

# PORTS *and* HARBORS

MARCH 1962

Vol. 7 No. 1



**PORT OF NEW ORLEANS**

**Looking down famous Canal Street**

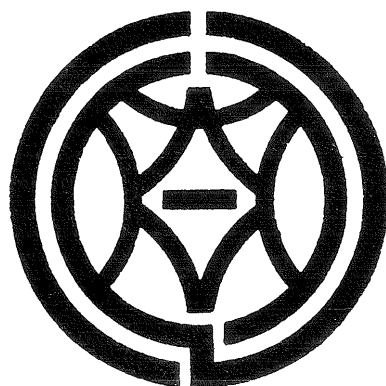
**THE INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS**

# *Introducing The Crests of Co-Member Ports*

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(Each Issue One Port)

## **THE PORT OF SHIMIZU**



Among the leading foreign trade ports of Japan, Shimizu is unexcelled in its scenic surroundings. The photo shows part of the port with Mt. Fuji in the background.

# 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

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

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## THE INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS

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**Lt. Gen. Huang Jen-ling**

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(Director and Alternate Director for Brazil are yet to be elected.)

# From The Central Secretariat

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

## Executive Committee Meeting Convened at Taipei, Taiwan, March 7-10

At the call of our President, Lt. Gen. J. L. Huang, a meeting of the Executive Committee was held March 7 through 10, 1962 at Taipei, Taiwan, China. The meeting was the first meeting of the Executive Committee to have been called since the last meeting convened May 19-20, 1960, at Honolulu, Hawaii.

Since this meeting was primarily for deliberation on the preparation for the Association's Third Triennial Conference which is scheduled for May 1 through 4, 1963 in New Orleans, U.S.A., the Port of New Orleans acting as hosts, a request was made to the Port of New Orleans to send its representative to participate in this meeting so

that the Executive Committee might fully discuss with him on details of the Conference preparation and program. In compliance with this request, Mr. W. J. Amoss, Director of Port, Port of New Orleans, came to Taipei in order to attend it, representing the port.

The members of the Executive Committee and other Association officials, who attended the meeting, were: Lt. Gen. J. L. Huang, Chairman, Board of Directors, China Merchants Steam Navigation Co., IAPH President (China); Mr. Hsu Ren-shou, Director, Keelung Harbor Bureau, Executive Director (China); Dr. Chujiro Haraguchi, Mayor of Kobe, Executive Director (Japan); Col. Julian C. Chaves,

General Manager, Manila Port Service, Executive Director (Philippines); Mr. John P. Davis, Harbor Commissioner, Port of Long Beach, Executive Director (U.S.A.); Mr. Arthur W. Nordstrom, Assistant City Attorney, Port of Los Angeles, IAPH Legal Counsellor (U.S.A.); and Mr. Gaku Matsumoto, Chief, Central Secretariat, IAPH (Japan). Also, participating in the meeting were R/Adm. H. P. Yen, Adviser, CMSNC, as a personal assistant to President Huang; Mr. Tomokichi Nishibe, Chief of the Kobe Port and Harbor General Bureau, Mr. Kotaro Yamada, General Affairs Section Chief, of same Bureau, and Mr. Haruyuki Ito, Secretary to Dr. Haraguchi, and Mr. Akira Ikeda, Mr. Shotaro Yamamura and Mr. Kenichi Kishimoto, as Central Secretariat staff members.

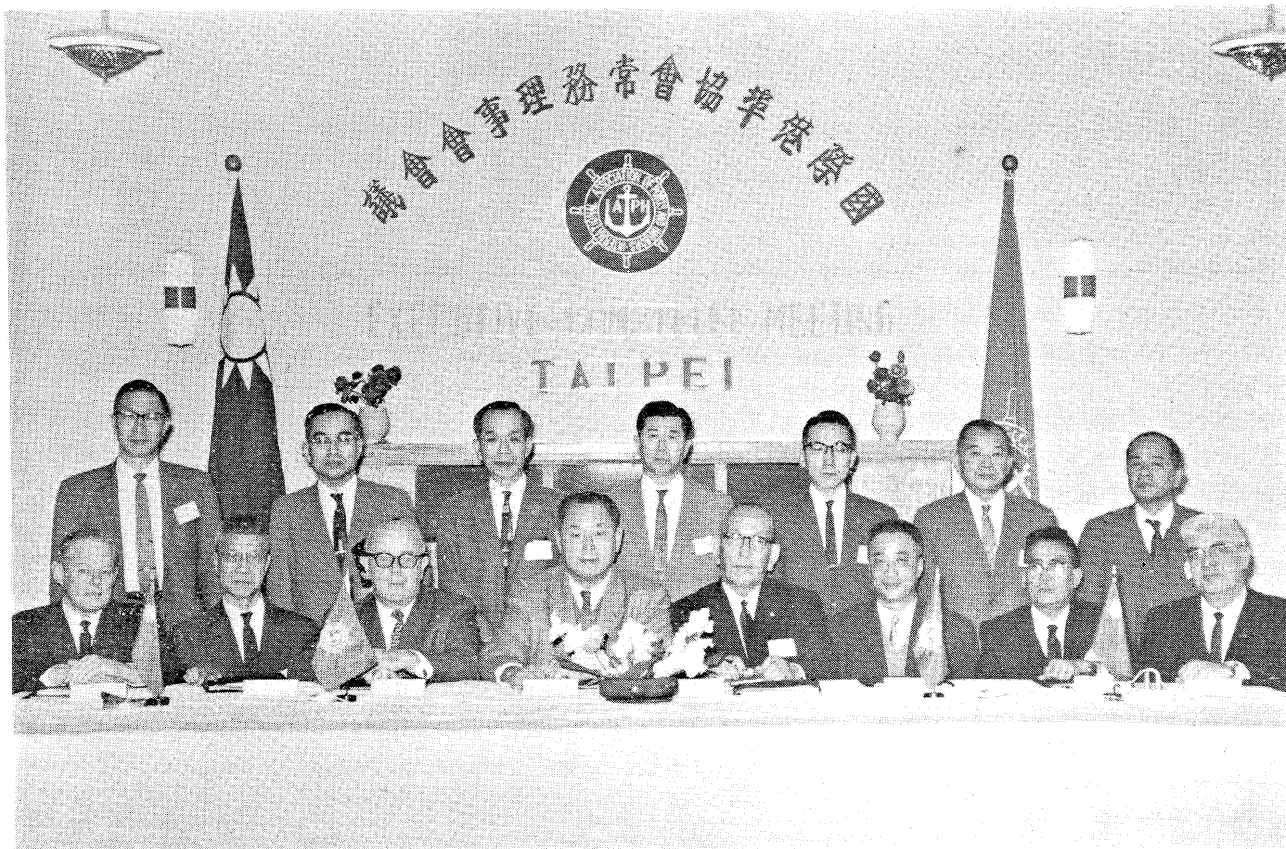


Photo shows Association officers attending the Executive Committee meeting March 7-8 at Taipei, Taiwan, from l. to r. in the front row: Mr. W. J. Amoss, Director of Port, New Orleans; Mr. Gaku Matsumoto, Chief of the Central Secretariat; Mr. John P. Davis, Commissioner, Long Beach Board of Harbor Commissioners; Lt. Gen. J. L. Huang, President, IAPH; Dr. Chujiro Haraguchi, Mayor of Kobe, Japan; Mr. Hsu Ren-shou, Director, Port of Keelung, Taiwan; Col. Julian C. Chaves, General Manager, Manila Port Service, Philippines; Mr. Arthur W. Nordstrom, Assistant City Attorney, Port of Los Angeles.



The Executive Committee meeting was opened with an address by Lt. Gen. J. L. Huang, IAPH President, who acted as chairman. Photo shows President Huang delivering the opening address.

### Conference Preparation and Program Discussed

The meeting was called to order at 9:00 a.m. March 7, at the Ta-tung Hostel, with the opening address delivered by President Huang. The text of his speech is quoted elsewhere in these pages.

According to the agenda prepared by the Central Secretariat, the Chief of the Central Secretariat then made a report on the Association affairs since the last Executive Committee meeting held in May, 1960 in Honolulu, Hawaii. They included the Seminar on Ports and Harbors under the Colombo Plan which was held in October, 1961, in Tokyo, the progress of Standing Committees, new memberships, the statement of accounts and payment of bills for the Second Fiscal Period (1959-1961), etc.

After deliberating on certain organizational problems, the committee entered into examination of the preparation for the Third Triennial Conference now going on.

The tentative Conference Agenda worked out by the Central Secretariat was discussed from various angles, in co-ordination with the conference program prepared by the host port of New Orleans, which was explained by Mr. Amoss, Director of the Port of New Orleans. Invitation of some international figures to attend the Conference as the guest speakers was among many things discussed in connection with the agenda and program of the Conference. Finally, committee members reached decisions which were satisfactory to all parties concerned.

### Parts of Keelung and Kaohsiung Visited

Business being almost over, participants in the committee meeting visited March 8 the Port of Keelung, conducted by Lt. Gen. Huang and Mr. Hsu Ren-shou, Director, Keelung Harbor Bureau. After attending the briefing in the Harbor Bureau office, the party was taken around the harbor on a boat tour. They had the opportunity

to see the development this main port of Taiwan had attained in recent years and its further modernization now being planned.

On the next day, the party flew from Taipei to Kan Shan Air Base near Tainan, whence proceeding to the Port of Kaohsiung. In Kaohsiung they were shown the facilities and activities of this fast developing port in Southwestern Taiwan on a boat tour around the harbor. They fully observed the harbor extension works vigorously under way.

Leaving Kaohsiung on the afternoon, they flew back to Taichung and thence proceeded by car to Sun Moon Lake, the famous mountain lake resort. In a cocktail sessions of the Executive Committee meeting called by President Huang, after arriving at the Evergreen Hostel on the lake, the President proposed to appoint his personal assistants both in Taipei and Tokyo as liaison men with the Central Secretariat, in order to streamline preparation works for the New Orleans Conference. This idea was supported by all of the committee members present.

