PORTS and HARBORS

MARCH 1963 Vol. 8 No. 1

PORT OF NEW ORLEANS
— Site of 1963 IAPH Convention —

THE INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS

Introducing The Crests of Co-Member Ports

(Each Issue One Port)

THE PORT OF SINGAPORE

Aerial view of the alongside berths including Empire Dock.

THE INTERNATIONAL ASSOCIATION OF PORTS 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

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From The Central Secretariat

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

Everything Ready for 3rd Triennial Conference, IAPH

— May 1-4, 1963, New Orleans —

The International Association of Ports and Harbors, representing 61 world ports, will hold its third triennial conference at New Orleans, May 1 through 4, the Board of Commissioners of the Port of New Orleans, serving as host, has announced.

Delegates will hear and participate in discussion of such topics as those dealing with world trade problems, planning marine terminals, bulk cargo facilities, containerized cargo handling, European and U.S.A. port developments, implications of the European Common Market, port safety through fire prevention, proper handling of hazardous cargoes, and use of shore-based radar for harbor traffic control, and financial aid in port development.

The International Association of Ports and Harbors, organized seven years ago and with headquarters at Tokyo, has as its objectives:

To associate its members from all countries together in the common cause of mutual international friendship and understanding; to exchange information on port and harbor organization, administration, management, development, operation and promotion; to encourage, develop and promote waterborne commerce to and from all world ports and harbors, and to encourage the standardization and simplification of procedure government imports and exports and the clearance of vessels in international trade, thereby promoting world peace and the welfare of mankind.

Lt. Gen. Huang Jen-Ling, chairman of the board of the China Merchants Steam Navigation Co., Taipei, Taiwan, China, is president of the association and W. J. Amoss, director of the Port of New Orleans, will be conference chairman.

* * *

IAPH Membership

The membership of this Association as of March, 1963, is 107, representing 26 countries, which includes 65 regular members. It is broken down as follows:

Regular Members

(Country)	(Number)
Argentine	1
Brazil	1
Burma	1
Canada	1
Ceylon	1
China	4
Colombia	1
Israel	1
Japan	29
Liberia	1
Malaya	1
Pakistan	1
Peru	1
Philippines	1
Singapore	1
Sweden	1
Thailand	1
U.A.R.	1
U.K.	1
U.S.A.	13
Venezuela	1
Viet-Nam	1
Total	65

Supporting Members (Corporate)

(Country)	(Number)
Australia	5
China	3
Japan	15
Pakistan	1
Philippines	1
U.S.A.	2
Venezuela	1
Total	28

(Individual)

Belgium	1
China	1
Israel	1
Japan	5
Mexico	3
Turkey	1
U.S.A.	1
Viet-Nam	1
Total	14
Grand Total	107

New members since January 1963 are the ports of London, Baltimore, Buenos Aires, Penang, Sydney and Baton Rouge as well as two Japanese organizations.

New Members*

REGULAR MEMBERS

Administración General de Puertos	Buenos Aires, Argentine
Maryland Port Authority	Baltimore, U.S.A.
The Port of London Authority	United Kingdom
Penang Port Commission	Malaya
Greater Baton Rouge Port Commission	Baton Rouge, U.S.A.
Japan Cargo Handling Mechanization Association	Tokyo, Japan

SUPPORTING MEMBERS

The Japan Port & Harbor Cities Council	Tokyo, Japan
The Karachi Port Trust	Karachi, West Pakistan
The Nippon Yusen Kaisha, Ltd.	Tokyo, Japan
Niigata Rinko Kairiku Unso K.K.	Niigata, Japan
The Maritime Services Board of N.S.W.	Sydney, Australia
Bureau of Public Works, Department of Public Works & Communications, Republic of Philippines	Manila, Philippines

* *Membership applications accepted since January, 1963*

FORUM ON PORT PROBLEMS

(The is the first of articles or views contributed to this Forum, which was started from this issue.—Editor)

World Peace and Economy

Gaku Matsumoto
Chief, Central Secretariat, IAPH

Ever since the dawn of history humankind has been constantly in pursuit of peace and happiness. Various nations have risen and fallen whilst striving for prosperity and aspiring for independence in the hope that same might eventually lead to peace and happiness. However, conflict of their interests has, as eloquently evident in history, driven them to wage imperialistic wars by repeating invasions and conquests.

Wars in the past were fought between individual countries, but they have now become finally developed and culminated into a nuclear war which is being waged on a worldwide scale. In fact, the threat of a nuclear war fatal to all mankind prohibits any individual nation from gratifying its own desire or realizing the peace of the world by means of war.

This situation has obviously brought home to the people of today that politics or political tactics essentially swayed by the antimoded idea of the stronger prospering at the cost of the weaker, falls far short of bringing about the peace and happiness of the world as aspired for. Amazing is the progress recently achieved in all phases of science, especially as regards aviation which has considerably shortened distances throughout the world.

It is indeed high time that all nations should abstain from engaging in conflicts and antagonisms merely out of their national consciousness and self-centered interests. In fact, there already exist strong indications today that they are being led to realization of a world community, where they will each be allowed to give full scope to their ability, while retaining their independence and idiosyncrasy intact on the guiding principle of partnership and cooperation. In other words, this signifies a trend that the concentration of the interests of mankind in various regions is becoming gradually expanded so as to embrace the entire world. This general tendency is clearly manifested by the idea of EEC, and even though the progress of EEC may become somewhat retarded due to the problem of England's participation, it is my firm conviction that its expansion as a worldwide organization is a certainty which will be realized sooner or later in keeping with the current of the times.

All this goes to clearly show that the world situation has become so basically changed that no peace can any longer be attained merely by means of politics or political tactics of any individual nations. Viewed in this light, even the recent impasse confronted by EEC may be attributed to the interference of political consciousness in the proposed organization of Europe, which should be essentially aimed at the mutual economic development of the continent. If it should be admitted that since ancient times the human beings have more than fully experienced the inability of attaining the peace and happiness of mankind solely by means of politics based on conflicts and antagonisms of nations, it could be asserted that what claims to be of basic importance in realizing this common objective of mankind can be sought in nothing other than the establishment of a world economic policy for promoting world prosperity and elevating the living of the people at large, if not excluding the interchange of religions and cultures. "Well-fed, well-bred" is the famous teaching of the Oriental sage, Confucius, which I believe, is of profound significance, especially in the present situation of the world.

The time appears to be ripe for exerting efforts for the development and promotion of world trade jointly by all nations on the guiding principle that while giving full scope to the development of their industries by taking full advantage of their locations, they should all jointly strive for realization of co-existence and co-prosperity by casting off all individual and selfish interests. This would imply that the former idea of "international trade" has now been replaced by that of "world trade" in the sense as above-mentioned. Needless to say, only when and where trade relations, keynoted by the idea of co-existence and co-prosperity supported by mutual understandng and friendship, have been realized by all nations, can be attained the prosperity of world economy and the peace of the world. What should then be the most basic measures to be taken for realizing the development of world trade relations as described? The first thing to be done in this connection will be the improvement of ports as the gateways for trade to the extent that all ports in the world have been perfectly developed on a common standard. No matter how much the Port of New York should have been perfected, for example, it would never contribute

to a smooth flow of world trade and the development of world prosperity at large, so long as ports in the newly-rising countries at the other end are left in a grossly unsatisfactory condition.

The measures which have so far been taken by the advanced countries for assisting the development of newly-rising countries do not as yet appear as havng fully attained their object. This automatically leads us to feel that there is as yet something lacking in their basic ideology. All countries of the world differ in their industries due to their respective geographical conditions. Should, therefore, endeavors be made to realize the economic prosperity common to all countries of the world, it would be essential to establish a "system of world division of work" on the basis of these national differences, under which adequate assistance could be extended to the newly-rising countries. At the same time, in view of the latter being more eagerly desirous of developing their trade with other countries than to merely seek assistance, the advanced countries should strive more energetically than ever to help the newly-rising countries in the improvement and perfection of their port facilities so that same may naturally as well as automatically lead to their industrial development. This would, for certainty, contribute toward the prosperity of world economy.

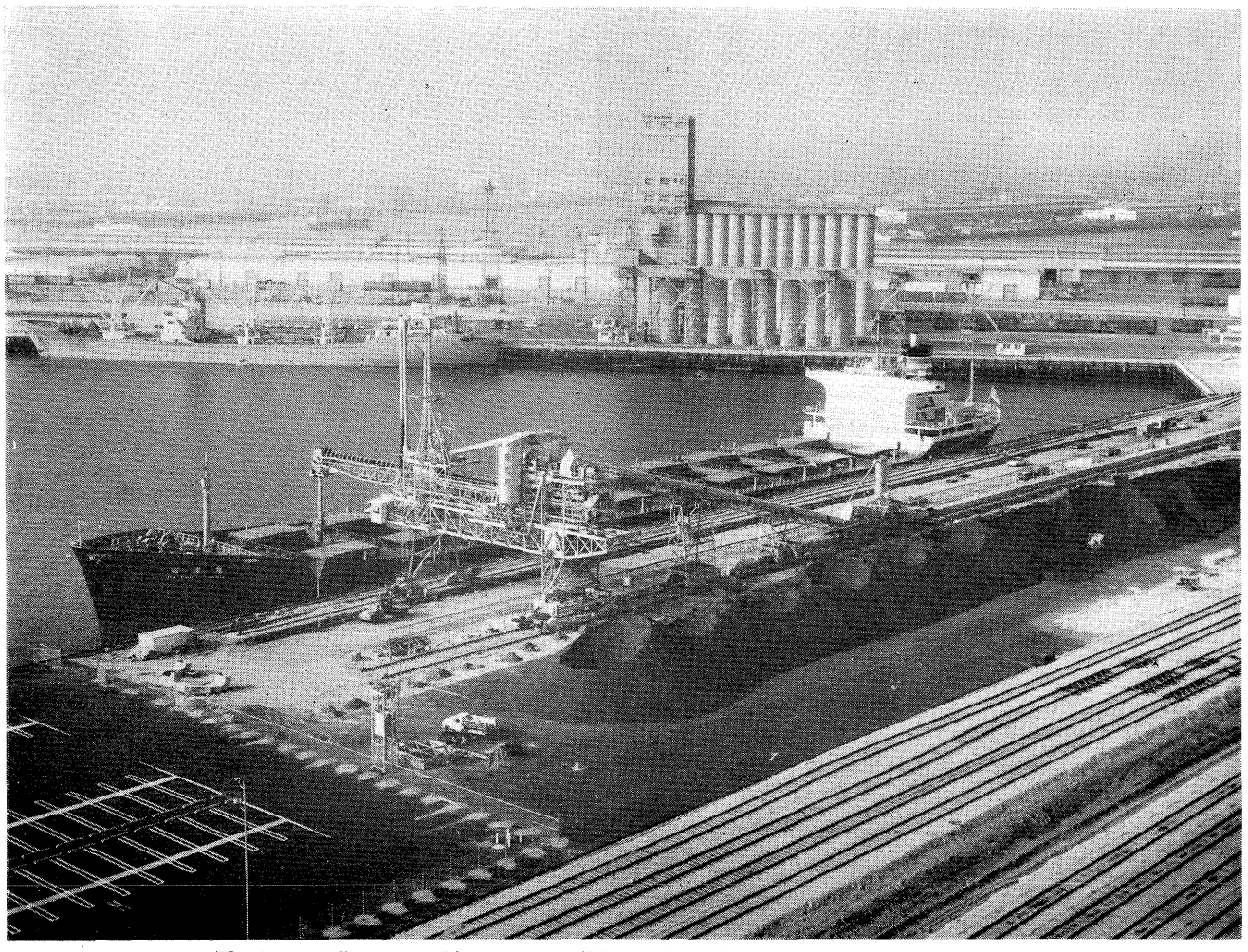
To sum up my statement, the peace of the world and the happiness of mankind can no longer be achieved today merely by politics or political tactics peculiar to any individual countries, but can only be acquired by the world trade which hinges on the spirit of interdependence and good neighborhood. However, the promotion of world trade can never be realized without effecting the perfection of all ports of the world so as to enable them to give full play to their functions. Therefore, I dare to declare "World Peace through World Trade; World Trade through World Ports." In this sense, all of us who are closely associated with port business, should fully realize our grave responsibility in regard to contributing toward world peace. In conclusion, let me propose the following motto for us, world port people:

"For World Peace, Unite All Port People of the World."

Long Beach's New Bulk Loader

The Port of Long Beach's new $4 million bulk loading facility is now in full operation, T.W. Buchholz, president of Metropolitan Stevedore Co. and operator of the facility.

With a 3125 long tons per hour capacity, the bulk loader is the largest on the West Coast. Designed by Kaiser Engineers, the facility went into operation last October.



The Port of Long Beach's new $4 million bulkloader, operated by Metropolitan Stevedore Co., is shown loading the 50,000-ton Japanese ore carrier Okitsu Maru with Kaiser iron ore from Eagle Mountain, Calif. In the background is the port's new grain terminal—the only such facility in Southern Calif.

