



### DECEMBER, 1957

Vol. 2 No. 4



From the Central Secretariat 37 International Port Conference in Osaka -13 New Orleans—Port of Progres 13 General Survey of Japanese Ports  $\hat{\Sigma}$ **20-Year Expansion Plan of Port**of Long Beach 52 San Diego—Progressing Port on the Pacific 5.7 Freeport of Monrovia, West Africa M Port of Honolulu 公 Nagoya Port Paintings Displayed in Melbourne Port

THE INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS

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Tuhere Wings and Wheels and Water Meet

#### 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.

When we are greeting in the new year, it is a pleasure for the Central Secretariat to send this last issue for 1957 of the "Ports and Harbors," Vol. II No. 4, to our members.

#### Next Triennial Conference at Lima, Peru, January 20-22, 1959

As already reported in the last issue of this magazine, an invitation has been extended to our Association by the Board of Harbor Commissioners, Callao, Peru, to hold its next Triennial Conference in the Peruvian capital, Lima, in November or December, 1958. On the part of the Central Secretariat. it has circularized this information to all our Directors of member countries, asking for their approval or disapproval on the acceptance of this invitation. Its acceptance has been unanimously approved by the Board of Directors. However, it has concurrently been decided after full consultation with our Peruvian Director, Col. Howard W. Quinn, Executive Director, Port of Callao Authority, that under the circumstances the date for holding the Conference be changed from November or December, 1958, to the week commencing January 18th, 1959, with registration on the 19th and the meetings to start on the 20th and run for three days. As noted before, this invitation has been extended with the approval of the President of Peru and the Minister of Finance and Commerce, through the good offices of Col. Howard W. Quinn, our Peruvian Director.

It is with a sincere desire to make this announcement that all of our members will manage to attend the forthcoming Triennial Conference in Lima, Peru. Because we believe through this conference can we expect the promotion of mutual understanding and the furtherance of friendly relations between our members of various countries, whereby to contribute to the development of ports and harbors of the world. At the same time, it is sincerely hoped that it will mark a greater step forward to the development and expansion of our Association.

#### Osaka Port's 90th Anniversary Celebrations

The 90th anniversary celebrations of the Port of Osaka, our member port, were conducted, as reported in the previous issue, on October 8th through 10th, on a grand scale, with the participation of many representatives of overseas ports and organizations who had accepted invitations extended by the port. As part of the program for the occasion, an international port conference took place in the Hotel New Osaka on the 9th under the sponsorship of Osaka Port, which was participated in by 44 delegates, representing 7 countries, including Japan. Its particulars are given on next page.

#### Visitors

During the last three months, the Central Secretariat had many visitors from our member ports of other countries as well as those who were furnished with their introductions, to welcome here, owing to the fall tourist season, which is best for travelling in Japan, either for business or sightseeing, and also to the Osaka international conference taking place at that time.

Those people were: Mr. Lloyd A. Menveg, President, Board of Harbor Commissioners, Port of Los Angeles; Mr. and Mrs. John P. Davis, Commissioner, Port of Long Beach, who were accompanied by six people from the same port; Mr. James W. Martin, Director of Trade Development, Port of New Orleans, who visited Japan as a member of the American Soybean Trade Development Team; Mr. and Mrs. Bunchai Mahavasu, Chief Engineer, Port Authority of Thailand, Bangkok; Mr. and Mrs. A.D. Mackenzie, Chairman, Melbourne Habor Trust Commissioners, Australia; Mr. and Mrs. C.E. Elliott, former Commissioner, Melbourne Harbor Trust; Mr. C.M. Chen, our Second Vice President, Taiwan, China; etc..

#### Membership Certificate and Badge

The Association membership certificate and badge, designed and prepared by the Central Secretariat, ready, we have started sending them to all our members. The paper used for the membership certificate now in the mail together (Continued on page 7)



International Port Conference in the Hotel New Osaka coming to order. Globe Press Photo.

### International Port Conference in Osaka

As was noted in the previous issue of this Association organ, our member port, the Port of Osaka, celebrated the 90th anniversary of the port opening on October 8 through 10, 1957, on a grand scale.

The celebration ceremony took place in the International Fair Hall in the harbor area on the morning of the 8th, with the attendance of more than 1,000 representatives of government and civic circles, including the foreign port workers who had come to participate in this significant event. Mr. John P. Davis, Commissioner of the Port of Long Beach, Calif., U.S.A., made a speech, on behalf of all of the invited foreign guests, expressing congratulations on the occasion and wishing for a greater future in store of this international port.

The International Port Conference arranged as part of the celebration program was held on the morning of the 9th in the Hotel New Osaka, participated in by about 50 delegates both from Japanese and overseas ports and related organizations. The foreign delegates who attended the conference were:

#### Australia

#### Mr. A. D. Mackenzie

Chairman, Permanent Committee, Australian Port Authorities' Association; Chairman, Melbourne Harbor Trust Commissioners

#### **Philippines**

Mr. Rafael M. Contreras Chairman, Philippine Port Commission Department of Public Works and Communications, Manila

#### Mr. Jose A. Cruz

Secretary, Philippine Port Commission

Chief Port & Harbor Engineer Bureau of Public Works, Manila

#### Col. Cipriano P. de Leon

General Manager, Manila Port Service, Manila

#### Dr. Benjamin S. Garcia

Member, Board of Directors Manila Railroad Co., Manila

#### Mr. Eleuterio Capapas

Collector of Customs Manila Custom House, Manila

#### Thailand

#### Mr. Bunchai Mahavasu

Chief Engineer Port Authority of Thailand Bangkok, Thailand

#### Mr. Suraphol Suriyakamphol

Chief, Electrical & Telephone Section Port Authority of Thailand Bangkok, Thailand

#### U.S.A.

#### Mr. John P. Davis

Commissioner, The Port of Long Beach, Calif.

Mr. Lloyd A. Menveg

President, Board of Harbor Commissioners City of Los Angeles, Calif.

#### Mr. T. Mizoguchi

Far East Representative—Japan Port of San Francisco

#### Mr. Griffith Way

Port of Seattle, Washington

#### Mr. Kazuhiko Asakura

Resident Representative in Japan, Port of Seattle, Washington

#### Viet-Nam

#### Mr. Nguyen Ky

Port Director, Port of Saigon, Viet-Nam The conference was carried out under the chairmanship of Mr. Gaku Matsumoto, Chief of the Central Secretariat of the International Association of Ports and Harbors, as an open discussion. Each delegate introduced the present state and the future development plan of the port he was representing. The meeting wound up by unainmously adopting the following agreement:

"It is unanimously agreed upon by all those who have attended the International Port Conference held on the 9th of October, 1957, in the City of Osaka, Japan, that they will strive for the promotion of mutual understanding and the furtherance of friendly relations between the international trade ports bordering on the Pacific, Southern and Indian Oceans and for the enhancement of efficiency of their operation and management."

#### U.S. Port Officials for Trade Act Extension

Port officials attending the American Association of Port Authorities annual convention helds in New York last October urged to crusade for a 10year extension of the Reciprocal Trade Agreements Act.

The Foreign Commerce Committee of the association, in a fourteen-page report, also stressed the importance of actively working for the enactment of the Organization for Trade Cooperation legislation.

Failure to pass such key legislation, the committee warned, will eventually bring drastic reductions in this country's commerce with the rest of the world. On the other hand, if the 85th Congress (2nd Session) renews for 10 years the Trade Agreements Act of 1955, due to expire on June 30 next, it will accomplish two important goals:

1. It will lay the foundation for increased world commerce.

2. It will sponsor closer, more business-like relations with trading nations of the free world.

A spot check among port executives, who came to New York from the leading port areas of North and South America, revealed wholehearted agreement with the principles contained in the committee report and resultant resolution. (Source: Los Angeles Port news).

### From the Central Secretariat---Continued

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with the badge is excellent quality Japanese paper hand-made with traditional technique from the bark of a certain tree produced in Japan, and it is watermarked with a design of phoenix.