(Continued on next page)

# President's Address at Executive Committee Meeting, March 7

As the Acting President of the IAPH, I have the unexpected honor and extreme pleasure to call this second regular meeting of the Executive Committee of the IAPH to order. I say, it is my unexpected honor because it is a legacy bequeathed upon me by our President, Mr. Lloyd Menveg who after contributed so much to the upbuilding of the IAPH resigned last August. I say, it is my extreme pleasure because this Executive Committee Meeting is now being held in Taiwan, the Provisional Capital of Free China and I am a Chinese. May I therefore, extend my warm sincere welcome to you, the members of the Executive Committee and our distinguished guest from New Orleans. Especially, do I appreciate those who have travelled half way around the world just to attend this Taipei Meeting.

For more than thirty years, I have been connected with the Chinese Army, I never paid much attention to shipping and water transportation until three years ago when my President appointed me as the Board Chairman of the China Merchants Steam Navigation Company—much less do I know about Ports and Harbors in the world. In May 1959, when I attended the Second Triennial Con-

ference of the IAPH, I had no idea that I would be elected as its First Vice President. Now, as the Acting President, I am constantly aware of my unequalness to the task. However, my military training has taught me to be dutiful and willing to learn. I can only pledge myself before you to carry on the work of this important organization faithfully and diligently until such time that a new and more capable President is elected.

When we think of the Third Triennial Conference to be held in the city of New Orleans, May 1963 is only 14 months away, we really don't have much time to waste. We should buckle down to business immediately and work hard for it. That is the reason why prompted me to call this Executive Committee Meeting.

Our Chief of the Central Secretariat has already circulated to you a tentative agenda of the Executive Committee Meeting which we will use as basis of our discussion. It may be summarized as follows:

- a. Reports of the Central Secretariat on Association affairs;
- b. Transfer (partial) of Power and Authority of Board of Directors to Executive Committee.

Next morning the party left Sun Moon Lake for Taichung, where they took train to Taipei, arriving there on the evening. Thus, the four day Executive Committee meeting of Taipei was closed on March 10.

Decisions and suggestions taken up by this Executive Committee meeting will be presented to the Board of Directors asking for its approval, as soon as the minute of the meeting will be ready.

## Permanent Council Meeting

Prior to the Executive Committee meeting called at Taipei, Taiwan, on March 7-10, the Permanent Council met on February 20, 1962 in the Palace Hotel, Tokyo, attended by Chairman Gaku Matsumoto, Chief of the Central Secretariat, and four members—Mr. Royal S. Wintemute, Mr. Hirisave Ramiah, Mr. H. D. Leonhardt, and Mr. I. H. Macdonald.

The meeting deliberated on the tentative agenda for the Third Triennial Conference scheduled for May 1-4, 1963 at New Orleans, La., U.S.A., worked out by the Central Secretariat, and approved the settlement of accounts for 1961 and for the 1959-1961 fiscal period as well as the working budget for 1962 and for the 1962-1964 fiscal period compiled by the Central Secretariat.



Executive Committee members are shown meeting in "a cocktail session" in the Evergreen Hostel on Sun Moon Lake on the evening of March 9.

- c. The application of Inter-Governmental Maritime Consultative Organization (IMCO) of the United Nations for provisional Consultative Status.
- d. Preparation for the coming Triennial Conference, May 1-4, 1963 at New Orleans.

These above mentioned are items of essential business. Yet apart from all these, there is a question of prime importance always ringing in my mind. The question is, are we, as an international body, living up to the Objects and Purposes as set forth in our Constitution? It is a challenge which we must accept. To refresh our memory, may I quote you Article II of the IAPH (Constitution on the Objects and Purposes?

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 procedures governing import and export and the clearance of vessels in International trade; thereby promoting the peace in the world and the welfare of mankind.

Indeed, our Constitution has provided us with some very noble and lofty ideals, yet they can be attained through many practical ways. When I read these lines, I realize what a tremendous responsibility we have upon our shoulders. I begin to ask myself again of these questions. What have we been doing to justify ourselves to be known as an International Association of Ports and Harbors? Have our standing committees and special committees been functioning properly? Have the required studies and reports been turned out in time, or could they be made ready for the next Conference? Has the Central Secretariat been able to keep in close enough contact

with our members? Can we further expand our membership to cover a more equitable representation from a geographical point of view? Last but not least, is the fact, that with the limited amount of time at our disposal, are we able to get our preparations ready for the Third Triennial Conference to be held in New Orleans in May of 1963? Gentlemen! I don't know what your answers may be. I can only say that I am ashamed of myself. I would like to quote Apostle Paul's words to rededicate myself to the work of the IAPH, "Forgetting those things which are behind, and reaching forth unto those things which are before." (Philippians 3:13)

It is therefore my fervent hope that while our business sessions are limited to three sessions, and these sessions vary from 120—180 minutes. We want to make every one of these 450 minutes count. With your permission I will set before you what I consider as the minimum requirements for the achievements to be attained at this Taipei Meeting.

Firstly, I hope that during the three sessions, we will be able to make a thorough check on all the previously appointed standing or special committees or individual members to see if they understood their assignments properly, and that they will complete their assignments in time for the coming Conference in New Orleans.

Secondly, I hope that during these sessions, let us review and adopt an agenda for discussion for the next Conference—dewling on a few of the more important points and weeding out some of the less essential ones. New assignments will have to be made so that those who are responsible for the particular subjects will know clearly and definitely what they are expected.

Thirdly, I hope that in these sessions, we will create a committee to be vested with broader powers to execute the preparation work of the next Conference within the framework of our delegated authorization — especially along the lines of financial matters and managerial functions. In this respect, I am most happy to see that Mr. W. J. Amoss is here. He is the Director of the Port of New Orleans which will host the IAPH's

Third Triennial Conference. I will call on him to enlighten us on these points at some later time.

Gentlemen! These hopes represent nothing new. They coincide with what our Chief of the Central Secretariat has outlined in his circulated agenda for discussion. I am only reiterating them for further emphasis. I am fully aware and thoroughly convinced that if we do not get these business clearly understood, assignments properly made at this Executive Committee Meeting, we will be like the Blind leading the Blind. Then, I dread to think of the future outcome of the Third Triennial Conference.

However, with the presence of our founding fathers in persons of Mr. John P. Davis, Dr. Chujiro Haraguchi, and Dr. Hsu Ren-shou and the expert guidance of our legal counsellor, Mr. Arthur W. Nordstrom, plus the new vigorous addition of Col. Julian C. Chaves and together with the mellowed experience of our Chief of the Central Secretariat, Mr. Gaku Matsumoto and his faithful staff, I have reasons to believe that the Third Triennial Conference is yet going to be the most successful one in our IAPH history, and that the IAPH will really live up to the sacred missions as charged to us by the Constitution and By-Laws of the International Association of Ports and Harbors.

### Membership Applications

During the last three month period (January-March, 1962), the following membership applications were accepted by the Central Secretariat:

#### Corporate Supporting Membership

The Broken Hill Proprietary Co., Ltd.

500 Bourke Street, Melbourne, Victoria, Australia

\* \* \*

Tai An Steamship Co., Ltd.

46, Kuan Chien Road, Taipei, Taiwan

#### Individual Supporting Membership

Max Heinz Weissler

c/o Israel Ports Authority

P.O. B. 2086, Tel-Aviv, Israel



# Internationally Known Port Executive Announces Retirement



**Mr. Dudley W. Frost, Executive Director, Port of Oakland.**

Mr. Dudley W. Frost, executive director of the Port of Oakland, and the past IAPH Alternate Director for the United States, has recently announced that he will retire June 30, 1962.

He is also one of the organizers of the International Association of Ports and Harbors.

Frost, an internationally recognized Port administrator, will complete 10 years of service as the Port's Chief administrative officer on his retirement date.

He informed members of the Board of Port Commissioners of his intention to retire at March 19 meeting to give the Commissioners ample time to plan ahead.

Frost's decade as executive director has been one of the most progressive periods in the Port's history.

It has included streamlining of the Port organization and major expansion programs in the harbor, the development of Jack London Square, industrial development and the expansion and improvement of Metropolitan Oakland International Airport.

The pace of this program—a pace he set himself—has caused illnesses during the past few years, including major surgery. Each time he bounced back.

Frost said his physical condition

now is the best it has been in years, but feels, along with his doctors, the preservation of his health requires curtailment of his activities.

Frost became executive director of the Port on July 1, 1952, when the late Arthur H. Abel retired. He was a member of the Board of Port Commissioners from 1946 to 1952, serving as president of the Commission at the time fellow members asked him to take on the Port administration.

One of his first major undertakings was to propose a bond issue for the expansion of Metropolitan Oakland International Airport. He was one of the leaders of the campaign organization which won voter approval for the \$10,000,000 bond issue on the first attempt in 1953.

The program of expansion and improvement now totals \$20,000,000, with the remainder needed provided by \$7,000,000 in Federal aid, proceeds from Port revenue bond sales, and Port income.

When the expansion program is completed about August 1, Oakland will have one of the finest and safest jet-age airports in the world with overwater approaches at both ends of the 10,000 foot runway and a spanking new \$5,200,000 terminal.

Under Frost's administration, Port development also was expedited by the 1953 passage of charter amendments granting the Board of Port Commissioners authority to sell revenue bonds and extend the maximum term of leases from 25 to 50 years.

Since then the Port has sold revenue bonds totaling \$8,000,000 to finance a diversified capital improvement program.

Overall, in the past five and a half years, this has totaled more than \$30,000,000, including the airport expansion program. Millions more have been poured into development on Port property by private investors.

At the same time, Port income climbed and Port revenue bonds to pursue the expansion and modernization program.

Harbor modernization has included the expansion of bulk oil facilities, development of the first petrochemical and packaging terminal on the West Coast, new bulk scrap handling facilities, new bulk facilities for granular materials, now under construction, and construction of cotton warehouses.

Currently, negotiations with Sea-Land Service, Inc., hold the promise of making Oakland the Northern California center for container operations in the inter-coastal trade.

In addition to the airport expansion program, Frost has been in the front lines of the fight for adequate service at Metropolitan Oakland International Airport. A formal complaint against the airlines was filed last year with the Civil Aeronautics Board and is pending the outcome of informal efforts to solve the service problem.