Buchholz said the bulk loader will handle about 2 million tons of iron ore, petroleum coke, potash, coal and other bulk cargoes during its first year of operation. The Port of Long Beach will receive a minimum of about $350,000 in revenue annually.

The facility recently loaded the world's largest ocean-going ore carrier, Santa Isabel Maru, with 57,000 tons of iron ore in just 26 hours.

Located on a 13-acre site on the Port of Long Beach's new Pier G, the bulk loader can traverse a 600-foot length of the pier front. Incoming bulk cargoes for outloading can be delivered by truck or rail car.

Rail cars can be shunted into a push button controlled gravity yard system. A rotary car dumping facility can handle 30 open top rail cars per hour or unload an entire 100-car train in four hours.

A system of conveyor belts then transports the material onto the loader's 150,000-ton stockpile. At full capacity the stockpile is 44 feet high, 600 feet long and 123 feet wide at the base.

The 400-ton traveling shiploader's loading boom extends to a maximum of 58 feet from the face of the pier enabling it load the largest ore carriers.

Port of Long Beach has leased the facility to Metropolitan for 40 years.

* * *

Bangkok Port to Erect Dolphins Midstream

As a result of the recent economic development of Thailand, the seaborn traffic in the Port of Bangkok has now increased to the point that the port congestion occurred nearly every weekend. More than 80 oceangoing vessels calling at the Port of Bangkok have to wait outside the Bangkok Bar Channel for more than 1,000 hours every month because they could not find anchorage space within the port area.

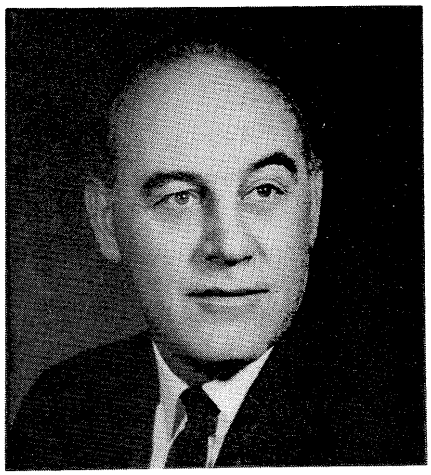
The Port of Bangkok has now berthing space for 10 ocean-going freighters and anchorage space midstream for another 5 ocean-going freighters. The berthing space is used chiefly for landing import cargo while the anchorage space midstream is used only loading export cargo because export cargo is transported mostly by river barges from private warehouses along the river to the freighters. To solve the problems of insufficiency of berthing space and to provide anchorage space midstream for loading export cargo, the Port Authority planned the project of erection of dolphins midstream of the river. Responding to the offer of the Government of Germany of the technical assistance for Thailand for the year 1962-1963, the Port Authority applied for technical assistance for its dolphins project. The German Government approved in the principle. An expert is required for a period of time in Bangkok to recommend the most economical type of dolphins to be used to cope with the local condition, to set up the statical computation including the details of the construction of the dolphins for bidding purpose and to recommend the number and spacing of the dolphins and the distance from the river bank.

* * *

New Advances in Containerization

A special committee composed of 15 prominent transportation experts has been formed by the National Defense Transportation Association to undertake intensive planning in cargo containers. Designated the Special Committee for the Standardization of Equipment, the group will attempt to develop a program implementing recommendations adopted by NDTA in 1959. Morris Forgash, president of United States Freight Company, will act as chairman of the panel that will devote special attention to methods and devices of loading, unloading and securing containers on planes, trains, ships and trucks. Important objectives would be establishment of standards that would require truck-trailers to be demountable so as to be completely interchangeable; that corner posts be provided on all containers regardless of type so that they may be readily transferred between land and sea carriers; and that uniform systems for tie-downs be enforced.

Mr. Forgash was again in the news recently when, as president of United States Freight Company, he joined with Thomas G. Newman, president of Container Transport International, Inc., to announce establishment of a scheduled international service from the Midwest to Europe. The service was formerly restricted to volume shipments. Now, the new arrangement will show small shippers to take advantage of it.



Mr. Elmo E. Ferrari
Director of Port of Stockton

Mr. Ferrari, Stockton Retire

Mr. Elmo E. Ferrari, one of the best known port directors in the United States and other countries, who was instrumental in building the Port of Stockton, into its present position as the third largest cargo port in California, resigned effectve December 31, 1962. Mr. Ferrari is one of the organizers of the International Association of Ports and Harbors, who attended the International Port and Harbor Conference of Kobe in 1952 which laid a corner stone in this international organization. Since the formation of IAPH, the Port of Stockton has contributed to its growth as a regular member.

After a rest, Mr. Ferrari plans to open a cargo research and development office in San Francisco and the Stockton Port Commission asked him to serve as its consultant in this field of activity. He played a key role in the development of many new and improved port area facilities.

Mr. Ferrari was succeeded by Mr. T. George Hench as Executive Director of the Port of Stockton. Mr. Hench has been Assistant Executive Director for many years.

Port of New Orleans

— Site of 1963 Convention of IAPH —

When the International Association of Ports and Harbors holds its third triennial conference at New Orleans May 1-4, delegates will have an opportunity to see one of the world's most modern and busiest ports in operation.

With the Port of New Orleans as host to the conference, full opportunity to tour this famous old United States gateway port of entry will be afforded.

Delegates will hear and participate in discussions of such topics as those dealing with world trade problems, planning marine terminals, bulk cargo facilities, containerized cargo handling, European and U.S.A. port developments, implication of the European Common Market, port safety through fire protection, proper handling of hazardous cargoes, and use of shore-based radar for harbor traffic control, and financial aid in port development.

The International Association of Ports and Harbors, comprising leaders of more than 60 world ports and organized seven years ago with headquarters at Tokyo, has as its objectives:

To associate its members from all countries together in the common cause of mutual international friendship and understanding; to exchange information on port and harbor organization, administration, management, development, operation, and promotion; to encourage, develop and promote waterborne commerce to and from all world ports and harbors; and

Port of New Orleans-Nashville Avenue Wharf—When shippers compare waterfront general cargo terminals with the giant Nashville Avenue Wharf at the Port of New Orleans, they usually compare others with a part of this colossus. With its shedded area along extending 2,400 feet parallel to the water, it covers a land area of 54.4 acres or 2,369,664 square feet. It easily accommodates five freighters of 500 foot length and requiring cargo shelter and presently being expanded by adding two additional ship berths at its ends. While the shed is 315 feet wide, the slab has a 407 foot width. The entire facility as shown here provides for the simultaneous loading and unloading of ships and cargo can be exchanged between five vessels; 64 giant trailer trucks; over 100 rail cars and a number of barges. The slab contains 40,000 cubic yards of reinforced concrete—equal to 15 miles of two lane concrete highway. This rests over a land area of 57 acres which was created by hydraulic filling of over 1,000,000 cubic yards dredged from the adjacent Mississippi River. A total of 80,000 tons of cargo can be sheltered in the shed at one time. Port engineers and directors from throughout the world have pronounced it the largest and most efficiently designed general cargo facility. It brings to approximately 100 the number of general cargo shipping berths at the Port of New Orleans.

to encourage the standardization and simplification of procedure governing imports and exports and the clearance of vessels in international trade, thereby promoting world peace and the welfare of mankind.

Lt. Gen. Huang Jen-Ling, chairman of the board of the China Merchants Steam Navigation Co., Taipei, China, is president of the association and conference chairman, and W. J. Amoss, director of the Port of New Orleans, will be chairman of the host group.

Increased shipping activity at the Port of New Orleans, coupled with greatly improved physical facilities, indicate a good outlook for 1963.

Anticipated ship arrivals through 1962—due largely to a last quarter increase—were estimated at 4 per cent above 1961, while gross tonnages were pegged at 12 per cent higher for 1962.

Value for the port's foreign commerce during the fiscal year ending June 30, 1962 was $1,790,000,000 and foreign tonnage totaled an estimated 13 million, based on available U.S. Department of Commerce figures. These figures represented a 15 per cent tonnage increase and a 4 per cent improvement in value for exports over the preceding period, despite a 17 per cent tonnage and 3 per cent value decline in imports.

Although both imports and exports at New Orleans showed a weakening tendency during the past calendar year, the improvement of the port's own cargo-handling facilities, and the opening of New Orleans' own new seaway in 1963 may well provide the impetus needed to improve its general position as the major port of entry of Mid-Continent U.S.A.

The port's wharf construction program—proceeding at a steady rate of a million dollars a month, and bringing the port every day nearer to the time when it will be providing the best facilities to be found anywhere—is already giving to shippers an example of what can be done by ports to speed cargo movements and cut costs.

First deep draft shipping is expected to begin using the Mississippi River-Gulf Outlet—a new 76-mile tidewater channel which cuts 40 miles off the present river route—this year.

These two major improvements may well provide the stimulus—along with increased trade development activities—to boost business at New Orleans well beyond its present volume.

Again, for the second consecutive year, the Port of New Orleans led all U.S. ports in railroad cars of cargo unloaded. According to 1962 figures released by the Association of American Railroads, New Orleans was ahead of New York by 1,626 cars. And this was even with an 8 per cent decline from 1961.

New York followed New Orleans' 109,854 rail car unloadings with 108,228. New York was down 5 per cent from the previous year. With a 6 per cent increase, Tampa was third with 80,063, consisting mostly of native Florida phosphate rock. Duluth-Superior, like New Orleans a heavy grain exporting port, was fourth with 76,914, an increase of 1 per cent. Hampton Roads registered a ten per cent increase, bringing her to fifth place with 64,001 carloads.

Grain elevators at the Port of New Orleans and environs shipped a whopping 25 per cent of the nation's total grain exports during 1962, boards of trade and U.S. Department of Agriculture figures indicated.

The port's public elevator, Continental Grain's New Orleans terminal and the Bunge Corporation elevator just upriver from the Crescent City at Destrehan exported a total of 348,759,000 bushels, or 25.7 per cent of the nation's total of 1,354,378,000 reported by the Agriculture Department.

Last year, the port reported its total exports for 1961 at 202,505,000, the largest known total ever shipped from a single port. Within-port-limits exports were down 4.5 per cent, due in past to end-of-the year labor disputes.

Largest customer for New Orleans grain exports was Japan with 38,966,000 bushels, followed by the Netherlands, 28,179,000; India, 19,482,000; West Germany, 16,774,000 and Italy, 13,972,000 bushels.

While New Orleans as a single port and the U.S. Gulf as a grain shipping region continued to lead the nation in grain exports, the lower Mississppi from Baton Rouge to New Orleans showed the greatest area increase, netting 58.2 per cent of the Gulf's 790,477,000 bushels—itself more than half of the nation's total.

Great Lakes ports collectively ranked second in grain exports with 235,422,000 bushels, while Atlantic ports handled 164,989,000 and Pacific ports 163,490,000 bushels.

Soybeans and corn continued as heavy exports at New Orleans, with 46,964,000 bushels and 82,923,000 bushels, respectively, while New Orleans wheat exports totaled 47,405,000 according to the Agriculture Department.

Other local grain exports were barley, 1,998,000 bushels; rye, 1,848,000, and grain sorghums, 7,910,000 bushels.

Total grain exports at other Gulf ports were: Houston, 91,838,000; Galveston, 84,143,000; Corpus Christi, 39,723,000; Pascagoula, 39,406,000 and Mobile 21,213,000. Port Allen (Baton Rouge) reported 111,191,000, according to the Agriculture Department tabulations.

While the U.S. Army District Engineer's report for 1962 on total waterborne commerce through the Port of New Orleans has not yet been released, 1961 figures proved to be 61,313,877 tons over public and private facilities. This, according to the U.S. District Engineer's reckoning, put New Orleans into having set an all-time Gulf record in tonnage, and second in the nation only to the combined port facilities of New York and New Jersey.

While this port had led Gulf ports every year since the end of World War II in tonnage and value of foreign commerce, it reached an all-time high of 15,017,184 tons in 1961. The lead over the closest Gulf rival was 5,00,000 tons. January-September figures shows 1962 tonnage to be at 8,965,000, and dollar value to be at $1,242,000,000.

The number of ships calling in 1962 was 4,821; the number in 1961 was 4,607. This represents a 4.6 per cent increase over 1961 tabulations.

Future plans for construction and expansion of port facilities during the next three years include:

Construction of a barge slip and wharf in Westwego, across the river from New Orleans.

A three-phase Nashville Avenue Wharf extension project which calls for the construction of 145 feet of wharf down-stream, 1,050 feet upstream, and finally, an additional 2,750 feet of wharf upstream.

Further area development on the Mississippi River-Gulf Outlet, including land acquisition and relocation of utilities for construction and development of the Outlet.

A Nashville Avenue underpass and roadway which will permit trucks to pass under rail tracks, thus avoiding congestion.