The membership badge is of the same design with the Association emblem inscribed on the front cover of this magazine. It is silver in base with the outer ring made of cloisonne.

#### Others

Taking advantage of the Osaka international conference, which was attended by delegates from some non-member ports and organizations of other countries, we had a special meeting with them on the morning of October 10 in the Hotel New Osaka. We explained to them the objects of our Association and asked for their cooperation regarding the participation of their ports or organizations in our Association as its members.

Before he left for India early December as head of the harbor investigation squad of the Indian Iron Ore Development Investigation Team, we asked Dr. Tadashi Hida, Chief, Construction Section, Japanese Ministry of Transportation, to meet Shri H. P. Mathrani, Development Adviser and Ex-officio Joint Secretary, Indian Ministry of Transport, in order to seek his

On the next day, the last day on the celebration program, the foreign delegates were invited to attend the 29th General Meeting of the Japan Port and Harbor Association. To the President's welcome speech, Mr. John P. Davis, President of the Pacific Coast Association of Port Authorities, and Mr. A.D. Mackenzie, Chairman, Permanent Committee, Australian Port Authorities' Association, responded by stressing the cooperation of the national associations in various areas. Mr. Mackenzie presented, on behalf of the Australian Association, a gavel made from an Australian redgum timber pile driven in the Port of Melbourne 90 years ago, to President G. Matsumoto of the Japanese Association.

good offices in inducing the leading Indian ports to join our Association.

#### L.A. Port Top Executive **Visits Mayors Here**

Mr. Lloyd A. Menveg, President of the Board of Harbor Commissioners of the Port of Los Angeles, who came to Osaka to attend the 90th Anniversary Celebrations of Osaka Port, called on Mayor Mitsuji Nakai on October 7, and presented, in behalf of Mayor Norris Poulson of Los Angeles, his official greeting to the Mayor of Osaka. In his written message, the Los

Angeles chief executive saluted "the vast interchange of maritime commerce" between the two ports.

"For the past three years," wrote Mayor Poulson, "Japan has led all other countries in the number of ship arrivals at the Port of Los Angeles, and goods received in vast quantities from your people include hardwood lumber, plate glass, veneer and plywood, toys, furniture and myriad other useful and beautiful items. We, on the other hand, have exported to you almost our entire shipments of iron and steel scrap, well over half our cotton, industrial chemicals and many manufactured items."

A similar message from Mayor Poulson was also presented to Governor Seiichiro Yasui of Tokyo by Mr. Menveg on October 12.



Mr. Lloyd A. Menveg, President, Board of Harbor Commissioners, Los Angeles, is shown handing Mayor of Los Angeles' greeting to Mayor of Osaka. Globe Press Photo.



### Port of Progress

The Port of New Orleans, as the general cargo port serving the American mid-continent between the Rockies and the Alleghenies, is providing ever expanding deep water facilities to accommodate the increasing participation of this area in world trade.

In 1956, a total of 12,506,872 short tons of cargo in foreign trade, passed through the harbor facilities. This cargo, valued at \$1,673,800,000, earned the Port of New Orleans the position of second in dollar value of foreign commerce, surpassed only by the Port of New York. During the past few years, traffic in the New Orleans harbor has shown a steady

increase, with last year being a record one in tonnage and value of cargo.

To handle this increase in foreign trade, the year 1958 will find the Port enjoying its greatest program of expansion and improvement of harbor facilities since the end of World War II-a continuing tenyear multimillion dollar program which is reviewed and revised each year by the Board of Commissioners of the Port of New Orleans. This Board is made up of five business leaders who serve without pay for terms of five years, with the term of one member expiring each year. No member may succeed himself. The annual vacancies

are filled by gubernatorial appointment from a list of three candidates nominated by seven leading business-civic institutions of the city.

During the twelve-year period. from June 30, 1945 to June 30, 1957, the Board of Commissioners spent \$29,582,000 on expansion and improvement of harbor facilities. Five new wharves were constructed and one completely rebuilt along the riverfront and the Industrial Canal, ranging in cost from \$155,-000 to \$3,139,000. A second unit was added to the Public Grain Elevator at a cost of \$7,623,000. In spite of these new facilities, trade through the Port has increased at such a phenomenal rate during the post-war years, that present facilities are operating at near-capacity at all times.

In 1956, the Board launched an improvement program which will utilize all available space for new facilities while transforming older wharves into what for all practical



Almost 13 miles of wharves and deep water terminals line the banks of the Mississippi River at New Orleans. These modern concrete and steel structures serve as general cargo handling facilities for mid-continent America's foreign trade.

Construction work begins on the first general cargo public wharf on the West Bank of the Mississippi River. In the background is seen the skyline of New Orleans and the new bridge being constructed across the river.



purposes will be new ones. Space for port expansion will eventually be provided by the Mississippi River-Gulf Outlet, a tidewater channel which Congress has authorized to be constructed from the Port's Industrial Canal to the Gulf of Mexico. Besides providing new deep-water sites for port expansion, the proposed Outlet will cut some 40 miles from the 110-mile distance between New Orleans and the Gulf. The channel, which will cost approximately \$100,000,000, will open up approximately 8,000 additioal acres of undeveloped land for industrialization within easy reach of the city's commercial sec-Construction of additional tion. port facilities along the channel will cost the Board additional millions of dollars.

The program, initiated in 1956, is literally projecting harbor improvements ten years into the future. Through Board policy, it has been kept extremely flexible, partly because of rising construction costs, and partly because of the undetermined status of the Mississippi River-Gulf Outlet.

Now being constructed under the program are four new wharves, three on the river and one on the Industrial Canal. One wharf is presently being reconstructed and should soon be in operation. The most impressive of these projects is an \$8,000,000 wharf and terminal being built at the uppermost limits of the harbor. It will be the largest and most modern of its kind in the Port. Furnished with large storage and transportation terminals in the rear, the wharf will provide for the orderly interchange of commodities, whether handled by rail, truck, barge or ship.

Construction work will soon begin on a rice handling terminal to be used by local mills for unloading rice barges and shipping bulk rice.

Only 1,000 feet upstream from the nearly completed \$100,000,000 bridge across the Mississippi, construction work has begun on the first public general cargo wharf on the West Bank of the river. This new wharf and bridge is expected to stimulate industrial development along the West Bank area which will soon demand more shipping facilities.

#### The Present Day Port

A number of New Orleans' pre-

sent wharves are modern concrete and steel structures constructed primarily for general cargo handling. Because they are built as quays-parallel to the banks of the river-the port's facilities provide maximum berthing space and greatest ship maneuverability. More than 13 miles of wharves and deep-water terminals parallel the banks of the harbor, almost eight miles of which are publicly owned and operated. A grand total of 195 ocean-going vessels can be berthed simultaneously at New Orleans. The 40 public wharves can accommodate 79 general cargo There are 15 tanker vessels. berths, 12 private industry berths, 44 repair berths and 23 government berths within the port limits.

New Orleans is served by eight truck line railroads, which connect the city with the rich central portion of the United States, as well as with every major city on the continent. The city-owned Public Belt Railroad, with 140 miles of track within the active waterfront, coordinates all rail traffic in the port area. The port is the terminus for barge lines plying 14,000 miles of inland waterways. More



The Foreign Trade Zone in New Orleans is 20 acres of land which for all commercial purposes lies outside of the United States. The foreign shipper may bring his goods into the Zone: store. process or manipulate them in any way without the payment of American customs.

than 50 truck lines serve the city, and the international airport handles 140 flights daily, including overseas traffic. The port enjoys a very favorable inland freight rate structure, which makes it possible for import or export cargo to be shipped to and from the mid-continent area more economically through New Orleans than through North Atlantic Seaboard ports.

In 1956, more than 50,000,000 tons of domestic and foreign cargo moved through the port, a gain of over 3,000,000 tons over the preceding year. This cargo was carried by vessels of 130 steamship lines. This vast tonnage is handled at a lower cost per ton than at any other major port. Reasons include a responsible labor force, highly mechanized operations, commodious wharfsheds, facilities for direct ship-rail-truck-barge interchange of goods, and especially-equipped wharves for commodities such as coffee, bananas and grain. A mild year-round climate and excellent labor relations combine with all these factors to prevent delays.