Frost initiated, with approval of the Board, the study by Stanford Research Institute, which led to the establishment of the Port of Oakland Industrial Park between the Nimitz Freeway and the airport.

Jack London Square expansion has included the construction of television studios and a convention and banquet building, a marine and the transformation of a warehouse into the modern Port of Oakland Building.

Frost was born in Hayward and raised in Alameda. He served in the Army in World War I and World War II, when he was a major in the Army Transportation Corps, serving in England as executive officer to the Chief of Transportation, U. K. Base.

He started his business career as a messenger with the Key System and subsequently served in the treasury, public relations and operations, departments of that company, becoming assistant to the vice-president in charge of operations.

Before and after World War II, he served as manager of the Downtown Merchants, Parking and Property Owners Associations.

Throughout his career, he has been active in many service clubs and civic organizations, among others serving as president of the

(Continued on page 24)

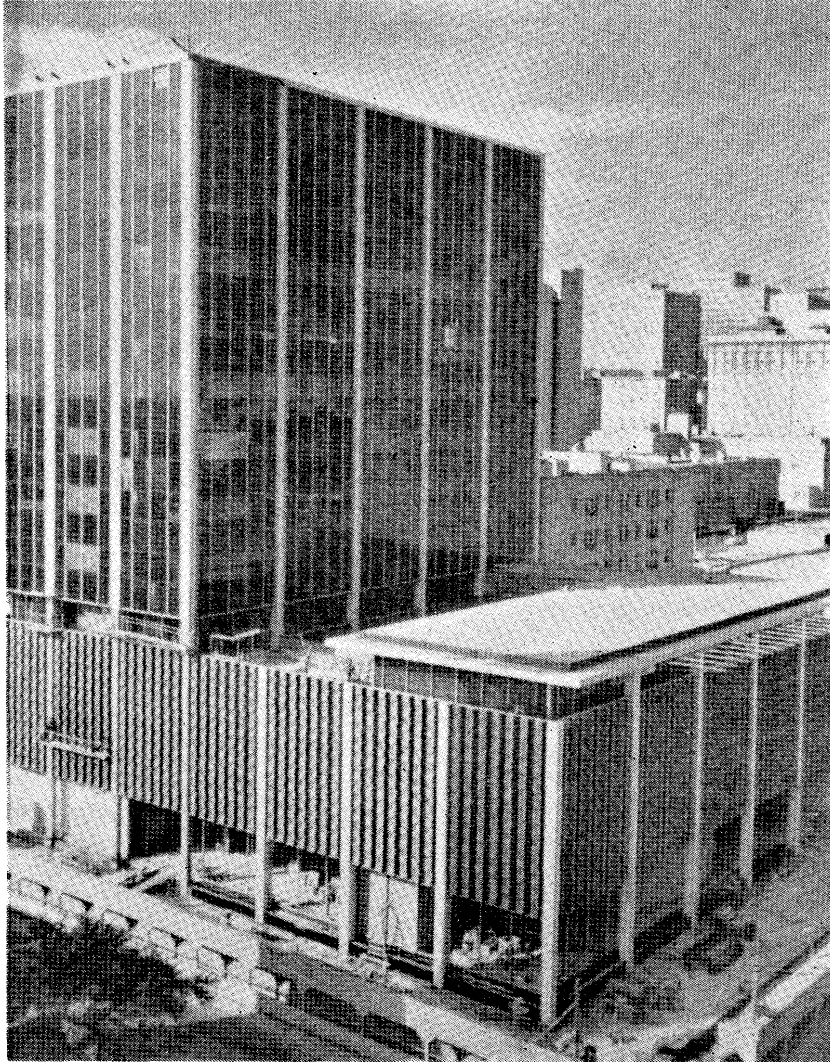


Photo shows the newly completed Port of Houston's World Trade Center, which was opened January 29. The 11-story structure contains some 75,000 square feet of rentable space, and among its tenants will be foreign consulates, freight forwarders, steamship lines and other firms in the field of world commerce. There is also space for trade exhibits.

## Houston World Trade Center Opened

The Port of Houston World Trade Building is another indication of the foresight and leadership which has kept Houston in the top group of this nation's great cities. It will be the sharpest and strongest tool in the development of international trade for this city and this port.

Houston has been fortunate in its economic development during the great growth years of this section of the United States. Always a great agricultural products shipping center, Houston began its greatest and most rapid growth at the turn of century with the discovery and development of petroleum.

Now the world is entering two

great areas of development and Houston, again, has grasped the opportunity and will surge ahead. These fields are those of space exploration and the field of international trade.

Businessmen and government missions with the needs of their countries in mind will come to the acknowledged world center of manufacture and shipment of tools and equipment used in the exploration for, and development of sources of energy. Here is where an unparalleled opportunity exists for the U.S. exporter to display his product to a select group.

The foreign visitor to Houston will come to the Port of Houston World Trade Building, the first and

second floors of which will be set aside as trade mart space for the display of products for export and for import. This is an opportunity for firms involved in the manufacture and sale of machinery and equipment.

To take care of this flow of international traders the various organizations, active in the field at Houston, will have offices on the third floor of the Building adjacent to each other. Located in this World Trade Center on the third floor will be the offices of the Institute of International Education, the offices of the Houston World Trade Association, the offices of the Manager, World Trade Department of the Houston Chamber of Commerce, the offices of the International Relations Department of the Port of Houston, and the offices of the Director World Trade Center.

There will be offices for the use of visiting traders equipped with phone and desk and with the services of the foregoing trade development offices at their disposal. The world trade library will be adjacent to the offices of the Director of the World Trade Center and will contain trade directories and source books on the countries of the world and on world trade.

A conference room for the use of the organizations in the World Trade Center area of the building will also be available on that floor. Trade contacts in the United States and overseas will be available at the Center as will technical information on shipping, documentation, ports throughout the world, exporting and importing information and certification of shipping documents through the Chamber of Commerce office at the center.

The reading room and periodical library of the World Trade Club will contain the dailies from the great financial, political and trading centers of the world in addition to the periodicals of the trade.

In short and to summarize the Port of Houston World Trade Building, with its third floor concentration of trade development organizations, in a World Trade Center will be the focal point for every aspect of international trade in Houston.

*(This article by Mr. Edward J. Fay, Director, World Trade Center, Port of Houston, has been quoted from The Journal of Commerce and Commercial, January 26, 1962.—Editor)*

# **Port of New Orleans Welcomes IAPH's 3rd Triennial Conference, 1963**

When the Third Triennial Conference of the International Association of Ports and Harbors meets at New Orleans May 1-4, 1963, delegates will have an opportunity to see some of the world's most modern waterfront facilities located in a city renowned for its historic charm.

By the time delegates begin arriving, the Port of New Orleans' already famed Nashville Avenue Wharf—believed to be the world's largest and most versatile general cargo facility—will be in full use, with still a larger companion wharf under construction nearby; the

port's new 76-mile ship channel to the Gulf—a project which dwarfs even the Panama Canal—will be open to deep draft shipping, and construction will have begun on a number of other major facilities designed to make the port city an even greater attraction to delegates than it has been.

Although New Orleans already ranks among the world's leading ports, its Board of Commissioners has been engaged for some time in an expansion program comparable with that of any other port authority on the North American continent. For several years, con-

struction of new facilities has been proceeding at the rate of approximately \$1,000,000 per month.

With close to 100 berths for deep draft shipping already in use, and with the seemingly unending construction of new and replacement of old wharves, the famed old city and port will provide a substantial and interesting environment for the 1963 conference.

Listed among the port's new and expanded facilities is the port's Public Grain Elevator which is now mechanically capable of inloading and unloading up to a million bushels of grain per day. This ele-



The new Nashville Avenue Wharf at the Port of New Orleans is shown as it was first placed in use recently. Its 2400 feet of water frontage accommodates four ships, which can load and unload simultaneously, as well as exchange cargo with over 100 rail cars, 64 giant trucks and barges. In the background is the giant Public Grain Elevator.





The Public Grain Elevator at New Orleans is now capable of turning over a million bushels of grain every work day. Three ships can outload bulk grain and one sacked grain simultaneously; barges can be unloaded at three mobile marine legs, at the rate of up to 12 per day. Rail cars unload at the rate of one almost every five minutes.

vator, along with a smaller new one operated privately within the port limits, last year set an all-time national record with over 202,000,000 bushels exported. Delegates will have an opportunity to see the New Orleans grain operation.

Additionally, the port's new public bulk handling facility—a multi-million-dollar terminal on the Mississippi River-Gulf Outlet ship channel—will be available for demonstration to conference attendees. This project makes possible the unloading of ores, sugar and other dry commodities handled in bulk form, and their transfer to adjacent industry, to barges, rail cars or trucks, or to storage.

Of all new or modernized public port facilities, however, the new Nashville Avenue Wharf stands out as the most important. This wharf

provides 2,400 feet of dockage space adjacent to the Public Grain Elevator. The entire structure rests on a site of 54.4 acres, created in large part by the placing of 1,000,000 cubic yards of hydraulic fill.

The concrete slab is 407 feet wide and features a waterside apron 62 feet wide and a landside roadway 30 feet wide. The steel and concrete shed is 315 feet wide and 2,400 feet long. It is capable of containing eight full cargoes in its cavernous covered area which is large enough to house 16 regulation size football fields.

It features double rail tracks on both aprons and has truck wells for 64 trucks. Rail lines pass over the tunneled truck entrance, thus preventing congestion at crossings.

