part of IOL and the Federal Government to avoid disruption of the ecology by the operation necessitated scheduling the movement of equipment past bird sanctuary areas so as to prevent disruption of the nesting periods.

Although the ice in the Site cleared by July 1st, the start of dredging was postponed until mid July as a precaution



Final stages of island construction with drill rig and camp on location.

against the disruption of the migration of the beluga whales. The equipment was set up at the site of the island by July 15th and the island soon began to take shape above the surface of the sea.

The operation was hampered initially by floe ice moving through the area which made it necessary to shut down for a period of time because of disruption of the dredge pipe. In addition, intermittent storms during the construction period of increasing severity hampered the operation with the result that the onset of winter prevented the completion of the island during the first season. R.M. Lindsay of Swanco assisted the IOL staff to supervise the dredging program. The effects of waves and currents on the island during the construction period indicated a revision to the erosion protection system was necessary before the next summer storm season set in.

Swanco with the assistance of IOL revised the protection system to provide erosion protection using easily transported materials which were installed rapidly in the month of July 1973. The system consisted of synthetic fibre filter cloth overlaying the 1 on 5 sand and gravel beach and held in place with submarine net and chain link fencing. The Poly-Filter X, a polyproplene filter mesh was laid down in large sheets, sewn together and stapled in place. Over this filter cloth, which prevented the movement of sand with the run out of wave induced sub surface water on the beach face, was laid chainlink fencing material topped with a heavy steel submarine net. The materials were all fastened together to create a continuous blanket. This was placed around the island except on the lee side, in the area of the barge wharf. The system was based on an installation in Cook Inlet, Alaska, at Ninilchik on the Kenai Peninsula which was constructed by the Corps of Engineers and which had proven successful over a period of several years.

The final achievement by IOL was the obtaining of a drilling permit from the Federal Government. To obtain this, it was necessary to satisfy the authorities that the environmental safety of the island and drilling system was secure.

Drilling commenced in the fall of 1973 after the island had successfully withstood ice loads of the winter of 1972-3 and the storms of the summer of 1973. The Project Manager who acted for Swanco to assist IOL throughout the project was J.S. Wood. He was assisted by the Project Engineer, P. Andru. Close contact was maintained with the IOL Project Manager, J.G. Riley, throughout this interesting and innovative project in Canada's Northern Frontier.

Avoiding Pollution at FOS

FOS-TELEX SPECIAL NOVEMBER 1973 Port of Marseilles Authority

(1972-1973: The start of production of the first plants in the Industrial Zone of Fos occurs at the same time as the anti-pollution measures which were programmed to begin during the period 1972-1973.)

I-STRUCTURES

The Secretariat to Deal with Industrial Pollution (S.P.P.P.I.)

By its remit and structure, the S.P.P.P.I. appears as an example of coordination and regulation. Elected Representatives, Scientific and Administrative Experts have been brought together to fight pollution in liaison with the Industrialists in the Zone.

The S.P.P.P.I. includes 4 Committees dealing with:

Air

- Subterranean Water
- Sea Water-Etang de Berre
- Sea Water-Gulf of FOS

The Remit:

To decide and arrange for appropriate studies of the problems that exist now and in the future; Coordinate actions of Management; To establish an anti-pollution plan; To keep the public informed.

Studies-Air

Actually, the present situation is not worrying, nevertheless, the development of new industry justifies the interest of the S.P.P.P.I:

- Monitoring stations (45 at the moment) have been in existence for 2 years. The stations provide the data from which can be deduced the daily emission of sulphur dioxide and its concentration.
- Meteorological studies have resulted in a definition of the characteristics of the climate, its winds and breezes.
- Mathematical simulation and analogy have resulted in the creation of an alarm network which warns In-
- 20 PORTS and HARBORS_AUGUST 1974

dustry of impending dangerous conditions.

- An epidemic study of 4 sites (one of which is in the region) as part of the National Plan.
- Other studies relating to oxides of nitrogen, hydrocarbons and smells.

Subterranean Water

- This Committee is concerned with the sweet water found below the plain of the Crau.
- Studies already carried out show a discharge potential of 29 m³/sec. of which only 5 m³/sec. are, at present, being used.
- A census of the water take-off points and of its pollution has been carried out; this serves as a base for supervision and policing waters.
- A plan for exploitation has been drawn up which underlines the concern of the Administration to conserve the resources of sweet water from the Crau for human needs.

Sea Water-Etang de Berre

- This vast inland sea, with its out-let through the Caronte Canal, has had its biological equilibrium considerably altered by the discharge of the Durance River into it via the Saint-Chamas hydroelectric station (The appearance and proliferation of eels is a happy example).
- As a first aproximation, the pollution in the Etang de Berre seems partly due to the industries that surround it – the "chemical industries, the Refineries etc and the Industrial Zones"-etc-and partly from the villages and small townssome, as far away as the Department du Var-that discharge their effluent therein via the river Arc.

Sea Water-The Gulf of Fos

 The pollution that already exists which is by no means negligible stems from the Etang de Berre, from the Industrial Complexes of Lavera, and those which discharge into the river Rhône.

- The Gulf of Fos is an area that is becoming brackish.
- The bacterial pollution raises the question as to the wholesomeness of the shellfish from this area.

Coordination

Each governmental Department works within its own remit and competence. The S.P.P.P.I. coordinates the various actions. In the case of water, provisional normes for the constituents of acceptable effluent have already been established by the S.P.P.P.I.—See appdx.

The Anti-Pollution Plan Air

- The actual quantity of SO2, at present being emitted (600 T/day) will be limited, in such a manner that, by 1980, in spite of the industrialization of FOS, the global emission will not exceed 800 T/day.
- These measures will apply to all industries, and relate to:
- x- the quality of the combustibles used (low level of sulphur)
- x- the height of the discharge chimneys (20 to 40% higher than the normal regulations require; this reduces the pollution density by from 30 to 50%).

Subterranean Water of the Crau

- Reservation of the sweet waters of the Crau for human consumption
 No unautherised withdrawal of
- No unautherised withdrawal of water therefrom
- The positions and protection of the water withdrawal points, already defined and supervised.
- A plan for exploiting this sweet water has been made; this plan represents constraints on the development of the region

Etang de Berre-Gulf of Fos

Fixed objectives are:

- x- By 1975, the present level of industrial pollution will be reduced by 50%
- By 1980, the level of industrial pollution, as at present, will be reduced by 90% (bearing in mind the industrial development)

II-MEANS RESULTS

Air

A network of atmospheric pollution detectors of SO2 have been installed, and are directly connected to a computor. This installation is looked after by the S.P.P.P.I. with the financial help of the Industries in the area.

Cost: 3 milion F.

Water-Etang de Berre-Gulf of Fos

The struggle aginst hydrocarbon pollution includes:

- x- Deballasting stations at Marseilles, Lavéra and Fos
- x- Floating breakwaters to limit and concentrate the oil slicks
- x- Barges for waste disposal at sea
- x- Tanks for waste recovery on land.

The Creation of an Anti-Pollution Cell

The Marseilles Port Authority has created an Anti-Pollution Cell to operate within the guide-lines noted above. x- Object:

Detailed analysis of the state of the region, control and supervision.

Intervention in the case of grave pollution.

Studies of requests to dispose of effluent.

x- Personnel: An Engineer

A technician responsible for external operations An administrative clerk A maintenance fitter A secretary

- x- Equipment: A boat and a car
- Later, a truck equipped as a laboratory x- Budget:

400,000 Fr/year to operate 700,000 Fr/year to cover cost of equipment and studies

 x- Location: Maison pontière-quai Brescon MARTIGUES. Tel: 07.06.97

Some Examples: ESSO

The ESSO Refinery, built in 1965, has recently increased its capacity from 3 to 8 million Tonnes per year.

14% of the extension investment went towards the reduction of air and water pollution.

The total pollution is now actually

less than before the extension was commissioned.

Ugine Aciers Air

The steel furnaces are fitted with fume extractors and water scrubbers which remove the solids as a slurry. Filtration then occurs, the water is recycled and the solids go to settling tanks and become mud.

The SO2 pollution is reduced by the judicious use of No. 2 B.T.S. fuel and natural gas.

The cost of atmospheric antipollution equipment is of the order of 7.5 Millard Francs.

Water

The cooling water circuit is completely separated from the internal water circuits.

When internal circulating water has to be returned to drain, it is filtered, and then neutralized in a special watertreatment unit.

After this treatment, the water conforms to the characteristics required by the S.P.P.P.I.

A separate unit filters the hydrocarbons and dust from rain and washing-down water before it is passed to drain.

The cost of this water treatment is of the order of 8.5 Million Francs.

SOLMER

The case of the SOLMER coking plant is an example of the gap which exists in the anti-pollution technology. Anti-pollution equipment installed includes:

- A stripping plant to reduce the

sulphurs and ammonia Separation of tars

- Floculation
- Activated mud treatment
- Aeration lagoon.

The Danger of Ammonia Pollution

Ammonium salts are fertilizers. If concentrated in a closed environment, they create certain types of "anarchical" algae. This phenomenum is called eutraphisation. These algae absorb the oxygen in the water. In lakes, this results sooner or later, in a disequilibrium of the fauna and flora.

Because the Gulf of Fos is not a closed area, such as a lake, and because the water is not only salt but also agitated by currents, one cannot rigidly apply the mechanism outlined above. But this does not mean that the risks are not real.

The State of the Technology

In the U.S.A. two lines of research to eliminate ammonium salts are being followed. One does not seem to hold out much promise for industry, but the other apears to have potential.

Requirement of the Administration

Besides the cleansing processes for the coke-oven effluent, noted above, the Administration require that SOLMER build a pilot plant capable of treating $\frac{1}{4}$ of the ammonia effluent. This pilot plant to be replaced by a full scale industrial plant by 1976.

For the moment, SOLMER have been asked to study, in conjunction

	Before treatment	After treatment
MES (Suspended matter)		
Matière en suspension	0.2 to 0.4 kg.	
DBO5 (Demande biolo-		
gique d'oxygène en		
5 jours)	0.5 to 2 kg.	0.03 kg.
DCO (Demande chimique		
en oxygène)	1 to 5 kg.	0.40 kg
NH3	2 to 4 kg.	-
Sulphurs	0.04 to 0.16 kg.	
Phenols	0.2 to 0.7 kg.	0
Cyanides	0.008 to 0.05 kg	
Ammonium Chloride	· ·	0.50 to 0.80 kg.
The degree of cleaning, a	as a result of these oper	ations, is satisfactory

except in the case of the ammonium chlorides.

with the regional scientific authorities, where to locate a discharge point for the ammonia salts which gives the best mixing into the Gulf of Fos. (This effluent is unlikely to alter the ecology

of the Gulf).