Cargo handlers make use of the most modern equipment and techniques. Pallet boards now are used for literally hundreds of different commodities. affording orderly, space-saving stacking and assembling of cargo on the wharves. Fork lift trucks lift and carry these pallet-stacked goods quickly and easily, even in loads of as much as five tons at a time. For safe, speedy transfer handling at ship-side, standard cargo moving devices, such as slings, nets, conveyor belts, and loops are used. Powerful floating cranes, available in the harbor for special heavylift jobs, supplement use of ship's tackle. Some of these can lift as much as 300 tons and are used for moving machinery such as Inland waterway locomotives. barges often transfer cargo directly to or from ocean vessels, thus eliminating extra handling charges.

The port is served by labor whose efficiency and stability is unsurpassed anywhere in the country. This, and the harmonious relationship between labor and management, are primarily responsible for the quick turnabout time for ships—2.8 days, the nations' best.

#### Foreign Trade Zone No. 2

One of the most interesting facilities of the New Orleans harbor is Foreign Trade Zone No. 2, which offers a variety of moneysaving advantages to both importers and exporters. The most important advantage is that dutiable goods may be landed and stored in the Zone without customs expense, taxes or similar restrictions. Goods within the Zone may be manipulated, stored or processed in many ways with no customs expense until they are ready to enter the customs area. In the case of goods which enter the Zone, and then are re-exported, no duties at all are assessed. There a number of services available in the Zone's modern plant such as cleaning and reconditioning for spices, seeds, etc. Another special service is a modern vacuum-fumigation plant, the only one in the United States located in a Foreign Trade Zone. It is U.S. government-approved, and is available for commodities requiring vacuum-fumigation as a condition of entry. The most recent service to be added is a modern lumber dry kiln, operated by a large lumber importer. Kiln-drying results in a better product and savings in inland freight rates.

There are four such zones in the United States-at New York, and deep-water terminals in the downtown industrial section. The canal and the Tand that flanks it on either side are under the administration of the Port's Board of Commissioners.

Seattle, San Francisco, and New Orleans.

#### The Industrial Canal

The Inner-Harbor Navigation Canal, or Industrial Canal, as it is generally known, is the link between the Mississippi River and Lake Pontchartrain. Begun in 1918 by the Board of Commissioners, the five-and-one-half mile canal is now lined with mills, factories

The entire canal is dredged to a 30-foot depth, with an average width of 400 feet. Near the river end of the canal is a toll-free lock, patterned after the one in the Panama Canal, where ships can be raised from river level to the level of Lake Pontchartrain. The lock is 75 feet wide, 640 feet long, and has a minimum depth of  $31-\frac{1}{2}$ feet. Several slips have been dredged along the Canal where industries have located. In addition, two turning basins 1,000 feet square, enable ocean-going ships to turn around in this inner-harbor.

The Board of Commissioners has built four wharves on the Canal, the most recent being an 800-foot open wharf, with marginal tracks, just south of the turning basin near the lake. Two sides of this turning basin serve as barge landings.

#### The Public Grain Elevator

The Public Grain Elevator at the Port of New Orleans is one of the nation's largest, most modern, and busiest. The binnage capacity is 5 million bushels, and in the fiscal year 1956-57, the elevator exported a near record movement of over 81,000,000 bushels of grain of all kinds, 16 times its storage capacity, surpassing all other grain elevators of the country in volume of expert.

This high volume of grain movement is due to the continuing modernization and expansion program of the elevator. The elevator is equipped with two marine legs, two mechanical rail-car dumpers, a 60-foot hydraulic truck dumper, cleaning equipment, automatic grain sampling machines, a new signal system in the dock shipping gallery to control grain between ships and tower, and automatic mechanical draught counters on each scale hopper to register draughts as a check against human  $\epsilon$ rror. In addition, the dust collecting system has been revamped, and a new and modern office building and laboratory erected for the elevator's staff and laboratory forces.

#### **Public Commodity Warehouse**

The Public Commodity Warehouse of the Board of Commissioners offers world traders low-cost shipside storage facilities of the most modern type. Equipped with marginal tracks on a 44-foot apron, the concrete wharf of the Commodity Warehouse is designed for speedy, efficient cargo handling between ship and rail. Use of this facility is limited to goods moving in export and import trade.

The warehouse is composed of five large concrete units, plus a cotton compress building offering 100,000 square feet of cotton storage space. The buildings are divided into 176 storage "cubes," each with 3,000 square feet of floor space. Goods may be stacked as high in these compartments as the nature of the proruct will permit. Each cube has three openings and is serviced by a movable twoton crane. Pallet-board stacking makes possible easy cargo shifting. The Public Commodity Warehouse buildings are of noncombustible construction. with a complete sprinkler system covering both cubes and wharf. The harbor patrol and private watchmen keep constant watch for fire and other possible loss or damage. These precautions have helped to earn the New Orleans' Port the lowest insurance rate in the nation.



To meet increased trade and competition, old wharves in the Port of New Orleans are being reconstructed. Here an all concrete and steel structure goes up along side an old timber wharf to increase the efficiency of midcontinent America's general cargo port.

### General Survey of Japanese Ports

#### Ryokichi Amano

Chief, Port and Harbor Bureau, Ministry of Transportation



Geographically speaking, Japan, consisting of four separate main islands, is surrounded by the sea, and moreover, her narrow inlands are generally so mountainous that the transportation of goods has been conducted from ancient times by the sea way. Subsequently, we have many ports scattered all over the country. We can enumerate 68 major ports, 1,903 minor ports and 37 ports of refuge. In addition, there are about 2,000 fishing ports. In spite of the fact, with the exception of several ports, the full-scale construction and improvement works have been taken up only for these 20 years. Therefore, the first thing we have to do is to carry out many construction and improvement works of modern port racilities.

#### Volume of Cargo Handled

The statistics in 1955 indicate that the commodities that are handled at these ports amount to about 250,000,000 tons. Among them foreign trade goods are about 50,000,000 tons and inlands trade goods 200,000,000 tons. Compared with the figures in 1954, the former shows about 10% increase and the latter is about 5% increase. The figures at individual port are as follows: DOKAI 16 million tons, YOKOHAMA 14 million tons. 13 million KAWASAKI tons. OSAKA 13 million tons, KOBE 12 million tons and TOKYO 10 million tons. The ports that handled more than one million tons in 1955 amount to forty-five.

Speaking from the standpoint of port character, we have 66 open ports as the foreign trade ports where the Customs facilities are installed, and always open to foreign vessels. Among them KOBE, YOKOHAMA and NAGASAKI have been known from olden times.

#### Development of Industrial Ports

In our country, many industrial enterprises assemble along the ports, because of the convenience



**Toyosu** Coal Wharf, Port of Tokyo, annually handles 1,350,000 tons of coal, Tokyo Steampower Plant with 282,000 k.w. generating capacity being seen behind. The coal handling capacity of the wharf is planned to be increased to 2.400.000 tons



of loading and unloading raw materials and manufactured goods, of the cheepness of cost of importation, and of the easiness to get at comparatively low price of the reclaimed huge space of lands, thus constituting so called as "Alongshore Industrial Areas". This tendency contributes to the development of industrial ports in our country, and the most famous ports in this line are DOKAI, in the Northern Kyushu, OSAKA and KOBE in the western part of the main land, NAGOYA in the central part of the main land, YOKO-HAMA and KAWASAKI in the eastern part of the main land and MURORAN in Hokkaido. Besides, there are many ports where the factories assemble and the construction works of factory sites are underway, thus transforming themselves into the industrial ports with the very rapid strides. Further, I should like to refer to the fact here that in order to reclaim the land for these purposes, we must have a number of large-type suction dredges, to the construction of which we are now making every effort.