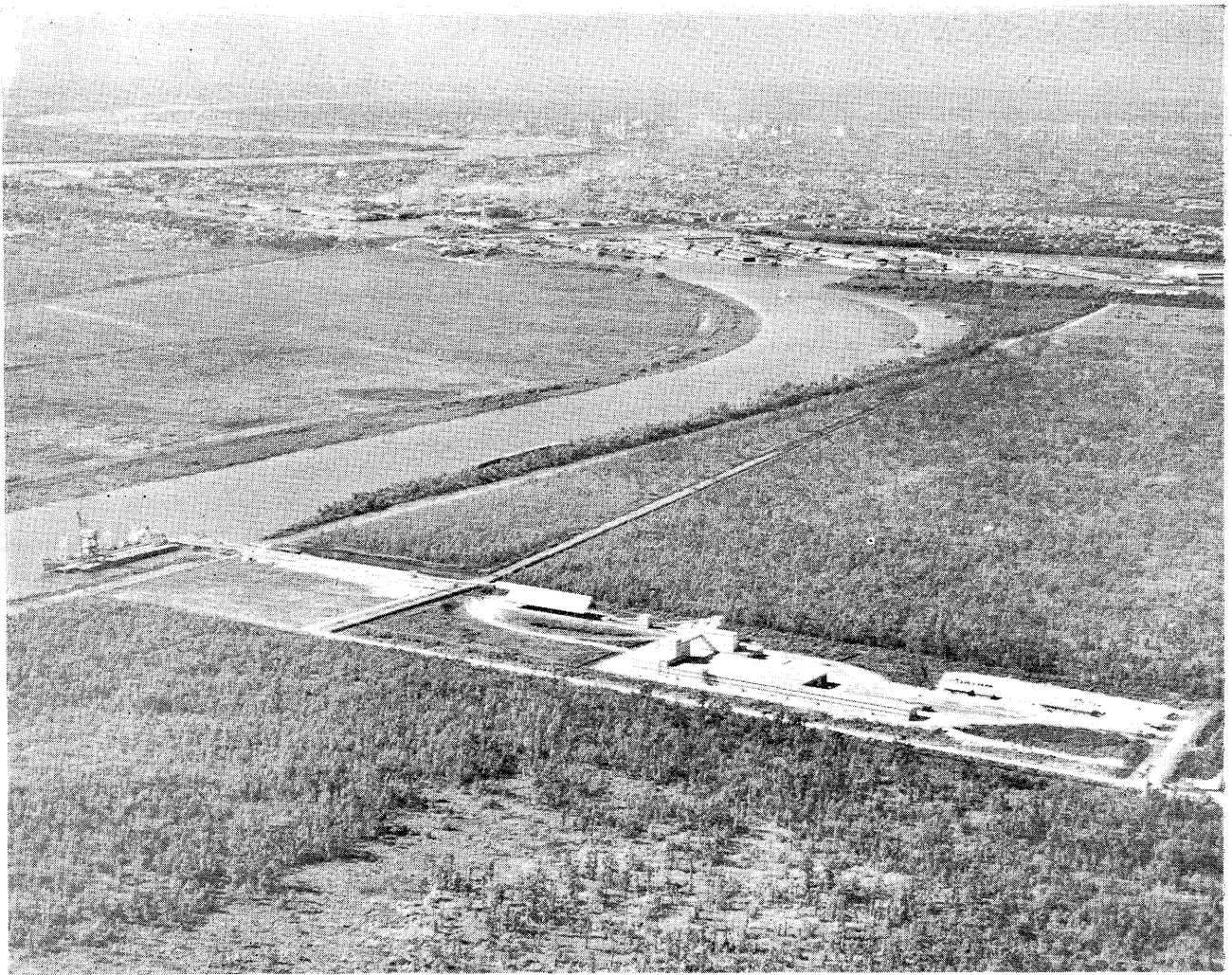
Delegates to the conference will have an opportunity to view the

entire harbor from aboard the yacht Good Neighbor, which is owned and operated by the conference host—the Board of Commissioners of the Port of New Orleans.

The feature of the conference which will probably contribute the most to the personal comfort and enjoyment of the delegates and their wives, however, is the selection of the Royal Orleans Hotel as conference headquarters. This hotel, newest in the city and located in the heart of the old French Quarter, combines the charm of old world atmosphere with the appeal of ultra-modern accommodations excellent service.

The entire structure is air-conditioned for year 'round comfort; all rooms and suites are spacious, and all afford the best in bathing facilities. A rooftop swimming pool and patio are open to hotel





The Port of New Orleans' new bulk handling facility, located on the new ship channel now serving the port as seen from the air. Still under construction at the time the photo was taken, the facility now boasts rail and truck loading emplacements. It is connected to adjacent industry via belts, and to all rail and truck routes serving the area.

guests. All meetings of the conference are planned for the hotel.

New Orleans, while being world famous as the United States' most interesting city because of its beautiful 18th and 19th century architecture and other colorful features, is also fast becoming the nation's "space age" city as well. Thanks to its location as a major juncture of land, water and air transport, it has been chosen as the site for the construction of Saturn rocket boosters and other components vital in the exploration of outer space.

Additionally, the city boasts a tremendous complex of light and heavy industry because of the ready availability of deep water frontage for industrial locations, the abundance of water, cheap natural gas for power and year 'round mild climate.

## Twenty Five Years of Progress

To an old timer like the Port of New Orleans, 25-years is but a fleeting moment in history. Mention a quarter of a century to a youngster, and the reaction is akin to the passing of a lifetime.

By human standards, old age is the deterioration of the body—the slowing up of reflexes. The Port of New Orleans has survived centuries, and is undergoing a face-lifting that will show her off as younger and stronger than ever.

The depression was still hanging on in 1936, the year which began the most recent 25-year period. Franklin Roosevelt had ordained several "letter" agencies, such as the NRA and the WPA. Still operating was the ERA, (Emergency Relief Administration).

Many New Orleanians remember this agency, because much of the improvement work going on in the port was by ERA forces.

In that year the port consisted of 7.71 miles of wharves and 5.50 miles of sheds. Of the total expenditures for repairs, additions and maintenance to the port's facilities, \$18,761.27 went for construction of levees along the Industrial Canal by ERA forces. Other major projects that year, 25 years ago, were the \$155,523.28 extension of 405 feet to the Pauline St. Wharf and others which brought the total to \$269,540.38.

Ship arrivals numbered 2,450 in 1936. These ships carried a total inbound cargo of 4,106,562 short tons, with exports of 2,749,157 tons

being carried out. Vegetable food products was the principal commodity, with non-metallic minerals second, and wood and paper third.

These commodities remained in the same one, two, three order in 1937. In addition, the Port of New Orleans handled 8,075,587 bales of cotton, not all of it for foreign trade. The 7,001,933 bushels of grain handled at the Public Grain Elevator, however, was all for export, since the port's elevator is strictly an export facility. Only \$7,792.27 was spent in improvements, but ship arrivals rose to 2,696, carrying a total of 8,776,820 tons of import-export cargo, an increase of 1,921,101 tons over the year before.

Little was done in the way of capital improvements until 1940, when \$27,259.72 was spent on the grain elevator. It enabled the port to handle 13,413,345 bushels, almost double that of 1937.

Non-metallic minerals nosed out vegetable foods for first place in export-import cargoes, and ores, metals and manufactures displaced wood and paper for third place. Total foreign trade tonnage was 9,727,336 tons.

World War II burst upon us and 1942 saw a change in all port statistics. Ship arrivals dropped to 1,744 vessels, and tonnage dropped down to 7,222,038 in world trade.

A wharf and shed was constructed at Florida Ave., along the Industrial Canal at a cost of \$317,621.35, and other additions and maintenance brought the total to \$766,960.68. Even a war does not lessen the need for proper maintenance of a port. War is temporary, fortunately, whereas progress must be reckoned with on a continuing basis.

Grain shipments, with the loss of many markets formerly enjoyed when certain nations changed from

ally to enemy, plummeted to under 4,000,000 bushels. Ores, metals and manufactures, which had risen to more than four million tons in exports-imports, was reduced to a tonnage of slightly under three quarters of a million tons. We needed too much for ourselves.

We rocked along until the end of the war and then, in 1946, broke through to rocket into operating gains financially, and increases in tonnages, which have been growing steadily. Even with the recessions which fell upon us during the 50's, we were able to overcome setbacks and grew bigger with the succeeding years.

The deficit of \$178,010.75 of 1946 was turned into a 1946 gain over expenses of \$98,679.88. Foreign Trade Zone No. 2 was added to the facilities of the Port of New Orleans. Grain shipments rose to 34,191,289 bushels. We were definitely back into the swing of peacetime business.

By 1950, our grain receipts were up to 46,104,882 bushels and our tonnage of world cargoes was back up to 8 million short tons.

Pauline St. Wharf was rehabilitated and added to, a fumigating plant was installed within the foreign trade zone, Congress St. Wharf and Pauline St. Wharf sheds were extended and a new wharf was built at St. Maurice Ave.

The next five years were significant in that ocean ship arrivals had increased to 3,671 by 1955 with cargoes subject to tollage amounting to 1,544,388 tons inbound, and 3,028,602 tons outbound. This totalled 4,572,991.

More than 11½ million stems of bananas were imported that year, and other cargoes increased as well. The handling of this amount of the golden yellow fruit was possible because of the efforts to hold the port's position in banana im-

ports. New Orleans has alternated with New York in the number one and number two position for generations. Of the two banana terminals in the port, the one at Erato St. Wharf was reconstructed and modernized.

The Public Commodity Warehouse was added to, roadways and levees were improved along the Industrial Canal and a new wharf on the canal was constructed at Jourdan Ave. Also included in the five-year period between 1951 and 1955 was the construction of truck loading facilities to accommodate this ever expanding mode of cargo transportation.

Costs of individual projects had been on the rise, so building during this period brought spending totals up to \$20,189,823. Maintenance was included in this figure, along with capital improvements such as the new dust collection system at the Public Grain Elevator.

A four-year period beginning with 1956 brought about several record breaking statistics. Grain, for example, was exported in total quantity of 89,292,258 bushels. This broke all previous records at the New Orleans port, which has been the principal port in grain exports in the United States. Total tonnage through the port in 1956 was 47 million tons, of which 11,330,150 tons was foreign commerce. This foreign tonnage had a dollar value of \$1,428,100,000. Sugar was the principal cargo that year, with 1,031,314 tons crossing the wharves here.

Expansion was carried out throughout the four-year period ending 1960, and two new wharves were dedicated, one at Perry St., and one at Thalia St. The Perry St. wharf was the first public wharf to be built on the west bank of the Mississippi River at New Orleans.