Permanent supervision and analysis of the water will be carried out and the Administration reserve the right to change the position of the outfall if they deem it necessary.

Anti-pollution equipment so far installed has cost 13 million Francs, of which 5 million francs has been spent on the pilot plant.

REMARKS

In accordance with requirements of circular 7/7/1970 General case

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DESCRIPTION

Suspended Matter (MES)

DB 05 at 20°C

COD

Test of Putrescibility

Cvanide Aluminium Arsenic Barium Lead Cadmium Chrome trivalent Chrome hexavelent Copper Nickel Mercury

Silver Zinc Tin Total Nitrogen

Phosphates Fluorides Sulphides

Mercaptans

Phenols

Hydrocarbons a/Refineries or Petrochemical b/Other Industries

Temperature Colour PH Surface Tension Elements

Biocides

40 mg/l of O2 disolved at full load should not exceed 30 mg/l on average per 24 hours 120 mg/l of O2 disolved at full load should not exceed 90 mg/l on average per 24 hours The waters should not give-off any putrid or ammonia smell both before and after incubation at 20°C, and the test should be negative when using methylene blue. In the present case,

the result is not, in principle, opposed to that for DB 05 noted above. Just the same, in cases of repeated differences one should look for the reasons by means of complementary tests.

APPENDIX MAXIMUM VALUE

30 mg/l

	· · · · · · · · · · · · · · · · · · ·
	1 mg/l
	10 mg/l
	1 mg/l
	10 mg/1
	1 mg/l
	0.1 mg/l
	2 mg/l
	0.1 mg/l
	2 mg/l
	2 mg/l
	0.1 mg/l
	0.1 mg/l
	2 mg/l
	2 mg/l
30	mg/l expressed as elementary N2
40	mg/l expressed in ammonium ions
2	mg/l expressed in PO4
	10 mg/l
0.2	mg/l of sulphur on average/24 hours
0.5	mg/l of sulphur on average per hour
0.2	mg/l on average per 24 hours
0.5	mg/l on average per hour
0.2	mg/l on average per 24 hours
0.5	mg/l on average per hour

20 mg/l 5 mg/l

30°C The effluent should be colourless Between 6 and 9

Installation of new electrolytic cells using mercury is not allowed

The acceptable concentration levels of various phenol derivatives will be the subject of a special study

Use I.R. method Use method COIN (extraction by solvent and weigh)

Whilst awaiting further toxicity tests for various surface tension elements, no moss should be seen to grow in the vicinity of the outfall. After treatment, fish (Carassius Auratus) should survive after an immersion of 48 hours.

These normes have been established as a function of the state of the region and of the existing technology. They are capable of modification.

They apply to each individual to the various effluent outfalls. The dilution of constituent of effluent is not a solution. They do not constitute the minima towards which Industrialists should aim.

Malaysia Plans \$52 Million Deep-Sea Port for East Coast

Pre-Investment News, February/March 1974 United Nations Development Programme

With investments totalling some \$52 million, Malaysia is to construct a deep-sea port which could one day become a major calling port for the vessels of a proposed regional cargo and tanker fleet serving Southeast Asia.

The new port, the first deep-sea port on West Malaysia's east coast, is to be built at Tanjong Gelang, about 200 kilometres northeast of Kuala Lumpur and about 25 kms. north of Kuantan, a shallow river port.

The Asian Development Bank has approved a \$30.4 million loan for the project which is scheduled for completion in 1978.

Generally referred to as the new Kuantan port, it is expected to handle nearly 1.6 million tons of bulk and packaged cargo in 1980. The corresponding figure for 1990 is projected to be in excess of 2.5 million tons.

Oil Palm, Rubber, Timber

The economy of the new port's hinterland is characterized by smallscale farming, with fisheries dominating the coastal areas. There are also some large oil palm and rubber estates. Most of the region, however, is covered with forests.

The hinterland, whose population is expected to double to more than 1.2 million by 1990, has great potential for the development of oil palm and rubber estates as well as timber industry.

At present, the region is served by a few small river ports suitable for handling cargo using small barges only. Goods and produce to and from the estates on the east coast have to be transported for an average distance of 275 kilometres across the central mountain range to the ports and the main commercial centres on the west coast.

Unsuitable

The existing small ports and jetties on the east coast, including the small Kuantan port, lack natural deep water and are not suitable for development as major international commercial ports.

Historically, the western region has been the centre of economic activity in West Malaysia. The sparsely populated eastern region had, until recently, remained undeveloped. Consequently, its road and sea transport facilities have not been as well developed as those of the western region.

In recent years, however, the Government has taken measures to speed up economic development in the eastern region. The Government has launched several large-scale agricultural development schemes in this area. The Pahang Tenggara Development Scheme and the Trengganu Tenggah Scheme, for example, provide for the development of more than 400,000 hectares of land, mainly for oil palm and rubber cultivation. The schemes also envisage the establishment of several timber complexes in the region.

The new Kuantan port, to be located about midway along the east coast, would provide a convenient outlet to the world market for the increased production resulting from the development schemes.

The need for the construction of a deep-sea port on the east coast, possibly near Kuantan, was underlined in the Southeast Asian Regional Transport Survey (RTS). The \$2.9 million survey, jointly financed by ASDS, UNDP and the United States, was completed in 1972 and had, among other things, recommended the establishment of a regional cargo and tanker fleet for Southeast Asia.

Eight Southeast Asian nations-Indonesia, the Khmer Republic, Laos, Malaysia, the Philippines, Singapore, Thailand and the Republic of Viet-Nam-have formed a regional organization (Southeast Asian Agency for Regional Transport and Communications Development) for implementing the RTS recommendations.

The new Kuantan port project calls for the construction of a deep-sea commercial port, related access roads, storage and transit facilities for both dry and liquid cargoes, and pumping facilities. The new port will handle both liquid and dry cargoes such as palm and mineral oils, fertilizer, rubber, timber, tapioca and manufactured products.

The project provides for the construction of:

- Berthing facilities for vessels of up to 35,000 dwt (Dead Weight Tonnage), consisting of three general cargo berths, a multi-purpose berth, a dolphin berth and a mineral oil jetty;
- paved areas and roads;
- three transit sheds and a timber storage shed;
- port buildings and port-related facilities.

Also included in the project is provision for the procurement of two tugboats, a pilot launch, two mooring boast, two moble firefighting units and cargo handling equipment. It also provides for the establishment of communications facilities, including a lighthouse and other navigational aids.

Bacat-transport

Bacat Line introduces new shortsea transport system and chooses Rotterdam as continental supply and discharge port

Reprinted from Rotterdam Europoort Delta 74/1/e

A new paragraph has been added to sea transport's exciting chapter concerning the 'barge carrier' or seabarge systems. On paper, about ten systems exist for the transportation of unit loads the size of an inland river barge. Of these drawing room plans the Lash (Lighter aboard Ship) system was realized in 1971, a system whereby a mobile crane on the deck of a mothership lifts on board over the stern lighters with a cargo capacity of 370 tons and places them in their proper spaces.

In 1973, the Seabee system was introduced which made it possible to take lighters of about 800 tons on board in pairs with the aid of a lift positioned at the stern of the mother-ship and to transport them via rollers to their stowage positions on board. Thus two transatlantic systems now exist in which mother-ships with a carrying capacity of about 30,000 tons, play a very important role. A total of 27 such ships are now in operation or on order, 24 of them being the Lash type, designed by Friede & Goldman of New Orleans, and 3 of the Seabee type designed by J.J. Henry of New York.

At the beginning of 1974, the first 'shortsea barge carrier' followed and was destined for operations between Rotterdam and Hull and Middlesbrough. Its introduction established a regular connection between the West European and British industrial areas in the Midlands, especially for the transport of base materials and semimanufactured products. Both the Lash and Seabee systems, as well as the Bacat (Barge aboard Catamaran) system, depend for their transportation functions on a definite segment of the market. The 'barge carrier' system enables uninterrupted transport of products which are offered in considerably larger quantities per shipment than, for instance, container or pallet loads. Important savings in transport costs can be achieved if the suppliers and/or consumers have facilities directly alongside water accessible to barges and if the necessary infrastructure for inland river transport is present. The 'shortsea barge carrier' functions, on the one hand, as the logical distribution system for base materials and semi-manufactured products supplied from overseas by bulk carrier, while on the other hand, this transport method can develop into a feeder system for the Lash carriers.

Realization

Realization of the Bacat system is firmly linked with the name of Gustav Drøhse, of Rudkøbing, Langeland, Denmark, who untiringly guided and stimulated the fulfilment of the idea from the drawing paper stage to reality. He did this in co-operation with the staff of the Frederikshavn Vaerft & Tørdok A.S. shipyard. It took over five years before the idea became reality, years in which many changes occurred but in which the basic idea, a shortsea barge carrier, was retained.

The BACAT 1, the first Bacat ship in the world, left the slipway at Frederikshavn on September 5, 1973. On February 16, 1974, after intensive trials, she was transferred by the shipyard to the shipowners Rudkøbing VI and Mr. G. Drøhse assumed the operation's management of the vessel, assisted by BACAT UK Ltd., of Hull, as general agent for England, by Worms & Cie of Paris as general agent for France, with the exception of the French Rhine ports, and the Holland America Line as general agent for the Netherlands, Belgium, Germany, Switzerland and the French Rhine areas.