Improvements to the Public Grain Elevator including rehabilitation of Elevator No. 1, additions to the sacking facilities and modification of marine unloading facilities.

A $5,500,000 reconstruction of the Public Commodity Warehouse.

Construction of a Napoleon Avenue Wharf.

Reconstruction of the Governor Nicholls Street Wharf and shed.

Redevelopment of Delta Shipyards and the construction of a banana terminal.

Two major facilities were either completed or largely completed in 1961 and the first half of 1962.

One was the new, ultra-modern, $12,500,000 Nashville Avenue Wharf dedicated last May by President Kennedy. The wharf is a major part of a long-range program of modernizing and expanding port facilities at the rate of $1 million per month through 1970. Work on the new facility began in 1956 with the dredging of 53 acres from the river for the wharf site. Approximately 1,000,000 cubic yards of hydraulic fill were placed before the first piles could be driven.

The entire facilty covers 54.4 acres. The wharf proper is 407 feet wide. It has a waterside apron 62 feet wide, a landslide roadway 30 feet wide, and is capable of sheltering 80,000 tons of general cargo.

Port of New Orleans Grain—One of the principal reasons why the Port of New Orleans traditionally leads the United States and more recently the entire world in grain exports is the huge public elevator shown here. Following a $13,500,000 expansion program, the elevator is now capable of inloading and outloading more than 1,000,000 bushels of grain per day. New Orleans elevators exported almost 350,000,000 bushels of grain during 1962, and this represents over 25% of the total United States exports. The Port of New Orleans elevator shown here unloads rail cars at a rate of up to one every 5½ minutes, and on the average one barge every two hours. Single loads of up to 50,000 tons of grain can be loaded aboard ships docking at this facility.

THE PORT OF SINGAPORE

By Mr. Loh Heng Kee, Traffic Manager
The Singapore Harbour Board

Singapore, the Lion City, is a name which is synonymous with trade and commerce. Situated in its strategic and commanding position right at the narrow gateway to the Far East, Singapore has a romantic and inspiring history. The existence of the New Harbour (now called Keppel Harbour) had been known since the 15th century and trade flourished around the mouths of the Singapore, Kallang and Rochore Rivers, but it was not until about 30 years after the Settlement of Singapore was established in 1819 that shipping companies and merchant houses began to utilise and develop the fine natural New Harbour. In 1869 the opening of the Suez Canal heralded the dawn of a new prosperous era of trade between Europe and the Far East. The Canal accelerated the dominance of steam propulsion and the disappearance of the sailing vessels.

Singapore's well-sheltered harbour provides excellent anchorage facilities for a multitude of vessels of all flags and colours. The entrance to the harbour is made through the Singapore Strait which is bounded on the north by the Federation of Malaya and Singapore Island, and on the south by the Batang Archipelago and Pulo Batam and Pulo Bintang. The inner harbour extends from Mount Palmer to Tanjong Katong and is protected by a detached mole. The enclosed waters provide a safe mooring area for coasters and smaller ships. The Eastern Anchorage is used almost throughout the year though during the North-East Monsoon period between October and February, the Western Anchorage is more popular.

The Port of Singapore comprises the anchorages in the Inner and Outer Roads and the alongside wharves, the former being administered by the Master Attendant and the latter the Singapore Harbour Board. The two authorities function independently but in close liaison, although at the time of writing plans are being drawn up by the Singapore Government with a view to setting up a Port Authority in the near future, which will have control over shipping both in the Anchorages and at the wharves. In this paper an attempt is made to describe in greater detail, the functions of the Singapore Harbour Board, but before doing so the shipping and cargo tonnage figures given below in respect of 1961 may give you an idea of the size of the Port of Singapore, which is currently ranked as one of the major international ports in the world.

The Singapore Harbour Board was constituted as a Statutory Corporation under the Port Ordinance on 1st July, 1913. The Board consists of a Chairman and ten other members representing shipping and commercial interests who use the facilities which the Board provides. The two main trading departments of the Board are (a) the Traffic Department which administers and operates a stretch of approximately 3 miles of commercial wharves comprising 30 berths including 24 deep water berths and (b) the Dockyard Department which undertakes ship repairs and provides dry-docking facilities in its 6 graving docks, the largest of which is capable of handling vessels up to 45,000 tons gross. The smallest is the No. 1 Dock which was built in 1856. The other departments are the Secretariat, Accounts Department Civil Engineering Department, Electrica Department, Personnel and Welfare Department and the Police Department. The Board also operates its own fire service for the entire land area of 955 acres.

The wharves handle approximately 6½ million tons of cargo a year, approximately 55% of which is import and the rest export. Each of the deep water berths clears an average of 261,000 tons per annum which works out to 480 tons per foot run of wharf per year. This high utilisation of quayage keeps the berths almost constantly occupied, especially so when ships begin to "bunch" during (say) the end of the month. Ships are often berthed on arrival, although during a peak period an average of a day represents the waiting time of a vessel in Port prior to coming alongside. Vessels are generally allocated berths on a "first come first served" basis, but passenger ships enjoy some priority over cargo vessels. There is no fixed period for a ship's stay alongside. However, if a ship has little or no cargo to work she is expected to vacate her berth and wait in the stream.

The Board provides a fleet of modern tugs to attend to its daily berthing and unberthing programmes. Pilotage is compulsory when tugs are used. This service is now provided by a Pilot Association, but plans are in hand for this service to be operated by the Board in the near future. A very swift undercurrent flows through the main channel which is accessible from both the East and the West. This renders berthing or unberthing a tricky operation, but, in a way, it is a blessing in disguise insofar as it helps to prevent siltation in the harbour. Dredging is, therefore, reduced to a minimum in the maintenance of a depth of 33 feet (10.06 metres) of water at L.W.O.S.T. at the outside berths whilst in the Empire Dock (a wet dock) vessels up to 27 feet (8.23 metres) draft can be brought alongside the four South Wall berths. The coastal wharves on the

Shipping	**No.**	**Net Regd. Tons**
Vessels entered and cleared Singapore.	39,190	76,913,945
Vessels berthed alongside the wharves.	4,009	13,570,841

Cargo	**S.H.B. Wharves Tons**	**Pulau Bukom, Sebarok and Roads Tons**	**Total Tons**
General Cargo	4,462,946	2,760,970	7,223,916
Fuel Oil	1,741,416	10,279,748	12,021,164
Bulk Cement, latex and Vegetable Oils	215,999	NIL	215,999
TOTAL:	6,420,361	13,040,718	19,461,079

North Wall of the Empire Dock have a maximum draft of 12 feet (3.66 metres).

The Singapore Harbour Board not only administers and operates the entire stretch of wharves and transit sheds but also provides direct employment for over 5,000 stevedores and wharf labourers and another 5,000 in the Dockyard. Vessels alongside are not allowed to use their own or contract labour. The Board's labour force attends to all aspects of cargo operations including shifting of cargo on board vessels, cleaning of hatches, dunnage laying, sorting cargo, etc. The labourers are divided into two categories, viz. stevedores and wharf labourers who in turn are grouped into labour gangs. A stevedore gang has 17 men including a "serang" (headman) and 4 winchmen, whilst a wharf gang which is invariably assisted by a forklift or a platform truck has either 10 men or 5 men including a "mandore" (headman) dependent on the nature of the operation or the type of cargo to be handled. A ship working 6 or more stevedore gangs is also supplied with a foreman and three assistance foremen. A ship working 5 stevedore gangs and under has a foreman and 2 assistant foremen.

Working Hours

The Board's working hours are of 4 hours per working period. (i.e. 0700-1100, 1300-1700, 1900-2300, 0100-0500). There are two periods in the day and two at night. The second night-working period is optional. Overtime is paid to the workers engaged in night work as well as on Sundays and holidays. The fringe benefits which the workers enjoy include free medical attention, free housing and vacation leave, two guaranteed free meals a day and a gratuity on retirement. The Central Kitchen, operated by the Board, prepares an average of 12,000 meals a day.

The labour force comprises workers of mixed race—viz. Indians, Chinese and Malays and others. It is a well disciplined force. Productivity in the form of actual tons per gang hour ranges from 12 to 14, although in the case of homogeneous cargo (like bagged sugar, flour and copra) the average rate is between 18 to 20 tons per gang hour.

Mechanical Aids & Pallets

Cargo operations are completely mechanised on the wharf. With over 200 6,000-lb forklifts and a fleet of platform trucks, side-forks, cranes, tractors and trailers, lorries and two 18,000-lb heavy forklifts, mechanisation is geared to a very high degree of efficiency. The pallet in use is a wing type pallet of 72″ (1.88 metres) × 54″ (1.37 metres) × 6″ (0.15 metres) dimesions weighing 235 lbs. It has been tested to load up to 3 tons and has a two-way entry. The pallet is constructed mainly of timber with two steel channels placed one at each end and a wooden member in the middle

Waterfront and the Singapore river on the right.

Aerial view of the alongside berths and the Inner Roads at the top right corner.

secured by bolts and nuts.

A total of 45,000 pallets renders palletisation feasible at all berths. Whenever possible, the cargo is palletised on board prior to discharge, but if this is not practicable owing to unsuitable working conditions in a hatch, the cargo is sorted by marks and palletised on the wharf apron. Loaded pallets are forklifted and stacked in transit sheds pending delivery. Conversely, consignments of export cargo are unloaded from road transporters or rail and palletised. They are then stacked by forklift pending shipment. In a modern port sensible utilization of pallets and mechanical aids is the key to the speedy turn-round of vessels, but there must not be any congestion either on the apron or in the shed affecting the free flow of machines and cargo. The labour on the wharf is now so accustomed to mechanical aids, that a gang would rather stand-by and wait for the arrival of a forklift or platform truck than work unaided. The hand-truck has become rather obsolete in that it is only used in minor operations like sorting cargo and checking the marking of the packages.

A very noticeable feature when one is approaching the wharf area in Singapore is the complete absence of portal or semi-portal shore cranes. At the new berths at East Wharf, a clean sweep of a 53-foot (16.15 metres) wide wharf aprons with no obstruction on the quay, coupled with a 100 foot (30.47 metres) single span × 450 foot (137.15 metres) godown (or shed) for the reception of cargo provides ideal working conditions for mechanisation. In view of the fact that modern ships are well fitted with cargo handling gear, the provision of costly wharf cranes is only a duplication of the vessels' expenditure. Therefore investment of the money, which otherwise would have been spent on cranes, in a fleet of efficient cargo-handling mechanical equipment, accelerates productivity and the speeding up of the turn-round of ships thus increasing the port's output and reducing operation costs.

As a means of assistng undergeared vessels to accelerate their despatch, mobile long-jib and tower cranes are available. The tower cranes have a reach of 50 feet (15.24 metres) and are extremely useful when single derrick arrangements of certain hatches require doubling up. When not in use these cranes are moved to the crane parks thereby causing no obstruction on the quay face.

Railway System

In addition, the Board operates and maintains its own railway system totalling 16 miles of meter gauge railway track, which is connected to the main railway line of the Malayan Railway. Its rolling stock comprises 140 covered and open trucks of up to 10 tons capacity and 32 flats (bogies) capable