#### Facilities for Handling Coal, Oil and Iron Ore

In order to grasp what sort of the commodities are handled at the Japanese ports, we are collecting statistics and publishing statistical tables annually. By the statistics we can see that the commodity handled in the richest amount is coal, which is mainly shipped from the ports in Hokkaido and Northern Kyushu to Keihin (Tokyo and Yokohama area), Chukyo (Nagoya area), and Hanshin (Osaka and Kobe area) districts. Also to the industrial ports as mentioned before a great amount of coal is forwarded.

Next comes fuel oil. The transportation of fuel oil is one of the most important missions of Japanese ports. The remarkable tendency in this field is the recent advent of large-type tankers that are called Super-Tankers or Mammoth-Tankers which extend as big as 40 to 60 thousands gross tons. In order to accommedate those big vessels, it is necessary to have at least 12 meters depth of water. Besides, we must construct distributional bases of fuel oil. In the face of these urgent request, we are planning the three-year-program for the port facilities concerning fuel oil. As the bases of import, we are planning early completion of 12 meters fareway and mooring facilities of 6 ports, name-YOKOHAMA, KAWASAKI, ly, YOKKAICHI, MATSUYAMA, IWAKUNI and TOKUYAMA.

Then comes iron. In the consequence of rush increase of the heavy industry production, the port facilities for the import of iron ore and for the export of iron products have been high-lighted of late. As the port in this connection we have TOBATA, WAKA- YAMA, KOKURA, DOKAI and HIROHATA, for the facilities of which we are endeavoring to complete so soon.

#### Facilities for Coastwise Shipping

One of the characteristic features in our country is the abundance of small-sized vessels. The completion of local minor ports and ports of refuge including those along the Inland Sea of Seto where the small-sized vessels are most numerous, is the problem that can never be neglected, and we are trying to construct and improve the facilities every year.

#### Technical Problem Peculiar to Japan

Our country has a misfortune of being the passage of typhoons that occur in the Southern Pacific, and our ports are visited by typhoons so frequently for the period from July to September every year, that the problem on rehabilitation and prevention is of prime importance to us. And, to make the matter worse, our country is suffering from frequent earthquake disasters. In order to make port facilities safe from these earthquakes, our engineers are exerting all possible efforts.

To my regret, I have to tell you another unfavorable fact. That is the settlement of the ground. I have heard of the famous settlement at Long Beach in U.S.A., but the settlement that are taking



Expansion works are busy at Port of Yokkaichi. Berths for super-tankers are being constructed and harbor areas allocated to oil companies.



#### Management of Port and Harbor Repairing Expenses

In the last place, let me refer to the problem of port management

tenance and management of ports. ister of Transportation, and the The spirit of the law is to manage control of those facilities as created ports by "Port Management through the works are entrusted Bodies". The Port Management to the governor or mayor who is Body is not the central government, the chief of the Port Management but the local government such as a Body, expecting sound manageprefectural government or a muni- ment and development of the ports. cipal government. Similar to the The national subsidies are granted port construction works executed for the expenses required for the by the corps of engineers in the construction and improvement



facilities, mooring facilities or port penses necessary for the mainfacilities, the State classifies the tenance of port facilities are borne rate of subsidy in 100%, 75%, by the Port Management Body, 60% and 50% of the cost of works. with the exception of special cases. And as for the directly executed work, the State disburses all of the expense beforehand, and, later, the Port Management Body reim- Concerning the warehouses along

works of water facilities, contour sidy rate from 100%. The ex-

#### Warehousing and Cargo Handling

burses to the National Treasury the port, we have the "Warehous- The purpose of these two laws is as share of expense according to ing Business Law", and for the the sound development of the busithe rate that is obtained after de- cargo handling, we have the "Har- nesses and the protection of ducting previously mentioned sub- bor Transportation Business Law". utilizers.



Night view of Port of Moji seen from Port of Shimonoseki across Kammon Straits, lying between Kyushu and the main land. The two ports are connected with a submarine railway tunnel; next March an undersea highway will also be completed to connect them.

Japan's foremost industrial port of Kawasaki is still a port in the making. Huge reclaimed lands are being used as factory sites and equipped with modern facilities.

### 20-YEAR EXPANSION PLAN FOR PORT OF LONG BEACH

The most ambitious expansion plan in the history of the Port of Long Beach is now under way.

Recently approved by the Harbor Commission was the construction of four new piers and accompanying transit sheds, warehouses and other Port facilities, southerly from the south end of Pier A.

The massive program, with construction stages of five, ten and 20 year increments will add another 41 municipal berths to the already existing 30. An exhaustive study made by management and engineering indicates that these facilities will be necessary to cope with the tremendous growth of population and industry in Southern California.

The finance department of the Harbor has assured the Commission that the income from Portowned oil wells will be sufficient to pay for these new projects, as well as to maintain existing Port facilities.

The first stage of the great plan will be started probably this year, and will be completed in six years. This stage will see the completion of Piers F and G. Pier F will parallel the fairway between the breakwater entrance and the approach to the Middle Harbor. It will extend for 1,800 feet in a southeasterly direction from Pierpoint, and will contain 25 acres of new land.

The easterly of the two fills will become Pier G, 900 feet wide. Beginning at a point several hundred feet east of Pierpoint, this pier will run south for 2,400 feet, and contain 50 acres of new land. With the subsequent construction of a jetty, the two new piers will form a protected outer basin having 12 new berths. Both of the piers will be units in the Master Plan, so designated by the Harbor Commission.

Work on the fills is expected to begin late this year or early in 1958. The construction period will be one to two years and will be followed by further commitments to complete a five to six year pro-

gram, estimated to cost \$14,628,000. Completion of this first step will provide the following:

- 1. Two deep water berths, completed, on the east side of the new Pier F.
- Four deep water berths, complete, on the west side of Pier G.
- 3. Protection of the four now uncompleted berths along the southerly end of Pier A, so they may be completed and used.
- 4. Two deposit areas for essential fairway dredging needed to accommodate supertankers at Pier E.
- 5. A deposit point for more economical subsidence fills over a 5-year period.
- 6. The site for an expanded Pierpoint recreational development.

Reference to supertankers in Point 4 above presents a key to the whole program. It must be realized that inclusion of the proposal in the master plan meant that the job would be undertaken some day, but nobody knew just when. For one thing, construction of the huge fills called for by the plan presented Harbor engineers with a poser of



The Port's newest warehouse (Pier A, Berth 10) is in the center, almost surrounded b y cotton ready for shipment. I n background is a larger warehouse also used for cotton during the shipping season. At left is a transit shed at Berths 9and 10.



The Port of Long Beach, California. Areas delineated by broken lines are piers and sheds to be constructed within the next 20 years.

large proportions: Where to get the material for the fills. That was Problem No. 1.

Last March 28, the Board of Harbor Commissioners took steps to effect a lease for 20 acres on Pier E to Richfield Oil Corporation for construction of a supertanker terminal. Rental to the Port for this facility, by the way, will be \$260,000 a year.

The plans to bring supertankers —loaded with petroleum products —into the Port of Long Beach represented Problem No. 2. With a loaded draft fo 48 feet, the coming of the big tankers will require dredging of the fairway and entrance channel at the Port. Bear in mind that these supertankers have been described as second only to the liner Queen Mary in size. And they are rated at roughly 100,000 tons.

Dredging is hardly a routine operation at the Port of Long Beach as it is at so many other harbors. For years, subsidence has proved a natural "deepener" of Port waters, and until the supertankers were proposed, the channels were considered deep enough for all ordinary purposes.

Out of these two problems, however, came the answer that brought a nod of favorable consideration from the Harbor Commissioners, last April 28. And from the dredging will come the long-sought material with which to help make the fills for the new piers F and G. The volume will be some five million cubic yards.

There is still another phase to the fortunate resolution of the two problems into one solution: It saves the Port large sums of money. First, all material for the new fills would have to be purchased otherwise, at great expense. Second, dredged material from the fairway and channel entrance would have to be disposed of otherwise, and that could be expensive too. As it is now, one cost will cancel out the other, so to speak, and leave the Harbor Department far ahead on both counts. But that still isn't the whole story.