Lift platform

The BACAT 1 is a so-called semi-catamaran ship. That is to say a ship with a normal, closed fore-part but whose hull behind the deck-house superstructure consists of two separated hulls above which the deck runs in the normal way. Lighters or barges can be moved in between these two hulls. Between the hulls is a lift platform suspended on tackles which are operated by hydraulic winches situated on deck. The lift platform carries a rolling traverser which, in turn, can be positioned sideways, i.e. athwart-ships. The lift platform with the traverser on it can be lowered to a depth of three metres below water level. The Bacat barges are brought two abreast over the lift platform by a pushboat. During the initial operation of raising the lift platform a centring system ensures that the barges are brought into the correct position in respect of the traverser on the lift. The lift then brings the barges on the traverser up to deck height where, together with the traverser, they are together moved to either side. After this a longitudinal transport system takes over. This longitudinal transport system moves two barges at a time to their respective stowage places, either on the SB- or the Portside of the deck. The traverser meanwhile moves back to the lift platform and is again lowered into the water to take on the next two barges. A total of 10 Bacat barges can be placed on the main deck. Unloading the barges takes place in reverse order. The operation of the lift, traverser and the longitudinal transport system is done from a central control post which is located at the stern behind the lift. The ballast pumps and trim pumps can also be remote controlled from the central control room. A pre-planned push-button and indicating system takes care of the right list and trim compensation during loading and unloading.

The main data of the mother-ship and the barges are as follows:

1 Mother-ship	
Length o.a.	103.5 m
Length b.p.	93.2 m
Breadth deck	20.7 m
Breadth hull o.a.	18.6 m
Breadth Catamaran hull	4.47 m
Depth to main deck	10.5 m
Draught	5.40 m
Number of Bacat barges	10
Number of Lash lighters	3
Cargo carrying capacity	appr. 2600 tons
Fuel tank capacity	250 tons
Fresh water supply	60 tons

Propulsion	2 × 2000 hp B Wain/Alpha di (type 16V23H	ürmeister and esel motors W)
Number of propellers	2 (in nozzle)	,
Number of rudders	2	
Bow-thruster capacity	350 hp	
2 Bacat barge	Lash lighter	
Length o.a.	16.82 m	18.75 m
Breadth	4.67 m	9.50 m
Height, external	3.30 m	3.96 m
Hatch length	13.15 m	13.72 m
Hatch breadth	3.35 m	7.62 m
Capacity	appr. 170 m ³	appr. 569 m ³
Cargo capacity	appr. 150s. tor	ns appr. 370s. tons
Maximum draught	2.45 m	2.73 m
Number of hatch covers	3	3
Weight per cover	1.27s. tons	2.7s. tons

Lash lighters

Three Lash lighters can be transported in the space between the two hulls. The Lash lighters are clamped to the tunnel-walls, each at their own draught. The lighters do not, therefore, constitute part of the deadweight capacity of the mother-ship — they bring, as it were, their own deadweight capacity with them. During the sea trip they act more or less as the bottom of the mother-ship and consequently undergo all the movements resulting from the sea motion, together with the mother ship. Tests held in the experimental model basin at Lyngby near Copenhagen, carried out under the supervision of Professor Prohaska, showed that even under extreme sea conditions hardly any water washes over the gangways of the Lash lighters.

The Lash lighters practically fill the tunnel between the two hulls. The lighters are moved inside by the pushboat in threes behind each other and clamped to the hulls of the mother-ship. Due to the limited available height in the tunnel, the stern flow barge is used as connecting link between the pushboat and the last Lash lighter. This stern flow barge belongs to the Bacat mother-vessel. It is - like the Lash barges - clamped in position between the two hulls and in the aftermost position. It then serves as a hydrodynamic hull element and closes off the stern opening between the hulls.

Frequency

The total loading and unloading operation, during which twenty Bacat barges and six Lash lighters are handled, takes about six hours. Dependent on the type of cargo, a maximum of about 5,200 tons cargo is then handled. In Rotterdam, the ship berths in the Rijnhaven, where the so-called 'barge fleeting area' is also located. The Maas-Rijn B.V. stevedoring company looks after the handling or possible loading and unloading of barges which are not destined to go further inland. Pushboat transport to destinations along the Rhine and also to Antwerp has been placed in the hands of Roba Schiffahrtsagentur und Lagerhaus AG. The H. Zwaak Jr. company, with its special pushboats, serves the mothership and the local lighter transports.

With a frequency of about 130 round trips per year, this transport system has an annual transport potential of up to some 650,000 tons in both directions combined.

Canadian Importers Seen in Need of More Ships and Commodities

Toronto Harbour Commissioners Toronto, Ontario, Canada

A lack of ships and a shortage of commodities are two of the problems facing Canadian importers in the coming months, according to Ernest B. Griffith, newly-elected president of the Canadian Importers Association.

Mr. Griffith, 57, general manager of the Toronto Harbour Commissioners, was chosen to head the association at its annual meeting in Toronto. He succeeds Jean-Louis Gervais, of Montreal, who was elected president in 1971.

During a recent interview, he touched on a number of topics including Canada's tariff rates which he said are probably as high as any developed country in the world. He also stressed that Canada should continue its aid to nations of the third world in order to develop good two-way trade.

The new president said the rising costs of transportation "are naturally of great concern to importers" but went on to explain that a shortage of almost every type of equipment to move both imports and exports was even more alarming.

Mr. Griffith pointed out that high charter rates and the lack of ships to carry cargoes have disrupted export trade. Shortages also exist in rail and truck transportation "although perhaps not to the same degree."

England

In England the industrial areas of Leeds, Sheffield, Rotherham and Nottingham can be reached with the Bacat barges. The convoys are moved by pushboats of the British Waterways Board, Transport Section. This semi-government organization also acts as sub-agent for BACAT UK Ltd. Lash lighters cannot be transported further than Gainsborough and Selby as the British waterways and canals system above these places has no facilities suitable for the Lash lighter measurements. The Middlesbrough port of call about once every four trips - is restricted to the harbour area, also for the lighters, as there are no waterways in the hinterland.

Continent

On the continental side of the Bacat operation, from Rotterdam as the base port both the catchment area of the Rhine as well as that of the Meuse and Scheldt and other connecting European inland waterways can, in principle, be served. The only restriction relates to the number of lighters in the system which for the present has been fixed at sixfold that of the mother-ship capacity. This means a total of 63 Bacat barges and 18 Lash lighters being available. In view of this number the penetration distance of the Rhine is restricted to Cologne and the Rhine ports situated downstream. The 63 Bacat barges were built in England by the Yorkshire Drydock Co. The 18 Lash lighters come from the Ross Company, of New Ross in Ireland. He revealed there was a definite shortage of vessels in the Great Lakes and that demands for bottoms for all types of trade was increasing. However, most vessels are engaged for the full length of the season and any new demand cannot be met.

"There is a lot of cargo available for movement through ports in the Great Lakes," said Mr. Griffith. "But we need the ships. In some instances cargoes have had to be moved for shipment through East Coast ports."

The reopening of the Suez Canal will make additional ships available. There is also a general feeling the tight ocean shipping situation should soften towards the end of the year. However, Mr. Griffith feels that shipping rates are likely to remain high because of inflation and increased fuel costs.

Mr. Griffith has been with the Port of Toronto Authority for the past 34 years, 23 of them as general manager. During that time he has seen a number of changes, the most important being the opening of the St. Lawrence Seaway. This 2,300-mile waterway gave Toronto world part status and increased its overseas trade from 713,186 tons in 1959, the year the Seaway opened, to 1,715,363 tons in 1972.

"Imports and exports go hand in hand," he said. "Without a reasonable flow of imports into Canada, foreign countries will lack the money to purchase Canadian exports," he added.

Canada now has a favourable balance of foreign trade, but Mr. Griffith cautioned that few countries will be able to increase their purchases of Canadian goods unless imports to Canada are increased.

"The nations with which we trade will certainly not buy from Canada if they are not allowed to sell here," he explained and added that a reduction of tariffs would promote the development of trade.

Mr. Griffith believes imports help in the battle against inflation. "The importing of goods does help keep the general costs of goods down, which has an effect on all customers."

"But that is not to say that some Canadian industries should not be protected from the effects of imports," he told a reporter. "It is my own personal view that one cannot make a dogmatic statement that applies to all circumstances."

"There will always be special cases requiring individual attention. But that does not mean that the general high level of tariffs should be continued."

Mr. Griffith noted: "The only hope for real human progress is through world trade. Intermittent aid from one nation to another may help in special disaster situations, but the main hope for all is the expansion of international trade."

"World trade has quadrupled since the end of the second world war. The result has been increased prosperity for only part of the world's population."

He emphasized that a great expansion of world trade is necessary if the less fortunite countries, still left out of the general increased prosperity, are to make progress.

The Canadian Government has already made a move in this direction with the passing of a special low tariff - the General Preferential Tariff - for developing nations.

"We are delighted that this lower tariff is coming into force on July 1, 1974," said Mr. Griffith.

He said he would like to see the association and the government doing more to aid developing countries. "If we can help them produce the items we can use in Canada then



New president of the Canadian Importers Association is Ernest B. Griffith, General Manager of the Toronto Harbour Commissioners. He is shown here at the Port of Toronto's Container Distribution Centre. May 1974.

we'll make it much easier for the Canadian manufacturer to sell his products."

Mr. Griffith said there are a number of areas in the world where Canada can expand trade. "There is certainly great potential for increased business with the People's Republic of China. We should also be taking a closer look at South America."

As general manager of the Toronto Harbour Commissioners, Mr. Griffith has travelled to China where he promoted the Port of Toronto as a direct shipping destination. He has also visited the Soviet Union whose shipping companies are among Toronto's biggest customers.

A concern of importers at the present time is the shortage of certain commodities. Steel, for example, is one product where demand exceeds capacity and this is expected to continue for some months. It means simply that importers have to forgo potential sales.

A graduate of commerce at the University of Toronto and a lawyer, Mr. Griffith became associated with the Toronto Harbour Commissioners in 1940, served later in the Canadian Army and returned to be appointed secretary of the board in 1946. He was named a Queen's Counsel in 1959.

He is now serving his second term as president of the International Association of Great Lakes Ports. He was the first chairman of the Canadian Port and Harbour Association and is a past director of the American Association of Port Authorities.

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ICHCA Biennial Conference 1975

London, 14th June (ICHCA Press Information):—A new deep-rooted change is presently taking place within the Cargo Handling and Transportation Industry.

After the whirlwind effect of recent technological changes on the movement of goods, the need was now seen for technology and operational systems to become increasingly responsive to changing user requirements.

The rapidity with which such changes are taking place calls for a greater understanding of their effect on the movement of goods, and in turn, a greater understanding of the systems themselves.

"Technology and Systems Responding to Changing User Requirement" is therefore the theme which has been chosen for ICHCA's next biennial conference, to be held in Florence, Italy from 11-15th May, 1975.