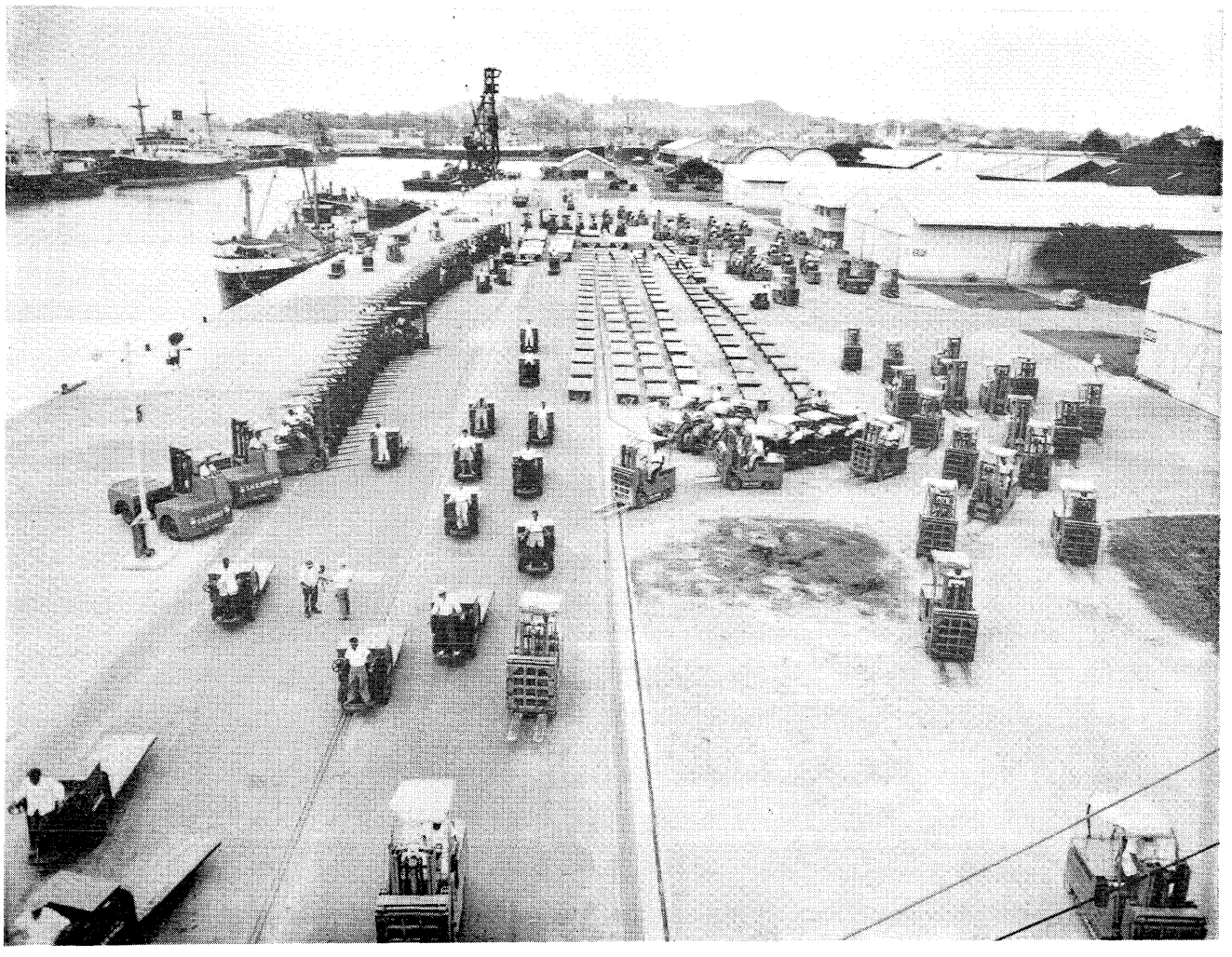
of handling pay-loads up to 20 tons per flat. The 3 diesel locomotives in use carry out all shunting operations within the Board's precinct, and in the Malayan Railway marshalling yard in Singapore.

An internal road system of 12 miles is also owned and managed by the Board.

Transhipment Cargo

Another interesting feature in this Port is the extent of transhipment cargo handled at the wharves. This aspect of entrepot trade has a great bearing on the prosperity of the Island State of Singapore. This transhipment trade represents approximately a quarter of the total tonnage passing over the quay walls. Preferential tariff rates are applicable to such cargo which must conform with transhipment regulations. A great attraction is the 4-week free storage and the 50% wharfage rebate. About 2,000 tons of transhipment cargo is moved daily within the wharf area from berth to berth ranging from a distance of 500 feet (152.40 metres) to 2 miles. Various methods of transportation to suit the nature of the cargo and operation involved are employed. Lorries, trailers and tractors, platform trucks, sideforks, rail trucks and forklifts are utilised. Flat platform diesel-powered lorries of 7 ton capacity are used for long runs whilst over shorter distances, trailers of varied capacities ranging from 2 tons to 12 tons are preferred. A rake of 8 × 4-ton trailers provides a load of 32 tons of palletised cargo per haul, the towing heads being capable of handling maximum tows up to 40 tons. The total fleet of trailers number 163 units assisted by 12 towing heads. Battery-operated platform trucks are capable of handling up to 4 tons per stillage. A floating crane for the handling from 6,000-lb to 18,000-lb capacity are mainly battery-electric operated though some machines are powered either by diesel or petrol. The Board also operates a fleet of 38 mobile cranes, the capacity of which ranges from 2 to 10 tons. A floating crane for the handling of heavy lifts up to 80 tons at a radius of 78 feet (23.77 metres) is available.

Special transit sheds are served for the reception of transhipment consignments for particular ports. Under an arrangement with local shipping agents, such cargo is concentrated automatically at the coastal berths without awaiting specific instructions. There are some 35 ports listed in the automatic removal scheme, which ensures that almost invariably transhipment cargo is available on the berth prior to the on-carrier's arrival. The absence of any undue delay in locating and transporting the cargo to the loading berth accelerates the vessel's despatch. It is not unusual to find a number of coasters loading transhipment cargo at the shallow water wharves, whilst ocean-going ships are busy discharging at the other berths. Sometimes, timing is important in view of the fact that



The Board's fleet of mechanical equipment.

a coastal vessel alongside may be waiting for a particular consignment which is still in the hatch of the discharging ship. The speedy unloading and despatch of the cargo to the on-carriers' berths is the Board's responsibility and every care is therefore taken to ensure the least possible delay.

The principal export items from Singapore are rubber, copra, sago flour, pepper and other spices, tinned pineapples, cane and rattan, timber and illipenuts. Approximately 75% of the entire export is shipped over the wharves, whilst the remaining 25% is carried out in the Roads. Lighters are invariably operated by private lighterage companies and they are mainly used for transporting goods to and from shipping in the Roads. They are usually wooden craft of 75 ton capacity. Sometimes due to congestion at the wharves discharging ships unload their cargo in the Roads into lighters for subsequent wharf discharge. Mobile cranes are supplied by the Board for unloading these lighters and storing the cargo in the sheds pending delivery.

Bunkering Facilities

All the ocean going berths operated by the Board are all provided with bunkering facilities. Marine diesel and fuel oils and fresh water are available and vessels whilst working cargo can bunker simultaneously. The oil farms belonging to private companies situated a short distance from the wharf area, replenish their supplies by mooring their tankers alongside and discharging direct into the oil tanks. A common oil facilities pipeline system (one for diesel and another for fuel oil) is operated by the Board. Connection is made to the wharf apron of all the ocean going berths. Oil companies concerned share the maintenance costs of this common-oil facility which is of considerable service to shipping alongside. There are two berths equipped with 18" pipelines for fast discharge of tankers.

Liquid Cargoes

Apart from the handling of dry cargo, liquid bulk consignments of latex, coconut oil and palm oil may be loaded by ships alongside direct from the various bulk-cargo installations operating in the wharf area. Certain berths are equipped with overhead pipelines which convey the liquid cargo from the bulking plants to the ships. This, of course, can be carried out simultaneously whilst other operations, e.g. the discharging and loading of dry cargo, bunkering, victualling, etc., are proceeding.

Bulk Handling Facilities

Bulking facilities, privately owned, for the handling of clinker and gypsum are available at one of the deep water berths. The company operating this plants imports its own raw materials for the production of cement, delivery of which can be effected either in bags or in bulk by specially constructed tank lorries. A grain mill with an underground conveyor system from wharf to plant

The East Wharf Extension, showing Godowns 44, 45 and 46 in use and Godown 47 under construction.

is under construction. This mill when completed early in 1963 will import grain in bulk for discharge into its silos. After milling, wheat flour will be available for local distribution and for export purposes.

Waterboats

Fresh water hydrants have been installed along the entire stretch of wharves. Apart from this service, the Board also operates a fleet of 12 waterboats of capacities ranging from 75 to 300 tons. These waterboats supply fresh water not only to vessels in the stream and inner roads but also to the neighboring islands and shore installations. Over 2 million tons of water is delivered per year. The larger boats are equipped with V.H.F. radio communications and can be diverted to attend to urgent jobs at short notice.

Wharf and Storage Facilities

The Board operates a total of 49 transit sheds at the wharf and 17 storage godowns, totaling 1,365,-694 square feet (126,872.54 sq. metres) of which 1,048,365 square feet (97,392.78 sq. metres) is transit storage. In addition hard-standing areas for open storage total 785,443 square feet (72,967.-40 sq. metres). A number of godowns equivalent to 428,994 square feet (39,854.31 sq. metres) are leased to commercial firms mainly for rubber packing. Large car park areas totalling 46,575 square feet (4,326.80 sq. metres) are also available.

Details of the system of wharves owned and operated by the Singapore Harbour Board are as follows:—

A scene in one of the new spacious godowns at the East Wharf Extension.

A scene in a new godown showing neatly stacked cargo on pallets.

Fire Service

The Board's Fire Brigade maintains a round-the-clock vigilance daily, and is equipped with 1 Fire Float, 3 Fire Engines and 4 Pumping Units at its 2 Fire Stations which are manned by a complement of 4 Officers and 133 men. The Carter Micro Alarm System is used throughout the wharf and dockyard areas. The Brigade's personnel also undertake all Hot Work Repairs and are in charge of the Oil Service. The Fire Precaution System runs on similar lines as recommended by the Ministry of Transport.

The Fire Float also attend to ships' fires in the Roads.

	Length of Wharf	Depth of Water at L.W.O.S.T.
West Wharf	4,526 feet (1,379.19 metres)	33 feet (10.06 metres)
Empire Dock	3,522 feet (1,073.49 metres)	27 feet (8.23 metres)
Shallow Water Berths	940 feet (286.51 metres)	11 feet (3.07 metres)
Main Wharf	3,152 feet (960.71 metres)	33 feet (10.06 metres)
East Wharf	1,100 feet (335.27 metres)	34 feet (10.36 metres)
East Lagoon	1,236 feet (376.73 metres)	34 feet (still dredging) (10.36 metres)

Police Department

Being fully conscious of the importance of port security, the Singapore Harbour Board takes pride in saying that it has an efficient Police Force which is second to none. Immediately after the last World War organised looting in the port area was so widespread that a crash programme had to be introduced to stamp out this menace. An Auxiliary Police Force comprising only police officers was formed in May, 1947. This stringent measure taken proved to be most effective and by 1951 pilferage of cargo of any appreciable scale was completely eradicated. As a culmination of research and experiment, the Force in its present form comprising 338 officers and men came into being in October, 1951.

The Police Force, apart from policing the entire wharf and dockyard areas on a 24-hours basis on foot, on bicycle and by radio patrol cars, also operates its own Marine Section to control the activities of small craft and lighters. The checking of cargoes of a dangerous nature on board vessels is undertaken by an "Arms and Explosives" Officer.

All the "In" and "Out" gates are constantly manned to ensure that no property is removed from the premises without authority. A pass system is maintained to ensure that no unauthorised persons enter or leave the area.

The security provided by the Singapore Harbour Board is well appreciated by the shipping community. Petty pilferage does occur occasionally, but the sum of Malayan $25,000.00 (¥2,917,250) paid out by the Board in the form of claims for the whole of 1961 compared with the millions and millions of dollars worth of cargoes handled during that period, clearly illustrates the effectiveness of the Police Force.

Lighterage Basin

In Singapore there are about 600 cargo lighters owned and operated by private lighterage companies. They are used mainly in transporting goods from the anchorages to the Telok Ayer Basin and the Singapore River and vice versa.

The lighterage basin in Telok Ayer is administered by the Singapore Harbour Board on behalf of the Singapore Government. A wharfage on all cargo and livestock passing over the steps of the basin or over the quay walls is levied.

Post War Expansion Scheme

"The first phase of the post war expansion scheme was launched in June 1959. The construction of four new deep water berths at the East Lagoon costing Malayan $18 million (¥2,100,420,000) which included the provision of mechanical equipment, was completed in April 1962. On May 30th 1961, the first berth was officially opened by the Minister for Finance. A more ambitious project to build several more berths costing Malayan $30

A scene depicting a small section of the Board's housing estate for its workers.

The Board's floating crane 'Nimrod' lowering a 33-ton rail car onto railway tracks at the North Wall.

One of the Singapore Harbour Board's Tower Cranes assisting in the loading of rubber.

million (¥3,500,700,000) is being planned. It is hoped that construction work will begin in the not too distant future."

The four new transit sheds recently completed are of the latest "portal-frame" structure design. Each, being 100 feet (30.47 metres) wide × 450 feet (137.15 metres) in length, has over an acre of covered storage. With no centre pillars, the sheds are ideal for palletisation and the operation of mechanical equipment. The wharf apron, as mentioned earlier, is 53 feet wide with 2 rows of bollards of modern design. Rubber tubular fendering is used throughout.

The following comparative tonnage figures of cargo handled at the wharves indicate the rapid increase of shipping and trade attracted by the excellent and efficient port facilites provided by the Singapore Harbour Board:—

Year		Tons
1870	.....	144,801
1941	.....	3,650,962
	(World War II)	
1946	.....	842,236
1947	.....	2,956,925
1957	.....	5,780,780
1961	.....	6,420,361

Statiscal Review of Vessel Activities in the Major Ports of the United States, Covering the Calendar Year of 1962

A statistical analysis of vessel activities at the eleven leading ports of the nation has just been released by The Maritime Association of the Port of New York.

Mr. William F. Giesen, General Manager and Counsel of the Association reports that the total number of ocean-going vessels arriving at and departing from the eleven major seaports of the United States during the calendar year of 1962 amounted to 110,786. This figure represents a decrease of 1,010 vessels under the previous year. A study of the figures reveals that New York's share of the total volume of ship traffic was 23.2 per cent, representing a decrease of 0.4 per cent under the 23.6 per cent recorded in 1961.