For years to come, subsidence remedial work will be necessary at the Port. Here again, material for the fills, dikes, etc., has to come from somewhere. But the quantities of dredged material from the fairway and channel work will be so great as to afford a major saving there also. The potential saving is considerable, through using the new piers for stockpiling material, to be re-handled for subsidence uses as needed.

Over a period of years, Harbor management has been preparing for the day when work on Pier A could be launched. Approach fills and facilities have been built up at the end of Pier A. Extensive core borings and engineering analyses of soil charactertiscs in the area of the authorized new piers have



High speed handling of bulk cargoes is carried out by the use of three gantry cranes. They can load 180 tons of scrap iron an hour. Clamshell buckets can be used in place of the electromagnets pictured here to facilitate loading or unloading of many kinds of ores.

been financed and obtained. Without such advance knowledge, it would have been unwise to recommend the project.

In addition, what are known as hydraulic models of Pier A and the authorized fills and piers were built and tested repeatedly at the Waterways Experiment Station of the Corps of Engineers at Vicksburg, Miss. The testing was done to determine that such facilities would be free of adverse effects (brought about by waves, tidal currents, etc.) if constructed in the proposed area. That uncertainty was eliminated, so far as exhaustive testing would permit.

Beyond all these precautions, Harbor engineers obtained from

the Army Engineers a construction permit without protests, under which to carry out the program. Consulting architects were brought in to project plans for surface work in the Pierpoint area, needed for the planned enlargement of facilities there. Other background data were prepared in support of the extension recommendations, and the information, complete and in graphic form, was laid before the Board. In the presentation, charts and figures were shown to indicate why such facilities are needed at the Port, and where the money will come from. A fundamental chart revealed the long range growth pattern in Southern California, and areas served by

the Port. This pattern, it was said, has established a rate of demand for construction of deep water cargo berths in Long Beach and Los Angeles Harbors, averaging two berths a year. Recent trends have been upward of this rate. This pattern has occurred with little variation over a 37year period, and in that time Long Beach and Los Angeles have each constructed on the average slightly less than one general cargo berth a year.

As to the urgency of launching the project, it was pointed out that the maritime industry is currently engaged in its first great revolution in cargo packaging and handling methods, as well as in ship design. These developments will increase trade here. To meet this rising demand, with consequent construction of more cargo terminals, Long Beach has no protected waterfront sites available except at Pier E, part of which has been leased, as stated above. At all other points, a long delay is involved because of oil development sites, and deep water facilities require years of construction time before they can be occupied.

Cost estimates and time schedules for the work were given by Bob Hoffmaster as follows: In fiscal 1957-58, Pier F wharf, dikes and fills in excess of fairway dredging to cost \$3,690,000; and Pier G wharf, dikes and jetty, fill from fairway dredging to cost \$5,058,000; or a total for the current fiscal year of \$8,748,000. Surface improvements of the two piers would follow in fiscal 1961-62, and 1962-63, for the total expenditure given above.

A 10-year plan looks toward ultimate construction of Pier H, similar in dimensions to Pier G, but easterly of it. The 20-year program will see construction of a fourth pier, J, of considerably less width than Piers G and H, but extending far to the south and southwest to enclose the new inner basin.

Behind this major development at Long Beach Harbor are the twin pressures on available facilities of the soaring population of the area served, and the mounting totals of world trade, as pointed out.

#### Japanese Child Art Displayed in Melbourne Port

Paintings by schoolchildren of Nagoya, Japan, of the Port of Nagoya, which were sent to Australia as a goodwill jesture from the Japanese port on the occasion of its 50th anniversary last July, were recently placed on view in the Melbourne Port Authority building by the Melbourne Harbor The display attracted a Trust. stream of visitors, including Melbourne school students who were greatly interested in those paintings. There are two of the photographs taken of the display shown on this page.

#### **Development of Indian Iron Ore**

Agreement being reached between the Japanese preliminary iron ore survey team and the Government of India on the development of Indian iron ore mines, it was decided to send a full scale survey team composed of government officials and business leaders to that country. The team will be headed by Mr. C. Asada, president of Kobe Steel Mill. Thirty-six members of the team will be divided into the two mine divisions, port and harber division, railway division and preparation and liaison division.

#### **Biggest Dredger Completed**

The dredger Toa Maru equipped with a 2,000 h.p. electric motor pump for the Toa Port and Harbor Industry Company, Tokyo completed her official trial run off the coast of Kawasaki on November 15. The vessel, which is the largest dredger ever built in Japan, will engage in the contruction of the Kawasaki waterfront industrial area now under way.

#### Tug Boats to be Equipped with Schneider Propellers

In order to cope with the recent trend of the growing size of ships, the Yokohama Tug Boat Company, which has been planning to equip Germanmade Shneider propellors to its tug boats, has decided to install the first propeller to the Daito Maru (145 tons gross) scheduled for completion on December 10.

#### **Atomic Ship Plans Completed**

The Kobe shipyard of Mitsubishi Heavy Industries, Reorganised announced that it had completed the plans of an atomic powered passenger and cargo vessel and a similar submarine tanker. Their principal particulars are:



A sign on the facade of the Port Authority building, Melbourne, tells of the Port of Nagoya painting display inside.



The Chairman of the Melbourne Harbor Trust Commissioners, Mr. A.D. Mackenzie, who recently visited Japan for the 90th anniversary celebrations of the Port of Osaka and who inspected the city and port of Nagoya, explains the significance of the Nagoya school childrens' paintings to students of a Melbourne girls' grammar school.

| Passenger/cargo vessel  |                           |  |
|-------------------------|---------------------------|--|
| Passenger accommodation | about 2,200 passengers    |  |
| Cargo capacity          | about 10,000 tons         |  |
| Service speed           | 23 knots                  |  |
| Length o.a.             | 205 meters                |  |
| Breadth                 | 25.6 "                    |  |
| Depth                   | 13.9 "                    |  |
| Gross tonnage           | 20,100 tons               |  |
| Propelling machinery    | two Westinghouse turbines |  |
|                         | (22,000 h.p. each)        |  |
| Submarine tanker        |                           |  |
| Oil tank capacity       | 30,000 tons               |  |
| Propelling machinery    | two steam turbines        |  |
|                         | (20,000 h.p. each)        |  |
| Length o.a.             | 180 meters                |  |
| Breadth                 | 23 "                      |  |
| Depth                   | 23 "                      |  |
| Speed under water       | 22 knots                  |  |
|                         |                           |  |



Air view of 10th Avenue Terminal, Port of San Diego, with the City of San Diego in the background.

### SAN DIEGO Progressing Port on the Pacific

San Diego, one of the world's finest natural harbors, is rapidly becoming a major factor in the development of foreign trade on the Pacific Coast. During the past five years, the Port of San Diego has produced a record of accomplishment which has astounded not only the competitive ports, but even its own citizens.

During the fiscal year 1951-52 there were 65 vessels of all flags in all trades which entered the Port of San Diego, whereas during the past fiscal year ending June 30, 1957, there were 259 vessels which called at this growing port, an increase of almost 400% during the five year period.

San Diego has long been considered as a consumer market, bringing into the area much more than it produced to send into the world markets. As a result, the exports from San Diego were rather small and insignificant. As a matter of fact, during the 19511952 fiscal year, San Diego only exported 592 tons of cargo valued at \$41,529.10 to the foreign markets of the world. Compare the foreign trade exports of five years ago to those of the last fiscal period ending June 30, 1957, which amounted to 75,366 tons valued at \$37,518,-521.00. You can readily see that the foreign exports from the Port of San Diego have increased over 125 times those of five years ago.

Industrial Growth of San Diego The pattern has changed materially in the economic life of the San Diego Metropolitan Area during the past five years. San Diego is beginning to expand its industrial base to include many diversified activities which will either be using imported raw materials or will be exporting their manufactured products. This industrial expansion of San Diego is being anticipated and matcthed by the development of the facilities for the handling of waterborne commerce in the Port.