In a joint statement announcing the new conference, Mr. Stanley Turner, President of ICHCA, and Mr. Ray Holubowicz, Chairman of ICHCA's Council, laid great stress on the need for a co-ordinated effort between operators, users, and ancillary services within the industry, in the light of present developments.

The papers to be given at the conference will reflect ICHCA's attitude to the industry as a whole. As such, the views of all parties interested in the efficient movement of cargoes will be heard.

Papers will be given by notable speakers representing varied interest from all sectors of the Cargo Handling and Transportation Industry. The sectors to be covered will include Ro/Ro; Rail and Road Transport; Inland Consolidation Terminals; Dry Bulk Cargoes; Oil Cargoes; Air Cargo; Barge aboard Ship; Perishable Cargoes.

Two keynote papers will be given at the start of the conference. These will deal with Integrated Transport, and the Changes in Patterns and Composition of World Trade. They are designed to "set the scene" for the papers to follow.

A full social programme is also arranged, including a comprehensive ladies programme, to complete the package. In addition the conference is being held simultaneously with the world renowned Florence Festival of Music - the "Maggio Musicale Florentino".

The conference has been designed to demonstrate ICHCA's revitalised approach to its role within the Cargo Handling Industry.

ICHCA was very much aware of the need for the Total Systems approach to be recognised, and accepted by all participants within the industry. No one operation can today act independently of others, or the customers which they serve.

The Association had recently formed an Air Cargo

section to consider the problems presently facing the operators' and users of Air Transport. This new section of ICHCA will provide the much needed forum, wherein all interests can get together for mutual consultation.

This multi-national, multi-lateral approach to technical problems, is unique to the Air Cargo industry. The Air Cargo papers to be given at the conference will demonstrate the full benefit of this new venture.

Problems in the international movement of goods were the subject of much discussion by TASC, the Association's "think tank". TASC had been formed by bringing together one "bright young man" from each of ICHCA's national committees. The first TASC report on "Condensation in Containers" was soon to be published.

These were but two examples of ICHCA's new approach. It was an approach which had already been justified by a marked increase in interest, internationally, in ICHCA's affairs.

Seaway Labour Agreement renewed

Ottawa, May 30 (St. Lawrence Seaway Authority):-The St. Lawrence Seaway Authority and The Canadian Brotherhood of Railway, Transport and General Workers, representing Seaway workers, today signed an agreement providing for a one-year extension of the Seaway Labour Agreement and for an increase in the wages of Seaway workers.

In April, the Authority agreed with the Union that unforeseen and unprecedented escalation of the cost of living justified an increase in Seaway wages beyond the increase which was agreed to in contract negotiations for 1973 and 1974 wages. Accordingly, a voluntary 3% increase, effective this June, was added to the 7% which had already been provided for, effective last January.

The Agreement for a voluntary wage increase included a one-year extension of the Collective Agreement so that it will run until December 31, 1975. During the term of the extension, Seaway workers will receive a further increase of 3% in January, 1975 and periodic increases calculated to increase hourly wage rates by 1 cent for each 0.5% increase in the Cost of Living Index.

National honors to Minnesota's World Port

Duluth, Minnesota (Seaway Port Authority of Duluth): -A world-wide promotional mailing of the Great Seal of the United States by the Seaway Port Authority of Duluth has brought national honors to Minnesota's World Port.

The Freedoms Foundation at Valley Forge Americana Award Certificate and plaque was awarded to the Seaway Port Authority of Duluth for outstanding promotional efforts for the year 1973. The prestigious plaque was presented to C. Thomas Burke, executive director of the Seaway Port Authority by Robert J. Sheran, Chief Justice, Minnesota Supreme Court. The presentation was made during the World Trade Day conference luncheon at the Sheraton-Ritz Hotel, Thursday, May 23 in Minneapolis.

Toronto Harbour Dredging Project Nears Completion

Toronto Harbour Commissioners

The new entrance into the Port of Toronto is expected to be open to shipping sometime this fall.

Work on the \$10 million project to create a new port entrance is progressing ahead of schedule and with more than 60 per cent of the contract completed by the end of operations in 1973, the remainder of the work will be finished ahead of the December 1974 deadline.

The Eastern Channel is being widened from 400 feet to 600 feet for ships of Seaway depth, plus an additional 100 feet for small boats. The new entrance will shorten the distance for ships entering the port by up to six miles and will allow for the integration of the new port area with the established sector.

Sand dredged from the Eastern Gap area and the Outer

Harbour, where Seaway-depth shipping lanes are being created, is being placed in position at the end of the East Headland to form the partial land base for Aquatic Park which will cover 188 acres when completed.

Work carried out to the end of 1973 included the creation of several major berms as part of the Aquatic Park land base at the end of the East Headland.

Project workhorse is the giant 1,400-ton dredge "Canadian" owned by the dredging contractors, McNamara Marine. It is the same machine used to form the artificial islands for Montreal's Expo '67.

The dredge is powered by electricity connected to the mainland by almost two miles of 5-inch-diameter 13.8 K.V.A. cable which runs underwater from a barge with an 11-foot-diameter reel. During its 24-hours-a-day operation,



Work continues on the widening of the Eastern Gap in Toronto Harbour to make it the main port entrance.

the dredge uses up the same amount of electricity as a town of 14,000 people.

The "Canadian" dredges an average of about 800,000 cubic yards of sandy material each month. During operations carried out so far, a variety of materials has been encountered ranging from coarse to fine to silty sand, and in some cases, almost slurry.

The dredge first discharged spoil to create two berms forming an open basin, primarily for the storage of materials. A total of 30,000 yards of 'inventory' stock pile stone, part of the demolished East Gap wall cribbing, has been placed in this area to date and will be used to provide protection along the exposed Aquatic Park berms.

Two additional 400-foot-wide berms were constructed during 1973 to form an enclosed basin which outlines the general shape of Aquatic Park. The eastern 400-foot berm, built in the form of a "V", encloses a small body of water to be used for a swimming pool or an ice rink.

Within this enclosed basin, a series of islands will be constructed to complete the 188-acre recreational complex.

The dredge and associated support ceased operations on December 4, 1973 and repair maintenance work was carried out during the early part of the year at McNamara's Whitby yard.

Dredging got underway again in May. A total of 2,300,000 yards of sand are to be dredged this year including some 100,000 yards which will help to build up the Ward's Island beach, just west of the Eastern Gap.

Also included in the total figure is approximately 40,000 yards of polluted material from the Eastern Channel. This will be dredged in August and will be placed internally in a confined berm area within the land base created for Aquatic Park.

During dredging operations, particular care is being taken to ensure that the designated slopes and grades of the berms are maintained. The shape of the land forms has been achieved by the use of a specially designed discharge scow.

Toronto Harbour Commission engineers, together with field managers A.S. Read and E.W. Thordahl, studied different methods of controlling the various qualities of the dredged material discharged through the pipe. The design of the scow provides a positive means of directing and controlling the disposition of the discharge material containing a variety of different grain sizes.

The equipment used comprises ascow of 100 feet by 35 feet with a 36-inch-diameter adjustable cantilever pipe 100 feet long which can be elevated to the height required for the specific conditions through on board power winches. As wear occurs through abrasion of the material being pumped, the cantilever high carbon pipe and line are rotated to compensate.

The discharge scow can draw as little as three feet of water at the bow when stern ballasted, which gives the unit a useful inclined posture to achieve close proximity to the shallow slopes of the landforms under construction.

During the 1974 dredging program, the main task in handling the material dredged from the remainder of the new ship channel lies in constructing basic convolute land forms and islands through developing a "harmony in the arithmetic" of the various elements involved. "These include" 10,000 horsepower pump control; discharge energy dissipation through the use of a special diffuser; material grain size; fallout rate; water level; and physical width of the berm above water.



Project workhorse for the Toronto Harbour dredging project is the giant 1,400-ton dredge "Canadian" owned by the dredging contractors, McNamara Marine. An average of 800,000 cubic yards of sandy material are dredged each month.



Dredged sand is discharged through the specially-designed discharge pipe which can be elevated to the height required for the specific conditions through on board power winches.

This uniquely-designed discharge scow will continue to play a key role in the formation of the land for Aquatic Park.

Subcontractor for the work on the demolition of the Eastern Gap is Canadian Dredge and Dock Ltd., who closed down 1973 activities on December 20. Production began again in March 1974 as a result of milder than normal winter conditions. All the demolition work on the cribs, walls, structures and Fisherman's Wharf will be completed in June. The construction of a new stone "beach stabilization" wall, built from materials recovered from demolition operation will also be complete by that date. A new tripod type structure "navigation aid" will be installed at the end of the new wall.

Final phase of the total project includes the construction of an 800-foot-long dock wall on the east side of the Eastern Channel. The \$800,000 contract was let to Ruliff Grass Construction who are already in the process of pile driving. The wall will have a steel sheet pile bulkhead with concrete coping, tied back to concrete anchor blocks and



Alameda, Calif., 5/30/74 (PACECO News):-The Port of Duluth will be the first Great Lakes port to offer shippers a specialized container handling facility complete with a Paceco Portainer and a new container marshalling area. The crane built by Paceco, A Division of Fruehauf Corporation, is a 30 Long Ton capacity Economy Portainer, which has been especially designed for Great Lakes and other ports. It has an 84 ft. outreach, 22 ft. backreach, and rides on rails 52 ft. 5 inches between centers. Equipped with a Quick Change Headblock, the crane can use either a telescopic spreader for 20, 35, or 40 ft. long ANSI containers, or can be changed in minutes to a cargo beam with swivel hook to handle palletized cargo or general cargo including steel bundles. Because of the Portainer's controlled straight-line operation, it will handle general cargo faster than conventional equipment. The new crane will be installed at the Seaway Port Authority of Duluth's Clure Public Marine Terminal adjoining the container marshalling area.

will be used as an eventual berth alongside the Harbour Commission's Container Distribution Centre, CDC Torport.

Scheduled completion date of the contract is July 15, 1974. Surface construction will then be carried out as well as dredging to Seaway-depth of the area beside the wall.

Harbor Department reorganization

Los Angeles, Calif., June 19 (Port of Los Angeles):-The Los Angeles Harbor Department, in action today (Wednesday, 6/19), has approved reorganization of the Harbor Department, as proposed by General Manager Fred B. Crawford.