The Port of Philadelphia, with an increase of 1.0 per cent over last year's figures, retained its position as the nation's second busiest port. Philadelphia recorded 12.0 per cent of all vessel traffic at the major seaports analyzed, as compared with 11.0 per cent for last year, representing an increase of 1.0 per cent. Vessel traffic through the Port of Philadelphia during 1962 exceeded by only one the 13,346 vessels recorded as arriving and sailing during the year.

Hampton Roads, which showed an increase in vessel traffic over last year, recorded a total of 9.1 per cent, to outrank the other ports considered in the analysis. The figures for Hampton Roads reveal that this year's traffic at that port showed a total of 10,830 arrivals and sailings, representing an increase of 325 vessels over the 1961 total of 10,505.

In the following table, details are given of the number of vessels arriving at and departing from the leading ports analyzed during the year 1962.

An analysis of the figures compiled indicates that a fleet of 2,785 vessels representing approximately 15.0 per cent of the world's merchant fleet of vessels of over 2,000 tons made up the total number of arrivals and departures from the port. The volume of tanker traffic at the Port of New York continued to fall off during the year 1962. Dry cargo and passenger vessel activity was below that of 1961, with a decrease of 378 vessels under the totals recorded during 1961. Of the 12,838 vessels recorded as arriving during the year, a total of 856 were passenger vessels, 237 of which were of American registry, and 619 were foreign flag carriers. The total number of ocean-going vessels, incoming and outgoing during 1962 at the Port of New York registered a total of 25,684—a decrease of 2.5 per cent under the 26,342 vessels recorded in 1961. Ship arrivals during the year numbered 12,638, with an aggregate net tonnage of 72,989,599, as compared with the previous year's return of 13,151 vessels, having an aggregate net tonnage of 72.466,568. The net tonnage of the ships arriving during the year, however, exceeded that of the previous year by 523,031 tons. The reason for this is believed to be the maiden arrival of the liner FRANCE, the largest passenger ship under the French flag, and the larger type bulk carriers and super-tankers arriving during the year.

A study of the figures on a month-to-month basis reveals that the lowest monthly total of departures was recorded in October, when vessel movements dropped to 974 due to the four-day work stoppage of longshoremen during that month. The December figures were also affected because the strike was resumed when the Taft-Hartley Act expired on December 23rd. The month of March showed the greatest activity, with a

VESSELS ARRIVING AT AND DEPARTING FROM LEADING PORTS ANALYZED DURING CALENDAR YEAR OF 1962

PERIOD COVERED: 1/1/62—12/31/62

PORTS ANALYZED	Arrivals	Departures
New York	12,838	12,846
Philadelphia	6,697	6,650
Hampton Roads	5,424	5,406
Baltimore	5,284	5,237
Los Angeles—Long Beach	5,056	5,090
New Orleans	4,821	4,704
San Francisco	4,777	4,710
Houston	4,204	4,198
Boston	2,275	2,198
Seattle	2,156	2,151
Portland, Oregon	1,986	2,078
TOTALS	55,518	55,268

high of 1,145 arrivals, 86 vessels short of the record-breaking high of 1,231 arrivals registered in March, 1959. The highest number of departures for the year was also recorded in the month of March, with 1,157 vessels leaving the port.

Comparative figures, broken down month by month, disclosing vessel arrivals and sailings at New York for 1962 and 1961, are given in the table on the right:

	ARRIVALS		DEPARTURES		
	1962	1961		1962	1961
January	1,109	1,178	January	1,098	1,163
February	992	1,025	February	987	1,019
March	1,145	1,166	March	1,157	1,230
April	1,058	1,075	April	1,046	1,057
May	1,137	1,139	May	1,113	1,112
June	1,063	1,032	June	1,106	1,020
July	1,087	1,081	July	1,087	1,116
August	1,127	1,157	August	1,152	1,141
September	1,069	1,066	September	1,069	1,119
October	1,018	1,077	October	974	1,041
November	1,027	1,039	November	1,046	1,030
December	1,006	1,116	December	1,011	1,143
TOTALS	12,838	13,151	TOTALS	12,846	13,191

A breakdown of the 25,684 vessels arriving at and departing from the Port of New York during 1962 reveals that 19,564 vessels were in the dry cargo and passenger trades, of which 6,950 were American, and 12,614 were foreign, and 6,120 were tankers. Of the 6,950 American vessels in the dry cargo and passenger trades, 1,944 entered from foreign ports, and 1,539 from coastal ports. Outbound American-flag vessels accounted for 1,964 movements to foreign destinations, and 1,503 to coastwise ports.

A further analysis of the 19,564 dry cargo and passenger vessels indicates that 13,093 were in the foreign trades, and 6,471 were in the coastal and intercoastal traffic. Tanker figures recorded 6,120 arrivals and departures during the year, which was a decrease of 280 under the 1961 totals. The arrivals numbered 3,070 vessels, of which 1,812 were flying the American flag, and 1,258 were under foreign registry. Of the 3,070 tankers arriving during the year, 1,797 vessels reported in from coastwise ports, and 1,273 from foreign ports. Of the 3,050 tankers which departed from the Port of New York, 1,710 left for coastwise destinations, and 1,340 for foreign ports. American-flag tankers accounted for 1,846 of the departures, and foreign-flag vessels for 1,204 of the departures.

As will be observed from the table below, showing the foreign trades served by vessels calling at the Port of New York, the greatest number of vessels were engaged in the United Kingdom and Northern European ports — with 2,034 arrivals, and 1,778 departures during the year 1962.

An analysis, according to flag, reveals that 41.3 per cent of the vessels using the Port of New York last year were American-flag vessels. By actual count last year, there were 10,608 American-flag arrivals and sailings, as compared with 15,076 foreign-flag vessels. Forty-seven foreign nations were represented by ships calling at the Port of New York during the year.

The top place, as usual, went to Ships of Norway, with a total of 3,045 arrivals and sailings, which was an increase of 44 vessels over last year. Second place went to Great Britain, with 1,628 movements, as compared with 1,546 for last year. Holland, with an increase of 44 over last year, and Sweden with 1,117 vessels, ranked third and fourth, respectively.

For the first time in the history of The Maritime Association's records, a merchant vessel flying the flag of Thailand called at the Port of New York. The vessel, named the SRI SUKOTHAI, arrived on December 26, 1962, under the agency of Motorships, Inc.

AREAS SERVED	ARRIVALS	DEPARTURES
Africa (West Coast)	86	96
Africa (South & East Coast)	98	114
Australia and New Zealand	88	98
Canada	451	473
Central America	417	375
Far East	669	662
Iceland and Greenland	23	18
India and Persian Gulf	147	252
Mediterranean	633	651
South America (East Coast)	361	382
South America (West Coast)	280	321
United Kingdom and Northern Europe	2,034	1,778
West Indies and North Coast of South America	1,291	1,295
TOTALS	6,578	6,515

ARRIVALS AND SAILINGS BY FLAG (Cont'd)

FLAG	Arrivals	Sailings
American	5,295	5,313
Argentine	66	64
Belgian	107	107
Brazilian	51	51
British	818	810
Canadian	8	8
Chilean	38	38
Chinese	47	44
Colombian	83	84
Danish	383	390
Dominican	52	50
Dutch	595	587
Ecuadorian	10	10
Eireann	10	10
Finnish	120	118
French	170	172
German	512	509
Ghanaian	3	3
Greek	310	314
Guatemalan	24	25
Honduran	50	50
Icelandic	36	35
Indian	27	25
Israeli	89	86
Italian	232	226
Japanese	352	361
Korean	4	4
Lebanese	1	1
Liberian	515	520
Mexican	12	12
Moroccan	1	1
Nicaraguan	32	29
Norwegian	1,521	1,524
Pakistani	4	4
Panamanian	287	288
Peruvian	16	15
Philippine	68	66
Polish	55	55
Portuguese	25	25
South African	23	24
Spanish	62	61
Swedish	557	560
Swiss	1	1
Thailand	1	0
Turkish	25	26
Uruguayan	4	4
Venezuelan	54	55
Yugoslavian	82	81
TOTALS	12,838	12,846

(The Maritime Association of The Port of New York, Jan. 31, 1963)

Int'l Trade Fair, Long Beach

An international trade fair, one of three to be held in the United States this year, will be staged, May 17-26, in a new $8 million exhibition arena here.

Called the International Trade Fair-West, the 10-day Southern California show will be held for the 11 western U.S. states.

Other world trade expositions will be held in May and July in New York and Chicago for the midwest and east coast regions of the country.

On display at all three shows will be materials, manufactures and merchandise from 50 to 100 nations throughout the world.

"We will have what will amount to a department store of the world," explained John L. Westland, Jr., nationally known world trade executive and general manager of the Southern California fair.

Westland recently returned from a 32-day, 35,000-mile trip to Europe, the Middle East and Asia to line up exhibits for the show.

He said that at least 50 exhibits have already been signed up and are en route to the west coast. Negotiations for many more "are still under way," he said.

Westland said many of the exhibitors, both national groups and individual manufacturers within various countries, will also exhibit at the Chicago and New York trade fairs.

Westland said the fair here will be attended by department store buyers, trade brokers and merchandisers, importers and exporters, and the general public.

"We hope to exceed an attendance of 100,000," he said.

In addition to the exhibits, which will include the leading lines of merchandise from the United Arab Republic, Peru, Finland, Israel, Japan, Britain, Tahiti, France, Belgium, India, the Philippines, Hong Kong, among other exotic locales and regions, the show will feature a wide range of nightly entertainment and several special events now being negotiated.

"Within the show's general market area, the 11 western states, there live more than 27 million persons," explained Westland.

"Within the immediate Southern California metropolis there are 10 million persons, all potential customers."

"There are more than 3.5 million autos on our roads and 1 million trucks, 135 newspapers, 50 radio stations and 11 television stations."

"This fantastic market, which grows at the rate of 200,000 new residents a year, is what we offer the exhibitor," said Westland.

PORT OF BALTIMORE-- ITS DYNAMIC DEVELOPMENT

The Port of Baltimore is today moving forward with a far-reaching, multi-million-dollar building program that will provide unexcelled facilities for the handling of all types of cargoes, and is developing services and rate structures that will assure its competitive position in the new era of rapidly expanding world trade.

Spearheaded by the Maryland Port Authority and private shipping interests, this port-wide program of rehabilitation and expansion is a key factor in the current revitalization of the entire metropolitan area. More than $165 million is currently being invested in Baltimore's waterfront economy in the form of channel improvements and new or expanded piers and industrial facilities.

Dundalk Marine Terminal

A major accomplishment of this program to date is the Maryland Port Authority's new 365-acre Dundalk Marine Terminal. Built on the site of a former municipal airport, Baltimore's first public marine terminal is strategically located in the center of harbor activity.

With the first major phase of its development completed at the cost of $15 million, the terminal currently offers five 600 foot marginal berths, serviced by 50 foot wide aprons, double and triple rail trackage, two 100,000 sq. ft. transit sheds, acres of open storage area, and two high speed gantry cranes, each capable of lifting in excess of 50 tons.

Ship access to Dundalk Marine Terminal is gained by a 7100 foot long, 30 foot deep channel leading to a 3000 foot bulkhead. The channel is 210 feet wide at berthside, narrowing to 150 feet as it nears the main channel.

Three trunk line railroads, the Baltimore & Ohio, Pennsylvania and Western Maryland, offer shipside service along depressed rail tracks, and direct truck access is provided by way of Baltimore Harbor Tunnel and a rapid expressway system. Equal facilities at equal rates are offered to all forms of transportation.

Also at the Dundalk site are a 50 car rail holding yard and 300,000 gallon emergency water tower.

Nine lessees, all engaged in port related business are presently located at the terminal. They are Koppers, R.G. Hobelmann & Co., Pacific Molasses, Lumber Terminals, George Transfer & Rigging, Harvey Aluminum, Maps, Inc., North American Van Lines (Containers Inc.) and Giorgio Motor Co.

Because the volume of business at the terminal is two years ahead of expectations, $2 million has been further allocated for improved channels and new facilities. Work to be done includes widening the channel to 325 feet and deepening to 35 feet; construction of a 120,000 sq. ft. warehouse to be operated by Modern Storage, Inc.; an additional five-and-one-

LOCUST POINT: The largest railroad-owned marine terminal in the world, the Baltimore & Ohio Railroad's Locust Point complex in the Port of Baltimore will be renovated by the Maryland Port Authority. Revitalization of these general cargo piers is another step in Baltimore's move to meet the competitive costs of waterfront operations at other Atlantic Coast ports.

half acres of paved ground storage; construction of a marine fire station; and relocation of marine radio station WHM and radiotelephone service WJY. Three more berths and a number of transit sheds will ultimately be added.

Due to its ability to fulfill ideal requirements, the Dundalk Marine Terminal is already handling some 65,000 foreign cars annually, over 50 million board feet of lumber imported in less than a year, military cargoes, scrap, copper, molasses, and containerized cargoes of household goods and personal effects.