*(This article on the progress of the Port of New Orleans, by Mr. Michael Kirk, was originally published in the December, 1961 issue of "New Orleans PORT RECORD". Mr. Kirk is the Business Manager of the port magazine.—Editor)*

# Port of Keelung

## —Main Entrance to Taiwan—

Taiwan, surrounded by waters, has on its coast many ports as the transit points for its sea and land transports on which trade with foreign countries fully depends. The major and key points for imports and exports are the harbors of Keelung in the north and Kaohsiung in the south of Taiwan, which after years of reconstruction and improvement, have become ports of international importance. Another sea harbor Hualien, the only sea harbor in eastern Taiwan, only capables for accommodating ships of 3,000-ton classes as the domestic ports at present. In order to explore the rich industrial resources in eastern Taiwan, the Government has decided to develop Hualien Harbor to a reasonable extent for accommodating vessels of 10,000-ton classes to make it also one of the international ports. The extension work is expected to be completed within this year.

### Brief History

Following the conquest of the Island by General Cheng Chen-Kung in 1663, it was noticed that Keelung Harbor should be developed in view of its good geographical condition and the rich reserves in the hinterland. In 1885, the Governor of Taiwan, Liu Ming-Chuan, planned to develop this port and construct a railway from Keelung to the South. The dredging work was carried out and first quay was completed in 1886.

After the occupation of the Island by the Japanese Gov't, construction work was carried out in five stages from 1889 to 1943. The fifth stage comprising mainly the development of the outer harbor and dry docks was not completed due to the second world war.

World War II ruined the port heavily. But rehabilitation work was quickly completed after the V-J Day by the Keelung Harbor Bureau. Also many new construction projects have been completed, services been improved, facilities been increased to make the port becoming one of the best ports in the Far East. Now it maintains regular

shipping lines with all the major ports of the Free World.

### Geographical Condition

The Port of Keelung is situated on the northern coast of the island of Taiwan, the chief port and also the main entrance of this province.

The Port of Keelung is operated by the Keelung Harbor Bureau, Dept's of Communications, Taiwan

This harbor is well protected by two breakwaters on the north and being surrounded by mountains in the other three direction (it is divided into three main sections; Inner Harbor, Outer Harbor and Fishery Harbor). The channel of navigations is about two kilometers long and a width of 150 to 350 meters. Ships with draft up to 30 ft. may enter freely for berthing while vessels of any draft could come into the outer harbor for anchorage.

Provincial Gov't. Its organization chart is as follows:

a. Location:	121°44'E	25°08'N
b. Depth and width:		
	Depth	Width
Entrance	15 meters	280 meters
Fairway	10—12 meters	150—350 meters
Wharf front	4.5 —10.5 meters	
c. Area:	Area in sq. meters	
Inner Harbor	1,130,000	
Outer Harbor	2,170,000	
Fishery Harbor	330,000	
	Total	3,630,000
d. Bottom condition:	Sand and clay, good for anchorage.	
e. Tides and current:	Tides: Max. 1.9 meters	
	Current: No effort on navigation.	
f. Winds and waves:	The prevailing winds are from N.E., occurred from October to the end of the next April which is the monsoon season. There are typhoons from July to Sept. with a max. velocity of 60 meters per second. The max. height of wave reaches to eight meters at the entrance during heavy winds.	



Participants in the Executive Committee meeting at Taipei visited March 8 the Port of Keelung. The photo shows them listening to Director Hsu Ren-shou's (standing) briefing at the Harbor Bureau.



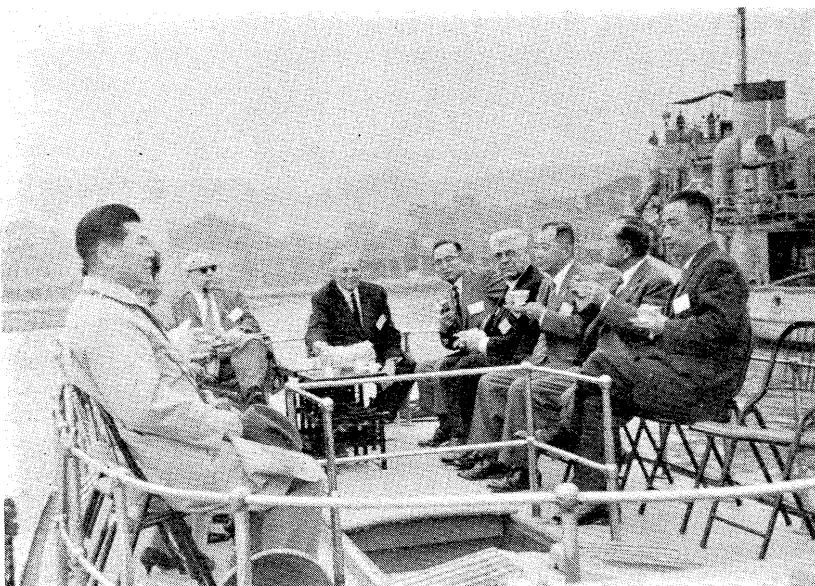
## Future Extension Plan of Keelung Port



Executive Committee meeting participants visiting the Keelung Harbor Bureau.



Visiting Executive Committee members are entertained at the Guest House of the Harbor Signal Station.



A boat cruise around Keelung Harbor.

Keelung Harbor is the largest Port in the north part of Taiwan. During the past ten years the volume of traffic through this harbor has been increasing rapidly as a result of the successful promotion of foreign trade through execution of the economic development plan by the Government.

An increase in tonnage of general cargo handled from 921,346 tons in 1950 to 2,053,695 tons in 1959 an average annual increase of 14%—has been recorded. It is estimated that the annual total cargo tonnage by 1965 should reach 3,000,000 tons, the maximum traffic volume that could be handled by this harbor with the present docking and storage facilities. Since harbor construction work is accomplished slowly, an immediate extension of this harbor is considered necessary.

Keelung Harbor is naturally divided into an inner harbor and an outer harbor, and since there is no physical possibility of expansion of the inner harbor, additional facilities must be developed in the outer harbor.

In 1954, this Bureau began to develop the outer harbor. In 1956, pier No. 30, with a length of 180 m and a water depth of 10.5 m was completed. During this period this Bureau also constructed a 10,000-ton grain unloading and storage facility; a 400 meters tunnel connecting the inner harbor district with the newly developed outer harbor; and a shallow water wharf of 84 meters to accommodate coastal oil tankers. Utilizing reclaimed land an open storage area of 8,000 m<sup>2</sup> was developed.

Keelung Harbor faces the Pacific Ocean at the north end of this island. During typhoon and monsoon seasons, the basin of the outer harbor, disturbed by invading waves from the ocean, is not sufficiently calm for continuous safe mooring and cargo handing. Since the outer harbor is the only area for harbor expansion, all of the water area should be usable in all seasons. The obvious way of correcting excessive wave movement is the construction of an inner breakwater. To determine the best location for such a breakwater,



model tests were conducted by this Bureau in cooperation with the Hydraulic Laboratory of the Chen Kung University in Tainan Feb. 1957 to Dec. 1958. Based on these tests it appears that the new breakwater should be located 440 meters east of wharf No. 30 and should run an angle of 135° from the end of the present wharf for a length of 275 meters. It is believed that this arrangement will not only adequately shelter wharf No. 30 and protect the proposed new wharves 31, 32 and 33 but will also permit safe berthing of ships at piers which may be constructed in the future at a distance of 250 meters from the existing wharf No. 30.

It is also proposed to construct a revetment 132 meters long to connect the end of the new inner breakwater with the end of the existing outer breakwater. The general arrangement of the proposed construction is shown on the cover.

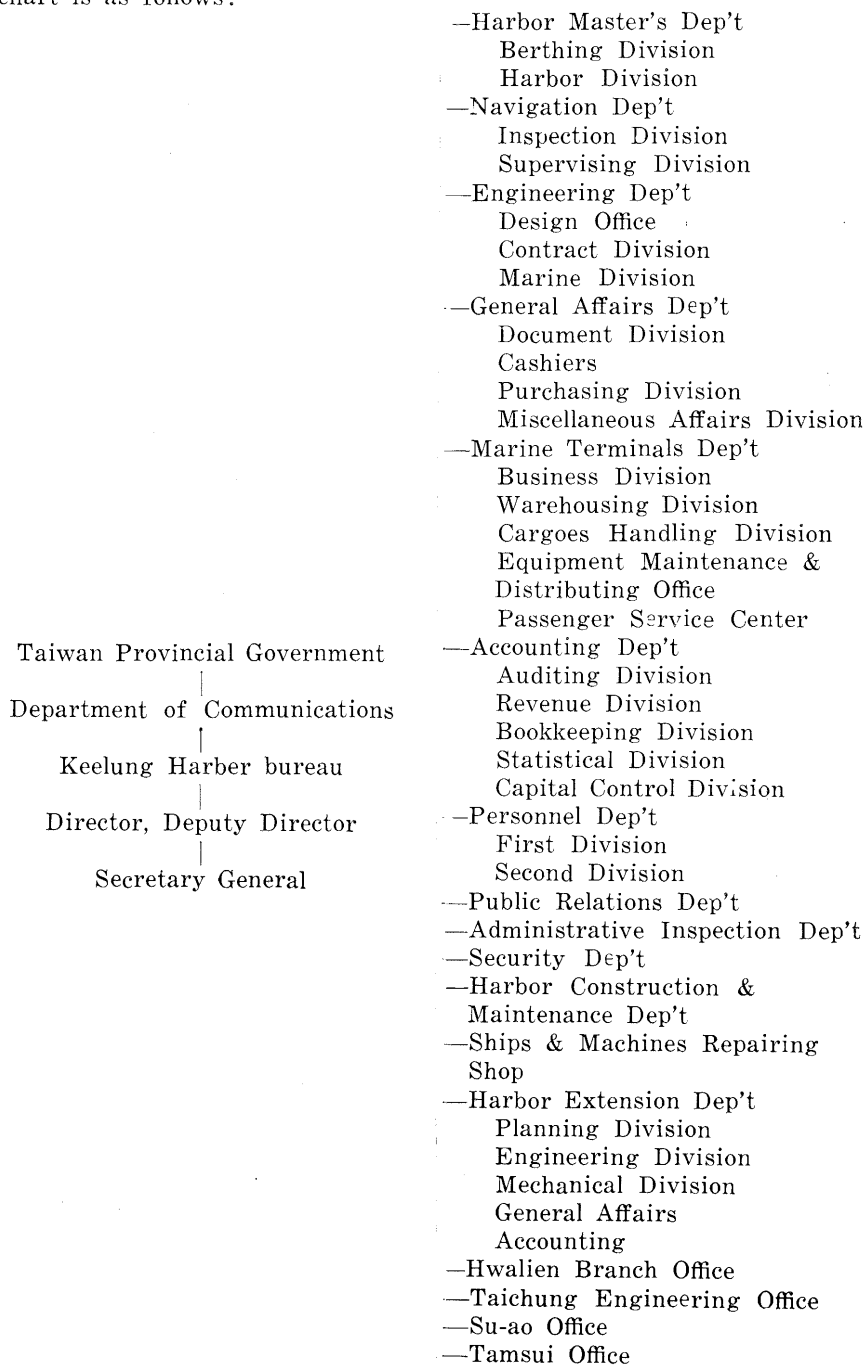
The first stage of the extension plan consists of the following items:

1. Construction of a west inner breakwater and revetment to improve loading conditions at existing pier No. 30 and to protect proposed new wharves Nos. 31, 32 and 33. The total length of the new breakwater is 407 meters.
2. Construction of new wharves Nos. 31, 32 and 33 with a total length of 620 meter to provide three additional berth for vessels up to 20,000 tons.
3. Construction of a transit shed for wharves 31 and 32 which will provide a covered area of  $250 \times 45 = 11250$  sq. meters for accommodation 22,500 tons of cargo.
4. By reclaiming an 80,000 sq. meter area for open storage and other port uses.
5. Dredging an estimated 200,000 cu. meters to insure safe navigation into and out of the harbor.
6. Construction of highways with a paved area of 29,100 sq. meters and a railway 3.9 km long to connect the new facilities with existing areas.

This project is planned for a five-year period at an estimated total cost of NT\$187,640,000 and US\$300,000, which will be financed by U. S. Aid and Taiwan Provincial

## Port Authority

The Port of Keelung is operated by the Keelung Harbor Bureau, Dept's Communications, Taiwan Provincial Gov't. Its organization chart is as follows:



Other organizations in connection with port operations:

Different Agencies	Connections	Dep't in the Bureau
Customs	Joint lock warehouse	Marine Terminals
Longshoremen Union	Under supervision of the Bureau	Dep't
Custom Broker Association	"	"
Tallymen Union	"	Harbor Master Dep't
City Gov't	Bureau connects with all general & technical assistance	All the Dep'ts
Quarantine Station	Quarantine service	Director
Pilot Association	Pilot service, under the supervision of the Bureau	Harbor Master's Dep't

Harbor Police	Under the supervision of the Bureau	Director
Ship Companies	Operation of berth & shed	Harbor Master's Dep't
	Employment of stevedore	Marine Terminal Dep't
Railway Administration	Maintenance of marginal rail at water front	Marine Terminal Dep't Engineering Dep't
Importers & Exporters	Cargo handling at the port	Marine Terminal Dep't
Freight Forwarders		
Military Transport Commander	Military cargo handling	"

### Port Facilities

#### a. Quays:

Between quay No. 1 to No. 30, the total length of deep water front is about 2,868 meters with a depth of 8 to 10.5 meters below L.W.

No. 17 & 18	2 berth for 15,000 T vessels
No. 2-4, 12, 14-16	7 berth for 10,000 T vessels
No. 1 A	1 berth for 5,000 T vessels
No. 1 B	1 berth for 3,000 T vessels
No. 6-10	5 berth for 6,000 T vessels
No. 29	1 berth for 1,000 T vessels
No. 30	1 berth for 20,000 T vessels

#### b. Buoys:

Three buoys for mooring 6,000 to 10,000-ton ships are now available.

#### c. Landing stage:

There are two pontoons for small harbor crafts and five sets (two in a set) of concrete pontoon ships of 3,000-ton.

#### d. Transit sheds and warehouses:

There are transit sheds and warehouses at waterfront which are owned by Harbor Bureau and Customs. The total capacity is about 126,000 tons with table listed below:

Sheds & Warehouses	Owner	Area	Max. Capacity
No. 1	Customs	1,300sq. m.	2,200 M.T.
No. 2	Harbor Bureau	4,930	8,800
No. 3	Harbor Bureau	4,930	10,600
No. 4	Harbor Bureau	2,170	6,200
No. 14	Harbor Bureau	8,375	8,400
No. 15	Harbor Bureau	11,880	12,200
No. 16	Harbor Bureau	11,880	14,000
No. 17	Harbor Bureau	17,060	16,000
No. 17A	Harbor Bureau		2,500
No. 18	Harbor Bureau & Customs	17,060	16,000
No. 19	Harbor Bureau		3,200
No. 29	Harbor Bureau	3,000	7,000
No. 30	Harbor Bureau	2,000	4,200
Silo (at Pier #30)	Harbor Bureau		10,000
Shallow No. 1	Harbor Bureau		2,000
Shallow No. 2	Harbor Bureau		1,000
Total			124,300 M.T.

#### e. Waterfront for ships of shallow draft:

About 40 meters junks could be accommodated along Eastern shore of Inner Harbor, with a draft of about 3 meters.

#### f. Cranes, elevators, conveyors and fork lift trucks:

Quay cranes:	one 30-ton (Electric)
	fourteen 3-ton (Electric)
Fork lift trucks:	two 15,000-lb
	twenty-two 6,000-lb
	two 5,000-lb
	two 4,000-lb
	one 3,500-lb
	twenty-nine 2,000-lb

al Government.

After completion of the extension project, three berths for 20,000-ton vessels will have been added to the harbor; together with the present facilities, the maximum annual cargo handling capacity of this harbor will amount to 3,900,000 tons which should be adequate for the need of foreign trade expansion of this country in the next ten years.

### Second Inter-American Port and Harbor Conference

At the Third Meeting of Permanent Technical Committee on Ports attached to IL-ECOSOC of Organization of American States (OAS), it was resolved to suggest to open the Second Inter-American Port and Harbor Conference in the latter half of 1962. Proposed Agenda are as follows:-

- I. Convention on Facilitation of International Waterborne Transportation in the Western Hemisphere and Annex thereto.
- II. Port Operations and Cargo Handling
  - a. Problems arising from increased use of containerized and unitized cargo methods in the ports.
  - b. Standardization of sizes for containers and pallets.
  - c. Methods for increasing the efficiency of ports through greater understanding of the duties and responsibilities of port management and port labor.
  - d. Recommended precautions considered essential for the safe handling of dangerous cargoes in the port area.
  - e. Cargo Loss Prevention
    - 1) Legal measures essential to prevent cargo loss.
    - 2) Physical arrangements and security guards of the area.
    - 3) Formulation of a clear understanding of the point of termination of responsibility as the cargo passes from one agency to another in the cargo handling operation.
- III. Port Development
  - a. Location of industries in

the port area.

- b. Recommended standard rules and regulations for operation of Free Foreign Trade Zones in the port area.
- c. Measures desirable for establishing and publishing port statistics to reflect the requirements, capacity, and efficiency of ports.
- d. Establishment of warehouses, including bonded warehouses, outside the immediate pier area so as to minimize congestion of the port.

#### IV. Other matters

Special attention is drawn to the "Convention on Facilitation of International Waterborne Transportation" which has been drafted by the Committee to reduce to a minimum the requirements imposed by regulations and procedures for entry and clearance of vessels and cargoes, following closely the standards and recommended practices already established in regard to air traffic.

The First Conference was held in San Jose, Costa Rica, in April and May 1956. This Conference, in which qualified experts designated by their governments of member countries participated, was originally inaugurated at the meeting of the Ministers of Finance or Economy held in Rio de Janeiro in 1954.

### Visitors

The Central Secretariat had visitors from the following members during the past three months:

Mr. John P. Cox, President, Parr-Richmond Terminal Co., Richmond, Calif. U.S.A. (February 2)

\* \* \*  
Mr. John P. Davis, Commissioner, Board of Harbor Commissioners, Port of Long Beach, Calif. U.S.A. (March 2, 1962) and IAPH American Director.

\* \* \*  
Mr. Arthur W. Nordstrom, Assistant City Attorney, Port of Los Angeles, Calif., U.S.A. and IAPH Legal Counsellor. (March 13, 1962)

\* \* \*  
Mr. Troy S. Garrison, Public Relations Director, Port of Los Angeles, Calif., U.S.A. (March 23)

Warehouse elevators: 17 (3-ton capacity)  
Warehouse conveyors: 8 (1-ton capacity)  
Floating cranes: one 60-ton (Headroom 16m)  
one 130-ton (Headroom 22m)  
Mobile cranes: four 10,000-lb  
one 12,000-lb  
one 20,000-lb

- g. Canals:  
Three canals with total length of 2,850m are all for local use.
- h. Coal yards:  
Total capacity is about 100,000 tons with an area of about 53,000m<sup>2</sup>.
- i. Dry Docks:  
one 3,000 tons with a dimension of 124m × 25m × 7.6m (depth of water about sill (L.W.))  
one 15,000 tons with a dimension of 174m × 30m × 12m  
one 25,000 tons with a dimension of 220m × 35m × 13m
- j. Water supply and oil bunker:  
There is an adequate number of water mains alongside the quay. In addition, three water boats of 180, 180 & 40 tons respectively are owned by the Harbor Bureau. There are 34 water supply hydrants along quayside with pressure at an average of 30 lbs. The maximum capacity for water supply by water boat is about 1,500 tons per day. Oil supply pipelines are provided at Quay Nos. 12 and 29 and also two oil barges are owned by the CPC. Nos. 12 and 29.
- k. Tugs:  
Three powerful tugs are now available with power from 600 Hp to 1,500 Hp. Several small tugs with horse power from 150-300 Hp are also available.
- l. Dredge:  
One dipper dredge (working in Hwalien Harbor at present time)  
One grab dredge  
Two small grab dredges (for canals)
- m. Fire fighting equipment  
1—fire boat (2,500 G. P. M.)  
9—340 gal. fire extinguishers  
4—600 G.P.M. fire pumps  
2—complete unit fire engine  
1—Jeep fire engine