Most significant of the changes from the previous organization of the Department was the elimination of the

position of one assistant general manager, creation of four major divisions out of numerous smaller units, and the transfer of construction and maintenance crews to a new operating division.

In the new plan the four larger divisions - port operations, port administration, planning and research, and engineering - will report to the assistant general manager.

Directors for the operations and the port administration divisions are to be named; Donald A. Walsh and L. L. Whiteneck now head the planning and research and the engineering divisions, respectively.

Also to be appointed are the one assistant general manager, a director of trade development, and a chief accountant. The latter two positions are now held by staff members on an acting basis.

Trade development, public relations and the legislative representative will report directly to the general manager.

The director of port operations will oversee the construction and maintenance crews, property management (real estate), port wardens (police), port pilots and wharfingers (port representatives on the wharves).

The director of port administration will guide the accounting, data processing, internal auditing, purchasing and stores, industrial relations and an administrative analysis sections.

The master plan, capital programs development, environmental and rate analysis will be directed in the planning and research division.

The chief harbor engineer will guide the construction specifications, estimating, design, survey and construction inspection and materials testing program.

Advanced engineering planning will continue in the engineering division for administrative purposes, but will coordinate its work through the planning and research unit.

Fiscal 1974-75 budget

Los Angeles, Calif., June 19 (Port of Los Angeles):-The Los Angeles Board of Harbor Commissioners today (Wed.-6/19) adopted a \$47.8 million budget to operate the Harbor Department during fiscal 1974-75.

Increases during the coming year are expected in receipts from shipping services, rentals and other sources; and money borrowed from the state to build small craft marinas.

The \$1.6 million anticipated increase in shipping services will come from dockage (charge against a ship at berth), wharfage (change against cargo moved over the wharf), and preferential berth assignment charges. Rentals also will increase about \$155,000.

Other shipping services revenues are expected to remain at 1973-74 levels, as will special income from fees to vendors, oil royalties and miscellaneous income.

Largest areas of expenditures in the budget are \$26 million for land acquisition and capital improvements, and salaries, including health and medical benefits, at about \$9.7 million for the 562 employees of the Harbor Department.

Approximately \$23 million of the \$26 million will go towards construction projects and capital improvements. Another \$2.75 million will pay for some land acquisition.

Other major expenditure categories are bond redemption and interest (\$3.6 million), contribution to the employee retirement system (\$1 million), and an unappropriated balance (\$2.5 million).

Port of Long Beach Trade Mission Visits Japan

TOKYO-A four-member delegation from the Port of Long Beach is in Tokyo this week to meet with officials from the Japanese shiplines, trading companies and members of the business community to discuss what additional cargo handling facilities should be created at "America's most modern port".

Making up the trade mission group are Harbor Commissioners Llewellyn Bixby, Jr. and Richard G. Wilson, Harbor General Manager Thomas J. Thorley and Trade Development Director Dean J. Petersen.

As spokesman for the delegation, Mr. Bixby pointed out that in 1973, Long Beach became the busiest single port of the Pacific Coast by handling 29,692,286 revenue tons of cargo, an increase of 15 percent over the year previous and an all-time high for any American Pacific Coast port.

More meaningful is that of the 6,594,624 tons of general cargo moving through Long Beach Harbor's 68 deep water berths, 2,458,486 tons were in commerce with Japan. Dry bulk cargoes accounted for another 1,972,985 tons, with the remainder of the 4,662,739 tons total trade with Japan being liquid bulk and petroleum.

Completion of Long Beach's \$50-million container complex brings the number of container terminals to four, with ten large berths served by twelve high capacity gantry cranes of 30 to 45 long ton capacity. This is one of the largest concentrations of container facilities in the Pacific, and is expected in the near future to lead to a doubling of the 3,371,127 tons of containerized cargo loaded and unloaded in Long Beach last year.

Among Japanese shiplines calling regularly at 7,200 acre, \$225-million Long Beach Harbor are "K" Line, several vessels of the Four Line Joint Service (operated by "K" Line, Mitsui O.S.K. Lines, Japan Line and Y-S Line), Showa Line, N.Y.K. Line and Toko Line.

Besides having the most advanced container complex, Long Beach offers shippers a wide variety of modern high speed facilities designed to accommodate virtually every type of cargo with speed and efficiency. With the deepest fairway of any American port (60 feet), Long Beach also provides terminals for handling of break-bulk, dry bulk, liquid bulk and specialized commodities, with up to 55 feet of water available alongside.

Long Beach Harbor is tied directly to the Interstate Highway System and is served by three transcontinental railroads. The Port has its own container freight station, rail-truck transfer yard and two import-export terminals for automobiles.

Last year, Long Beach was selected as the first recipient of the Environmental Improvement Award by the American Association of Port Authorities.

More recently, the Port of Long Beach was presented with the Presidential "E" Citation for Excellence in Export Service, largely due to its role in the establishment of a deep-water bulk commodity terminal designed to expedite movement of petroleum coke to Japan and other nations, as well as for working closely with Sunkist Growers to expedite the transpacific shipment of fresh citrus products to the Far East.

The Long Beach Harbor officials added that they are in Japan not only to meet with industry officials to describe present facilities, but to discuss future expansion plans for new terminals necessitated by the continuing growth of trade between Long Beach and the Far East.

Chairman, Vice Chairman elected

New York, N. Y., Apr. 18 (News from The Port Authority of NY & NJ):-The Commissioners of The Port Authority of New York and New Jersey today elected William J. Ronan of New York City as Chairman and W. Paul Stillman of Fair Haven, New Jersey as Vice Chairman of the bi-state agency. The elections were held at a special meeting of the Board of Commissioners at One World Trade Center this afternoon. Dr. Ronan, who has been Vice Chairman of the Board since 1972 and a Commissioner for 6-1/2 years, succeeds James C. Kellogg, 3rd, Chairman since 1968 and a Commissioner for 19 years. Mr. Stillman has been a Commissioner of the bi-state Authority for 14 years.

In an expression of tribute to Mr. Kellogg, Commissioner James G. Hellmuth, Chairman of the Board's Nominating Committee, said "... for myself and my colleagues, our thanks to Jim Kellogg for the great job he has done as Chairman since 1968. We recognize that it has been a demanding and difficult task which he has carried out most effectively. We are indeed fortunate that Jim will continue as a Commissioner and share with us his ability, experience and his exceptional personal qualities." Commissioner Kellogg was reappointed to a 6-year term in 1972.

Commissioner Hellmuth told the members of the Board that Dr. Ronan has expressed his intention to resign from his post as Chairman of the Metropolitan Transportation Authority in the near future, at which time he will assume the Chairmanship of the Port Authority.

The Board of Commissioners of the Port Authority has 12 members, six of whom are appointed by the Governor of New Jersey and six by the Governor of New York for overlapping terms of six years. They serve without compensation. The Americas



San Francisco, Calif., 6/6/74 (Marine Exchange of the San Francisco Bay Region):-The maiden voyage arrival of the MS CAPE HOWE was recently feted in special ceremonies aboard ship. The Marine Exchange of the San Francisco Bay Region and Crescent Wharf and Warehouse Co., presented Captain Arnot Peebles with engraved plaques to commemorate the occasion. Also on hand to welcome the Captain was Mack E. McKnight (and family), West Coast Manager of British Steel Corp., Inc. British Steel has a fifteen year charter from Scottish Ship Management, Ltd., operators of the vessel. The CAPE HOWE initiated service between the United States and Great Britain and was the first vessel to use Crescent's new steel loading facility in Alameda. Kerr Steamship Co. is the local agent for the service.

Brooklyn Marine Terminal leased

New York, N.Y., June 13 (News from The Port Authority of NY & NJ):-Pier 6 at the Brooklyn-Port Authority Marine Terminal has been leased to International Terminal Operating Co., Inc. for operation with the adjacent Pier 7 as a combined terminal for ITO steamship accounts, according to an announcement today by Port Authority Chairman William J. Ronan at the monthly Board meeting of the bi-state agency at One World Trade Center.

Waterman Steamship Corporation will operate its new LASH (lighter-aboard-ship) service to the Red Sea, Persian Gulf, India, Pakistan and Bangladesh from the combined terminal. The newly constructed LASH vessels – S.S. ROBERT E. LEE, S.S. STONEWALL JACKSON, and S.S. SAM HOUSTON – are presently being delivered to Waterman from Avondale Shipyards, Inc., New Orleans, Louisiana. These ships will be the largest LASH vessels in service, measuring 893 feet in length and carrying 89 LASH barges.

In addition to Waterman's LASH and Far East breakbulk service, ITO will handle Kuwait Shipping and Baltic Shipping Company at the combined terminal.



Left to Right: Fred Whelan, Director Trade Development, Georgia Ports Authority, Atlanta, Georgia; S. Nomura, Manager Liner Dept., Mitsui OSK Line; J. D. Holt, Executive Director, Georgia Ports Authority, Savannah, Georgia; T. Fukada, Director Mitsui OSK Line; H. Hirai, Director Liner Division Mitsui OSK Line and Isao Togioka, Assistant Far Eastern Director Georgia Ports Authority, Tokyo. (Georgia Ports Authority)

Trade mission to Far East

Savannah, Ga., June 19 (Georgia Ports Authority News Release):-Members of the Georgia Ports Authority and staff officials, Robert H. Tharpe, Chairman; Don Grantham, Member; J. D. Holt, Executive Director and Fred Whelan, Director of Trade Development, have just returned from a trade promotion trip to the Far East. Together with the Authority's Far Eastern Director, Makio Yamada, and Isao Togioka, Assistant Director, they visited with steamship officials, trading company management personnel, and numerous exporters and importers.

In addition to cities in Japan, Taiwan and Hong Kong, the first visit to Korea for stateside members was included in the business travel itinerary. An indication of increased trade and shipping between Korea and the Port of Savannah has been developing in recent years, prompting the necessity for direct personal contact with international traders and shippers in Korea.

Savannah now ranks second only to New York, on the U.S. East coast, with containership service from and to the Far East, presently offering direct services of American Export Line, American President Line, Japan Line, Mitsui-OSK Line, United States Line, Y-S Line and the consortium arrangement of K Line and NYK Line.

This unprecedented increase in steamship service and trade with the Far East via the Port of Savannah is greatly due to the close working relationship the Authority maintains with international shipping circles in these countries, along with regular contact from the Authority's Far Eastern office in Tokyo.