The major marine facility is also involved in long-term shipment of materials and equipment for the construction of an aluminum plant overseas, and over a 20-month period is serving as the point from which parts of a $245 million steel mill are being exported to Eregli, Turkey. This is one of the largest single movements to come out of an American port and requires more than 50 vessels to transport.

The terminal first opened in January 1960, and the Port Authority assumed control of the entire facility one year later. Its multi million dollar investment includes $4,147,310 paid to the City of Baltimore in 1959, when the Authority purchased the site.

More than 400,000 tons of freight have so far moved across its berths, and ninety per cent of this cargo represents new or increased business for the port.

Hawkins Point Pier

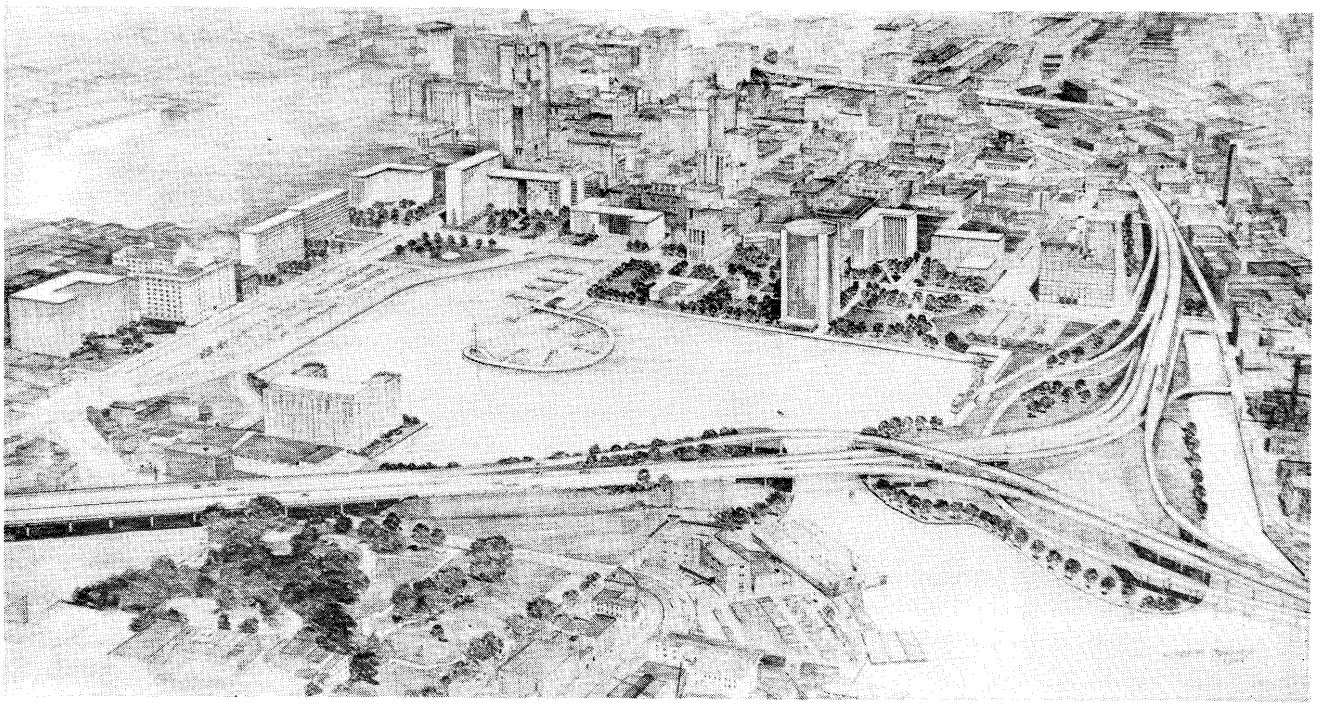
Dundalk Terminal is the second major project of the Maryland Port Authority in the harbor area. The first was the Hawkins Point Pier, a $3.5 million construction project, completed and open for operation in 1959. Encompassing 137 acres of land, pier and channel improvements, the property is owned by the Authority and operated under lease by the Baltimore and Ohio Railroad.

The Hawkins Point Pier is 720 feet long and 90 feet wide, and during construction was specially reinforced to support the gantry cranes to be installed when the need develops. The pier is equipped with four sets of railroad tracks that will accommodate 56 cars. The supporting area is large enough to hold an additional 170 cars. The access channel is 390 feet wide, and slips alongside the pier are 150 feet wide. Both the channel and the slips are 36 feet deep. The pier is also equipped with modern facilities for customs agents and stevedores.

Private Industry Building on Waterfront Sites

Even as the publicly sponsored program of development moves forward under direction of the Maryland Port Authority, private interests in the Port of Baltimore's $2 billion industrial complex are involved in plans for improving and expanding tidewater property.

Thus, the Hawkins Point project provides a waterfront facility for and deepwater access to a new 5200-acre industrial tract known as Marley Neck. Fronting on the Patapsco River and Curtis Bay, this area is presently the



INNER HARBOR PROPOSAL: In December, 1962, the Maryland Port Authority issued a report on the impact of the proposed East-West Expressway on the Port of Baltimore and strongly supported the Hamburg Street route for the new highway. The Authority stated that the proposed route would provide vitally needed high-speed truck access to the cargo handling areas of the port and at the same time would afford the opportunity for major redevelopment of the inner harbor area. Closing the inner harbor to commercial shipping activities could result in a downtown lagoon suitable for the establishment of a pleasure boat marina and choice sites along the shore for modern office and apartment buildings. The Authority also revealed that its own future planning calls for construction of an International Trade Center building that logically would be located on the waterfront of the inner harbor. A 2,400-foot marginal pier backed by a park would be constructed along Boston Street to replace the facilities for visiting naval vessels and grain ceiling work now provided by the city's Pratt Street piers.

SHIPBUILDING SUPERIORITY: Hundreds of modern tankers, cargo carriers and special ships have gone down the ways at Bethlehem Steel Shipbuilding Division's Sparrows Point Yard, a 170-acre complex adjacent its giant steel plant in the Port of Baltimore. The yard continues the nation's busiest, with 15 ships building or planned for construction under a program extending to 1964.

scene of one of the prime industrial extensions of the Port of Baltimore and has already become the home of over $100 million worth of new industry in the port area.

At Hawkins Point, Kennecott Refining Corporation imports Chilean copper for its $40 million refinery. Glidden Paint Company and Pittsburgh-Des Moines Steel import and export raw materials and finished products from their $30 million titanium dioxide plant and 145-acre fabricating plant respectively. Also in the rapidly developing area are new facilities for U.S. Gypsum and Atlantic Cement companies, and the $15 million power station of the Baltimore Gas and Electric Company.

Port Busy With New Activity

Elsewhere in the port, Humble Oil, Gulf Oil, Weyerhauser and the Western Maryland Railway have all recently completed additions to their harbor installations.

The Baugh Chemical Company, in conjunction with Pan American Sulphur Company, has completed terminal facilities for the receipt and storage of liquid sulphur.

Bethlehem Steel, Sparrows Point, has completed a $12 million construction of new piers and sheds to accommodate the shipment of finished steel products, including the new Pennwood Wharf, a multi-million-dollar marine terminal complex. The 870-foot wharf, built on steel piles up to 160 feet in length, can ultimately be expanded to handle four ocean-going vessels. The heated warehouse at the terminal is 505 feet long, 100 feet wide, and is capable of storing 20,000 tons of finished steel products. The terminal also has a 1000-foot ship turning basin connected to the main Baltimore channel by nearly two miles of channel 33 feet deep and 250 feet wide. Outbound cargo from Bethlehem's new wharf includes not only shipments from Sparrows Point, the nation's largest steel plant, but also products from the company's Bethlehem, Williamsport and Lebanon plants.

U.S. Gypsum chose a 50-acre site near Hawkins Point for the location of its new $10 million pier and processing plant. The pier is the largest facility in the United States for receipt of gypsum rock in bulk, and the plant includes buildings and other accessories attached to the manufacturing process.

Atlantic Cement Company selected the Port of Baltimore for the establishment of a cement distribution terminal. Its 10-acre waterfront site at Curtis Bay includes a $2 million pier, channel, and 16 storage silos rising 190 feet in the air. The silos have the capacity to store 175,000 barrels of dry cement, which is transported to Baltimore in the world's two largest ocean-going barges. Each barge is 420 feet long and 80 feet wide, with a capacity for carrying 90,000 barrels of cement. Special equipment permits self-discharge of the cement into Atlantic's silos at the rate of 880 tons an hour. The terminal is utilized for the distribution of dry cement to the Middle Atlantic area of the United States.

The development of a new non-armored cable at the Western Electric Company's Baltimore works has made the port the focal point of a giant project to lay telephone cable across the ocean floors. A new, specially designed vessel, the SS LONG LINES, will call at Baltimore to load thousands of miles of modern cable and will sail from here to points around the globe where improved communications are needed. Because of this operation, Western Electric built a new pierside cable plant and berthing site on its property fronting Colgate Creek.

Improved Rail and Truck Facilities

The Canton Company recently completed a $500,000 improvement program to its piers and support terminal warehousing. The largest single expenditure was at Pier 8, where $200,000 was spent reconstructing the bulkhead, resurfacing the apron and pier shed, and equipping the shed with new lighting.

Pier 10 was improved with a new apron, new lighting in the pier shed, and new concrete and asphalt surfacing. Sea-Land Service, Inc. is making Pier 10 ready for its new weekly direct containership service between Baltimore and Jacksonville, Florida, and San Juan and Mayaguez, Puerto Rico.

Further improvements include a new fender system at Pier 11, where rail cars and trucks are being given equal access by lowering the elevation of the tracks and resurfacing the pier; new lighting for Pier 6; dredging of the slips at the Ore Pier; a new water tank at Pier 4; and new roofing for Canton's two Colgate warehouses.

The Canton Company is also developing Canton Center, a 200-acre tract adjacent the waterfront, which is becoming an industrial-business-research complex.

Shipbuilding and Ship Repair Schedules

Shipbuilding and ship repair have long been a part of the Port of Baltimore's operating complex. In 1962, Bethlehem Steel Shipbuilding Division's Sparrows Point Yard maintained its position as the busiest merchant shipyard in the United States, with 15 ships either on order or presently being constructed under a program extending into 1964. The list includes five 11,000-deadweight ton Lykes Brothers cargo vessels, four 20,000 ton Grace Line passenger-container ships, five 25,300-deadweight ton Texaco tankers and one Sinclaire tanker. More than 500 vessels, including seven 46,000 deadweight ton tankers, have gone down the ways at Bethlehem's 170-acre yard at Sparrows Point.

At its Key Highway Repair

BULK CARGO CENTER: Over many decades of handling huge quantities of ore, grain, coal and other bulk commodities, the Port of Baltimore has developed the world's largest coastal facilities for loading and discharging bulk materials, with unrivaled handling records. The ore piers of the Baltimore & Ohio, Pennsylvania and Western Maryland railroads, along with the modern facility operated by the Cottman Company, handle 7,000 tons per hour. The port's three grain elevators can store over 13 million bushels, and the grain piers load 450,000 bushels per hour. Public coal piers have a combined loading ability of 10,000 tons per hour. Shown here, the Port Covington ore pier of the Western Maryland Rail vay, with its two traveling bridge cranes and traveling revoling crane. In the background, Western Maryland's coal pier, 3,500 tons per hour capacity, and grain elevator, 4.8 million bushels capacity.

Yard, Bethlehem Steel Shipbuilding Division placed new 20,000- and 10,400-ton floating drydocks in operation during 1962. First vessel to utilize the 20,000-ton drydock was the former ESSO CHATTANOOGA, a tanker converted into the container ship SS SAN FRANCISCO. Other recent activity at the yard included repair of the M.V. ALISIOS, of the SS EXEMPLAR, of a number of naval auxiliaries including general overhaul of the U.S. Navy repair ship, VULCAN, and delivery of the last of five converted tankers to Hess, Inc. On its schedule for 1963, Bethlehem's Key Highway Yard will handle conversions of two Moore-McCormack Lines vessels, the SS ARGENTINA and SS BRASIL, adding 62 first class passenger spaces aboard each ship.

Also in 1962, the port's Maryland Shipbuilding and Drydock Company ended its pioneering program of jumboizing T-2 tankers and specialized bulk carriers. The company additionally reported construction of the R.V. ATLANTIS II and conversion of ANTON BRUUN, both oceanographic vessels, completed in 1962, with conversion of the U.S. Navy vessel NORTON SOUND to be completed in 1963.

Further Port Expansion Planned for 1963

Rukert Terminals, Inc. is the Port of Baltimore's leading independent terminal operation, with several facilities on the waterfront; the company is the leader in handling waterborne shipments of fertilizer. Early this year, Rukert will complete a $1.5 million expansion of its Lazaretto Point cargo piers. The project will extend an existing 505-foot marginal pier berth by 625 feet and did two apron rail tracks to permit handling of open top rail cars at dock side. A rail-mounted overhead crane will be added later. As soon as the pier is completed, work will begin to construct supporting warehouses.

