

PORTS *and* HARBORS

DECEMBER 1964

Vol. 9 No. 4



THE PORT OF MELBOURNE

INTERPORTS '65
10-14 MAY 1965
LONDON

FOURTH CONFERENCE
INTERNATIONAL ASSOCIATION
OF
PORTS AND HARBORS

THE INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS

Introducing The Crests of Ports

(Each Issue One Port)

THE PORT OF MELBOURNE



For more than 100 years passengers have been disembarking from ships in this area of the Port of Melbourne. The pier above is Station Pier, the main passenger terminal of the port, and alongside are four passenger ships, including P. & O. Orient Line's 40,000 ton "Oriana."

THE INTERNATIONAL ASSOCIATION OF PORT AND HARBORS

OBJECTS AND PURPOSES

(Per Article 3 of Constitution)

The objects and purposes of this Association shall be:

(a) To associate its members from all countries together in the common cause of mutual international friendship and understanding;

(b) To exchange information relative to port and harbor organization, administration, management, development, operation and promotion;

(c) To encourage, develop and promote waterborne commerce to and from all world ports and harbors; and

(d) To encourage the standardization and simplification of procedure governing imports and exports and the clearance of vessels in international trade:—
thereby promoting the peace in the world and the welfare of mankind.

UNDERTAKINGS

(Per Article 3 of Constitution)

This Association shall carry out the following undertakings in order to accomplish the objects and purposes specified in the foregoing Article:

(a) The holding of conferences of the International Association of Ports and Harbors as provided in the By-Laws;

(b) The publication of the minutes of Conferences, an official Association journal or other publication and other special publications concerning ports and harbors, as may be authorized by this Association;

(c) The establishment of relations with other international organizations, associations and agencies on matters of mutual international interest concerning ports and harbors;

(d) The establishment of a center or centers for the collection, tabulation and distribution of information concerning ports and harbors from throughout the world for the benefit of members of this Association and other interested persons:

(e) The dissemination to ports and harbors, and governmental agencies and private operators thereof, of the accomplishments of this Association as expressed in resolutions, bills, reports of committees, and the published proceedings thereof;

(f) The establishment of committees from among the membership of this Association for reference purposes of members engaging in the organization, administration, development, operation, utilization, management or promotion of ports, harbors and other waterfront facilities;

(g) The assumption of other undertakings necessary to effectuate and realize the objects and purposes of this Association.

PORTS and HARBORS

PORTS AND HARBORS is quarterly published by the Central Secretariat of the International Association of Ports and Harbors as an official journal of the Association, to provide its members with information concerning port and harbor development in the world.

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THE INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS

President

John P. Davis

Commissioner

Board of Commissioners of the
Port of Long Beach, Calif., U.S.A.

Chief of the Central Secretariat

Gaku Matsumoto

Editor: Kenzo Matsuo

Published by

The Central Secretariat of the International
Association of Ports and Harbors

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The International Association of Ports and Harbors

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First Vice-President Dr. Chujiro Haraguchi Mayor, City of Kobe Japan	Chief of the Central Secretariat Mr. Gaku Matsumoto Honorary President, Japan Port and Harbor Association, Tokyo, Japan

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(Continued on page 28)

INTERPORTS '65

CONFERENCE PROCEDURE & PROGRAMME

Monday, May 10	Registration at Dubarry Suite,	
9.30— 5.00	Cafe Royal	
12.30	Lunch (Board and Conference Staff only)	
2.30	Board Meeting	
Tuesday, May 11	Official Opening	
9.45—10.10		
10.15—11.00	Address by Conference Chairman	
11.00—11.25	Coffee	
11.30—12.30	Dr. Chujiro Haraguchi	Development of regions to bring prosperity to ports
12.30	*Lunch	
Wednesday, May 12	Mr. Dudley Perkins	Port Management
9.30—10.30		
10.30—10.50	Coffee	
10.55—11.40	Mr. Howard Mann	The relative merits of private, state and civic ownership of ports
11.45—12.30	Mr. V. G. Swanson	The role of the port authority in the changing pattern of cargo movement on the Australian coast
12.30	Lunch	
2.30— 3.30	Mr. Austin J. Tobin	A port's foreign representative—what is his field?
3.30— 3.55	Tea	
4.00— 5.00	Sir Andrew Crichton	The relationship between all those engaged in a port and their employers
Thursday, May 13	Sir Donald Anderson	What does the user expect from a port authority?
9.30—10.30		
10.30—10.55	Coffee	
11.00—12.15	The Rt. Hon. Lord Rochdale	The constitution and functions of the National Ports Council
12.30	*Lunch—excepting those on Thames Navigation Service visit	
Friday, May 14	Mr. E. H. Simoes	The role of the port in a developing economy
9.30—10.30		
10.30—10.50	Coffee	
10.55—11.40	Captain Stig Axelson	Big ports, small ports—what are their respective roles?
11.45—12.30	Dr. Heinz Kaufmann	The economic importance of a free port
12.30	*Lunch	
2.30— 3.30	Closing Session	
3.30	Tea	
4.00	Board Meeting	

N.B. *denotes functions to which both delegates and their ladies are invited
†denotes ladies programme

TOURS, SOCIAL & LADIES PROGRAMME

Monday, May 10	*Reception at Port of London Authority, Trinity Square, London E. C. 3
6.00— 8.00	
Tuesday, May 11	*General tour of the Port of London by river
2.00— 7.00	Free evening
Wednesday, May 12	†Visit to Hampton Court and Windsor Castle by coach (includes lunch)
10.30— 4.30	
10.00— 6.00	†Visit to Woburn Abbey by coach (includes lunch)
8.30—11.30	*Reception by Lord Mayor of London at Guildhall, City of London, E. C. 2 (formal dress)
Thursday, May 13	†Visits by coach limited to separate parties of 20 ladies, to:
10.00—12 noon	1. Cutler Street Warchouses
	2. Silver Vaults
	3. Antique Supermarket
	4. Her Majesty The Queen's Art Exhibition (Royal News)
	5. Royal Academy
12.15— 6.30	Visit by river to Thames Navigation Service, Gravesend (limited to 60 delegates)— buffet lunch)
2.30— 6.30	Visit by coach Tilbury Docks (limited to 60 delegates)
2.30— 5.00	Visit by coach to London Docks—Wine vaults and bulk wine storage (limited to 30 delegates)
2.30— 5.00	Visit by coach to Surrey Commercial Docks—Timber storage (limited to 30 delegates)
2.30— 5.00	Visit by coach to West India and Millwall Docks—New general cargo development (limited to 30 delegates)
2.30— 5.00	*Visit by coach to Westminster Abbey and Houses of Parliament
2.30— 5.00	*Visit by coach to the City
7.45 for 8.15	*Banquet at the Savoy Hotel (formal dress)
Friday, May 14	†Free morning

N.B. *denotes functions to which both delegates and their ladies are invited
†denotes ladies programme

CONFERENCE SPEAKERS AND THEIR PAPERS

Dr. Chujiro Haraguchi, Mayor, City of Kobe	Development of regions to bring prosperity to ports
Mr. Dudley Perkins, General Manager, Port of London Authority	Port Management
Mr. Howard Mann, Chairman, Canadian National Harbours Board	The relative merits of private, state and civic ownership of ports
Mr. V. G. Swanson, Chairman, Melbourne Harbor Trust Commissioners	The role of the port authority in the changing pattern of cargo mo- vement on the Australian coast
Mr. Austin J. Tobin, Executive Director, Port of New York Authority	A port's foreign representative — what is his field?
Sir Andrew Crichton, Managing Director, Peninsular and Oriental Steam Navigation Company	The relationship between all those engaged in a port and their em- ployers
Sir Donald Anderson, Chairman, , Peninsular and Oriental Steam Navigation Company	What does the user expect from a port authority?
The Rt. Hon. Lord Rochdale, Chairman, National Ports Council	The constitution and functions of the National Ports Council
Mr. E. H. Simoes, General Manager, Bombay Port Trust	The role of the port in a develop- ing economy
Captain Stig Axelson, General Manager, Port of Gothenburg	Big ports, small ports—what are their respective roles?
Dr. Heinz Kaufmann, Manager, Authority for Harbour and Shipping, Hamburg	The economic importance of a free port

From The Central Secretariat

By **Gaku Matsumoto**
Chief of the Central Secretariat
I.A.P.H.

Meeting by Correspondence of Board of Directors

In accordance with the provision of Sec. 39, Article IX of the By-Laws, a meeting by correspondence of the Board of Directors was called on November 20 under authorization of President John P. Davis, with December 19, 1964 as the voting date, to approve the election of all 19 applicants to the membership as follows:

REGULAR MEMBERS

Port of Bristol Authority, England
Tees Conservancy Commissioners, Middlesbrough, England
Port of Stockholm Authority, Sweden
Nigerian Ports Authority, Lagos, Nigeria
Marine Department, Hong Kong
Handa City, Aichi Prefecture, Japan

CORPORATE SUPPORTING MEMBERS

Department of Harbours and Marine, Brisbane, Australia
Koppel Bros., Inc., Long Beach, Calif., U.S.A.
Chisui Kogyo Co., Ltd., Osaka, Japan
Tokai Co., Ltd., Nagoya, Japan
Mitsui Real Estate Co., Ltd., Tokyo, Japan
Giken Kogyo Co., Ltd., Tokyo, Japan
Shipping & Trade News, Tokyo, Japan
Taisho Marine and Fire Insurance Co., Ltd., Tokyo, Japan
Saeki Kensetsu Kogyo Co., Ltd., Osaka, Japan
Wellington Harbour Board, Wellington, New Zealand
East African Railways and Harbours, Mombasa, Kenya

INDIVIDUAL SUPPORTING MEMBER

Mr. Andre Pages, Bordeaux, France

Appointment of Standing Committees

In accordance with the lists of candidates recommended by the directors of the member countries, our President appointed 12 members of No. 1 Standing

No. 1 STANDING COMMITTEE

** Chairman
* Vice-Chairman

Members

** Mr. Charles L. Vickers ,
General Manager
Port of Long Beach

Mr. Carlos Castillo
Acting Chief, Div. of Ports & Harbors, Bureau of Public Works, Department of Public Works & Communciations

Mr. Hu King-fin
Superintendent, Dock Dept.
Keelung Harbor Bureau

Mr. Luis Adolfo Pinto Salinas
Chief, Technic & Static Div.
General Administration
Autoridad Portunaria del Callao

Mr. Nobuo Tsuchihashi
Director, Port & Harbor Bureau
City of Yokohama

Mr. Kozo Yomoda
Director, Port & Harbor Bureau
Kobe City Hall

Mr. I. Ziv
Head of Organization & Procedure Division
Israel Ports Authority

Mr. Loh Heng Kee
Acting Operation Manager
The Port of Singapore Authority

Mr. A. Nallusamy
Asst. General Manager
Penang Port Commission

Mr. Rae F. Watts
Port Director
San Francisco Port Authority

Mr. Albert Lyle King
Director, Marine Terminal Dept.
The Port of New York Authority

* Mr. H. P. Meijer
Deputy Managing Director
Port of Rotterdam

Address

P.O. Box 570
Long Beach 1, Calif.
U.S.A.

Manila
Philippines

Port Building
Keelung, Taiwan
Republic of China

Terminal Maritimo
Callao, Peru

1-1, Minato-machi
Naka-ku, Yokohama
Japan

6-7, Kano-machi,
Ikuta-ku, Kobe
Japan

P.O. Box 7049
Tel-Aviv
Israel

P.O. Box 300
Singapore

P.O. Box 143
Penang

Ferry Building
San Francisco 6, Calif.
U.S.A.

11 Eighth Ave.
New York 11, N.Y.
U.S.A.

Hevnbedrijf der
Gemmente Rotterdam
Stieltjesstraat 27,
Rotterdam 20
Netheralnds

Committee (on Port Administration and Utilization), 6 members of No. 2 Standing Committee (on Commerce and International Relations) and 9 members of No. 3 Standing Committee

tee (on Cooperation with other International Organizations) at the Executive Committee Meeting of February 1964 in San Francisco. Accordingly, the Central Secretariat has conveyed their appointments to the persons concerned, who have consented to serve on the Committees.