Along with daily business appointments, the Ports Authority hosted receptions in Tokyo, Nagoya, Osaka, Seoul, Taipei, Kowloon and Hong Kong.

International Congress Marine Technology

Hamburg:-Hamburg will present from September 24th to 29th, 1974 a wide-ranging survey on the latest development in international shipbuilding, machinery, marine technology and port handling techniques. 406 firms from 18 shipbuilding nations participating. In large-scale joint ventures, products of latest technical developments are offered, among others, by Denmark, the German Democratic Republic, France, Great Britain, Norway, Poland and the Federal Republic of Germany.

Hamburg will demonstrate by excursions the practical functioning and effectiveness of plants and large-scale installations.

Hamburg will offer technical information at the international Marine Technology Congress on: technology and efficiency in the field of marine industry in symposia on problems of ship operation technology and on ocean engineering.

For further information refer to:

Hamburg Messe D 2000 Hamburg 36 Jungiusstrasse, Messehaus Hamburg Germany

MARITIME '74

Gothenburg, Sweden:-The organizers of the MARI-TIME 74 (International Shipping) Conference plan to hold a 3-day conference May 14-16, 1974 in the Congress Center of the Swedish Trade Fair Foundation, Gothenburg, Sweden on the following two problems of great international interest:

POLAR NAVIGATION

"New ships, new equipment unlock the door to the riches of the Arctic and make year round navigation possible."

INTERNATIONAL FERRY SERVICES

"International short sea ferry services and their importance to modern transport systems."

Port consultation at the European level

Antwerp (Antwerp Port News, March 1974):-Invited by President H. Rochereau a restricted Antwerp delegation recently stayed in Paris to attend one of the monthly meetings of the "Association pour le dévelopement des Grands Ports Français" (Association for the development of the large French seaports). This event took place within the framework of meetings with a number of important E.E.C.-ports arranged by said association.

Spokesmen on the Antwerp side were Mr. Walter H. Osterrieth, President of the Port of Antwerp Promotion Association (ASSIPORT) and Mr. L. Delwaide, Alderman of the port.

Mr. Walter H. Osterrieth treated two aspects of the port which constantly hold the attention of foreign ports, whether or not competitive. Indeed, he made a synthesis of the conception and the results of the public relations and the social organisation in the port of Antwerp.

The second speaker, Mr. Delwaide, largely dwelt on the structure of the Belgian seaports seen within the broader framework of the European Community. He devoted great attention to the most desirable co-operation between the E.E.C. ports. As an example for what is to be realized at the European level speaker referred to what has already been achieved in the field of inter-Benelux port consultation.

New peak in Antwerp container traffic

Antwerp (Antwerp Port News, March 1974):-Containerization of general cargo is increasingly coming to the fore, as is manifest once again from the 1973 figures that just have been published by the General Management of the Port of Antwerp.

Increasing forwarding possibilities by sea, rail and overland now available in the port of Antwerp certainly had their word to say in this progress.

Not less than 214,794 containers (empty containers not included) were handled in the port in the course of last year, against 155,532 units in 1972. The total containerized goods tonnage amounted to 3,228,794 tons in 1973, against 2,303,491 tons the year before.

In percentages, this means a rise in 1973, compared to 1972, of c. 38% for the number of containers and of c. 41% for the weight of goods so carried. The average container load was 15 tons.

The following statistics convering containerized traffic in the last 5 years will speak for themselves:

NUMBER OF CONTAINERS (*)						
Year	Discharged	Loaded	Total	Index		
1969	51,369	49,073	100,442	100		
1970	92,150	75,639	167,789	167		
1971	72,895	60,548	133,443	133		
1972	72,466	83,066	155,532	155		
1973	99,150	115,644	214,794	214		
	GOOI	OS TONNAG	ES (tons)			
		101 - 11	1 105 55	100		

1969	594,065	601,511	1,195,576	100	
1970	1,234,761	979,266	2,216,027	185	
1971	1,062,169	892,639	1,954,808	164	
1972	1,051,366	1,252,125	2,303,491	193	
1973	1,467,572	1,761,222	3,228,794	270	

(*) empty containers (1973: 24,809) and flats not included.

The total tonnage of 3.2 million tons of containerized goods corresponds to about 11.5% of the expected total general cargo traffic in 1973, viz. approximately 27.9 million tons.

As has been the case for several years, the major portion of the containerized traffic in the port was to and from the North American continent.

In 1971, the latter traffic exceeded 1 million tons for the first time; in 1972 it become 1.5 million and reached 1.8 million in 1973.

Following statistics further show that the North American container traffic recorded a strong rise in the course of the last 5 years.

	NUMB	ER OF CON	TAINERS	
Year	Discharged	Loaded	Total	Index
1969	22,442	16,408	38,850	100
1970	39,639	28,508	68,147	175
1971	41,388	40,897	82,285	212
1972	45,373	56,213	101,586	261
1973	58,659	60,961	119,620	308
	GOOI	OS TONNAC	GES (tons)	
1969	272,370	213,653	486,023	100
1970	549,912	358,908	908,820	187
1971	639,134	597,327	1,236,461	254
1972	678,563	870,384	1,548,947	318
1973	905,244	949,023	1,854,267	381

Europe-Africa

In 1973 the share of the Noth American traffic in the overall container traffic was about 57%.

Record cargo in 1973

Edinburgh, 24.4.74 (Forth Ports Authority):—A new cargo record of 10.4 million tonnes and a surplus of \$800,000 mark the operations of the Forth Ports Authority in 1973.

These figures showed that cargo handled had increased by 765,000 tonnes and the surplus had increased by $\pounds 166,700$, despite additional provision for depreciation and counter-inflationary curbs on the raising of port charges.

Commenting on the year's results, Mr. Gerald Elliot, chairman of the F.P.A., said that the surplus looked very substantial and cargo prospects for 1974 looked promising, unless there was a serious slump in U.K. trade. But the surplus still fell some way short of what was required to keep the Authority financially healthy.

In order to give customers the service they needed, the Authority had to generate enough money to provide for proper replacement of assets at inflated costs and to finance at least part of new developments, he said. It would be the Authority's aim to do this in the coming years, while keeping rates at competitive levels.

PLA takes over Gee Stevedoring Co.

London, June 17 (PLA News):-Legal formalities for the takeover by the Port of London Authority of The Gee Stevedoring Company Limited were completed this afternoon (June 17, 1974) at the PLA's World Trade Centre headquarters.

Arrangements are now being made for the company's name to be changed as soon as possible to PLA (Gee) Stevedoring Limited.

The company will continue its stevedoring and quay operations in India and Millwall Docks and cargo tallying work at Convoys Wharf, Deptford.

Realistic test in the River Thames

London, May 1974 (photographic news release from PLA):-EXERCISE PLAFIRE 7 - A realistic test of response by emergency services to a disaster situation in the river Thames. POLACAP (Port of London Authority Combined Accident Procedure) is a code name for a set of procedures drawn up jointly by the PLA and emergency services such as Police, Fire Brigade, Ambulance Service, Hospital Managements and Mobile Medical Teams, Salvage and Towage services and the Port Health Authority for immediate, concerted and co-ordinated response to an emergency situation in the river Thames. Field simulations like EXERCISE PLAFIRE 7 are held from time to time to ensure that POLCAP is kept up-to-date and all participants are practised in their role.

On May 14th 1974/EXERCISE PLAFIRE 7 was held in Bugsby's Reach, about 7 miles below London Bridge and off Blackwall Point. It assumed a collision between a laden petroleum carrying barge (500 tons), a discharged collier and a passenger launch carrying 40 passengers. There was controlled fire, casualties for rescue and pollution. (See Figures 1-4)



Fig. 1 A patrol launch of Thames Division of Metropolitan Police (River Police) engaged in rescuing casualties from the sunken passenger launch.



Fig. 3 Firemen lower a stretchered injured crewman from the collier 25 ft down to waiting police launch to be ferried ashore to waiting ambulances.



Fig. 2 A mobile Medical Team from the London Hospital, ferried out by River Police, boards the collier to attend to injured and trapped crew.



Fig. 4 PLA Salvage Vessel representing the burning petroleum barge is boarded by the Fire Brigade unit who used foam in fire fighting. Background is the Blackwall Point Jetty of South Eastern Gas Board close to which the barge had drifted after collision. (PLA, May 1974)

Docks Board Feature Article

The Changing Face of Fleetwood

British Transport Docks Board

London, 8 April:- Changes during the last twenty years in methods of cargo handling and transportation have given special opportunities to Britain's smaller ports. Nowhere is this change more apparent than at the port of Fleetwood where the exciting developments which have taken place during 1973 have changed the role of Fleetwood from being solely one of the country's major fishing ports to also being an important base for unit load traffic to Ireland.

The first step in this direction was taken in April 1973 when a daily container service to the Irish ports of Drogheda and Larne was introduced by Ferrymasters (Ireland) Limited, a wholly-owned subsidiary of the P and O Group. A new terminal has been provided on the west side of Fleetwood's Wyre Dock and containers are handled by a 25-tonne Scotch derrick crane.

This new container service has already had considerable impact on Fleetwood's trading position. Trade statistics for 1973 recently issued by the British Transport Docks Board, the port authority, reveal that Fleetwood handled well over half a million tonnes of trade compared with only 374,716 tonnes in 1972. This 43 per cent increase was almost all accounted for by the new container service.

The next stage in transforming Fleetwood into a unit load port occurred in August when the Docks Board announced that the first roll-on/roll-off terminal was to be built at the port. A contract worth in the region of \pounds 750,000 was awarded to Harbour and General Works Limited of Morecambe for the construction of the terminal at the western side of Fleetwood Harbour in the River Wyre and is expected to be in operation early in 1975.

Vessels will lie alongside four dolphins and access will be gained by a 75 metres (246 ft.) long hinged bridge ramp approached by means of an access jetty. It is planned that two ships a day will use the berth, each vessel having a four-hour turn-round, although it would be possible for the berth to cope with four ships a day. The terminal will be used in conjunction with roll-on/roll-off services across the Irish Sea.

But the Docks Board is not content with just these developments at Fleetwood and is already planning for the next stage in the port's expansion. There is ample room for development of further container berths in Wyre Dock and for roll-on/roll-off terminals at riverside berths. Indeed, the Docks Board have announced that they are currently seeking Parliamentary powers for three more roll-on/roll-off berths on the eastern side of the dock entrance. This ambitions scheme would involve reclaiming an extensive area of marshland amounting to about 22.6 hectares (56 acres). However, it is not likely that the Docks Board bill will receive Parliamentary approval before the autumn, and if the project was then undertaken no new berth could be operating before 1976.