To match this industrial growth of San Diego and to provide the facilities to handle the waterborne commerce, the Port of San Diego modernized the existing "B" Street pier by constructing a new transit shed 133 feet wide and 880 feet long. Two massive 12-inch concrete fire walls divide the building into three compartments fully protected with sprinkler system. High quality, economical construction was achieved by the use of tilt-up reinforced concrete walls, prestressed concrete girders, and beams supporting the roof. The new shed was equipped with fluorescent lighting for both interior and exterior areas. The shed complies with the highest standards for the construction, protection, and maintenance of cotton compresses, warehouses, and similar properties as recommended by the Cotton Warehouse Inspection Service.

#### New Facilities to Meet Demands of Increased Commerce

The Port realized that the existing pier facilities at Broadway Pier, the older transit shed on the south side of "B" Street Pier, the new modernized transit shed on the north side of "B" Street Pier, the open face wharf at 10th Avenue, and the lumber dock at 28th Street would be inadequate to meet the demands of increased Therefore, a modern commerce. concrete storage shed, similar in construction to the new shed at "B" Street, measuring 150 feet by 320 feet was constructed at the site of the new 10th Avenue Termi-The floor is at platform nal. height and has 15 foot loading platforms with ramps extending along the entire sides of the building which has been designated as Warehouse "B".

As soon as these structures were completed, they were being utilized to the extent of approximately 120 per cent of capacity. Therefore, work was commenced on the development of a major project to be known as the 10th Avenue Terminal.

The 10th Avenue Terminal is a modern marginal wharf 2,600 feet

long and extending 1,100 feet from the shoreline at each end. The new wharf is capable of berthing nine large ocean-going cargo vessels simultaneously. The wharf is of the cyclopean and mass concrete wall type of construction with 37 feet of water around the facility. Cylindrical rubber fenders are attached to the quay wall for the protection of the pier and vessels. These fenders consist of rubber tubes, supported by heavy chain, and are 19 feet long with an outside and inside diameter of 10 and 5 inches respectively. They have proven satisfactory in Great Lakes ports as well as other parts of the world. The Port of San Diego is attempting to provide facilities for bunkering on a basis which will be competitive with other Pacific Coast ports. Plans are also being made to provide the conveniences of telephone service and fresh water lines at ship side.

There are two transit sheds each measuring 200 feet wide by 1,000 feet long. Each transit shed is separated into four compartments by concrete and steel firewalls. The balance of the structures are of the prestressed concrete tilt-up wall construction and are fully

sprinklered. Directly behind the two transit sheds there will be two warehouses of the same type of construction measuring 400 by 600 feet. Each warehouse will contain six compartments separated by concrete firewalls.

The area between the transit sheds and the warehouses will be depressed allowing trucks and rail cars to have platform height affecting their receiving or delivering of cargo. Additionally, there will be hydraulic ramps which will allow mechanized equipment to go from ship's side through the transit shed and down the hydraulic ramp to the depressed level area across to the warehouse facility, up another hydraulic ramp for final resting place in the warehouse.

This type of operation will afford, in actuality, additional ship's side transit sheds, since there will be an uninterrupted movement from ship's tackle to point of rest within the warehouse area.

The ultimate development of the 10th Avenue Pier will, without a doubt, see the installation of all types of specialized cargo handling equipment. Through progressive planning it is hoped to meet the demands as they arise through the



Photo shows Central Piers, Port of San Diego. installation of bulk handling equipment, tankage for the storage of liquid cargoes, and gantry cranes for heavy lifts and the movement of scrap metal.

#### For Future Expansion

There is additional open land area in the southeastern portion of the 10th Avenue Terminal which. at the present time, has not been definitely committed to any particargo-handling function. cular The development of this area will depend primarily upon the advancement of ocean-going cargo-handling services. Since there has been no definite indication as to the type of port facilities which will be required in the event of a large expansion of roll-on roll-off type of service, this area is being left in a manner which could be easily adapted to the new concept of "fishyback" transportation. Should this concept fail to materialize at the time the area is needed for other types of cargo handling, the area could easily be adapted to the handling of bulk commodities. These is sufficient area to allow for the installation of such types of equipment as fore and aft type cantilever cranes, conveyor belt systems, car dumpers, and other implements necessary  $\mathbf{for}$ the handling of bulk ores and similar commodities.

Another possible use would be the installation of grain-storing facilities and elevators along with their necessary conveyor belt systems, rail and truck unloaders. The 10th Avenue Marine Terminal has its terminal land area immediately adjacent to the rail assembly yards of the Atchison, Topeka and Santa Fe Railway and the San Diego and Arizona Eastern Railroad, a subsidiary of the Southern Pacific Company. This proximity of two transcontinental railroads assembling yards to the 10th Avenue terminal eliminates a great deal of the switching of rail cars which is necessary in other ports. The area faces on the land side U.S. Highway No. 101, affording direct truck routes to Tijuna and Baja California only fifteen miles to the south and to Los Angeles 120 miles to the north. U. S. 101 also connects in the City of San Diego with U. S. Highway No. 80 going east through the rich Imperial Valley into Arizona, New Mexico

and Texas.

#### Potential of San Diego

Also available is U. S. Highway 395, giving fast direct service to the San Gabriel Valley area of Riverside, San Bernardino, Fontana. Colton, and Pamona, which is rapidly becoming a major industrial center. Therefore, the Port of San Diego affords exceptional inland transportation facilities not only to Mexico, but to the entire southwestern portion of the United States. The rapid industrial growth in the natural hinterland of San Diego, coupled with San Diego's industrial expansion program, truly portrays an extremely bright future for the development of foreign commerce. To support this statement, it should be realized that San Diego is one of the few ports which has not been developed to anywhere near its true potential. There are sufficient land areas available in San Diego to build two or three more terminal facilities which could be duplicated in size to the 10th Avenue Terminal described above. For many years San Diego has been considered as structurally a Naval base with no commercial activity whatsoever; however, today foreign traders throughout the world are beginning to realize the potential of San Diego for the development of world commerce. As more and more people become aware of the potential benefits to be derived by utilizing the facilities of the Port of San Diego, the Port stands ready to expand its facilities to handle all types of additional water-borne cargoes.

#### Los Angeles Prepares to Handle Biggest Oil Tankers

Well over \$2,000,000 will be spent by the Port of Los Angeles to prepare the way for a huge new marine oil loading terminal that will accommodate the world's largest super-tankers.

According to General Manager Bernard J. Caughlin, the Los Angeles Board of Harbor Commissioners has recently awarded two contracts: 1) for a major dredging job to cost \$1,470,-000; and 2) for building a dike at the pier site for \$639,117.

Work will start within two months on dredging a fairway from the breakwater entrance to the dock site on the San Pedro side of tha harbor. Specifications call for the removal of 1,400,000 cubic yards of earth from the Outer Harbor's bottom to form a channel 500 feet wide and 45 feet deep with a turning basin 1,200 feet in diameter in front of the pier.

This preparatory phase of the oil loading terminal is to be completed in six months from the time the job is started.

The second contract for a dike involves the use of about 900,000 cubic yards of earth dredged up from the fairway. The remaining 500,000 cubic yards will go into reclamation work at nearby Cabrillo Beach.

"Still to be awarded," said Caughlin, "is the contract for building a 900-foot-long pier. Dolphins (mooring spars) 100 feet outboard from the pier will give an over-all docking length of 1,100 feet."

Pipe and pumping systems and a tank farm are also to be installed before the facility goes into operation around January 1959.

"When completed, our new, up-tothe-minute oil terminal will be available to any super-tanker—including the largest now in service—calling at the Port of Los Angels," General Manager Caughlin promised.

#### Al minium Ship Completed At Uraga Dock

The bauxite carrier Sun Walker (8,810 tons d.w.) for a Canadian Company whose superstructure is made of special aluminium alloy was completed by the Uraga Dock Company and left Yokohama on November 7 on her maiden voyage to Canada. The volume of aluminium used is 180 tons.

#### **Pilot Station at Tokyo Port**

In anticipation of the increase in number of pilots resulting from the growing traffic of the port of Tokyo, the Port and Harbor Bureau, Tokyo Metropolis, is studying the new building for a pilot station which will replace the present small building.