Following the appointment of the members, the following gentlemen were appointed by our President Chairman and Vice-Chairman of the three Standing Committees:

No. 1 Standing Committee

Chairman

Mr. Charles L. Vickers
General Manager
Port of Long Beach

Vice-Chairman

Mr. H. P. Meijer
Deputy Managing Director
Port of Rotterdam

No. 2 Standing Committee

Chairman

Mr. W. J. Amoss
Director of the Port
New Orleans

Vice-Chairman

Mr. Wee Keng Chi
Secretary
The Port of Singapore Authority

No. 3 Standing Committee

Chairman

Mr. Hajime Sato
Director, Port and Harbor Bureau
Ministry of Transportation

Vice-Chairman

Mr. Ichizo Maeda
Vice-Administrator
Nagoya Port Authority

Visitors

Sir Leslie Ford, formerly general manager of the Port of London Authority and Chairman of the Organizing Committee of the Fourth International Conference to be held in London next May, visited the Central Secretariat on November 9 and 10 when Mr. Gaku Matsumoto, Chief of the Central Secretariat and other staff members talked with him about the preparations now steadily under way for the Conference. He left Tokyo on November 11 for

No. 2 STANDING COMMITTEE

** Chairman
* Vice-Chairman

Members

** Mr. W. J. Amoss
Director of the Port
New Orleans

Mr. John-Iwar Dahlin
General Manager
Port of Helsingborg

Mr. V. G. Swanson
Chairman
Melbourne Harbor Trust
Commissioners

Mr. Chang Shao-chow
Deputy Director
Keelung Harbor Bureau

* Mr. Wee Keng Chi
Secretary
The Port of Singapore Authority

Mr. Motoo Oka
Director, Port & Harbor Bureau
Tokyo Metropolis

Address

Board of Commissioners
of the Port of New Orleans
2 Canal Street
P.O. Box 60046
New Orleans 60, La.
U.S.A.

Hamndirektoren
Helsingborg
Sweden

29 Market Street
Melbourne, C. 1,
Victoria
Australia

Taipei
Taiwan
Republic of China

P.O. Box 300
Singapore

3-5, Marunouchi,
Chiyoda-ku, Tokyo
Japan

Kobe to talk about Conference affairs with Dr. Chujiro Haraguchi, Mayor of Kobe City and the first president of the Association who is a Conference speaker.

On October 17 Mr. G. Matsumoto, Chief of the Central Secretariat and Mr. T. Kanchi, Deputy Chief had a talk with Mr. Joseph Bishop, formerly Port Commissioner of Long Beach who was visiting Tokyo for the Olympic Games.

Permanent Council Ends Its Existence

As the result of revision of the By-Laws decided at the Executive Committee meeting held in San Francisco on February 26-27, 1964, the Permanent Council was abolished on September 14 after an existence of 9 years during which time it faithfully performed its duties as the administrative body. Its functions have been taken over by the Executive Committee.

Chief of Central Secretariat Honored

On the occasion of the Culture Day, November 3, Mr. Gaku Matsumoto, Chief of the Central Secretariat was granted a set of three silver cups by the Emperor in appreciation of the outstanding contributions he made for the development of ports and harbors.

Long Beach Is Cotton Leader

Recent figures reveal that the Port of Long Beach ranked number five in the nation as a cotton exporting terminal for the third straight year.

Also the number one cotton port on the West Coast, Long Beach handled 378,744 bales this year to take fifth spot nationally.

Long Beach has the only AA-rated port cotton warehouse to be so qualified by the Cotton Warehouse Inspection Service of Memphis. Only 12 other warehouses in the country have received this favorable classification.

No. 3 STANDING COMMITTEE

** Chairman
* Vice-Chairman

Members

Members	Address
Mr. Jan Hung-Kwei Harbor Master and Chief of Harbor Management Dept. Kaohsiung Harbor Bureau	Pong Lai Road No. 6, Kaohsiung Republic of China
Mr. Tang Sing-yi Manager, Business Dept. China Merchant Steam Navigation Co., Ltd.	48 Chungking Road South 1, Taipei Taiwan
Mr. A. Gafny Head of Economic & Commercial Department Israel Ports Authority	Tel-Aviv Israel
Mr. Ben E. Nutter Executive Director Port of Oakland	66 Jack London Square Oakland 7, Calif. U.S.A.
Mr. Thomas J. Thorley Assistant General Manager Port of Long Beach	P.O. Box 570 Long Beach 1, Calif. U.S.A.
* Mr. Ichizo Maeda Vice-Administrator Nagoya Port Authority	6-7 Minato-Honmachi Minato-ku, Nagoya Japan
** Mr. Hajime Sato Director, Port and Harbor Bureau Ministry of Transportation	1-1 Marunouchi Chiyoda-ku, Tokyo Japan
Mr. Howard A. Mann Chairman Montreal Harbours Board	180 Elgin Street Ottawa 4, Ontario Canada
Mr. Wee Keng Chi Secretary The Port of Singapore Authority	P.O. Box 300 Singapore

1. Ports and Harbors in Japan
2. Port Planning
3. Recent Trend of Port Construction
4. Recent Trend of Coastal Engineering
5. Operation Ships and Cargo Handling Machinery
6. Waterfront Area Development Project

The participants in the Seminar include:

- Mr. Ernesto Paul Peraud
Technical Director, Merchant Marine & Port Council, Argentine
- Mr. Sergio Boris Diaz
Assistant Deputy, Chilean Port Authority, Chile
- Mr. Yuan Tao
Chief, Berthing Arrangement, Harbour Master's Office, Republic of China
- Mr. Rafael Roa Suarez
Director, Engineering Division, Empresa Puertos de Colombia, Colombia
- Mr. Amir-Pasha Atefi
Chief, Port & Railways Section, Plan Organization, Iran
- Mr. Youssef Moussapour
Assistant Chief, Engineering Division, General Port & Navigation Organization, Iran
- Mr. Adel Behnam Rehani
Civil Engineer, Iraq Ports Administration, Iraq
- Mr. Jose Luis Sanchez Casco
Chief Cashier, Asuncion Port, Ministry of Finance, Paraguay
- Mr. Domingo A. Aquino
Supervising Civil Engineer II, Construction and Maintenance Branch, Philippines
- Mr. Nicolas M. Villaseñor
Senior Civil Engineer, Bureau of Public Works, Philippines
- Mr. Vitoo Dhiranetra
Wharf Superintendent, Port Authority of Thailand, Thailand
- Mr. Francisco Alfonso Lopez Ruiz
Assistant Engineer, Ministry of Public Works, Venezuela
- Mr. Md. Shamsuz-Zaman
Chief Engineer, Chittagong Port Trust, East Pakistan
- Mr. In Sup Chang
Chief, Port and Harbor Section, Bureau of Public Works, Ministry of Construction, Republic of Korea
- Mr. Rudy Fredrik Senduk
Student, Indonesian Maritime Academy, Indonesia

4th Port and Harbor Seminar

With the Japanese Government and the Overseas Technical Cooperation Agency as organizers and the Central Secretariat as coordinator, the 4th Seminar on Ports and Harbors under the Colombo Plan for Southeast Asia, the Technical Cooperation Program for Latin America, the Technical Cooperation Program for the Middle and Near East and the Technical Cooperation Program for Northeast Asia was held from November 3 through December 17, 1964 in Tokyo.

The Seminar was opened with a ceremony on November 9 for 15 participants from thirteen

countries with the attendance of Mr. S. Hirose, Administrative Vice-Minister of Transportation, Mr. A. Nishiya, Director, Economic Cooperation Bureau, Ministry of Foreign Affairs and other distinguished guests.

A welcome party was given in honor of the participants on November 16 by the International Association of Ports and Harbors and 5 other organizations.

The Seminar consists of lectures, discussions and field trips to major Japanese ports and industrial plants in Tokyo, Nagoya, Osaka, Kobe and Kyushu. The subjects of lectures are:

FORUM ON PORTS PROBLEMS

The Financial Management of a Port

Contribution by:

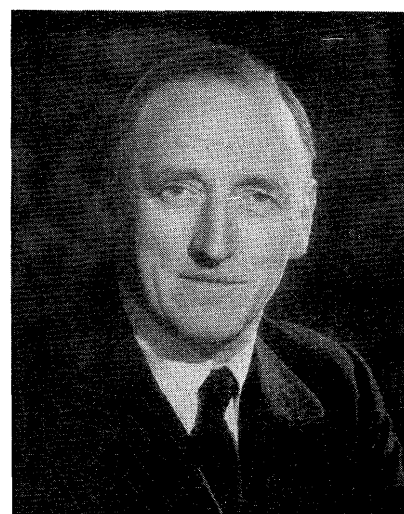
The Rt. Hon. Viscount
Simon, C. M. G.
Chairman
Port of London Authority

Through the sea-ports of the world flows the international trade on which prosperity depends, and for that reason others besides those directly involved in the administration and operation of the world's ports are concerned that they should be efficiently and economically run. It is perhaps natural that the users of the ports—exporters, importers and shipowners—should regard efficiency as the most important aim. It is not only that interruptions in the flow of traffic are costly, and can easily outweigh the short run the economic advantages obtained from sound financial policies. In many cases the true cost of port operation is masked by national policies, which result in the community as a whole—that is the taxpayer—bearing a substantial part of the cost, from which the users of the port are correspondingly relieved, and, in consequence, the latter are not made fully aware of the true cost of the facilities they demand. Different views may well be held as to the desirability of such policies, but whatever view is taken, and whatever policy is adopted, the fact remains that someone has got to bear the whole cost of constructing, maintaining and operating ports, and this undoubtedly lays upon those concerned the responsibility of seeing that funds are wisely invested, and that assets are employed to the best advantage. I

hope, therefore, that it may be of interest to readers of this publication to hear something of the outlook of port authorities in Great Britain on this problems—or at least, for I would be the last to suggest that all think alike, of our outlook in the Port of London.

Port and harbour authorities in Great Britain are many and various. They include the nationalised corporations, municipally owned and public trust ports, and ports owned by companies with equity shareholders. However, they all have one thing in common: each is required to pay its own way without receiving any subsidy direct or indirect, from national or local government. This old established concept was created and is maintained with good reason. Briefly, we believe that once subsidies are started there is no natural or logical limit to them, so that they will tend to increase as a result of political and other pressures. And just as they conceal the true state of affairs from users, so they conceal it from port management, who are thus lured to shelter behind them rather than to concentrate on improving their own efficiency.

We deem it important that responsibility and accountability should go together, for divorce of these can so easily lead to inefficient administration and to waste of resources. For example, a harbour authority, in our view, must



Lord Simon

make its own decision on such matters as dredging entrance channels, building harbour walls or docks, and then face the financial consequences of that decision in the same way as any other commercial undertaking. The harbour authority will, of course, need to raise charges to meet its expenses and this at once poses the test of economic need. Before going ahead with a major venture, a port authority must be satisfied that the traffic will be there in due course, and that users will be prepared to pay the appropriate charges to enable its proposals to stand on their own feet.

The Port of London Authority is the largest single port authority (in terms of value) of the nation's

trade. It is an independent corporation established by Act of Parliament, controlled by a Board representative of port users and important national and local bodies. It has not equity shareholders. It is required to raise sufficient by way of dues and charges to meet its expenses, ploughing back its surpluses for the benefit of the port.

The Authority obtains its capital by fixed interest bearing stock issues raised in the open market in the ordinary way. Its stocks are all quoted on the London Stock Exchange. It follows from this that the maintenance of high financial standards and a sound reputation for financial stability is a primary consideration for this Authority—for on this depends its ability to raise its capital on satisfactory terms. In this the Authority has hitherto been successful, and enjoys high investment status with its interest rates no more than $\frac{1}{4}\%$ to $\frac{1}{2}\%$ above the Government's borrowing rate for equivalent stocks. This is remarkable when it is considered that the revenues of the Authority depend entirely upon the trade of the port, with no guarantee from, or claims upon, any other public authority.