New construction in the port also includes Bethlehem Steel's plans to build a waterfront cobalt leaching plant requiring 700,000 pounds of cobalt and 900,000 pounds of copper per year. The new plant will be the nation's sole producer of a liquid concentrate from which cobalt is extracted. The plant will process calcined pyrite ore from the sulphuric acid plant at Sparrows Point.

In 1963, at least four other companies will locate major new facilities on tidewater in Baltimore. Marquette Cement Manufacturing Company will construct a distributing plant; Farboil Marine Coatings plans to erect a plastics and chemical plant; J. E. Smith Company has acquired a 44,000 sq. ft. building for the production of paper boxes; and Inland Steel Products Company announced the opening here of a new factory for the manufacture of several lines of steel building products.

Long-Range Plans for Future Growth

Important among the duties of the Maryland Port Authority is the long-range planning to equip the Port of Baltimore to meet the commercial needs of the future. Recognizing that basic changes in water transportation are occurring at this time, the Authority has geared its program to provide the port with the type and number of facilities that will be required to accommodate future traffic. This planning assumes particular importance from the standpoint of providing efficient facilities as a means of lowering handling costs on piers.

Ocean carriers in existence, under construction, or planned for future construction are substantially larger than the majority of the ships in use today and, therefore, the greater ship length, increased beam and draft are being taken into consideration in planning improvements. Atomic ship propulsion now nearing practical reality will create special problems that have been recognized and will be met. The growth of port-linked industry, not only at the Port of Baltimore but at other ports of the State, has also demanded the attention of the Authority in mapping a future course.

It was in keeping with this legislative intent that a 157-berth marina for pleasure craft and commercial fishing boats was opened under the auspices of the Authority at Crisfield, Maryland, in June 1962, and under the same policy that plans are rapidly moving ahead on a new wharf for ocean-going vessels and adjoining industrial area at the State's Port of Cambridge. The finished 350-foot marginal type commercial pier, 25-foot deep channel, and 10-acre port-linked industrial site may well mark Cambridge as the second official port of entry in Maryland, after its completion by the end of 1963.

Thus, the Authority's planning broadly encompasses all facets of port development, including new pier facilities, cooperation with private industry in providing specialized facilities, continuous study of ship channel requirements, and participation in recommendations for highway improvements. Close relations are maintained with all members of the Port of Baltimore business fraternity. Meetings held with committees representing labor, the railroads, motor truck operators, steamship companies, forwarders, custom house brokers and private terminal operators are concerned with means of solving internal problems and the most effective methods of overcoming competitive practices at other ports by cooperative efforts of all segments of the port community.

The Authority carries on these operations in close cooperation with the private business enterprises of the port. Its policy emphasizes continuous consultation with firms engaged in the many phases of commerce and industry comprising the Port of Baltimore's marine business for the purpose of rendering assistance where required. Cognizant of the major role played by private business in port development, the MPA encourages continued improvement where possible by such firms. During fiscal 1962, a total of 42 permits were issued by the Authority to private industry for construction work and dredging within the limits of Baltimore Harbor.

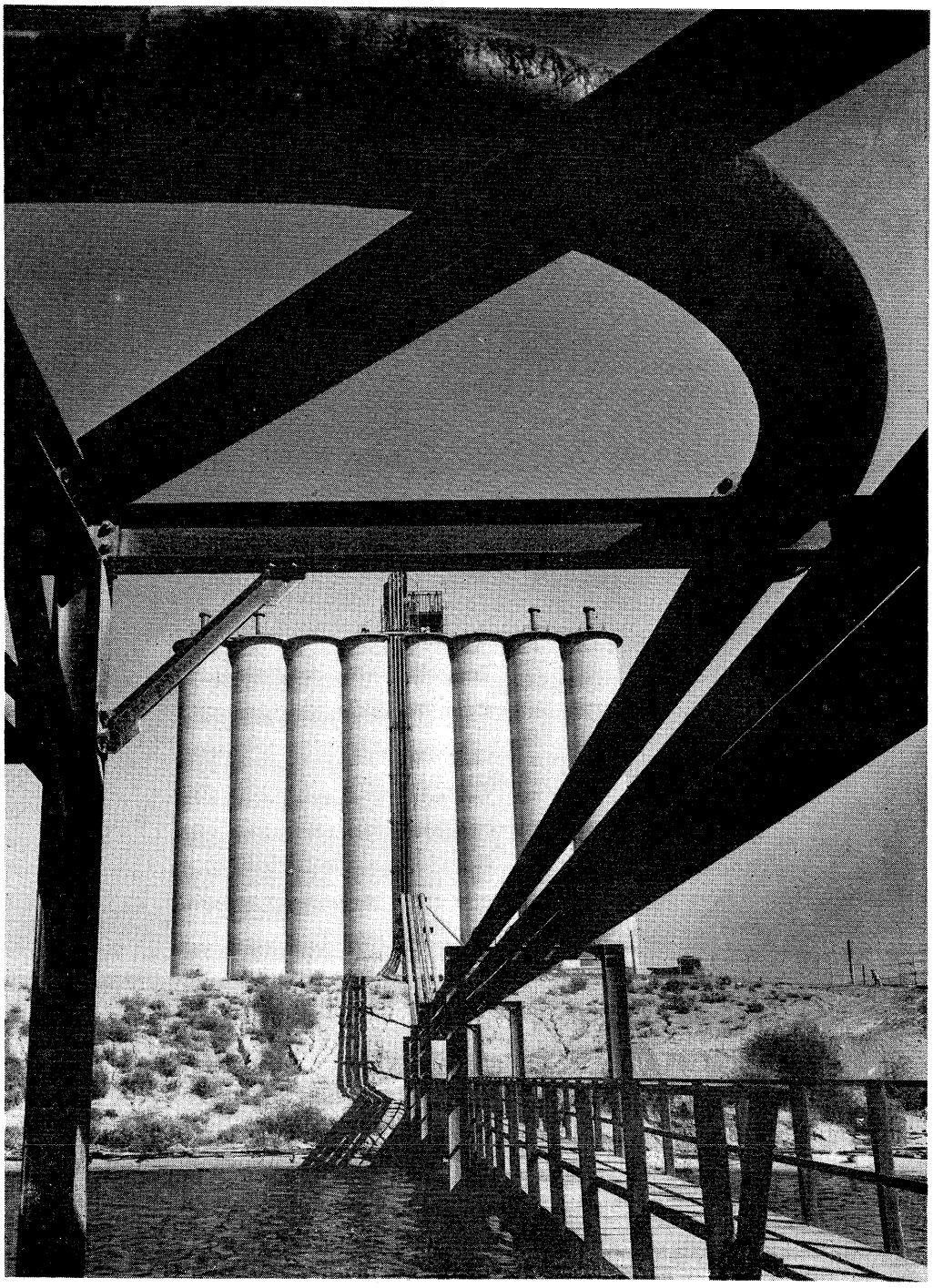
Streamlining the Railroads' Marine Terminals

As the next step in its port modernization program, the Maryland Port Authority plans to renovate and rebuilt the general cargo piers operated by the Baltimore and Ohio Railroad at Locut Point, the largest railroad-owned marine terminal in the world. Modernization of the Pennsylvania Railroad's piers in the Canton area is expected to follow. This giant proposal, now in the hands of railroad management, will enable the Authority to rehabilitate facilities that currently handle the major percentage of general cargo in the port. Emphasis will also be placed on making these piers equally accessible to motor carriers. Revitalization of the railroads' marine terminals is considered an essential step in Baltimore's move to meet the competitive costs of waterfront operations at other Atlantic Coast ports.

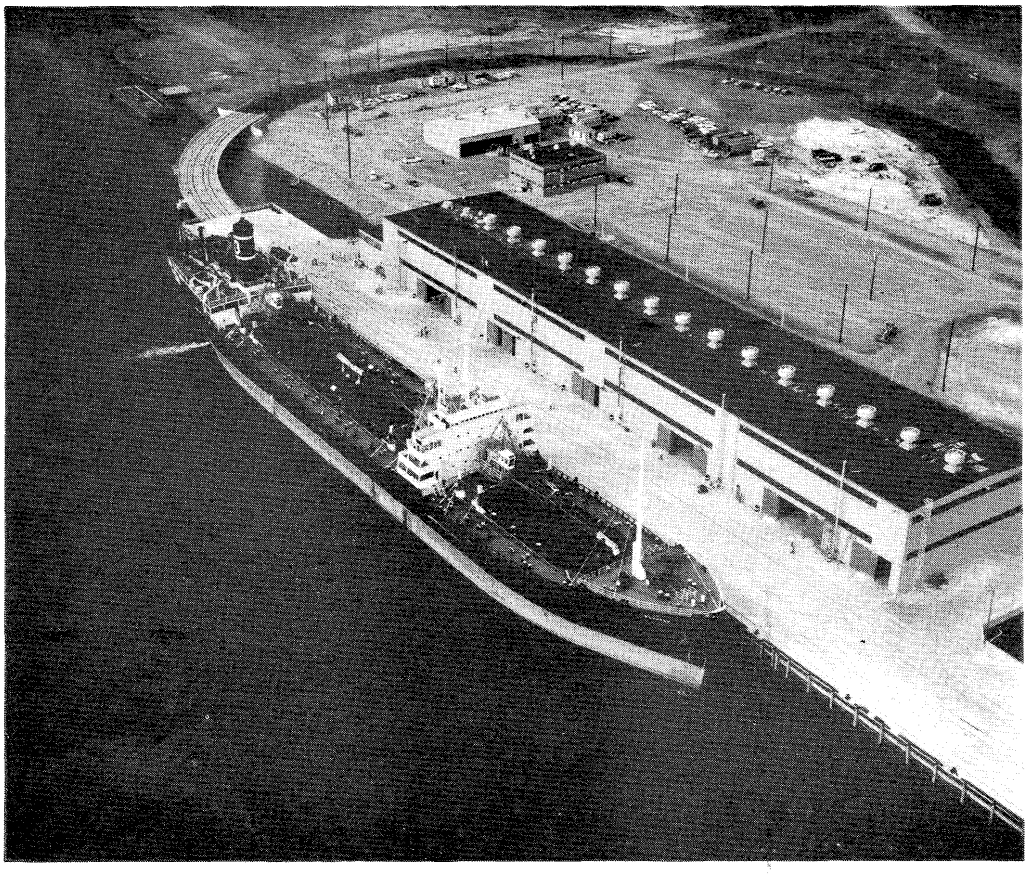
Expansion of Transportation Systems

In February 1963, the Chesapeake and Ohio Railroad assumed control of the Baltimore and Ohio Railroad as the initial step toward ultimate merger of the two carriers. Baltimore's existing rail system will be further improved by this anticipated B&O-C&O consolidation. The pending merger not only will add hundreds of additional miles to the existing systems, but will make available to Baltimore shippers increased equipment, added service to inland points, and vast new markets for export-import goods originating in consuming centers in the interior of the country.

Simultaneously, the State of



NEW TIDEWATER INDUSTRY: Sixteen storage silos rise 190 feet in the air above Curtis Creek at the Atlantic Cement Company's newest $2 million distribution center in the Port of Baltimore. The silos have a capacity to store 175,000 barrels of cement, which is transported to here in the world's two largest ocean-going barges. Special equipment permits self-discharge of cement into Atlantic silos at the rate of 800 tons an hour. The Baltimore terminal is utilized for the ultimate distribution of dry cement in the middle Atlantic area. A new pier is also part of this operation.



Service has been inaugurated at Pennwood Wharf, the new multi-million dollar marine terminal complex at the Bethlehem Steel Company Sparrows Point (Md.) plant. The S.S. Bethtex is shown as she arrived to take on the first cargo of finished and semi-finished steel for shipment to Florida and Gulf Coast ports. The new terminal features an 870-foot wharf, a heated warehouse 505 feet long and 100 feet wide capable of storing 20,000 ton of finished steel products, and a 1,000-foot ship turning basin connected to the main Baltimore harbor channel by nearly two miles of channel 33 feet deep and 250 feet wide.

Maryland has joined in the alert and progressive port spirit through its excellent roadbuilding program comprising a $330 million network of rapid-transit highways and expressways. The 32-mile Baltimore County Beltway that completely encircles the city, the Baltimore-Washington Parkway, Jones Falls Expressway, Baltimore Harbor Tunnel and Chesapeake Bay Bridge already provide truckers with direct, non-stop routes into and out of all points of port activity. An East-West Expressway will complete the 12-year project before the end of 1965.

New Face of the Inner Harbor

In December 1962, the Maryland Port Authority issued a report on the impact of the proposed East-West Expressway on the Port of Baltimore. It strongly supported a route for the new highway that would close off the city's famous inner harbor area to commercial shipping (approximately two miles of the port's 45 miles of waterfront) while giving further truck access to every major cargo handling area around the harbor.