#### Construction of 103,000-ton Tankers Approved

The Ministry of Transportation gave approval on October 31 to the Kure Shipyard division of National Bulk Carriers, Inc., New York for the construction of three 103,000-ton tankers for Universe Tank Ship, Inc., Liberia. Their main particulars are:

| 10nnage gross 69,100 tons     |  |  |  |  |
|-------------------------------|--|--|--|--|
| " dead weight 103,000 "       |  |  |  |  |
| Propelling machinery 25,000 " |  |  |  |  |
| Service speed 14.9 knots      |  |  |  |  |
| Classification AB             |  |  |  |  |

They are scheduled for completion in 1959.



### THE FREEPORT OF MONROVIA

#### One of the Finest in West Africa

In July 1948, the Freeport of Monrovia which is one of the finest on the West Coast of Africa was opened to commercial vessels.

The port is situated on Bushrod Island and the site on this island makes the port free from complicated estuary flow; provides a channel entrance in deep water and escapes the possible formation of a sand bar from littoral drift.

The Freeport of Monrovia consists of an artificial harbour formed by two breakwaters approximately  $1\frac{1}{2}$  miles out into the open sea, which encompass about 750 acres of protected water. Approximately 750 acres of the habour area is dredged to accommodate oceangoing steamers, and a marginal wharf 2,000 ft. long is capable of berthing four ships.

The wharf is approximately 17 ft. above mean sea level and the outboard ends are marked by

powerful navigation lights.

Coverage storage is provided by an 830 ft. long by 80 ft. wide transit shed of structual steel construction with a clearance of 20 ft. from the floor. This shed provides 65,-000 square feet for the storage of cargo, in addition to the space allotted for passengers, customs and police facilities. Also, 2,500,000 sq. ft. of fenced open storage is provided.

There are three additional warehouses 140 ft. by 40 ft. each; twelve latex storage tanks with a capacity of 2,500 tons and other facilities are:

(a) Petroleum Storage Facilities (Bulk)

|                       | Gallons   |
|-----------------------|-----------|
| 1. Bunkers            | 3,381,000 |
| 2. Gasoline, Aviation | 612,642   |
| 3. Gasoline, Motor    | 1,310,300 |
| 4. Kerosene           | 212,000   |
| 5. Diesel Oil         | 1.072.000 |

- (b) An iron ore loading berth with a capacity of 15,000 tons per hour
- (c) BunkeringFacilities
  - Bunkers C—4 berths
    Diesel Oil 2 berths

On the marginal wharf there is a 75 ton American Hoist and Derrick steam whirler crane with a 75 foot boom. This crane is used to load and discharge heavy cargo. There is also a Lorain crane capable of lifting 6 tons; a Stiff-leg crane of 3 tons; 16 forklifts and jitneys and two powerful tugs.

#### The Port Objectives

The port aims to invite domestic coastwise and foreign trade and transshipment traffic, and to aid in developing the resources of Liberia and adjoining countries.

The principle exports are: Iron Ore with a 70 per cent content, (Continued on page 28)

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### THE PORT OF HONOLULU

#### **Renovation and Expansin Under Way**

#### History

The Port of Honolulu, located on the Island of Oahu, Territory of Hawaii, was discovered by Captain William Brown of the fur trading vessel "BUTTERWORTH" in the early 1790's.

Dredging of shoal areas and filling of tidelands started in 1840 in what is now the industrial district of Honolulu. The first steam tugboat appeared in 1854 to assist in docking vessels. By 1857, the Minister of Interior report indicated, Honolulu Harbor possessed five wharves with a total berthing frontage of 600 feet, capable of handling ships of 1,500 gross tons.

In 1898 the Hawaiian Islands were annexed as a Territory of the United States and the Organic Act of 1900 placed the responsibility of harbor development and control under the Superintendent of Public Works. One of his first projects was the construction of a wharf 400 feet long and 120 feet wide with an 80-foot wide shed constructed along the main entrance channel. Today a new, modern terminal costing \$5,500,000.00 has replaced this old wharf.

By 1902 the Territory of Hawaii operated 13 wharves and private industry and the U. S. Navy had a total of three wharves. A total of 683 ships visited Honolulu Harbor in 1902, 540 American, 85 British, 38 Japanese, and 20 of various nationalities.

During the period 1902 to 1957 many changes have taken place. Most of the old wharves have been replaced and many new private and public wharves have been built.

#### Management

The Port of Honolulu is controlled by a board of seven harbor commissioners appointed by the Governor of Hawaii. This board is vested with the authority to control and manage the shores, shore waters, navigable streams, harbors, ports, docks, wharves, quays, bulkheads and landings belonging to or under jurisdiction of the Territory of Hawaii. This seven-man board of harbor commissioners controls the operation of five deepwater ports located on the Islands of Hawaii, Maui, Oahu, and Kauai.



Aerial photo shows Aloha Tower to Diamond Head Terminal with Waikiki Beach in background, Piers, No. 5 & No. 6 now being torn down to make way for large new passenger freight terminal, and part of Outer Harbor Basin.

Entire Harbor ٠F "-Indicates Aloha Tower Area "H"--Site of new passengerfreight terminal to be built in 1958-'59-60 "I"—Diamond Head Terminal "A"—Sand Island Road-proposed new entrance channel to left of "A" "B"—Army Piers "C." "D" & "E"… **Privately** owned piers



In addition to these deep water ports the board controls many small boat harbors, light draft barge facilities and other facilities serving the waterfront activities in the Hawaiian Islands. The principal function, however, of the board of harbor commissioners is to supply and manage the necessary docks and facilities for the handling of overseas and interisland freight and passengers.

The chairman of the board of harbor commissioners is an exofficio member of the board whose prime job is that of Superintendent of Public Works and Territorial Highway Engineer. The actual management of the Port of Honolulu is under a general manager and chief engineer who is appointed by and who serves under the board of harbor commissioners.

In addition to the piers and shore facilities owned and operated by the board of harbor commissioners in the Port of Honolulu, there are many docks and facilities owned and operated by private business enterprises and by Federal government agencies, such as the Coast Guard, the Army Transportation Service, and others.

The management, maintenance, and construction of all Territorially-owned water-front facilities are handled by the Manager and Chief Engineer and his staff. His office designs, constructs, and operates these Territorially-owned facilities charging rentals, fees and tolls, with which to pay operating costs and finance new construction. Large capital improvements are financed by the sale of revenue bonds which in turn are paid off with the fees and tolls charged for the berthing of ships and the handling of cargo.

The harbor board, with the approval of the Territorial legislature, authorized the sale of \$5,500,-000.00 in revenue bonds in 1950 to be used for the construction of a new, modern freight terminal designated as Diamond Head Terminal. This terminal has been extensively used and has helped to carry the ever-increasing tonnage of freight handled in the Port of Honolulu. Business volume and tonnage of cargo have continually increased since the end of World War II and has practically doubled in the past ten years. For the year ending June 30, 1957 a total

of 5,221,788 tons of overseas and inter-island cargo was carried over Port of Honolulu wharves. This increase in tonnage and income will make it possible to finance several million dollars worth of new improvements the next few years and the harbor board will probably increase its bonded indebtedness by approximately \$7,000,000.00 in 1958 and 1959.