Possibly, the single most important factor in this investment status is the maintenance of annual surpluses and the avoidance of deficits, although from time to time a deficit may be incurred as it was in 1961/62. But in any event such profitability is necessary to provide a measure of self-financing to help meet our large modernisation and development programme. This brings us immediately face to face with a serious problem. What do we mean by a surplus? It is important to be clear about the accounting standards by which port authorities are required to pay their way, and this subject has been re-considered recently in this country as a result of the report of the Rochdale Committee (which was set up by the Government in 1961 to review the major ports and harbours of Great Britain and reported in 1962). One of this Committee's most important recommendations was that throughout Britain port assets should be maintained, and replaced

when worn out, out of revenue rather than by fresh capital borrowings which ought to be reserved for new development.

It can be demonstrated that in the long run it is cheaper to the users to meet the cost of renewing assets from income, and we in the Port of London Authority have welcomed this return to what is really an old and tried principle of thrift. But it does mean that we have to raise our level of profitability in order to provide adequate surpluses on our revenue account, and we plan to do this over the next three years.

The same principles which it has been decided to apply to the undertaking as a whole ought, by the same argument, to apply to individual activities undertaken by harbour authorities. These again vary considerably between one port and another, and in London the Authority engages in considerably wider activities than many ports either in Britain or elsewhere. We are, therefore, concentrating, with the aid of management accounting techniques, on the study of what operations are profitable and what are unprofitable. Some degree of cross-subsidation between one activity and another may be desirable, and, indeed, essential. But generally speaking it may be said that it is not sound business for profitable operations to subsidise unprofitable ones. For this means charging customers on profitable business more than necessary and so discouraging them, while on the other hand, the provision of loss-making facilities may stimulate the demand for them and lead to pressure upon the Authority to spend more money on increasing these unprofitable operations. It is, of course, recognised that, in the process of modernisation and development, new facilities designed to attract traffic may, in their early years, have to run at a loss. But they should not be undertaken at all unless at the end of the road a profitable future can be seen for them. For no one can say that new

and improved facilities are really required unless those who claim to require them are prepared to pay the true cost.

It may seem to some that we are setting our sights too high. It will perhaps be said that transport undertakings of any and every kind throughout the world are recognised as only marginally, if at all, profitable, requiring from time to time massive injections of public money, which are justified by the claim that they perform a public service, and an essential public service, for the community. But is this philosophy soundly based? If, when all resources—represented by installations, plant, machinery and, of course, labour—are employed to best advantage, the service required by traders costs so much a ton, there seems to me no good reason why this charge should not be demanded and paid. The burden will eventually fall back upon those who find trade profitable, whether in selling what they produce or in buying what they need, and they will decide, through the intricate mechanism of the market, whether it can be paid or not. Admittedly, there may be cases where trade which is essential to the prosperity of a community cannot in truth afford the full cost of the service it requires. But would it not be better in those circumstances to face the facts, and to meet the position by straightforward assistance to the seller or buyer rather than by a concealed subsidy in the cost of transport, which would, incidentally, benefit all and sundry whether they need special help or not?

The only purpose of ports is to provide the services necessary to facilitate the flow of sea-borne trade. This is essentially an economic matter and it is, therefore, through the sound application of economic principles that this objective can best be achieved.

Nigerian Ports Authority

Contribution by:

Ag. Secretary to the Authority

Creation:

The Nigerian Ports Authority is an autonomous public corporation created by an Act of Parliament and commenced operation on 1st April, 1955.

Duties:

(a) To provide and operate such port facilities in Lagos and Port Harcourt as appear to them best calculated to serve the public interest. (This is to be extended to the new port of Koko by the end of 1964);

(b) To maintain, improve and regulate the use of the ports of Lagos, Port Harcourt, Akassa, Bonny, Burutu, Calabar, Degema, Forcados, Koko, Sapele and Warri and the port facilities transferred to the Authority under the Ordinance, to such an extent as appears to them expedient in the public interest;

(c) To provide for the ports in (b) above, the approaches to such ports, and the territorial waters of Nigeria, such

pilotage services and such lights, marks, and other navigational services and aids as appear to them best calculated to serve the public interest;

(d) To provide and operate such other services as the Minister may require.

Policy:

(a) To secure that the annual revenues of the Authority are, taking one financial year with another, sufficient to meet all charges properly chargeable to revenue;

(b) To secure that no person is given any undue preferences or subjected to any undue disadvantages.

Organisation Structure:

(a) General Manager's Department (including Training, Establishment, Welfare and Charges).



A mobile crane loading imported cargo on to a lorry at Apapa Quay.

- (b) Secretarial Department.
- (c) Traffic Department.
- (d) Engineering Department.
- (e) Harbours Department.
- (f) Accounts Department.
- (g) Stores Department.

Cargo Facilities:

- (a) Apapa Quay (Rail and Road served)

- 1 Area—160 acres
- 2 Length—5,000 ft.
- 3 No. of Ships—9 to 10 ocean going vessels and 1 coaster.
- 4 Covered storage space—888,000 sq.ft.
- 5 Open Storage space—200,000 sq.ft.
- 6 Plant & Equipment—24 electric portal quay crane, 1-25 ton heavy lift portal quay crane, 1 gantry crane, 20 mobile cranes, 5 diesel locomotives, 26 tractors, 82 heavy duty trailers, 20 light duty trailers, 39 fork lift trucks, 15 mobile & fixed bag elevators, 2 heavy duty fork lift trucks plus a considerable quantity of other cargo handling gear.

- 7 Extension—4 additional berths (2,524 ft.) under construction with provision for container traffic.

- (b) Customs Quay (Only Road served)

- 1 Area—10 acres
- 2 Length—1,232 ft.
- 3 No. of Ships—3 ocean going vessels & 1 coaster
- 4 Covered storage space—130,000 sq.ft.
- 5 Open storage space—100,000 sq.ft.
- 6 Mechanical Equipment—Mobile cranes, fork lift trucks, four-wheeled trucks and trailers.

- (c) Port Harcourt Quay (Rail & road served)

- 1 Area—95 acres
- 2 Length—3,459 feet
- 3 No. of Ships—7 ocean going vessels & 1 coaster
- 4 Covered storage space—706,000 sq.ft.

- 5 Open Storage space—150,000 sq.ft.

- 6 Plant & Equipment—Electric portal quay cranes, 1 gantry crane, 13 mobile cranes, 3 diesel locomotives, 34 tractors, 100 heavy & light duty trailers, 24 fork lift trucks, 2 heavy duty fork lift trucks, 7 fixed & mobile bag elevators plus a large complement of other cargo handling gear.

Passenger Facilities:

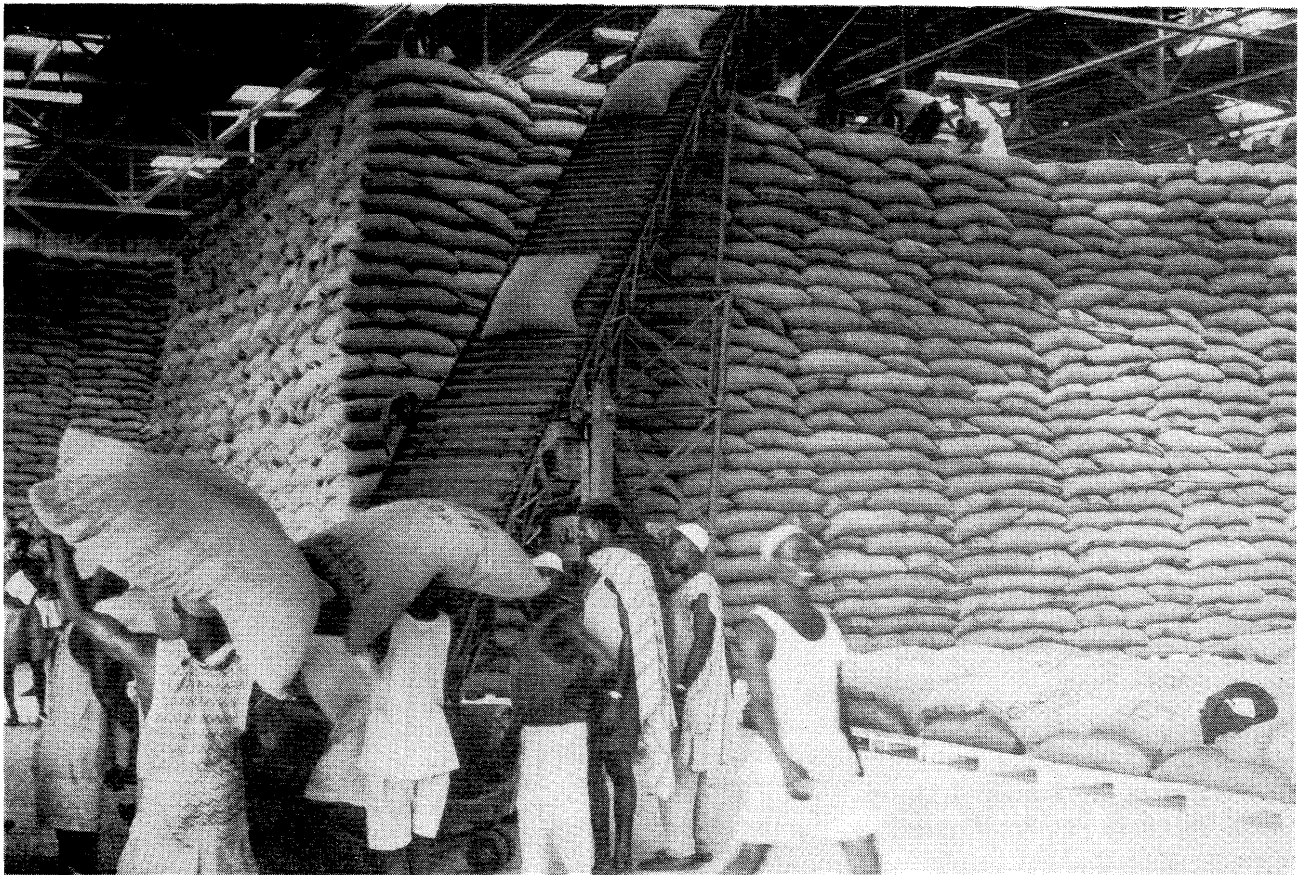
- (a) Lagos:

The Authority owns and maintains the Atlantic Terminal at No. 4 Berth, Apapa Quay, which contains a modern well furnished waiting lounge with refreshment bar, customs examination hall, immigration and port health services and special reception room for the use of VIPs.

There is a fortnightly mailboat service to Liverpool and also a scheduled French mailboat services to French ports as well as cargo/passenger



A bignal tractor hauling a load of produce on a trailer.



Mechanical stacking of produce in the Produce Warehouse, Apapa Quay.



Palletised cargo in No. 3 Transit Shed, Apapa Quay.

services to Europe, the U.S.A., the Far East and other ports of the world.

(b) Port Harcourt:

The Authority owns and maintains a hall for embarking and disembarking passengers. Unlike Lagos there are no scheduled mailboat services but regular cargo/passenger services are operated from and to the U.K. and Europe. Cargo vessels of principal shipping lines also offer passenger accommodation to the U.S.A., the Far East and other ports of the world.

The year, 1963/64 may be considered one of the most significant yet reported upon, in that an increase of a total of 10.1% tonnage has been recorded.

A pleasing feature of the year's operations has been that all days have shared in the increased tonnages. Although pride of place

must undoubtedly go to Apapa Quay where both imports and exports have improved to produce an all time record for that Quay, Port Harcourt Quay too deserves congratulations for remarkable improvement upon last year's record figure.

The trading profit amounted to £2,383,093 and after charging interest on stocks and loans amounting to £687,402, amortisation of stocks and loans (£85,145) and transfer of £700,000 to Tax Equalisation Reserve, the Net Revenue surplus for the year under review amounted to £910,546 as against £549,788 for the previous year.

The second phase of the dredging programme on the Bonny Bar to provide a channel 35 feet deep with a 650 feet bottom as commenced in November, 1963. It is expected that the project will be completed by November, 1964.