The very first container operation to be introduced at Fleetwood commenced in October 1970 when the Golfo

Europe-Africa

Line began a regular weekly service between Fleetwood and Bilbao. This service was established to bring in cargoes of Spanish fruit and vegetables for distribution throughout the U.K. The cargoes are carried in collapsible containers known as 'Golflat' units specially designed for speedy discharge direct to road transport. General cargo is carried on the outward journey and traffic in both directions has considerably increased since the service started, with the result that the Golfo Line has become one of the port's main users.

Another principal user is ICI who have a factory in the area and imported and exported about 52,000 tonnes of chemicals last year. Timber is regularly handled, with just over 12,000 tonnes being dealt with in 1973. A long established traffic which the port handles is sand and gravel dredged from the estuary of the River Wyre for the local building industry and which amounted to 127,000 tonnes last year.

A major trade which over the past two years has established itself at the port is the export of steel scrap to Europe. Early in 1972 the firm of Meyer Newman and Company Limited selected Fleetwood as its northern outlet on the basis of service and cost, and exported over 24,000 tonnes in 1972 and nearly 22,000 tonnes in 1973 in spite of restrictions on scrap metal exports. Once these restrictions to EEC countries are lifted, Meyer Newman are confident that exports of scrap metal will rise dramatically and are contemplating installing a fragmentation plant at Fleetwood.

The port has recently acquired other valuable additional business. Grain, which a few years ago played an important part in the port's trade, will shortly be once more arriving at the port and boosting the trading figures by quantities up to 200,000 tonnes per annum. The Docks Board propose to lease an area of land in the north-east corner of Wyre Dock to a large national grain concern to build a silo with a storage capacity of 10,000 tonnes. This silo is due to be in operation early in 1975.

Another success story for the port has been the return of the steamer link between Fleetwood and the Isle of Man. Passenger sailings began again at the end of 1971 after a lapse of ten years. Since then more and more people have used the port as the first stepping stone to a holiday -59,000 passengers in 1972 and nearly 71,000 passengers in 1973 were carried on the 58 sailings in each direction during the summer season.

The terminal used by the Isle of Man service is being extended by the Docks Board by an additional 30 metres (98 ft.) in readiness for the 1974 season beginning at the end of May, and not less than 65 sailings in each direction are planned during the season.

This route is becoming so popular that the Isle of Man Steam Packet Company hope to introduce a car carrying vessel on to the service for the 1976 season.

It is, however, as a fishing port that Fleetwood has become a household name. During 1973 total landings for the near, middle and distant water fleets amounted to 40,000 tonnes - just over seven per cent of the port's total trade. In addition some 39,000 tonnes of ice was supplied to the fishing fleets.

The present fish dock facilities at Fleetwood are sadly out-of-date and not equipped to deal as efficiently as possible with today's highly sophisticated trawlers and methods of distribution. The British Transport Docks Board have, therefore, an ambitious scheme in hand to modernise the Fish Docks at the port.

The project involves the reconstruction of the quay wall on the south side of the Fish Dock and rebuilding of the fish market. The front section of the new market will be for the display and sale of fish, while in the rear section processing halls will be provided for the fish merchants. Land at the rear of the market will be paved and roads resurfaced and re-aligned. The work will be carried out in two phases so that the normal business of the fishing industry can continue.

The scheme, which has been agreed between the Docks Board, the Fleetwood Fishing Vessel Owners' Association and the Fleetwood Fish Merchants' Association, will cost in the region of $\pounds750,000$ and a Government grant towards the cost of the works has been approved. When completed Fleetwood will have one of the most modern and efficient fish docks in the country, which will greatly benefit the fishing industry.

The contract for the project has been awarded to Harbour and General Works Limited of Morecambe. Work on the first phase of re-developing the fish market began early in April and the new market is expected to be operational by Easter 1975.

In addition the reconstruction of the two slipways in the Fish Docks is planned. It is proposed to renew the carriage of No. 1 slipway and to completely rebuild the whole of No. 2. The capacity of the No. 2 slipway will be increased so that vessels up to 1,050 d.w.t. can be handled on both slipways which are used by fishing and commercial vessels.

The port also has a thriving inshore fishing industry whose yearly catch accounts for ten per cent of the port's fish landings. The size of the inshore fleet has been growing rapidly in recent years, and in 1972 the Docks Board provided a new base at Jubilee Quay for use by the full-time inshore fishing fleet based at the port. However, in only two years this new facility has proved inadequate in view of the fleet's further rapid expansion, and plans are already in hand to extend Jubilee Quay by a further 91 metres (300 ft.)

There is, however, one cloud on the horizon as a result of all the extra trade which is being generated, and that is communication. But the M6 is only 20 miles away, and when the M55 linking Blackpool with the M6 is completed early in 1975 the motorway will be only 12 miles from the port. Considerable improvements of the existing roads between the M55 and Fleetwood are currently either under construction or consideration.

Fleetwood has indeed become the boom town of the Fylde coast during 1973 - new trade, new developments, new projects for the future, all coupled with the port's existing good reputation should make the port the boom town for at least the decade to come.

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Copenhagen— Denmark's Largest Port

Port of Copenhagen Authority

Copenhagen, 20 March, 1974:- The Port of Copenhagen is Denmark's largest port with its 12.3 mill. tons in goods turnover in 1973. The Port of Copenhagen is recognized as a base port by most of the shipping lines plying routes between North European and overseas destinations. This fact is considered most advantageous to exporters and importers using the port.

The navigational conditions for ships approaching the Port of Copenhagen are excellent and these together with the Danish Decca Network and the fact that there are no differences in tidal levels make the port navigable both by day and night the whole year round.

All cargo types are seen in Copenhagen. Oil imports are the most important item in the statistics reflected by the more than 6.6 mill. tons of liquid fuel handled annually through the Oil Harbours. Our port has no refinery, but yet the turnover has shown a steady upward trend for years.

Of course the Port of Copenhagen do also receive other types of bulk cargo, e.g. large cargoes of soya beans etc., etc.

The container traffic shows again an increase in the number of containers handled. The figures for 1973 reached a total of 46,512 20' units or 5.6% on 1972 figures. The main container terminals are as follows:

The container terminal at the Levant Quay, operated by the Free Port of Copenhagen Co., Ltd., has a total area of about 50,000 sq.m. with possibilities of extending the nearby prepared area according to the rising demand for space. The Levant Quay has a total length of 665 m, 500 m with a depth of 10 m and a depth of 7 m for the remaining 165 m. The latter stretch is used for general cargo and ro/ro vessels. Handling is by a container crane of 32 tons and by one luffing crane of 50 tons. Another 32-ton container crane will be in use about 1/5 1974. Four Clarck straddle carriers and one forklift truck are taking care of ground handling. Consolidation is in a warehouse of 4,600 sq.m.

Deep-sea services by Johnson/Scanstar; short-sea by Broströms Tender Service, Seatrain, Koninklijke Nederlandsche Stoomboot-Mij and Scandinavian Traffic GmbH & Co. K.G.



The Copenhagen Free Port Container Terminal.

Europe-Africa



The Container Terminal in Ferry Port Nord.

The container terminal at Kalkbraenderiløbskaj, operated by the Car Ferry Terminal Ltd., has marshalling area of 15,200 sq.m. The terminal has a quay length of 135 m and a depth of 6.7 m. Roll-on/roll-off facilities. Handling is by a container crane of 25 tons and one 30-ton LMV forklift truck. Consolidation is in a 2,000 sq.m. large warehouse.

Short-sea services by Svea Line Syd AB, Russian Steamship Line, Trans-Nordic Line, Bugsier and Ibesca Container Line (Dart).

Japanese, British and French car manufacturers today consider the Port of Copenhagen as the distribution centre of their cars to the entire Scandinavia. The number of imported cars is steadily rising, thus 29,855 automobiles were handled in the Free Port, and 35,294 automobiles were handled in the Ferry Port Nord area, totalling to 65,149 automobiles in 1973.

Furthermore General Motors has decided to transfer a considerable part of their production of assembling Opel cars to Copenhagen and that exportation shall take place through the Port of Copenhagen. This means that in the years to come, cars assembled in Denmark will be exported to Finland, Sweden, Norway and possibly also to other countries. As a start figures of 25-30,000 automobiles per year have been mentioned, rising to 60-70,000 annually in a couple of years. An additional increase to about 110-125,000 units per year can be expected. General Motors has made agreement with the Car Ferry Terminal about the handling of this export.

The commercial advantages of having a free port area are evident and these combined with the full range of facilities the Copenhagen Free Port has, makes it the ideal transit center for distribution of goods to major destinations in Scandinavia and in the Baltic.

The fact that Denmark has joined the Common Market is expected to add much to the annual goods turnover in our port. Copenhagen is, compared with ports in Northern Europe, a port with cheap rates, and to illustrate this statement we give you below two examples of disbursements accounts.

Example 1.

Port of discharging	:	
Size of vessel	:	
Cargo discharged	:	

Copenhagen 1300 NRT Full cargo of trailers



Roll-on/roll-off in Ferry Port Nord.

When discharging	:	August, 1973		
Time in port	:	1 da	1 day.	
•	Disb	ursements		
Light Dues			Dkr.	0
Official Harbour Dues			-	585
Pilotage			-	900
Boatmen			-	320
Customs Overtime Charges			-	100
Cost of Discharging (fee)			-	0
Agency Charges (as per agreement)			-	1,425
Other Expenses			-	100
Total			Dkr.	3,430
Average expenses p	er NRT:	Dkr. 2.64.		

Example 2.

Example 2.					
Port of discharging	:	Copenhagen			
Size of vessel	:	3500 NRT			
Cargo discharged	:	1000 tons ger	neral cargo		
When discharging	:	August, 1973			
Time in port	:	2 days.			
Disbursements					
Light Dues		Dkr.	0		
Official harbour Du	es		1,575		
Pilotage		-	1,600		
Boatmen		-	570		
Towage		-	6,900		
Customs Charges		· -	300		
Cost of Discharging	(fee)	-	0		
Agency Charges		-	2,275		
Other Expenses		-	150		
Total		Dkr.	13,370		
Average Expenses p	er NRT: Dkr. 3	3.82.			