#### Physical Features

The main entrance to Honolulu Harbor today is 40 feet deep, 500 feet wide and 4,000 feet long. It is located on the lee side of the island of Oahu and enters through a natural opening in the coral reef which has been deepened and widened to meet the needs of present day large draft vessels. The harbor contains two inner basins with a connecting channel, all at least 35 feet deep. One of these inner basins is approximately 3,300 feet long by 1,500 feet wide, whereas the other basin is approximately 3,400 feet long and 1,000 feet across at its widest section. These two basins are connected by a channel 2,500 feet long by 600 feet wide. As one enters the main



Photo shows Diamond Head Terminal with 3 Freighters at Berths, on East Side of Main Entrance Channel and Old Piers No. 5 & No. 6 in foreground being torn down.

channel, the Aloha fower stands out above the warehouses and is surrounded by a large passengerfreight shed area now serving most of the passenger traffic into and out of the Port of Honolulu. This Tower is located at Lat. 21° 18'37" N. and Long. 157° 52' 07" W. A considerable portion of the outer basin is over 40 feet deep and the minimum depth along the major piers is 35 feet. Many of the world's large cruise ships have enetred Honolulu Harbor and docking facilities are available to handle them. In 1951 the board of harbor commissioners constructed а modern, fireproof, reinforced concrete freight terminal at Pier No. 2, which was re-named "Diamond Head Terminal". This pier is 1,717 feet long, lies along the east bank of the main entrance channel and contains 374,000 square feet of covered shed area and 380,000 square feet of open storage area. The location of Diamond Head Terminal is such that freight can be taken to the fast growing south end of the Island of Oahu without the necessity of hauling through the center of the City of Honolulu with its heavy congested traffic.

Berths 8, 9, 10, and 11, which surround the Aloha Tower, handle the majority of the passenger traffic coming in and going out of Honolulu Harbor. Several old, wooden piers due to be torn down lie between Diamond Head Terminal and Pier No. 8. The United States Coast Guard is also located in this area.

#### **General Information**

In addition to the wharves, sheds, and other facilities owned and controlled by the board of harbor commissioners, there are many wharves and facilities owned by private interests and also by the United States government. Private interests have constructed a bulk sugar loading facility, storage for petroleum products, freight warehouses and many additional facilities.

The Aloha Tower is used for a signal tower for harbor shipping. It is continuously manned by personnel under the control of the harbor master. All ships entering or leaving Honolulu Harbor must comply with the signals hung on the Aloha Tower as well as the normal rules of navigation. Large craft over 500 tons are not allowed to pass each other in the entrance channel and all ship movements are controlled so as to minimize danger of accident.

Fees and tolls are charged for pilotage, dockage, wharfage, demurrage, and for services to vessels.

The Port of Honolulu has five harbor pilots and two pilot boats available to assist vessels requesting this service. Dockage fees are based on gross tonnage of ships. Wharfage fees vary with the materials or items handled. Animals are charged by the head, general merchandsie by the ton and lumber by board feet. Liquids passing through pipelines are charged for by the barrel with the exception of molasses which is charged by the ton. Water is sold to ships requesting it at \$0.06 per 1,000 gallons. Demurrage is charged against all merchandise remaining on a Territorial wharf after the free time specified.

The board of harbor commissioners operates no freight handling equipment or service. All

(Continued on page 28)

# THE PORT OF HONOLULU

### CROSS ROADS OF THE PACIFIC



### ALOHA TOWER - GATEWAY TO HAWAII

### BEATHING, FACILITIES FOR PASSENGER LINERS-WORLD CRUISE SHIPS-FREIGHTERS. CARGO AND SHIP HAND -LING FACILITIES TO SERVE THE WORLDS TRADE - - -PILOT TERVICE - WATER - FUEL - ELECTRICITY.

|       |                  | Territory of Hawaii           |
|-------|------------------|-------------------------------|
| Lat.  | 21° 18′ 37″ N.   | Board of Harbor Commissioners |
| Long. | 157° 52' 07'' W. | P.O. BOX 397                  |
|       |                  | HONOLULU 9, HAWAII            |



stevedoring is performed by private corporations which maintain adequate equipment for the handling of cargo including derrick barges for heavy lifts.

#### **Future New Construction**

The Port of Honolulu has had a continuous growth since the day of its discovery in 1790 by Captain William Brown. In order to take

#### Port of Monrovia ——Continued

Crape Rubber, Liquid Latex, Palm Kernels, Ivory, Coffee and a variety of tropical vegetable products.

The principle imports are: Cotton piece goods, Tobacco, Spirits, Autos, Trucks, Heavy Machinery, Steel Rods, Salt, Cement, Flour, Sugar and Milk.

During the first six months of 1957,440 ships of ten nationalities called at the Freeport and the total revenue tons which moved through the port during that period increased 21% to reach 1,296,000 compared to 1,066,000 tons for the corresponding period of 1956.

The Port is operated by the Monrovia Port Management Company comprising seven American business organizations operating in Liberia. Colonel Donald H.

Inskip is the Port Director with Mr. Isaac David as his Assistant. Mr. David is also a Director of the International Association of Ports & Harbors.

It is interesting to note that although the port has been open only since July 1948, the business far exceeds expectations and a substantial amount has been cleared over operating costs. Due to the tremenduous growth of the port, the Directors are now contemplating building an exclusive tanker berth which will facilitate the quick despatch of tankers.

The port of Monrovia has turned out to be one of the principle units in unfolding some of Liberia's vast potentialities and it has made itself indispensable in the trade of West Africa.



Photo shows Kammon Highway Undersea Tunnel, connecting Shimonoseki Port on the main land and Moji Port on Kyushu Island, which is scheduled to be completed next March. It is 3,460 meters in length, of which 780 meters is the submarine portion. Inside is divided into upper two lane traffic passage and lower for pedestrians.

care of this ever-increasing volume of ships and cargo as well as larger ships than in the past, the board of harbor commissioners has decided to tear out several old wooden piers and construct a passenger-freight modern new terminal capable of handling ships over 900 feet in length. Construction of this new facility will start early in 1958 with the tearing down of Piers No. 5 and No. 6 and the construction of a bulkhead, fill, and platform deck. It is expected to sell \$3,500,000.00 worth of revenue bonds with which to start this project. After this phase of construction is completed another \$3,500,000.00 worth of bonds will be sold in early 1959 with which to finance the completion of the superstructure for handling passengers and freight. This project should be completed by midyear 1960.

In addition to the plans for expansion of facilities by the board harbor commissioners. of the United States Engineering Department is planing a second entrance channel to Honolulu Harbor just westward of the present entrance. This project will probably be accomplished within the next few years and will greatly facilitate ingress and egress to this port as well as allow for further development of facilities adjacent to this new channel.

#### **Editor's Note**

It is exactly one year since our organ "Ports and Harbors" was inaugurated and its first issue was forwarded to our members for inspection in December, 1956. During this short space of time, it has quite grown up-from the 8 pages of the first issue to the 28 pages of the present one. In point of substance, it has now come to include up-to-the minute information on many of our member ports and organizations. Ás editor who deals with the editing of this magazine in behalf of all our members, we take this opportunity to deeply thank them all for the sincere cooperation which has enabled us to make a progress, if any, in our magazine.

In the coming year, however, it is our hope that it will become to be much used by our members not only as a medium of information but also as a forum for discussing any matter of common interest. Why don't you send in articles on any port problem and of any length? This is our sincere request to make to all our members at this year-end, which will be carried into the coming year. May we close this short note with best wishes for a happy and prosperous Neaw Year to all our members and readers.



AMERICA'S

MOST

MODERN

The Port of Long Beach - America's Most Modern - was man-made for the shipper. Wealth from Port-owned oil wells furnished the funds - the result is not only a completely-equipped Harbor, but also a debt-free one. Deep channels are doubly protected. Great clear-span transit sheds are among the world's largest and most modern. A tall bulk-loader and Robins car-shakeout "team up" to load bulk cargoes aboard ship at record speed. Heavy fire protection safeguards the shipper's goods, and fast mechanized handling saves him time and money. Radar-radio pilot control moves ships in or out of the Harbor safely in thickest fog. Cotton, citrus, minerals, coke, paper, lumber and oil are only a few of the vast tonnages that annually clear the Port. Truly, this is the shippers' port - built to meet their specifications.

PORTOFLONG BEACH P.O. Box 570 • 1333-V El Embarcadero • Long Beach 2, California

#### Central Secretariat of the International Association of Ports and Harbors

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THE PORT OF LONG BEACH, a man-made harbor with ample water depths and land facilities to accommodate all types of shipping. A debt free port which is being developed under a comprehensive plan, it has enjoyed a phenomenal growth and is served by a vast network of rail and air lines and a highway system which radiates to all points of the United States. Its gigantic 20-year expansion plan is explained in this issue.

1 19<sup>11-12</sup>