Sealing off the inner harbor would result in a downtown lagoon, suitable for the establishment of an International Trade Center building which would be the focal point for all Maryland maritime interests and would provide an ideal location for offices of steamship agencies, foreign freight forwarders, foreign consuls and the Baltimore Custom House. It would also serve as the new headquarters building of the Port Authority.

In this long-needed redevelopment of Baltimore's downtown waterfront, a civic recreational area would be instituted, offering such facilities as a pleasure boat marina, maritime museum, outdoor amphitheatre and panoramic restaurant overlooking the water.

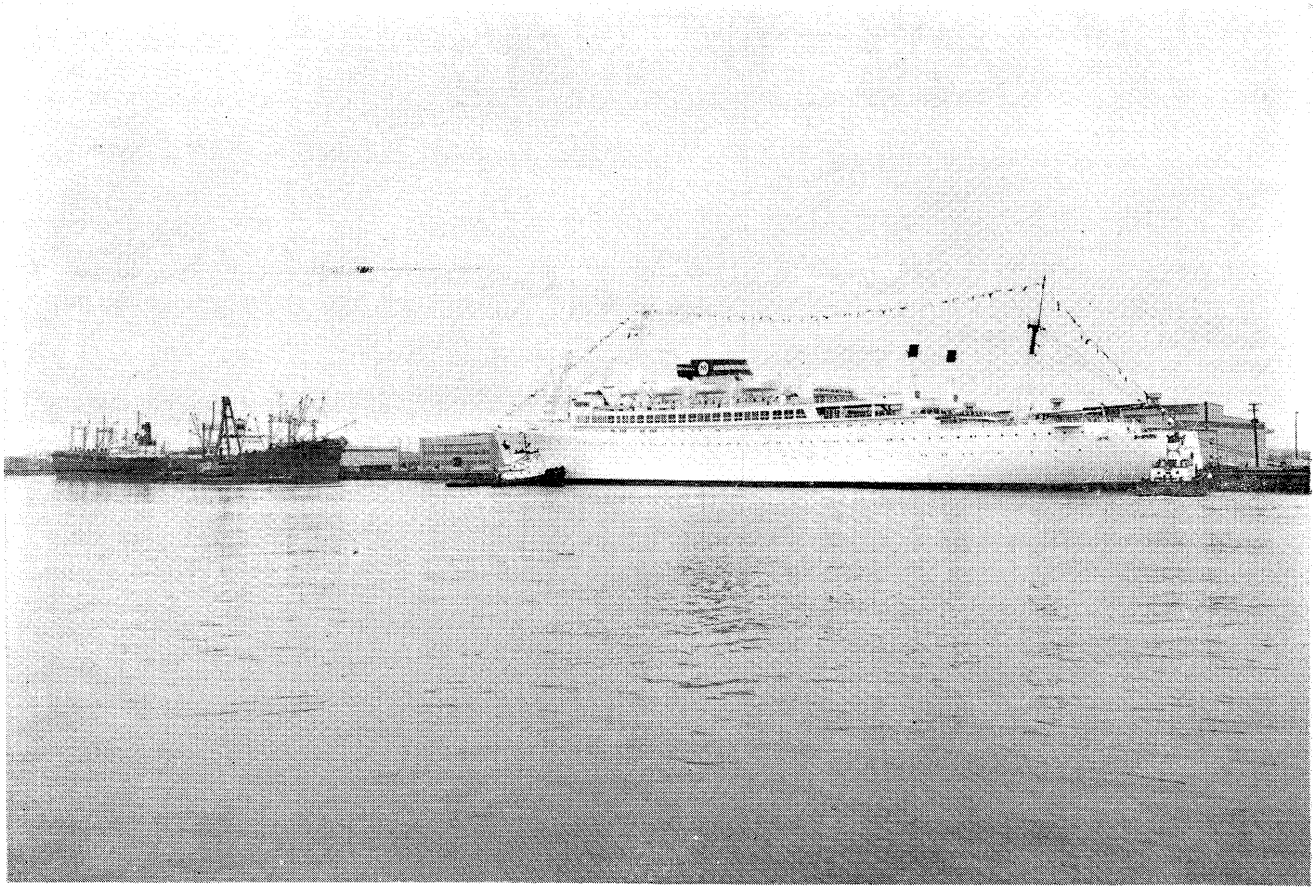
To accommodate the limited port activities now in the inner harbor, the Authority's report suggests a marginal pier development in the port's Boston Street area, tying in with the new expressway and providing some 2400 feet of bulkhead. This project would afford space for visiting naval ships and grain ceiling work, and would be backed by a park area that would "enable the people of Baltimore to visit the harbor in scenic and interesting surroundings."

Deeper Channels, Greater Access

Along with these new port facilities either completed or under way, Baltimore will soon reap the benefits of the $32 million Federal channel dredging program initiated in 1960 by the U.S. Army Corps of Engineers. This five-year project will result in the pilot channel leading into the port being dredged from its former 39-foot depth and 600-foot width to a 42-foot depth and 800-foot width.

During the past year, this undertaking advanced sufficiently to assure that 1963 will see a 42-foot depth on the entire inbound side of the channel, from the Atlantic Ocean 22 miles upstream to Fort McHenry, giving fully loaded deep draft vessels including supertankers access to the Port of Baltimore.

Linked to this enormous effort is a 10-year dredging program designed to deepen and widen Baltimore's other link to the sea, the Chesapeake and Delaware Canal. From the north, this toll-free, 14-mile waterway provides a time- and mile-saving passage between



TERMINAL DEMONSTRATES VERSATILITY: The new 365 acre Dundalk Marine Terminal, already one of the outstanding general and specialized cargo facilities in the United States, gave a further demonstration of its versatility on October 25 with the first of a series of public cruises, returning passenger service to the Port of Baltimore. Above, the SS ARGENTINA, luxury ocean liner of the Moore Mc Cormack Lines and the 253rd vessel to be docked at the terminal during 1962, prepares to embark on a 14-day Caribbean cruise with a near capacity booking of over 300 pleasure-bound passengers. Down the line, far left, the SS WORLD JAPONICA, in another facet of this ultramodern facility's operations, unloads a record 7 million board feet of lumber. At the same time, the ARZIPA completes the loading of another portion of a $245 million steel mill bound for Eregli, Turkey. And slipping out quietly for an unknown destination before the arrival of the ARGENTINA was the AMERICAN BANKER, which on the day previous had loaded a cargo of military equipment. These four ships illustrate the many-sided abilities of the new terminal and the cargoes handled there—ninety per cent of them new to the Port of Baltimore or in far greater quantities than in the past.

Baltimore and other leading North Atlantic ports as well as ready access to the ocean for outbound ships. It is used by over 40 per cent of the vessels that call at Baltimore.

When this $100 million project is completed in 1970, the C&D Canal will be increased from 27 feet to 35 feet in depth, and from 250 feet to 450 feet in minimum width. At the same time, the raising of several bridges and elimination of sharp curves in the canal will open the area to larger vessels.

Shippers' Port-Now and Tomorrow

Altogether this coordinated program involving federal, state and private capital and planning assures Baltimore of a port that will be able to handle all types of cargoes traveling on the newest and most modern ocean carriers. The huge effort to make it easier to get to Baltimore and easier to discharge and take on cargo is part of the overall endeavor to promote the port throughout the United States and Europe and to defend the favorable rate structures that invite so many shippers to save money by utilizing the place which has become known throughout the world as "Economy Port —U.S.A."

Each year Baltimore further grows as a city and as a port. In 1962, the $1 billion mark in foreign waterborne commerce was exceeded for the seventh consecutive year, while foreign tonnage increased 20 per cent and the highly valued trade in general cargo jumped 11.5 per cent. Seven new steamship services were inaugurated, established lines expanded operations or improved schedules, passenger service returned to the port with sailings booked for the fall of 1962 and winter and spring of 1963; manpower remained traditionally stable, customs receipts rose 21.4 per cent to over $38.5 million, and Baltimore appeared to maintain its position as the second largest foreign trade port in the United States.

The basic talents and shipping know-how which established Baltimore's reputation as a world port 258 years ago continue to work today, building to meet the challenge of her ever-increasing global trade. They stand on the firm foundation of a proud and prosperous past, and reflect the Port of Baltimore's commitment to the future.

TENTATIVE CONFERENCE PROGRAM
THIRD TRIENNIAL CONFERENCE, 1963

INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS

New Orleans, U.S.A.

New Orleans, Wednesday, May 1-Saturday, May 4, 1963
Royal Orleans Hotel, New Orleans, La.

Registration of Delegates and Attendance (including wives)
Registration desk will be open in lobby 1:00 P.M. to 5:00 P.M., Thursday, April 30 and 9:00 A.M. to 5:00 P.M., May 1 and May 2.
Attending delegates are requested to arrive at hotel not later than April 30, 1963 (Tuesday).
Registration fee: $25.00 (U.S.), per capital. Accompanying ladies, as guests.

FIRST DAY — MAY 1, 1963, WEDNESDAY

Opening Session (Grand Ball Room, Royal Orleans Hotel) 10:00 A.M. — 12:00 A.M.
Luncheon Session (Place to be determined) 12:30 P.M. — 2:00 P.M.
Business Session, Plenary Meeting (Grand Ball Room, Royal Orleans Hotel) 2:30 P.M. — 4:30 P.M.
Dinner Session (Place to be determined) 8:00 P.M. — 10:00 P.M.

SECOND DAY — MAY 2, 1963, THURSDAY

Seminar Session (Grand Ball Room, Royal Orleans Hotel) 9:00 A.M. — 12:00 Noon
Luncheon Session (Place to be determined) 12:30 P.M. — 2:00 P.M.
Panel Discussion Session (Grand Ball Room, Royal Orleans Hotel) 2:30 P.M. — 5:00 P.M.
Dinner Session (Place to be determined) 8:00 P.M. — 10:00 P.M.

THIRD DAY — MAY 3, 1963, FRIDAY

Panel Discussion Session (Grand Ball Room, Royal Orleans Hotel) 9:00 A.M. — 11:30 A.M.
Harbor Inspection Tour (STEAMER PRESIDENT) 12:00 Noon — 3:30 P.M.
Dinner Session (Place to be determined, Jonit with MVWTC) 8:00 P.M. — 10:00 P.M.

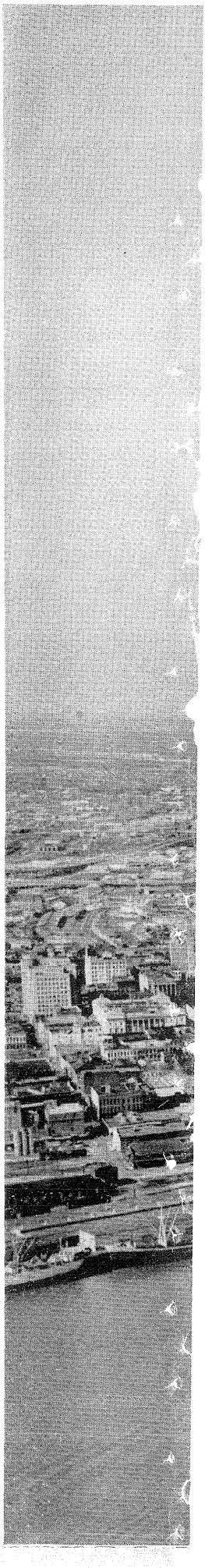
FOURTH DAY — MAY 4, 1963, SATURDAY

Business Session (Grand Ball Room, Royal Orleans Hotel) 9:00 A.M. — 11:00 A.M.
Luncheon Session (Place to be determined) 12:30 P.M. — 2.00 P.M.

POST CONFERENCE TOUR

Sunday and Monday, May 5 and May 6
U.S. WATERWAYS EXPERIMENT STATION, VICKSBURG, MISSISSIPPI
May 5, 1963 1:30 P.M. Depart by Transportation for Jackson, Miss.
May 6, 1963 8:00 P.M. Arrive New Orleans.

Swindell Dressler Company, of Aspinwall, Pennsylvania, manufactured and shipped this massive Electric Arc Melting Furnace via the Port of Baltimore on February 11. Destined for Fiat, of automobile renown, at Torino in northern Italy, the heavy-equipment cargo weighed over 100 tons. It was routed from Aspinwall via the Pennsylvania Railroad to Baltimore's Locut Point terminal, where the two carloads were taken aboard the CARLIN FASSIO.



Arrow at right points to building of the Royal Orleans Hotel in the old French Quarter at New Orleans—scene of the Third Triennial Conference of the International Association of Ports and Harbors. In foreground is central part of the Port of New Orleans. River in foreground—the Mississippi—is one boundary of the city, Lake Pontchartrain, disappearing in background haze, forms northern border.

Central Secretariat of the International Association of Ports and Harbors

Rm. 715-A, N.Y.K. Bldg., 20, Marunouchi 2,
Chiyoda-ku, Tokyo, Japan