### Port Operation

#### Incoming vessels:

Year	1957	4,360,000 G/T
	1958	5,680,000 "
	1959	6,200,000 "
	1960	6,530,000 "
	1961	6,844,000 "

#### Average Ship Days:

1957	1.5 days
1958	1.3 "
1959	1.3 "
1960	1.3 "
1961	1.5 "

#### Cargo loaded & unloaded in the port :

	General Cargo	Oil	Coal	Total
1957	1,618,000T	129,000T	175,000T	1,922,000T
1958	2,007,000T	128,000T	94,000T	2,229,000T
1959	2,054,000T	119,000T	155,000T	2,328,000T
1960	1,949,000T	159,000T	264,000T	2,372,000T
1961	2,206,000T	162,000T	288,000T	2,656,000T

#### Loading and unloading speed:

	Loading T/hr/derrick	Unloading T/hr/derreck
1957	42T	37T
1958	47	39
1959	47	41
1960	43	42
1961	44	43

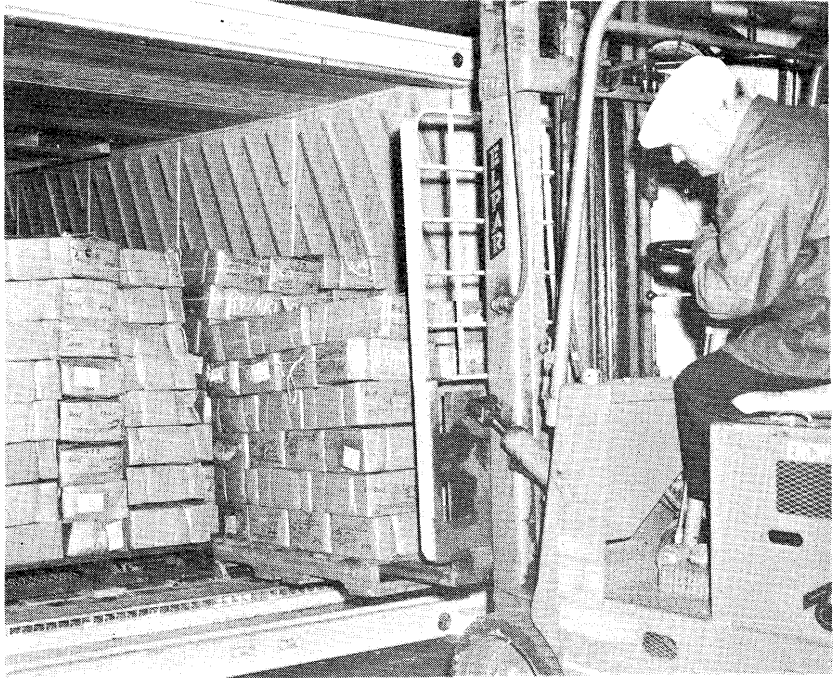
## Encinal Trans-Freeze Facilities

Encinal Terminals, largest privately operated steamship terminal in the United States, has installed a unique modern facility, called "Trans-Freeze", for the safe storage and handling of intransit frozen and chill cargoes. The Trans-Freeze units, developed by Trailmobile and Thermo-King, will serve as a frozen and chill cargo holding station between water, rail and land carriers, at Encinal's Oakland, California, Outer Harbor facility.

First vessel to take advantage of the new Trans-Freeze service was the M. S. HOYANGER (Inter-ocean line) loading 20 tons of frozen poultry parts destined for the European markets. The load was delivered in advance of vessel arrival via refrigerated trucks; palletized; and transferred to the waiting freezer boxes. The vessel, using the freezer units as a ship-side holding station, was then able to time the cargo loading independent of usual availability factors.

Mr. George J. Richardson, Vice President, Sales, Encinal Terminals, attending the first function of the new service commented, "We have made this new Trans-Freeze facility available as an additional cost-cutting feature for our customers, influenced also by our increased volume of frozen and chill cargoes, to or from World markets. It guarantees that frozen cargoes are always at hand for vessel loading, without costly delays usually encountered when deliveries are made on Saturdays, Sundays, Holidays, or at night. Truck lines can deliver frozen and chill cargoes direct to shipside, in advance of vessel loading. It is then quickly palletized and transferred to one or more of the adjacent Trans-Freeze units awaiting the convenience of the designated vessels."

Special roller-flooring within the boxes allow swift and efficient movement of the palletized cargoes. When readied for transfer they are rolled to the mouth of the boxes, where forklifts move directly into the elevated boxes and the palletized loads are then taken directly to the side of the vessel.



**Inbound or outbound frozen and chill cargoes are quickly palletized and stowed directly into the Trans-Freeze interiors by modern Encinal handling equipment. The units are then sealed and contents temperature-protected for later transfer.**

Each Trans-Freeze unit holds approximately 1,000 cubic feet of frozen or chill cargo and is equipped with independent power supply and temperature control. Temperatures can be controlled to a minus

(-10°) degrees.

For free descriptive brochure on the new freezer facility write: Trans-Freeze, Encinal Terminals; P.O. Drawer A; Alameda, California.

## Port of New York's Reconstruction Plan

A great new \$4,832,000 marine terminal in Atlantic Basin, Brooklyn-Port Authority Piers, will replace the existing, obsolete Pier 38, according to an announcement made by S. Sloan Colt, Chairman of The Port of New York Authority.

The new two-berth facility, to be known as Pier 12, will be able to handle 250,000 tons of cargo a year—more than twice the amount that could have been handled under the original plan to rehabilitate the existing pier. It will be completed in the fall of 1963.

Construction of the new pier will be made possible by the acquisition of 235,200 square feet of adjacent New York Railway Dock Property, and by the removal and reconstruction by the Port Authority of a New York Dock Railway floatbridge rack.

The Brooklyn-Port Authority Piers development, Mr. Colt added, now will comprise thirteen new piers. This will increase from \$90,000,000 to \$95,000,000 the total cost of the redevelopment of the two miles of choice Brooklyn waterfront. Eight new piers already are in operation and three are under construction. The thirteenth pier, to be known as Pier 4, will be located at the foot of Montague Street.

New Pier 12 will be 1,000 feet long on its west side, 720 feet long on the east, and 320 feet wide, with 30-foot-wide aprons to assure efficiency in cargo handling. The pier shed will provide 182,000 square feet of covered space and will be supported by about 158,000 square feet of upland area. Pier 12 will be built in advance of leasing to expedite its availability to



meet the growing demand for modern marine facilities in the New York-New Jersey Port.

The new property is located on the south side of Atlantic Basin in an area bounded by Buttermilk Channel, Wolcott, Ferris and Sullivan Streets. It will be used partially for upland space for Pier 12, and partially for new rail facilities of the New York Dock Railway. These will include a floatbridge rack to transfer freight cars from carfloats to trackage on land, and an adjacent rail yard to be completed this summer at a cost of \$724,250.

In addition, the Port Authority will construct a 64,575-square-foot rail transfer building on the north side of King Street, between Conover and Ferris Streets, at a cost of \$500,400. It will be leased for ten years to the New York Dock

Railway at an annual rental of \$61,346 upon completion this fall.

The thirteen new Brooklyn-Port Authority Piers—wide, steel and concrete structures, fully fire resistant and fire protected will replace the 25 narrow, obsolete piers existing at the time the bi-state agency purchased the two-mile-long property in 1956. Altogether, there will be 28 modern, efficient vessel berths, each with about 90,000 square feet of shedded space, to replace 44 antiquated berths. More than 50 acres of upland area will be cleared to provide open storage and truck parking space.

Upon completion, these great new facilities will be capable of handling about 27 per cent of the Port of New York's foreign trade general cargo, and will provide employment for about 4,300 peo-

ple who will earn some \$19,000,000 a year. In 1961, 1,930 people were employed at the Brooklyn-Port Authority Piers, with an annual payroll of \$10,750,000. The construction program is providing jobs for 250 workers at a payroll of \$2,000,000 a year.

The eight piers completed by the Port Authority are Piers 1, 2 and 3 in the Fulton Terminal area; Piers 6, 7 and 8 in the Baltic Terminal area; and Piers 10 and 11 in Atlantic Basin. Piers 9A and 9B in the Baltic Terminal area are scheduled for completion in July 1963. Pier 5 in the Fulton Terminal area is expected to be ready for occupancy in the fall of 1963.

To date the bi-state agency's investment at the Brooklyn-Port Authority Piers amounts to about \$67,000,000.



Aerial view of the Brooklyn-Port Authority piers showing New Pier 12 to be constructed by the Port of New York Authority at a cost of \$4,832,000 as part of its \$95,000,000 redevelopment program of two miles of choice Brooklyn waterfront extending south of the Brooklyn Bridge to and including Atlantic Basin. Altogether, thirteen modern and efficient piers will replace the 25 narrow and obsolete piers which existed when the Port Authority purchased the property in 1956. Eight of the new piers are in operation; three more are scheduled for completion in 1963. Two-berth pier 12, in Atlantic Basin, will be 1,000 feet long on the west, 720 feet long on the east and 320 feet wide, with 182,000 square feet of shedded space. The new pier will be supported by about 153,000 square feet of upland area.

# PORT OF KAOHSIUNG

## Ocean Gateway to Southwestern Taiwan

### Geographical Condition

Kaohsiung Harbor is located in the south-west of Taiwan, longitude 120° 15' 46" east and latitude 22° 37' 01" north. The harbor and the Port of Keelung in the north-west constitute the two large international seaports in Taiwan. Situated at 165 miles east of Amoy, Fukien Province, 552 miles north of Manila, the Philippines, and 325 miles and 1,700 miles north-east of Hongkong and Singapore respectively, the harbor is the nearest sea access of Taiwan to Southeast Asia.

The spacious Kaohsiung Harbor has a total water area of 19 square Kilometers. At its entrance stand two hills serving as a natural gate to the inner harbor. Two 938-meter breakwaters stretching into the sea out of the foot of each hill protect the harbor against winds and waves. The calm water of the harbor is suitable for berthing ships. In addition, the harbor with its sandy sea-bed and average tidal range of only about one meter, provides the most ideal anchorage for

ships. In Kaohsiung, average annual rainfall is 1,940 mm. Its hinterland, bestowed with a year-round warm climate, is rich in agricultural products. The port city with a population of close on 500,000 at present is one of the leading industrial centers of Taiwan.