Regular surveys were carried

out throughout the year in the deep water channel with two regional surveys which covered the area of the old (non-compulsory) channel. On the 20th March, 1964, as a result of reaching a depth of 27 feet 3 inches in the new section of the channel, the buoys making the 520 feet channel were removed and replaced in their new positions which will eventually give a 35 feet deep channel.

Monthly soundings were undertaken on the Escravos Bar, and soundings were extended to cover the area being dredged since completion of the moles. A new 60 feet beacon was erected on the North shore which now enables a much better position fix to be obtained and the chart was extended to show this beacon.

Work is now proceeding satisfactorily at Apapa on the 865 feet new sheet piled wharf to provide berthing facilities for fishing craft and factory ships in 22 feet



Stacked produce awaiting shipment in the Produce Warehouse, Apapa Quay.

of water at low tide. The Dockyard end of this wharf will provide berthing facilities for the Authority's vessels requiring refit. Despite the initial difficulties arising from hidden obstructions of old wrecks, buried marine structures and metal scraps, over 500 feet of this £150,000 wharf has been completed during the year under review. The alignment of the Fisheries Wharf and Dockyard frontage Piling Project has necessitated the demolition of the old fueling jetty for the Authority's launches and other small craft, and its replacement by a new sheet piled wharf with concrete deck near No. 3 wharf, Apapa Dockyard.

Preliminary work is in progress in connection with the 100 tons synchrolift project which will replace No. 1 slipway which has been closed to make way for the Dockyard Frontage Piling Project. When commissioned, this revolutionary slipping facility will be the first of its kind in Africa.

The contract for the preliminary site investigation in connection with the proposed Tanker-

Jetty at Atlas Cover was awarded. The proposed Jetty will replace the existing Petroleum Wharf which is rapidly approaching the end of its life and has proved inadequate for present day needs.

Work progressed on the Port Harcourt Wharf Extension and apart from the rehabilitation of the Old Quay, the project of major importance commenced during the year was the construction of the new 'B' Warehouse, which is to be 400 feet long and 150 feet wide. Work was also commenced on the construction of new offices at No. 3 Transit Shed. Further steps are also being taken to improve storage facilities at the port. At the completion of 'D' Shed and the linking up of Arcon Sheds Nos. 1 and 2 there will be provision of approximately 2,700 square feet additional space.

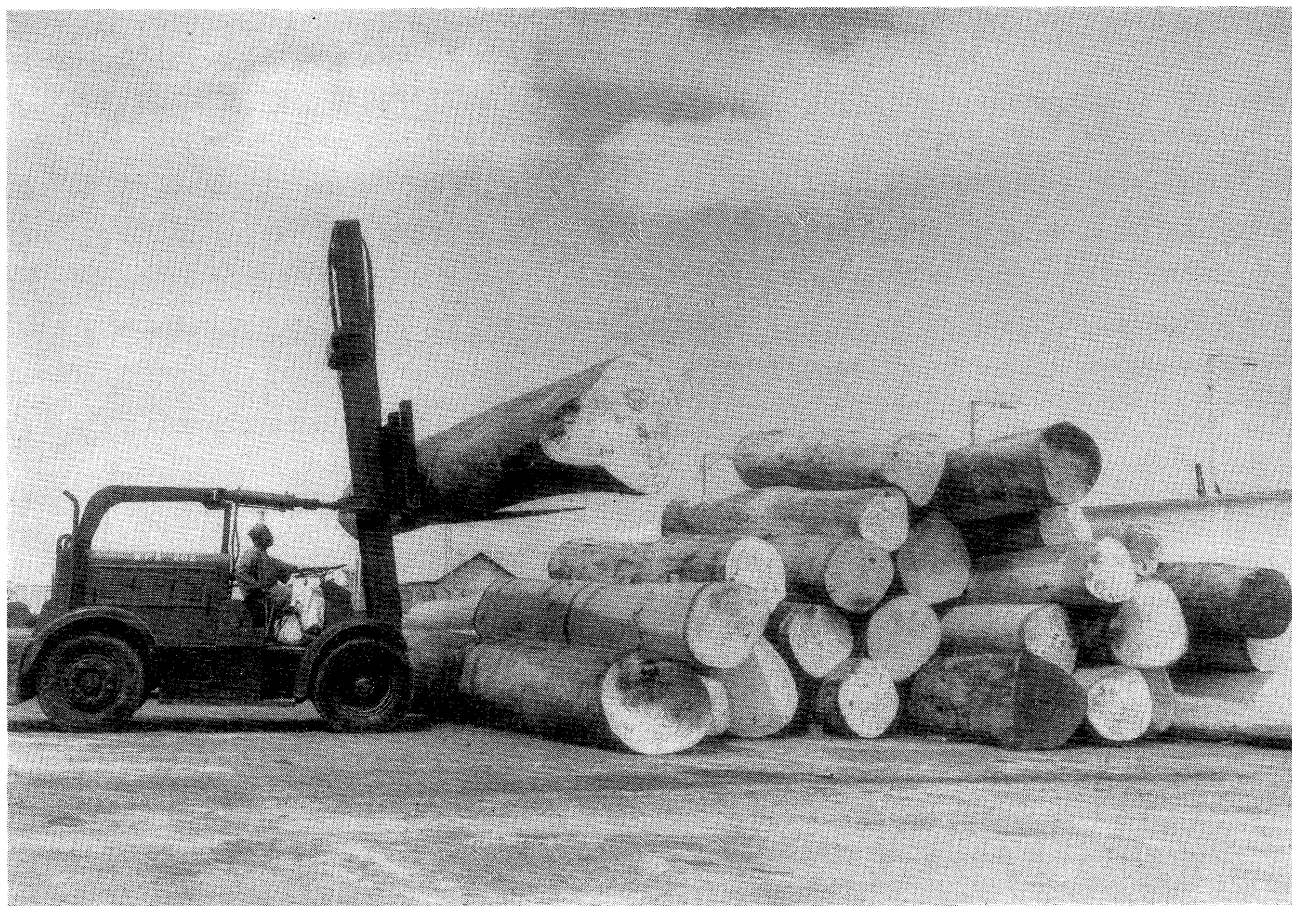
The development of the new Port of Koko which is being undertaken by the Federal Government in consultation with the Authority is in progress. This comprises one deep-water berth with ancillary building with provision for future expansion.

Training of all grades of staff continued and during the year, there were 169 trainees undergoing various forms of professional training overseas, and 1101 were being trained locally.

A Nigerian was appointed to be the General Manager in July, 1963.

The relationship between the Management and the Trade Unions was cordial. A total of 30 meetings were held with the various Unions at Management level, 4 of which were with the Nigerian Maritime Trade Union Federation. In addition there were the usual sectional consultative meetings at Heads and Local Heads of Departments levels. An important re-organisation in the administrative setup resulted in the decentralisation of the Personnel Department during the year. This had worked successfully as it has speeded up the implementation of agreement reached between the Management and the Trade Unions.

The Authority's Offices in London and Kano, Northern Nigeria continued to render valuable services to customers.



A freight lifter handling logs at Apapa Quay.

Vessel Activity By Flag—1963/64

Nationality	No. of Ships
Nigerian	238
British	1,215
Norwegian	406
Dutch	403
Liberian	392
West German	306
French	497
U.S.A.	182
Ghanaian	129
Swedish	111
Danish	88
Japanese	88
Polish	85
Italian	78
Panamanian	68
Israeli	48
Greek	41
Swiss	40
East German	37
U.S.S.R.	35
Spanish	25
Yugoslavian	19
Indian	9
Lebanese	9
Finnish	9
Camerunian	6
Irish	6
Belgian	5
Ivory Coast	4
U.A.R.	3
Chilean	1
Total	4,283



Crane discharging cargo of motor car from a berthed ship at Apapa Quay.

IMPORTS—ALL PORTS 1st April, 1963 to 31st March, 1964

PORTS	TOTAL	FROM FOREIGN			(FREIGHT TONS) FROM NIGERIA			
		TOTAL	GENERAL	BULK OIL	TOTAL	GENERAL	BULK OIL	COAL
LAGOS	2,441,251	2,286,511	1,481,004	805,507	154,740	15,483	8,918	130,339
P'HARCOURT	796,633	773,105	611,077	162,028	23,528	16,058	7,470	—
SAPELE	45,169	41,057	41,057	—	4,112	4,112	—	—
WARRI	35,862	34,831	34,831	—	1,031	29	1,002	—
BURUTU	36,854	28,703	28,703	—	8,151	1,129	7,022	—
CALABAR	21,189	16,618	16,446	172	4,571	1,039	3,532	—
BONNY	—	—	—	—	—	—	—	—
DEGEMA	30	30	30	—	—	—	—	—
TOTAL	3,376,988	3,180,855	2,213,148	967,707	196,133	37,850	27,944	130,339

ALL PORTS NUMBER OF PASSENGERS EMBARKED AND DISEMBARKED 1ST APRIL, 1963 TO 31ST MARCH, 1964

PORTS	TOTAL	DISEMBARKED			EMBARKED		
		TOTAL	CABIN	DECK	TOTAL	CABIN	DECK
LAGOS	35,821	20,055	7,687	12,368	15,766	6,680	9,086
P'HARCOURT	5,404	2,814	645	2,169	2,590	474	2,116
SAPELE	115	71	9	62	44	26	18
WARRI	46	46	1	45	—	—	—
BURUTU	19	4	2	2	15	3	12
CALABAR	28,654	13,834	399	13,435	14,820	141	14,679
BONNY	—	—	—	—	—	—	—
DEGEMA	—	—	—	—	—	—	—
TOTAL	70,059	36,824	8,743	28,081	33,235	7,324	25,911

SHIPS ENTERED : ALL PORTS - 1957/58 to 1963/64

P O R T S	1957/58		1958/59		1959/60		1960/61		1961/62		1962/63		1963/64	
	No. of	Net Reg.	No. of	Net Reg.	No. of	Net Reg.	No. of	Net Reg.	No. of	Net Reg.	No. of	Net Reg.	No. of	Net Reg.
	Ships	Tonnage	Ships	Tonnage	Ships	Tonnage	Ships	Tonnage	Ships	Tonnage	Ships	Tonnage	Ships	Tonnage
Lagos	1522	3783967	2027	4595506	2213	5010297	2126	5109271	2233	5568732	2174	5547776	2063	5912723
Port Harcourt	556	1277847	695	1799631	722	1909914	886	2545311	847	2321725	939	2639451	1084	2855597
Minor Ports :														
Sapele	354	544728	231	597549	288	655407	296	799142	276	689598	335	774369	345	865411
Warri	171	302675	131	305103	190	451843	189	449588	172	410427	187	439575	161	424929
Burutu	238	402348	228	461147	241	528550	276	558368	246	503064	159	372758	190	426622
Calabar	208	417414	215	438599	248	446205	223	414300	205	473479	178	402300	173	419732
Degema	91	250476	65	202987	94	245745	80	224717	62	142696	75	219944	40	108982
Bonny	-	-	-	-	-	-	-	-	176	1181873	198	1355870	226	3897101
Total Minor Ports	1062	1917641	870	2005385	1061	2347750	1064	2446115	1137	3401137	1132	3564816	1135	6142777
Grand Total :	3140	6979455	3592	8400522	3996	9267961	4076	10100697	4217	11291594	4245	11752043	4282	14911097

**NIGERIAN PORTS AUTHORITY
TONNAGES HANDLED - ALL QUAY : 1955/56 TO 1963/64**

(Deadweight Tons)