The port is continuously being extended and several projects are currently in hand, first and foremost in the Northern part of the port and at the Oil Harbour. In future it may be expected that much more land will be reclaimed in order to establish new harbour areas and to extend already existing sections to give even better access to the port.

Europe-Africa



Port of Le Havre-Antifer

Le Havre (Port of Le Havre):-Progressively, at the foot of the cliffs of St Jouin Bruneval, the oil terminal of Antifer starts to take shape. (State of the works the 15th May).

- The back-land at the foot of the cliffs is practically finished (33 ha by 35)
- The principal breakwater, which will be 3520 m out to sea, is nearly one kilometer long
- The service port, which will be used in the 1st phase by hoppers and in the operation of the port, by vessels



annexed to the navigation (pilot-boats, tugs, port pilots) is finished.

- The construction of the first reservoir of 150,000 m³ will be started next June.
- Between the Port of Le Havre-Antifer and the actual oil port of Le Havre, the first pipe-line elements are being installed. This pipe-line will link the new oil port to the reservoirs of the Compagnie Industrielle Maritime who are concessionaires to the Port of Le Havre.
- The volume of the materials dredged up to date have reached about $11 \text{ million } m^3$ out of the 30 million to be dredged.





HONG KONG --- WORLD WAREHOUSE

More than 22,000 tons of cargo come to the British Crown Colony of Hong Kong each day, making it one of the most important trading ports in the Far East. Although Hong Kong is strongly Westernised in its industrial and commercial ways of life, the waterfront remains for ever a part of the true Orient. This is especially so of a mile-long stretch at the Western tip of Hong Kong Island called the Western Praya. The Praya — it is a Portuguese word meaning quayside — is peopled by Chinese waterfront workers who have made their own way of life and are

"Ports of Gujarat"

A book titled "The Ports of Gujarat," giving details of services and charges at ports of the State of Gujarat on the west coast of India, was published in February this year in a 120-page, 150×230 mm. hard cover book (3rd edition, revised) by The Kandla Commercial Publications, Adipur (Kandla-India), at a price of Rs. 25.00 per copy. Foreword by Capt. D. V. Singh, Chairman, Kandla Port Trust, is quoted below.

"Gujarat State has the longest coastline of 1600 KM out of India's total coastline of 5345 KM and has got 41 working Ports including the Major Port of Kandla out of 126 working ports in India."

"Shri Satkartar Batra published the first edition of the

determined to stick to it. There are men, their muscled arms sinewed and knotted, who can hoist a 200 pound crate on their shoulders as if it were an empty box. And there are men who, when the day's work is done, will willingly gamble their day's wages on the fall of a mahjong card.

PICTURED: Junks and lighters bringing ashore produce from every corner of the world. Goods are either forwarded immediately to importers or stored in warehouses on the Western Praya waterfront. (Hong Kong Government Information Services)

book 'Ports of Gujarat' in April 1963, the second edition in December 1968 which were useful to the Shipping interests. He is now bringing out the 3rd edition to incorporate all the facts and figures upto date."

"This book which contains much valuable information for shipping interests regarding such vital matters as the geographical conditions, navigational facilities, storage accommodation, port charges and other relevant data of importance to the shipping industry will no doubt prove very helpful to the shipping interests and to port authorities, and Shri Batra is to be thanked for taking so much interest in compiling information pertaining to ports and shipping."

"I have no doubt his book will have a wide circulation and prove very useful to whosoever wants information about the Gujarat Ports."



Kobe:-Bird's eye view of the Port Island, the Port and the City of Kobe (Port of Kobe Information Center, Port & Harbor Bureau, Kobe City Government).

Melbourne delegates to Antwerp

Melbourne Harbor Trust Port Gazette, May 1974):-The Secretary of the Melbourne Harbor Trust, Mr. K. R. Trueman, and the Principal Construction Engineer, Mr. R. P. Alexander, will represent the Trust at the sixth International Harbour Congress to be held in Antwerp from 12th to 19th May.

At least 50 countries representing more than 84 Port Authorities and many Industries are expected to participate in the congress, which was last held in 1968.

A wide variety of papers will be presented and because of the spread of subjects which cover Technical and Administrative matters, relative to the activities of the Port of Melbourne the presence of two of the Trust's top officers would be beneficial to the Trust.

Some of the papers that will be presented and discussed at the Congress are:

- Geology and soil mechanics in Harbour construction.
- Hydraulic engineering in Harbours and offshore (infrastructure).
- Civil Engineering in Harbours.
- Harbour appliances and Harbour equipment.
- Safety devices and safety measures in Harbours, including protection of the environment.
- Handling, carriage and storage of goods.
- Management problems of Harbours in relation to evolution of maritime or Harbour traffic.
- Different types of Harbour administration in connection with area extensions of Harbours.
- Economical, social, political and juridical aspects.
- The infuence of Harbour infrastructure or Harbour dues or the problems concerning the covering of expenses with Harbour extensions.
- Harbour dues (taxes, contributions) on the container (Continued on Page 46)

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(Continued from Page 44)

and other cargo in the shape of unit loads.

- The economical and social aspects of increasing mechanization in Harbours.
- The growing use of electronic calculating machines as an aid to Harbour management.
- The use of electronic calculating machines or computers and other ways of simulation in planning and operation of container handling or facilities.

Both Mr. Trueman and Mr. Alexander will also visit and inspect leading overseas Ports in the United Kingdom, Europe, United States, Japan and Hong Kong, before returning to Melbourne after being away for six to seven weeks.

Container warehouse first in the world

Hong Kong (Hong Kong Trader, February 1974):-A revolutionary container warehouse – the first of its kind in the world – was opened in Tsuen Wan, one of Hong Kong's major industrial areas, in January.

The container warehouse is owned by The Hongkong & Kowloon Wharf & Godown Company Limited.

Its unique features are two specially designed Demag container hoists which are capable of lifting containers of any length between 20 ft. and 40 ft. to all levels of the building.

The hoists were developed jointly by Kowloon Wharf and Demag of West Germany, and are able to lift maximum all-up weights of 30 long tons. They are believed to be the first of their kind in the world. With a total covered floor area for cargo storage of 415,000 sq. ft., the mammoth 12-storey godown has been specially designed to provide the most modern and complete storage facilities for container and break-bulk cargoes moving into Hong Kong.

Each of the ten upper floors of the godown has two container lobbies, capable of taking four containers up to 40 ft. long at any one time.

The unique system of positioning containers on upper floors by hoists is an historic "first" for Hong Kong and was developed as a means of maximising the space available for cargo storage.

For break - bulk cargo the godown is equipped with 12 1.2-ton gantry hoists along the sides of the building - each with a maximum speed of 150 feet per minute.

On the ground floor is a huge area of almost 65,000 sq. ft., for cargo working, vehicle parking, and receipt, delivery, loading and unloading of containers and breakbulk cargo.

The building is fully protected by an automatic sprinkler system to F.O.C. (Fire Officers' Committee) standards, and maximum protection is assured by Kowloon Wharf's own fire service department which operates 24 hours a day.

Other features exclusive to the godown include:

*Special electrical installations to permit sections of the building to be converted to cold stores, airconditioned stores or dehumidified areas.

Town gas availability on any floor should there be a demand for the setting-up of laboratories or bottle-washing plants.



The Royal Yacht Britannia rounds Marsden Point in Port Whangarei, New Zealand, escorted by two N.Z. Navy fisheries protection vessels and tugs of the Northland Harbour Board. The Britannia was in Port Whangarei in February to embark members of the British Royal Family who had flown to Whangarei for an official visit. Queen Elizabeth, the Duke of Edinburgh, the Prince of Wales, Princess Anne And her husband, Captain Mark Phillips, attended the 10th Commonwealth Games in New Zealand and their visit to the northern part of the country included the celebration on February 6 of New Zealand's National Day at Waitangi in the Bay of Islands. (Photo by Derek Messenger, Whangarei)

Lyttleton

(Continued from Contents Page)

The photograph was taken on the 30th January during the Commonwealth Games held in Christchurch when there were 20 vessels in port with a record tonnage for vessels berthed of 142, 672 gross tons.

In addition to 2 cruise liners and five warships the Royal Yacht "BRITANNIA" is shown berthed in the Inner Harbour where she served as the royal residence for Her Majesty Queen Elizabeth II during the Games.

The Lyttelton Harbour Board has an application before the N.Z. Ports Authority for permission to purchase a container crane to equip the new berth on completion for full container handling.

The port's maximum draft has recently been increased to 37 feet making it one of the deepest ports in the country while the largest container vessels of over 900 feet in length and unrestricted beam contemplated for the N.Z. trade could be handled now as the deepened straight channel is free of any navigational problems.



Port Checking Post (Bangkok, Port Authority of Thailand)



Bangkok, Thailand, March 22 (Port Authority of Thailand):-The East Quay Project, the construction of the quay wall eastward of the present wharf at the mouth of Prakhanong Canal, is under construction on the approval of the cabinet on June 28, 1966.

The construction work consists of 2 parts:

The first part construction of 4 berths, started on May 1, 1972, is scheduled to be completed within 160 weeks or by May 25, 1975.

The construction of the first part consists of:

- deep water quay of 789 meters long
- lighter quay of 288 meters long
- two transit sheds each of 10,500 square meters
- open storage area of 63,000 square meters

- heavy load area of 4,800 square meters

This includes road, railway, road bridge, checking post and all necessary facilities for cargo handling and transportation.

The second part construction consists of another 2 berths of 451 meters long and storage area of 35,400 square meters.

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Push-Button Container Terminal by MITSUI-PACECO



The Dawn of A New Generation of Portainers $^{\mathbb{R}}$ and Transtainers $^{\mathbb{R}}$

Containerization is now being exploded widely, and containers must be handled quickly, safely and inexpensively.

Key to solution are high speed, reliability and automation of MITSUI-PACECO portainer, shoreside container handling crane. Mitsui is leading this field and challenging tomorrow. Volume of containers is increased largely in the terminal, and keenly demanded are systematization, computerization and automation.

MITSUI is developing one answer and that is push button container terminal system. MITSUI/PACECO automated and computerized Long-span Rail-mounted Transtainer and Rail-car System will materialize most efficient terminal operation, benefitting terminal operation, shipping line and all others



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