Y E A R	APAPA QUAY			CUSTOMS QUAY			P'HARCOURT QUAY			TOTAL		
	Import	Export	Total	Import	Export	Total	Import	Export	Total	Import	Export	G. Total
1955/56	365931	529952	895883	436564	6422	442986	276918	241854	518772	1079413	778228	1857641
1956/57	407981	630330	1038314	479635	11478	491113	331944	251743	583687	1219560	893551	2116111
1957/58	452663	545650	998313	389743	5376	395119	354453	224502	578955	1196859	775528	1972387
1958/59	483587	737003	1220590	403650	1127	404777	362574	315447	678021	1249811	1053577	2303388
1959/60	562440	672923	1235363	464186	917	465103	414824	278263	693087	1441450	952103	2393553
1760/61	684281	604902	1289183	405261	899	406160	438128	293971	732099	1527670	899772	2427442
1961/62	726610	806880	1533490	286216	1333	287549	436999	393978	830977	1449825	1202191	2652016
1962/63	683098	747458	1430556	211707	2576	214283	490991	385054	876045	1385796	1135088	2520884
1963/64	731971	894202	1626173	217241	11816	229057	477319	443024	920343	1426531	1349042	2775573

EXPORT - ALL PORTS
1st April, 1963 to 31st March, 1964

(FREIGHT TONS)

PORTS	TOTAL		TO FOREIGN			TO NIGERIA			
			GENERAL	BULK	COAL	TOTAL	GENERAL	BULK	COAL
LAGOS	1,479,243	1,397,737	1,172,489	225,248	—	81,506	20,979	60,527	—
P.H.	691,849	555,268	448,064	76,959	30,245	136,581	1,415	376	134,790
SAPELE	434,411	425,588	425,588	—	—	8,823	8,823	—	—
WARRI	104,805	104,789	104,789	—	—	16	16	—	—
BURUTU	86,304	85,964	84,185	1,779	—	340	164	176	—
CALABAR	100,931	97,117	79,475	17,644	—	3,812	450	3,362	—
BONNY	3,903,199	3,903,199	—	3,903,199	—	—	—	—	—
DEGEMA	36,118	36,118	36,118	—	—	—	—	—	—
TOTAL	6,836,860	6,605,782	2,350,708	4,224,829	30,245	231,078	31,847	64,441	134,790

NIGERIAN PORTS AUTHORITY

Principal Imports—1963/64

(Deadweight Tons)

Goods	Q U A Y S			
	APAPA	CUSTOMS	P'HARCOURT	TOTAL
Cement	204,526	27,289	139,433	371,248
Iron, Steel & Machinery	97,601	9,912	33,502	100,642
Salt	57,228	9,912	33,502	100,642
Beer, Stout, Ale, Provisions and Confectionery	40,094	18,669	20,940	79,703
Textiles	34,181	29,094	11,431	74,706
Chemical Preparations	32,496	6,345	8,007	46,848
Books & Stationery	28,292	8,183	10,023	46,498
Sugar	26,229	4,822	8,706	39,757
Total	520,647	136,328	318,969	975,944
Others	211,324	80,913	158,350	450,587
Grand Total:	731,971	217,241	477,319	1,426,531

Principal Exports—1963/64

(Deadweight Tons)

Commodities	Q U A Y S		
	APAPA	P'HARCOURT	TOTAL
Groundnuts	364,374	194,310	558,684
Palm Kernels	98,143	148,723	246,866
Cocoa	121,843	2,393	124,236
Groundnut Cake	114,173	471	114,644
Cotton Seed	44,751	28,303	73,054
Cotton Lint	27,804	14,780	42,584
Wheat Offal	20,743	—	20,743
Shea Nuts & Butter	20,714	—	20,714
Soya Beans	—	18,894	18,894
Benni Seed	306	12,942	13,248
Tin & Columbite	6,674	6,035	12,709
Total	819,525	426,851	1,246,376
Others	74,677	16,173	90,850
Customs Quay	—	—	11,816
Grand Total:	894,202	443,024	1,349,042

The Economic Value of Ports to the Areas They Serve

By :

**Dato Laksmana Haji Monamed Razalli,
S.P.M.P., J.M.N., P.J.K., J.P.**

**Cairman
Penang Port Commission**

INTRODUCTION

The extent to which a country participates in international trade measures to a large degree her economic progress. The ability to maintain and increase her exports enables a country to meet her international monetary obligations and thereby avoid balance of payment difficulties. A sound monetary base provides for economic stability. The economic strength of a country depends on a number of factors, economical, political, internal law and order, etc. The provision of good transport facilities is one of the important factors.

Sea transport remains the major mode of conveyance of commodities of world trade because of its low cost and storage facilities. Therefore, ports are of immense economic value to the areas they serve in that they are gateways for both imports and exports of the nation. The existence of a good and efficient port ensures uninterrupted flow of goods into and out of the country. The interdependence of one industry on another, of one geographical area on another and one mode of transport on another, enhances the value of the port, the pivot on which rests the inland and overseas transport of the country.

Malaysia is more important to world trade than vice versa; a large portion of her overseas income is derived from her main primary products, namely, rubber and tin. However, fluctuation in prices of these two commodities will greatly affect her economy. Malaysia is at present reducing her dependence on agricultural products by encouraging the establishment of industries. In the near future, it is hoped she will be in a position to export some of the products of her industry.

HISTORICAL BACKGROUND

The ports of Penang and Singapore owe their establishment and early development to the Anglo Dutch rivalry in South East Asia. The discovery of new trade routes, the demand for spices and the lucrative trade of the East Indies led to the establishment of trade settlements in Penang (1786) and Singapore (1819). Penang and Singapore were sufficiently close to the Spice Islands for the purpose of supplying spices to Europe.

The excellent harbours, the establishment of law and order, and the enlightened policy of free trade proved a boon to the two settlements. During the 19th century the two stations progressed as centres of a flourishing entrepot trade. Located on the main shipping route from Europe to the Far East and Australia, Penang and Singapore served as collecting centres for the products of South East Asia for the world markets.

An influx of immigrants, mainly Chinese, came to the two thriving ports to share and thereby further aid in the prosperity of the entrepot trade. Singapore and, to a lesser extent, Penang, became the main centres of trade in South East Asia rivalling and surpassing the Dutch ports of the then East Indies. The economic development of Malaya and the influx of migrant population into the country provided the two ports with the additional role of handling the exports and imports of the country.

British intervention in the Malay States in 1874, the mining of tin, and the introduction of rubber, increased the importance of the ports of Penang and Singapore.

The historic port of Malacca, dating back to the 15th century,

dominated the trade of this area up to the end of the 18th century. However, its position as a trading centre was lost to a great extent to the two flourishing ports of Penang and Singapore. Trade in Malacca continued to diminish until it came to serve own limited hinterland.

Port Swettenham was constructed in 1900 immediately after the opening of the Port Swettenham branch railway line to Kuala Lumpur. Its original object was to handle commodities such as rice, flour and sugar directly from vessels to wagons. The construction of a road link with the interior towns, especially Kuala Lumpur, and the development of central Malaya gave an impetus to the trade passing through this port. The need for improvements to the port to handle the increased tonnage was realised in the late twenties but the recession followed by World War I, prevented the implementation of further expansion. After the second world war, the port had to cope with an ever-increasing tonnage of cargo and the railway administration had to carry out 'crash' programmes to reduce the congestion and delays to ships. Four new deep water berths were commissioned recently and this has eliminated the shipping delays in the port.

After World War II, Penang and Singapore continued in their roles of the prewar years. With the passing years Malaya's balance of payment became favourable because of increase in commodity prices during the Korean War. Exports of her main products increased and so did her imports of foodstuffs, secondary products and luxury goods as the standard of living and per capita income rose. The Port of Penang and the Port of Singapore not only served Malaya but also the neighbouring countries for their exports and imports. The excellent processing and marketing facilities and the established pattern of trade provided by both these ports proved too great a lure to the traders of this region.

PORTS OF MALAYSIA

Singapore's port facilities comprise alongside deep water berths from Keppel Harbour to Tanjong

Pagar in the channel separating Pulau Blakang Mati from Singapore Island; coastal berths at Telok Ayer; anchorages on either side of the detached mole near the city (which are referred to as the Inner and Outer Roads respectively); anchorages on the seaward side of Pulau Blakang Mati and tanker berths at Pulau Bukom, Pulau Sebarok and Tanjong Penjuru. Extensive wharves with thirty or more berths for ships and godowns are available at Keppel Harbour for ocean-going and coastal vessels. There are also facilities for docking and for repairs of ships provided by six graving docks, the largest of which can accommodate vessels up to 45,000 gross tons. The deep natural anchorage of the Outer Roads is accessible to the largest ocean-going ships. The Inner Roads shelter vessels with a draught of less than 15 feet and length not exceeding 315 feet. Cargo from the roads is also handled by a large fleet of lighters and local craft operating from the Singapore River and the Telok Ayer basin.

Port Swettenham is situated at the mouth of the Klang River facing the Straits of Malacca. The old port area, consisting of three ocean berths, two coastal wharves, two lighterage wharves and seven river anchorages, was insufficient to cope with the increasing traffic of the postwar years. The four most modern new berths built at the Klang Straits, a few miles away from the old port, have increased the handling capacity of the port. The new system of operation and the mechanisation has further helped in eliminating the occasional congestions that the port used to suffer in the past.

Penang with a natural harbour is mainly a lighterage port serving Northern Malaya and the entrepot trade of Southern Burma, Siam and Northern Sumatra. The port authority in Penang is the Penang Port Commission. The Commission's facilities include a deep water wharf known as Swettenham Pier on Penang Island, two mooring buoys, Prai Wharf on the mainland for lighters, supply of fresh water, slipways to repair and service small vessels, and

godowns. Added to the facilities provided by the Port Commission are private jetties, godowns and lighters owned and operated by private enterprise.

ADMINISTRATION AND CONTROL

The three major ports of Malaya are administered by a statutory body each, but only Penang and Port Swettenham are subject to the overall control of the Central Ministry of Transport. The Port of Singapore, prior to 1st April this year, was under the jurisdiction of the Singapore Harbour Board, a Statutory Corporation constituted under the Ports Ordinance in 1913. The general control of shipping throughout the port and all shipping operations in the roads came under the Marine Department of Singapore. On 1st April 1964, "The Port of Singapore Authority" was established which takes over the responsibilities and functions of the former Singapore insofar as they concern general control of shipping in the port and all shipping operations in the Roads.

Port Swettenham, until this year, operated as part of the Malayan Railway Administration. A Port Board comprising representatives of commercial and shipping interests existed to advise the General Manager of the Railway Administration on all matters pertaining to the port. In 1964 Port Swettenham was separated from the Malayan Railway and a new authority called "Port Swettenham Authority" was formed to administer and operate the port.

The Penang Port Commission incorporated by Ordinance in 1956 exercises general responsibility for the provision of adequate and efficient port services and the control and development of the Port of Penang.

The Port of Malacca is administered by the Harbour Master who is also the Chairman of the Port Advisory Committee.

At the present time, there is a lack of co-ordination between the Malaysian ports. No machinery exists for the interchange of information and advice for the establishment of common practices and policies. The only common administrative feature of the ma-

major ports is that they are all subject to the overall control of the Ministry of Transport.

PORT FACILITIES OF MALAYSIA

Considering Malayan ports as a whole, the existing facilities are sufficient to meet the current volume of trade without difficulty, but assumption should not be made that the capacity of every port is adequate for its own trade. The Port of Singapore which has reached the rank of a major international port, has the widest margin of capacity and often offers relief to the strain occurring in the other ports. In Port Swettenham, prior to the opening of the wharves at the North Klang Straits, the maximum capacity of the port had been reached long ago with the result that delays to ships and congestion in port were a frequent occurrence. With the provision of four new berths at the North Klang Straits the port facilities have been considerably improved and the general efficiency of the port increased. In Penang there have been no delays to ships although the port is at present being used very near to its maximum capacity.

The Port of Singapore

The Port of Singapore comprises the anchorages in the Eastern and Western Roads and the wharves, both of which are now under the control of the Port of Singapore Authority. The Eastern Roads is divided into Inner and Outer Roads by a detached mole.

The anchorages in the harbour are well-sheltered. The outer roads provide a fine natural open anchorage for deep sea vessels. Here they can work their cargo to and from lighters. The Inner Roads is sheltered and separated from the Outer Roads by a detached mole. This anchorage has a depth of about 15 feet and is used by coastal vessels and small ships. A large part of goods moving to and from ships in the roads is also handled from the highly congested waters of the Singapore River and to a lesser extent the lighterage basin in Telok Ayer. There is a large fleet of privately-owned lighters and no undue complaint has been noted of

delays to ships in the Roads owing to the shortage of lighters. Both Inner and Outer Roads enjoy a substantial share of the country's trade.

The wharves lie more or less in a straight line protected from the open sea by islands. They are constructed to modern standards and are provided with transit sheds. The length of the wharves is about 14,475 feet, i.e. an accommodation for 25 ocean-going vessels and 5 coastal vessels at one time. All the wharves are available for common use on a "first come, first served" basis. This policy has enabled the Port Authority to achieve a high utilisation rate for its quayage. Over 6½ million tons of cargo pass over the wharves annually.

Berthing of vessels is carried out by the fleet of modern tugs owned by the Port Authority. Pilotage is compulsory if tugs are employed.

The port labour is an efficient force capable of achieving an average working rate ranging from 1214 tons per gang hour. Cargo working operations carried out at the wharves have been extensively mechanised. Bulk handling facilities are available for latex, gypsum, grain coconut oil and palm oil.

Fresh water is available from the wharves and in the Roads. Bunkering is undertaken on a commercial basis.

Other facilities available in the Port of Singapore are the oil installations built and maintained by the oil companies themselves, and the repair yards belonging to the Port of Singapore Authority and one or two private companies. Port of Penang

The Port of Penang is a natural sheltered harbour consisting of a two-mile stretch of water between the City of George Town on the island and the coast of Province Wellesley on the mainland of Malaya.

The facilities provided in the Port of Penang may be divided into two groups. On the one hand are the permanent port installations and lighters provided by the Penang Port Commission which exercises control of the port, and on the other hand, the private

jetties, godowns and lighters owned and operated by private enterprise.

The facilities provided by the Port Commission include a deep-water wharf known as Swettenham Pier on Penang Island for two ocean-going vessels, two mooring buoys in the Roads, lighterage and slipway and repair facilities for small vessels. On the mainland site of the harbour, the Commission operates Prai Wharf which offers loading and discharging facilities for small vessels and lighters. Besides the landing facilities provided by the Commission, there is a free public landing place at Weld Quay on the island. There are also a number of privately owned landing places at Permatang Pauh on the mainland. Goods handled by the private operators are landed or loaded over the free public landing places on Penang Island or at the privately owned landing places on the mainland. Between these two groups straight competition exists in providing port services.

Other facilities include two wharves on the mainland serving bulk fuel oil installations. An excellent supply of fresh water for ships is available all the year round.

Port Swettenham

Port Swettenham serves the central regions of Malaya where the largest consuming areas are located. It is situated at the mouth of Klang River facing the Straits of Malacca. The port is situated some 27 miles from the Federal Capital of Kuala Lumpur and is connected therewith by road and rail.

The existing facilities of the port consist of the old facilities of the port and four deep-water berths at North Klang Straits which came into operation at the end of 1963. Apart from the facilities of the North Klang Straits Wharves, there are seven deep-water anchorages, five mooring buoys, three deepwater berths, two coastal wharf berths and several lighter wharves. The port has a fleet of 84 lighters with a total capacity of about 7,000 tons. Several tank installations are erected for the storage and shipment of bulk latex, palm oil and coconut

oil. Loading of liquid cargo is by means of pumping it through overhead pipelines.

Port of Malacca

The Port of Malacca is on the south-west coast of Malaya bordering the Straits of Malacca.

Malacca is a lighterage port served by only a few ocean-going vessels which have to anchor from 1½ — 2 miles offshore and work the cargo from lighters. As the port is in the focal point of many large and valuable rubber estates, it is used to export rubber produced there. Very limited imports pass through the port on account of its limited facilities.

Communication with Inland Transport

The area of Malaysia is 130,000 square miles of which only one-fifth is developed. There are over 6,000 miles of metalled road. The principal trunk road along the west coast of Malaya runs from Singapore in the south (across the causeway) to Kangar (on the mainland) in the north. From Kangar another road leads to Padang Besar on the border of Thailand. The other trunk roads are from Port Swettenham in the west to Kuantan in the east and from Kuantan along the east coast to Kota Bahru in the north-east.

The road system of Malaya links all the main ports with the various inland towns, thus making the hinterland accessible. A large portion of imports into Malaysia is distributed to the towns in the interior. The high standard of roads and accessibility to ports contribute towards economic and efficient transport of goods by road to and from inland towns and the main ports.

An east to west trunk road from Kota Bahru on the north-east coast, through a rich mineral area and across the mountain range which runs right down the length of the country, to the west joining the existing trunk road will be constructed in the near future. This road will open up a vast area of the hinterland of north Malaya and facilitate a direct east/west route for the transport of goods in both directions as well as enhance the importance of ports on the western coast of Malaya. Products of cot-

tage industry will soon find their way to the west coast ports along a shorter and more economical route. Thus, the economic development in the eastern states of Malaya could be carried out at a faster rate than at present.

The main railway line of Malaya, which is along the west coast, is about 500 miles in length. This line runs from Singapore in the south to Prai, on the mainland opposite Penang Island, in the north. Another line from Bukit Mertajam (near Prai) goes to Padang Besar on the Thailand border and it joins up with the Thai railway system at that point. An international express passenger train service links Prai with Bangkok in Thailand.

There are branch lines linking Port Swettenham and the other minor ports of Port Dickson, Teluk Anson and Port Weld.

Another 200-mile line popularly known as the "Golden Blowpipe" from Gams in the south-west, goes through the states of Negri Sembilan, Pahang and Kelantan on the east coast to Tumpat, on the Thailand border. At this point, the east coast railway line is linked to the Thai railway system.

In Sabah, a metre gauge line of 96 miles links Jesselton on the coast with Melalap in the interior.

The railway arises from an inward trade deriving from overseas rather than from outward trade. Exports from Malaysia are mainly primary produce and imports are foodstuffs and manufactured products.

The west coast ports, which are linked to the inland towns by both road and rail, have made a great contribution towards the opening up of the country and they are now contributing to a large extent towards the development of secondary industries in the inland towns. They are gateways for imports of machinery and equipment for these infant industries and adequately serve as outlets for exports of the long established primary industries.

The extension of the railway from Prai to Butterworth, (the work is now in progress) will help to reduce the cost of transport of

goods for export through the deep water wharves now being constructed at Buiterworth.

Economic Factors affecting Ports in Malaysia

Malaysia has a population of 10.125 million and the rate of increase is approximately 2% per annum. More than half of the working population is engaged in mining and in agricultural occupations, e.g. rubber tapping, rice planting, etc. for Malaysia is predominantly an agricultural country. The increase in population leads to an increase of consumption of foodstuffs and consumer goods, a large portion of which is imported. Hence the ports, which have both road and rail connections, serve the nation with their facilities and help in the distribution of imports throughout the country.

Since 1957, the year in which the country achieved independence, the standard of living has risen. And, what used to be luxuries have become necessities to an increasing percentage of the population, e.g. imports of motor cars and motor cycles have increased over the last few years.

Diversification of industries in the form of development of secondary industries has gathered momentum due mainly to the drive for industrial development by the Government, the economic stability, expanding markets and the Government's policy of encouraging foreign investments in the private sector of the Malaysian economy. "Pioneer status" and "tax free for a limited period" are accorded to investors during the infancy of the new industries introduced by them. These inducements plus healthy economic investment conditions have, in the last few years, led to the establishment of a number of "pioneer" factories with part Malaysian capital and part foreign capital and technical assistance. Such factories are manufacturing a number of products which were formerly imported.

At present the products from these factories are mainly for home consumption but in the near future exports will be feasible. The ports serve as inlets for raw materials and equipment to these

factories and in no small measure, contribution towards the economic growth of the areas in which these factories are located. When the local supply of these new manufacturing industries exceeds local demand, the ports will, no doubt, be able to serve the industries adequately as outlets for their exports.

Malaysia is the world's largest producer of rubber and tin and these two commodities form the bulk of her exports. The ports serve as the gateways through which these two important products pass on their way to the world's markets.

New wharves have recently been constructed at Port Swettenham and work on the construction of six new deep water berths has commenced. The additional port capacity and facilities will help in the further economic growth of not only the areas around the ports but also the inland towns they serve. With the extensive facilities which will be made available by the construction of new wharves at Port Swettenham and Butterworth, the ports will be able to meet the future needs of commerce and industry of this country.

PORT DEVELOPMENT Penang

No major development projects have been undertaken to increase and improve the cargo handling capacity of the Port of Penang since the construction of the Prai Wharf on the mainland of Penang since the construction of the Prai Wharf on the mainland in 1923. Prai Wharf is now used as a lighterage wharf. There has been a gradual increase in the tonnage of cargo handled by the Port of Penang in the post war years. As a lighterage port, Penang has, however, been able to cope with the higher tonnage by increasing the godown space available especially at a number of landing places along Prai River, and by the addition to the lighter fleet. Both these improvement have been undertaken mainly by private enterprise.

Due to the considerable decrease in the entrepot trade of
(Continued on page 27)

Port of Melbourne

Contribution by :

V. G. Swanson,

Chairman

Melbourne Harbor Trust Commissioners

It is important to remember the comparatively recent origin of the communities now thriving on the vast Australian continent when studying the Australian scene generally, and an Australian port in particular. But as no port can really be studied unless in relationship to the hinterland it serves, a study of the Port of Melbourne, however brief, must be against the background of the history, development, and achievements of the State of Victoria and its capital — metropolitan Melbourne.

There can be little doubt that the existence and development of the port made possible the development of the State and capital, but nevertheless it is in growth of this hinterland that the story of the port is fully unfolded.

It was only in 1835, that this 87,884 square mile State in the south eastern corner of the 3 million square mile continent awoke from its primeval slumber to begin to establish a new community which today, has become a major primary and secondary producer in the Australian nation.

The first official census in Victoria, taken less than a year after the establishment of a settlement on the banks of the Yarra River, disclosed 142 males and 35 females of European origin. The Yarra River, disclosed 142 males and 35 females of European origin. The Yarra River of that day was a shallow meandering stream navigable only to ships with draughts of less than 11 feet of water.

Today the settlement which occupies the same banks of the Yarra has a population of more than 2 million, and the same Yarra River is a deep water seaway for ships from more than 20 maritime na-

tions of the world, with a port of more than 100 berths extending over 12 miles, handling more than 11 million tons of cargo in its 10½ square mile area.

Like ports everywhere, Melbourne mirrors the prosperity of the hinterland it serves, for, apart from more than 2 million people in the capital city on the banks of the Yarra, another one million people live in the principally rural areas outside the capital.

The State of Victoria as a whole, second smallest of the six self governing Australian States, produces more than a quarter of the nation's total wealth of primary products, and more than one-third of the nation's secondary products although comprising only three per cent of the vast land mass of the island continent, Australia.

To serve the requirements of such primary and secondary industries, the Melbourne Port Authority follows a continuing policy of specialisation of berths and facilities to handle specific cargoes — particularly bulk cargoes — such as crude and refined petroleum products, petrochemicals, sugar, phosphate rock, timber, gypsum, iron and steel, soda ash, and the rapidly developing roll-on roll-off cargo and container cargo trade around the Australian coast.

The majority of these cargoes are drawn from Australia's own resources and, together with the container and roll-off cargo, forms the basis of the nation's coastal trade handled exclusively in Australian owned and registered ships.

Mechanisation to suit the various trades as well as general mechanised cargo handling has been introduced over the years to

make the port the most highly mechanised on the Australian coast, with a turnround of shipping which matches its mechanisation.

Principal unit in the port's mechanical equipment is to be a German designed and Australian built 250-ton floating crane which will come into service in the port at the end of 1965. This heavy lift crane will be the largest floating crane on the Australian coast, and the only other crane of any similar capacity is a 250-ton shore based crane in the Port of Sydney.

Due to a number of factors, Melbourne has always been in the van of Australian ports as far as mechanisation, specialisation, and the introduction of new cargo handling methods and ships are concerned. This has been due, in part, to the farsightedness of the port's administrators over the years, but it must also be partly attributed to the port's geographic location on the trade routes around the Australian continent, and the industrial growth and development of its hinterland.

Despite the youthfulness of the Australian nation, the Port of Melbourne is old in terms of port administration. The Port Authority — the Melbourne Harbor Trust Commissioners — was established in 1877, a considerable time before many larger and longer established world ports were put under the administration exclusively concerned with their development and progress. For example a central port administration was set up in Copenhagen in 1858, in Hamburg in 1866, in Bombay in 1873, in Sydney in 1901, in London in 1909, in Toronto in 1911, and in New York in 1921.

From 1835 when the settlement of Melbourne was founded, until 1877, when the Port Authority came into existence, geographic and economic conditions, as well as the population growth, made the establishment of a single port authority more necessary than elsewhere.

From 1835 onwards the new settlement grew rapidly. The wool industry already established in New South Wales also flourished in Victoria. Business houses were

established and commerce flourished, until in 1851 Victoria really entered a boom migration and development period which severely taxed the facilities available to shipping—primitive by even the standards of those days.

1851 was the year of the Victorian gold rush—a phenomenon equalled only by the Californian gold rush of two years earlier. Literally hundreds of ships set sail for Melbourne from all parts of the globe, and the State population increased by more than 450,000 in the decade between 1851 and 1861, on a population basis of 77,000 odd.

It is of particular interest that a similar population and development boom occurred exactly a century later when between 1951 and 1961 there was a population increase of about 800,000 on a basis of about 2 million people.

The 1850s and the 1950s represent the two outstanding periods of migration gain, reflecting Victoria's commercial and industrial development in which shipping and the port played a major part, for

the transportation of goods by sea then, as now, was the mainstay of the entire State.

Almost since the first settlement, representations were made for river improvement and a port authority to provide facilities in the River Yarra for the shipping on which the community was dependent.

A capricious nature had endowed Melbourne and its river with few natural advantages for port installations and shipping, and the facilities on which the present port are based were made in swamp land or carved out of the shallow silted waterway.

Some wharves and facilities were provided by the Government of the day, which finally yielded to the demands, general through the community, to establish the Melbourne Harbor Trust in 1877.

An Act of Parliament gave the new port authority independence of operations in all aspects of port activities, and all but absolute financial autonomy. Far sighted legislators made the Trust free from day to day political control

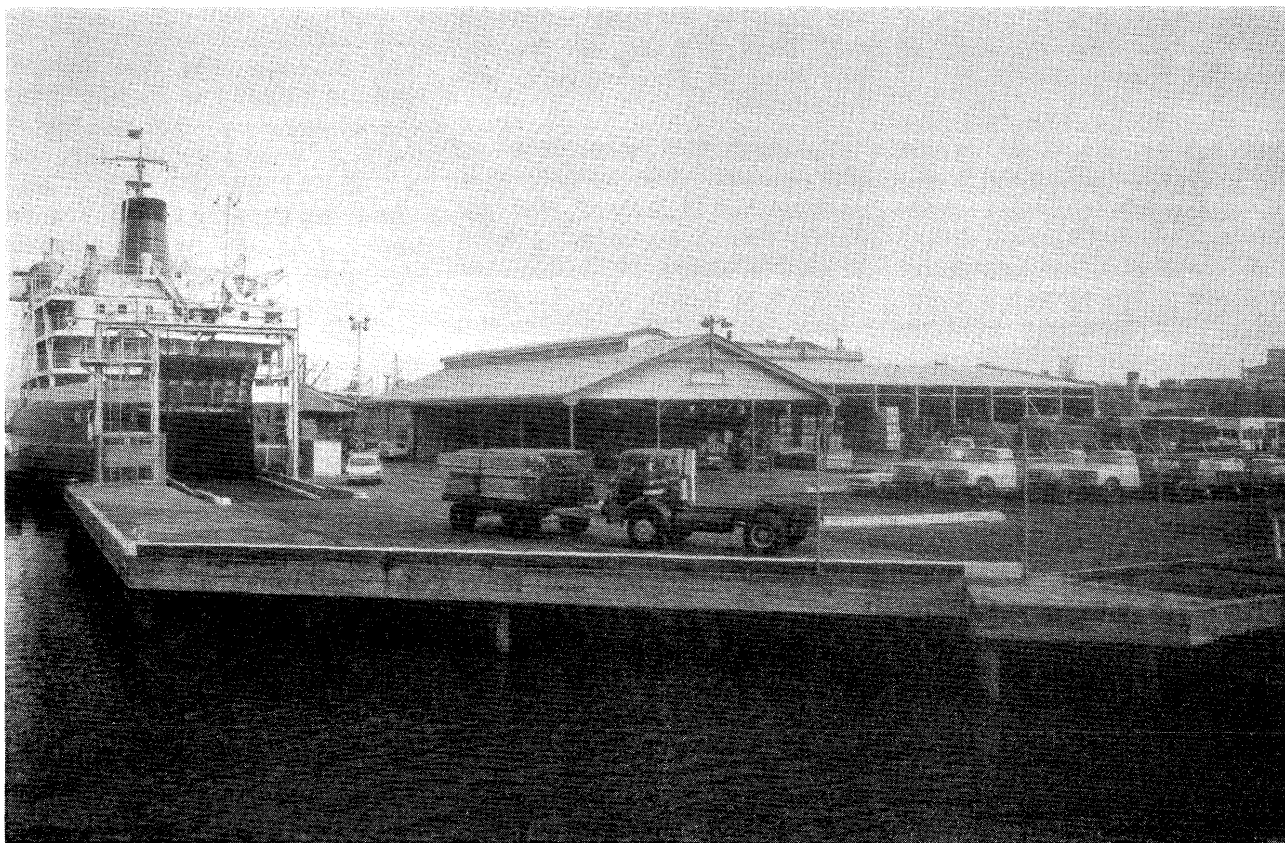
to allow it to operate in much the same way as the commercial interests it served.

The Trust was required to be financially independent, by raising its own revenue, including loan moneys for capital works. The Trust itself guarantees its loans and is responsible for the repayment of capital and interest.

In 1877 the Trust was required to reimburse the Government for the facilities and equipment it took over, and although this reason has long since lapsed, the requirement to pay into Consolidated Revenue a portion of the port's revenue has remained ever since.

One of the principal port facilities which the Trust took over, was the Railway Pier in the Bay area outside the River mouth, which was built in 1854 to handle the tremendous influx of ships bringing cargo and passengers to the Victorian goldfields.

The pillage of cargo being lightered ashore from ships anchored in Hobson's Bay had reached such proportions that Australia's first railway ran from the



Roll-on roll-off cargo and its specialised ships, as well as container and unit loaded cargo, have been a major development in the Australian coastal trade over the past 10 years. Melbourne was the key port in this development, and seen here is a typical terminal and ship at work.

city to the new pier, to reduce cargo losses and to land passengers at a berth. To this day Railway Pier, and the subsequent new Station Pier, has remained the port's principal passenger terminal throughout the 110 years which followed.

Today Station Pier provides four berths for passenger ships with passenger facilities, including those for Customs, baggage, visitors, etc., on an upper level, which cargo is handled simultaneously at wharf level.

The wharf aprons on both sides of the Pier are each equipped with four sets of rail tracks and portal electric travelling wharf cranes of 3 tons capacity, while a centre roadway handles road vehicles.

Victoria continues to take in more than 40 percent of the migrants coming to Australia, and Station Pier in the Port of Mel-

bourne, remains the principal gateway to their new homeland. The Pier, built on the site of the old Railway Pier in the 1920s and opened in 1930, was the first facility in an Australian port with its main purpose to provide facilities for passengers.

From the formation of the Trust, the Port of Melbourne rapidly began to take shape. One of the early developments was 96 acre dock system at the foot of the city, to bring shipping and goods almost to the doors of the merchants and traders.

The dock system excavated and dredged out of swamp land, provided 21 berths and was opened to shipping in 1893.

Today the dock is still the main overseas cargo terminal of the port, handling principally exports, with a depth of water for shipping up to 31 foot draught. The tidal variations in Melbourne only

average about 18 inches, so that shipping does not have to rely on tides for arrival or departure, nor does the port require lock to handle ships. Deep water is provided by dredging to a guaranteed depth required by ships calling at the port.

Victoria Dock has been extended over the years to provide an additional three berths immediately outside the dock entrance to give 24 berths, nine of which are served by three sets of rail tracks on a 45 ft. wide wharf apron with semi-portal electric wharf cranes of three tons capacity.

A current £1 $\frac{3}{4}$ million dock development is now under way to reconstruct four of the Dock's older berths inside the entrance, by widening the wharf apron to 50 feet, providing crane tracks and three sets of rail tracks, to increase the number of rail berths, and to provide a road level wharf



Melbourne, the former Australian National Capital, has been standing on the banks of the River Yarra since 1835. Here the business and commercial heart of the metropolis of more than 2 million people, shows the close proximity to the shipping facilities in the port of Melbourne on which the city has been dependent right throughout its existence.

decking with a wheel load capacity of 25 tons for vehicles and mobile cargo handling equipment. The new reinforced concrete wharf will also have foundations to carry cargo transit sheds if required.

All the Victoria Dock berths are fitted with transit sheds of which the more modern ones are of larger dimensions measuring 500 ft. in length and 120 ft. in width.

The Port's most modern facilities are an extension of the Victoria Dock system on the north bank of the river further downstream, where an initial five berths, extending over 3,200 ft., have been built in what is known as Appleton Dock.

Three of the Appleton Dock berths handling general cargo, have a 70 ft. wide wharf apron with three sets of rail tracks and portal electric wharf cranes to handle cargo between ship and shore. At the end of the apron behind each of the three berths are transit sheds each with 81,000 square feet of stacking area and measuring 600 ft. long and 150 ft. wide, with inbuilt offices and amenities for waterside workers, shipping and stevedoring companies, customs and port authority personnel.

While the wharf apron is at shed floor level, the roadway behind the sheds are lowered to truck height and road vehicles back up to roading doors to deliver or take away cargo.

The other two berths are bulk cargo handling berths which have a narrower wharf apron of 43 ft. and two sets of rail tracks. The principal cargoes which have been handled at these berths are phosphate rock and black coal, and there are 75-ton hoppers over the rail tracks to allow rail or road vehicle loading.

The cargo is handled by portal electric travelling cranes with 7½ ton grabbing gear. A feature of the bulk berths however is the large open transit stacking area of seven acres behind the berths, which allows the ship to discharge rapidly and without interruption, while simultaneously rail loading

is possible by means of the hoppers.

Road transports, loaded by front-end loaders or overloaders, move the bulk of the transit stock pile from behind the berth and the rate of discharge and road transportation has been as high as 4,000 tons in 24 hours. A 10 ft. high retaining wall at the back of the wharf ensures a clear wharf apron at all times.

The Appleton Dock system comprises a 235 acre compounded land area behind the five berths which is reserved for extensive port development including extensions to the existing berths if and when required. In addition there are a further 300 acres not compounded, and future plans provide for another two dock system to be built over the whole of the 535 acre area.

From the inception of the Trust, the impetus of planned port development resulted in berthage being provided along both sides of the Yarra gradually extending downstream from the city proper. Today on the south bank there are 30 berths, although the number in actual use varies as trades change and different requirements are needed for ships and cargo.

The south side berths principally handle general overseas cargo, but there are several specialised berths for the handling of specific coastal cargoes, these include a special highly mechanised steel handling wharf which has an average throughput of about 3,000 tons a day of all classes of steel products, including ingots, structural steel, steel plate, angle iron, pipes and tubing, fish plates, wire and fencing posts.

The berth facilities were specially designed for the trade which is from Australia's own iron and steel works at Newcastle and Port Kembla on the eastern seaboard, and portal cranes of six-ton capacity discharge from ship to wharf apron. Six-ton shed cranes in six of the seven bays of the open ended transit shed, stack the cargo according to marks, and by means of overhanging rails load road transports at the opposite end.

There is an increasing use of

road transport in Melbourne, and the port has always catered more for road transport than for rail, although rail berths play an important part in the port's cargo handling.

All cranes at the steel berth can be equipped with electro magnets to handle ingots. In addition to the wharf and shed cranes, heavy loading fork lifts assist in the handling of the steel cargo between ship and road transport. All cargo is pre-slung in six-ton loads, and the slings are returned to the port of origin after discharge in Melbourne.

Specially designed timber berths on the south side handle the large volume of timber imports into the port from overseas, and a nine acre stacking area behind the berths allows for the rapid discharge of ships by means of mobile cargo handling equipment, such as straddle trucks which shuttle between the ship's side and the transit stacking area.

Gypsum from South Australia is handled at a special berth equipped with 7½ ton grabbing cranes. The cargo is discharged into hoppers and by conveyor belt across the wharf apron and roadway to a large transit hopper which loads road transports.

Perhaps of the greatest significance in recent years has been the development of the cargo container and the special container ship, as well as roll-on roll-off vehicle laden cargo handling methods and the roll-on roll-off stern loading ship.

Melbourne has been the key port in the development of this new trend in cargo handling on the Australian coast, and currently four roll-on roll-off ships and two container ships operate out of Melbourne.

This development is now spreading to other ports around the nation's coastline following the successful introduction of the new methods and new ships out of Melbourne.

Contrary to the practice in many ports, Melbourne does not operate the Pilot Service, commercial towage, or the employment and control of waterside labor.

The services of a pilot are obligatory for masters of ships entering Port Phillip, and the Service, regarded as the oldest public service in Victoria, goes back to 1839, has developed in the intervening years as a separate entity under the Marine Board of Victoria.

Land and water within the confines of the Port territory are vested in the Melbourne Harbor Trust Commissioners and the port in effect is a city within a city. The Authority is empowered to make and enforce regulations, build roads and railways, buildings and port facilities. It owns and operates all wharf and port facilities, including wharf cranes, and a pool of mobile cargo handling equipment which is hired out with drivers. There are no privately owned or leased wharves.

Because of the industrial, social and commercial conditions which prevail and are peculiar to Australia, the Port of Melbourne has a greater economic influence on the hinterland it serves than other ports of similar size, and to a large extent also reflects the trends prevailing throughout the nation as a whole.

(Continued from page 22)

Penang in recent years, the principal element in the trade of Penang has been the mainland trade of Malaya. Owing to the economic development of Malaya, coupled with the rapid increase in population, the tonnage handled is expected to rise to three million tons per annum by 1970. An east-west trunk road from Kota Bharu to Sungei Siput will be constructed in the near future. This will bring the east coast States within the hinterland of Penang.

The two deep water berths at Penang Island have not been able to serve both the mainland and the Island of Penang adequately due to increase in tonnage handled in the port.

To cope with the anticipated increase in trade, the Penang Port Commission has undertaken to provide deep water wharves at Butterworth on the mainland. The project calls for the construction

of six deep water berths and related port facilities. The first stage of the project, i.e. reclamation and dredging is at present in progress and the first three berths are expected to be ready and operating in 1968.

These new wharves are being designed for maximum use of mechanical equipment in handling general cargo. Generally, the transit sheds are being designed on the most up-to-date and modern lines with facilities for ships' agents and consignees to build their own godowns in the back area. It is considered that when the six wharves are completed, the additional capacity and facilities will adequately serve the anticipated increase of tonnage to be handled. In fact, the economic prosperity of Northern Malaya will largely be dependent on this project.

Development of other major ports in Malaysia is also in progress. Port Swettenham has recently completed an addition of four new berths for ocean-going vessels to deal with the increased traffic passing through this port which serves Central Malaya. Singapore has also gone ahead and is still continuing their project of developing the Port of Singapore to provide for additional facilities for cargo handling and also for berthing ocean-going vessels. For many years to come, the development projects of these three major ports in Malaya are considered adequate to deal with the increased flow of seaborne trade.

San Francisco Port Expansion

Expansion south of Pier 29 to add 470,000 square feet of open and covered cargo-handling area at a cost of \$7,000,000 has been announced by the San Francisco Port Authority. The new facility will be designated Pier 27.

The move was the port's answer to the increasing cargo needs of Pacific Far East Line, which stepped up its San Francisco business by 160,000 tons in less than two years.

It also assured retention of the existing passenger terminal by Matson Terminal Company. PFEL had originally requested reassignment of Pier 35 for use as an ad-

ditional cargo facility.

Matson, which berths its own passenger liners as well as those of Holland-America and P & O-Orient Lines at Pier 35, will retain its assignment.

Port engineers said the new Pier 27 can be completed by 1966.

The Port Authority two years ago spent \$1.5 million to integrate Piers 29, 31 and 33 for PFEL, which until then was occupying three smaller piers on the south part of the waterfront.

Since the move PFEL has increased its San Francisco tonnage by 58 percent, for a projected yearly total of 360,000 tons by the end of 1964. The company expects even further increases.

Pacific Far East Line has been assigned Pier 40 in addition to its 29-31-33 terminal pending completion of the Pier 27 project.

Financing will come from the sale of \$4,000,000 in general obligation port bonds plus cash from the port's earned surplus. The port has been completely self-supporting for its entire 101-year existence as a state agency.

The plans call for extending the present Pier 29 by 170 feet and joining to it a wedge-shaped deck extending diagonally to the base of Pier 23. Old Pier 27 was razed in 1948 and the existing, obsolete Pier 25 will also be demolished.

The new Pier 27 will have berthing space for two ships along its 1,340 diagonal length, a 210,000-square foot steel-and-concrete cargo shed, and some 260,000 square feet of open area.

In approving the plan the Port Authority directed port engineers to design the deck so that it could be used for other than shipping purposes should cargo-handling in the area be replaced at some time in the future by commercial developments under a long-range "Embarcadero City" concept.

In addition to the planned \$7,000,000 project the Port of San Francisco has under construction what will be the largest pier in the San Francisco Bay Area: the 60-acre Army Street Terminal, which will go into business in 1966.

(Continued from page 2)

Liberia	Mr. Edward Julius Wesley Assistant to Port Director Monrovia Port Management Co., Ltd.	Mr. Raymond J. Weir Consul, Consulate of Liberia Los Angeles, U.S.A.
Malaysia	Mr. Goh Koh Pui Chairman The Port of Singapore Authority Dato Laksmana Haji Mohamed Razalli bin Haji Mohamed Ali Wasi, J.M.N., P.J.K., J.P. Chairman Penang Port Commission	Mr. Loh Heng Kee Acting Operations Manager The Port of Singapore Authority Mr. Inche Ismail bin Ngah Marzuki General Manager Penang Port Commission
Mexico	Ing. Daniel Ocampo Sigüenza Residential Engineer of Port Construction Villahermosa, Tabasco	Ing. Mario E. Villaneuva Reyes Residential Engineer of Port Construction Coatzacoalcas, Ver.
Netherlands	Ir. F. Posthuma Managing Director Port of Rotterdam	Ir. H. P. Meijer Deputy Managing Director Port of Rotterdam
Pakistan	Mr. I. A. Abbasi, S.Q.A., Chairman, Karachi Port Trust	
Peru	Mr. Mateo Kalafatovich Director Bureau of Port Administration Peruvian Government, Lima	Mr. Rene Guevara Mechanical Engineer Bureau of Port Administration Peruvian Government, Lima
Philippines	Mr. Florencio Moreno Secretary, Department of Public Works & Communications	Col. Julian C. Chaves General Manager Manila Port Service
Sweden	Mr. John-Iwar Dahlin General Manager Port of Helsingborg	
Thailand	Major General Prachuab Suntrangkoon Director Port Authority of Thailand	Capt. Lapo Israngkura, R.T.N. Deputy Director (Operations) Port Authority of Thailand
United Kingdom	The Rt. Hon. Viscount Simon, C.M.G. Chairman Port of London Authority	Mr. G. D. G. Perkins General Manager Port of London Authority
U.S.A.	Dr. Joseph D. Carrabino Commissioner Board of Harbor Commissioners City of Los Angeles Mr. Albert Lyle King Director of Marine Terminals The Port of New York Authority	Mr. Rae F. Watts Port Director San Francisco Port Authority Mr. W. J. Amoss Director of the Port Board of Commissioners of the Port of New Orleans
Venezuela	Mr. Andres German Otero Ministerio de Hacienda Ministro de Hacienda, Caracas	Mr. Cesar Bustamante Ministerio de Hacienda Encargado de la Administracion General de los Servicios Portuarios Nacionales, Caracas
Viet-Nam	Mr. Nguyen Van Chieu Director, Saigon Port	Mr. Nguyen Ngoc Du Director Port of Da-Nang

INTERPORTS '65

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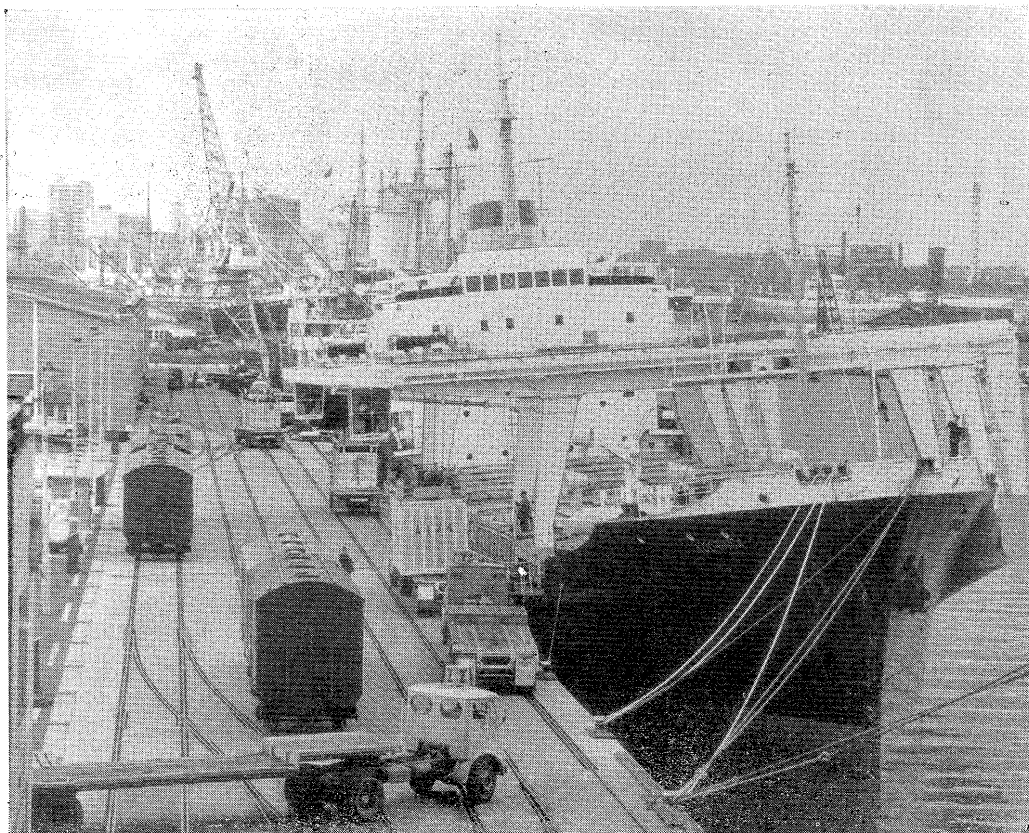
Patron: H.R.H. The Prince Philip,
Duke of Edinburgh



Tower of London

By T. S. Boys

Central Secretariat of the International Association of Ports and Harbors



Methods of handling container cargo by means of a specially designed and built Australian ship follow the trends in other world ports. Here the container ship "Kooringa" lists to starboard as her gantry cranes lift 17-ton containers off their road transports.

The Port of Melbourne covers 10½ square miles, with 108 berths for shipping extending over 12 miles. Here can be seen the upper reaches of the port showing the Victoria Dock system at the foot of the city, and in the foreground the three 600 ft. by 150 ft. transit sheds at the Appleton Dock general cargo berths, while at the left of the sheds can be seen the bulk coal and phosphate rock being discharged from two bulk carriers.