### Brief History

Three hundred years ago, Kaohsiung was merely a fishing village. Since Cheng Cheng-Kung, hero of the Chinese people, occupied Taiwan in 1616, a large number of Fukienese and Cantonese had successively crossed the sea to inhabit on the island. The population of Kaohsiung began to increase gradually. After the Treaty of Tientsin in 1860, the British planned to open Kaohsiung into a port but failed. At that time, the water depth within the harbor was 3 meters, only navigable by moter junks. In 1895, as a result of the Sino-Japanese war, China ceded Taiwan and the Pescadores to Japan. Construction of the harbor was started by the Japanese in 1908. Upon completion of the second phase construction in 1939, the harbor was rendered navigable by 8,000-ton class ships.

During world war II, the port facilities were severely damaged. The fairway was blocked by sunken ships, and vessels of above 300 tons could hardly come into and out of the harbor. The function of port as a whole was almost lost. In 1945, Taiwan was retroceded to China and the Chinese Government took over the Kaohsiung Harbor Bureau in November that year. Since then, the Harbor Bureau has spared no efforts in rehabilitation and improvement of the harbor. First, the sunken ships in the harbor were removed, then all of the piers, warehouses, pavements and bridges rehabilitated. Furthermore, incessant dredging of fairways, expanding of port installations and adding of cargo-handling equipment have now brought Kaohsiung Harbor to the international standard. From 1959 and on, 30,000-ton class tankers have been able to enter the port freely. Amount of imports and exports has been fast increasing year after year. In 1955 the volume of trade totalled 2,300,000 tons exceeding the highest record of 2,000,000 tons registered in the period of the Japanese reign. In 1961, the total cargo handled reached 4,110,000 tons which is more than ten times the amount at the Retrocession days. The Port of Kaohsiung handles about two-thirds of Taiwan's total volume of imports and exports.



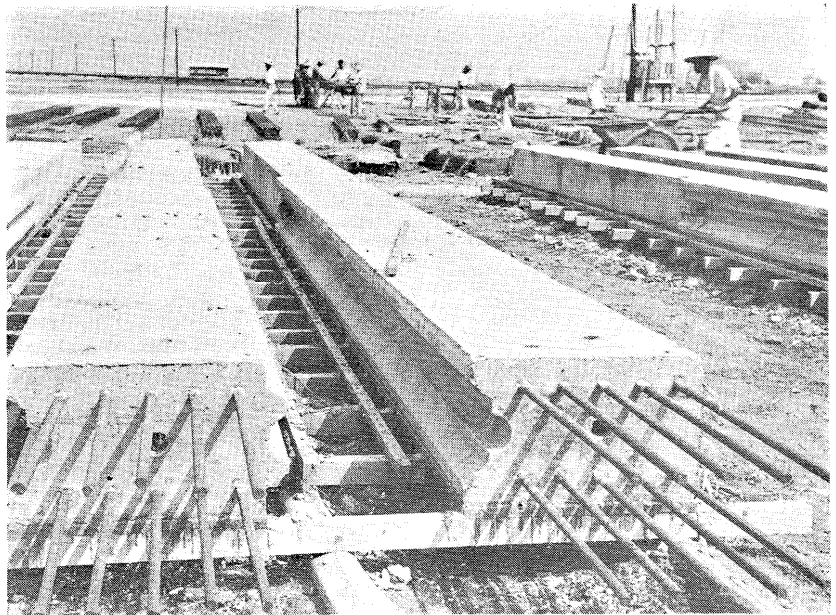
Participants in the Executive Committee meeting at Taipei, Taiwan, visited the Port of Kaohsiung on March 9. They were entertained at lunch at the Guest House of the Port.

## Port Authority

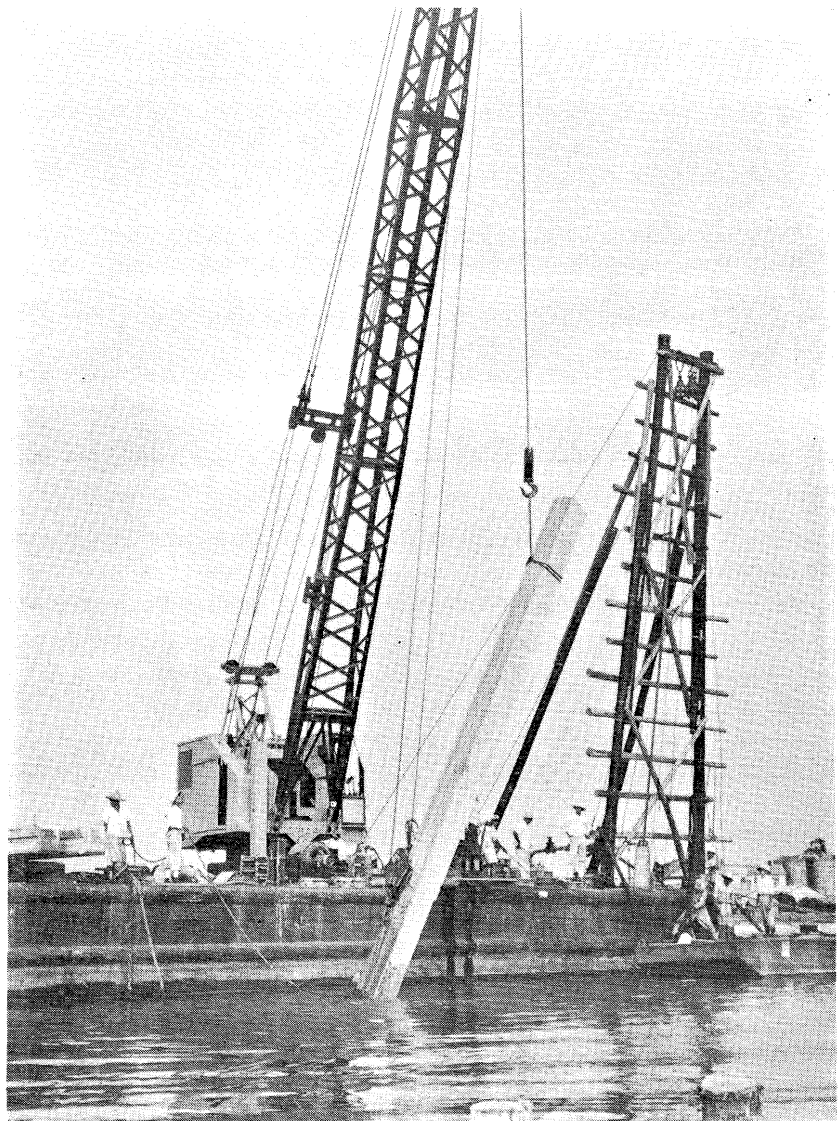
The Port of Kaohsiung is operated by the Kaohsiung Harbor Bureau, Department of Communications, Taiwan Provincial Government. Besides the Kaohsiung Harbor, Ma-Kung Harbor and all other small harbors located south of latitude  $23^{\circ} 30'$  of the island of Taiwan are under the Harbor Bureau's jurisdiction. Part of its administrative duties are directly instructed by the Ministry of Communications. The Harbor Bureau is headed by a Director and a Deputy Director, and is composed of the Harbor Master's Department, the Navigation Department, the Engineering Department, the General Affairs Department, the Accounting Department, the Personnel Department, the Stevedoring and Warehousing Office, the Port Maintenance Engineering Office, the Harbor Extension Engineering Office and the Ship and Machinery Repairing Yard. These units are charged respectively with administering harbor affairs, supervising navigation and shipping affairs, managing stevedoring and warehousing operations, maintaining harbor installations and executing harbor extension projects. Administrative offices are also provided in such small harbors as An-Ping, Ma-Kung, Hsin-Kong and Pu-Tai to administer the various affairs of the respective harbors.

## Port Facilities

1. Main fairway, 4 km in length, with depth navigable by 20,000-ton class freighters and 30,000-ton class tankers.
2. 23 piers with a total length of 3,250 meters.
3. 15 mooring buoys and more are being installed.
4. 8 basins for berthing small-sized vessels and fishing boats.
5. 13,000-ton drydock and 1 ship repairing shop, owned by the Bureau.
6. 43 Bureau-owned warehouses with storage capacity of 150,000 tons and 45 public and private-operated warehouses with storage capacity of 100,000 tons.



Casting of reinforced-concrete sheet piles.



Reinforced-concrete-sheet-pile type revetment under construction—sheet-pile driving on boat.



7. 73 working vessels of various types. Of this number, 11 are tugs (the greatest capacity: 800 HP) and 13 barges (mostly 100-ton class).
8. Cargo-handling equipment of the Harbor Bureau includes 37 tractors, 286 trailers, 16 forklifts, 15 cranes of various types (the greatest lifting capacity is 50 tons), 12 belt conveyors and 1 set of export salt conveying machines.
9. Fresh water for ship's use is chiefly supplied by 9 water boats, each with a water-conveying capacity of 50-100 tons per hour.
10. Loading and unloading capacity: about 10,000 tons every 12 hours.
11. Average daily amount of transportation by vehicles: 4,000 tons.

#### **Present Status of Port Operations**

Of the chief exports through Kaohsiung Harbor, sugar ranks first, salt second, molasses third, and bananas, cement, etc., come next. Among the major markets are Japan, Korea, the Philippines, Southeast Asia, India, Middle East, North Africa and South Europe. The main imports are raw materials of which crude oil stands first,

fertilizer second and ores third. Economically, Kaohsiung Harbor is a big industrial port where the amount of export usually exceeds that of imports.

To maintain adequate water depth, silting in the harbor from rivers as well as open sea has to be prevented by constant dredging. Also to coordinate with the national economic reconstruction and to cope with rapidly increasing trade volume, the Harbor Bureau has made strenuous efforts for improvement of the port facilities and for execution of the long-term harbor extension project. The results gained in the last few years have been satisfactory.

In harbor administration, the Harbor Bureau is in charge of management and improvement of harbor installations, authorized to approve ship's entries and exits and to arrange berths for incoming ships, and at the same time responsible for shipping and navigating affairs such as ship's inspection and survey, seamen's investigation and screening, issuance of certificates etc.

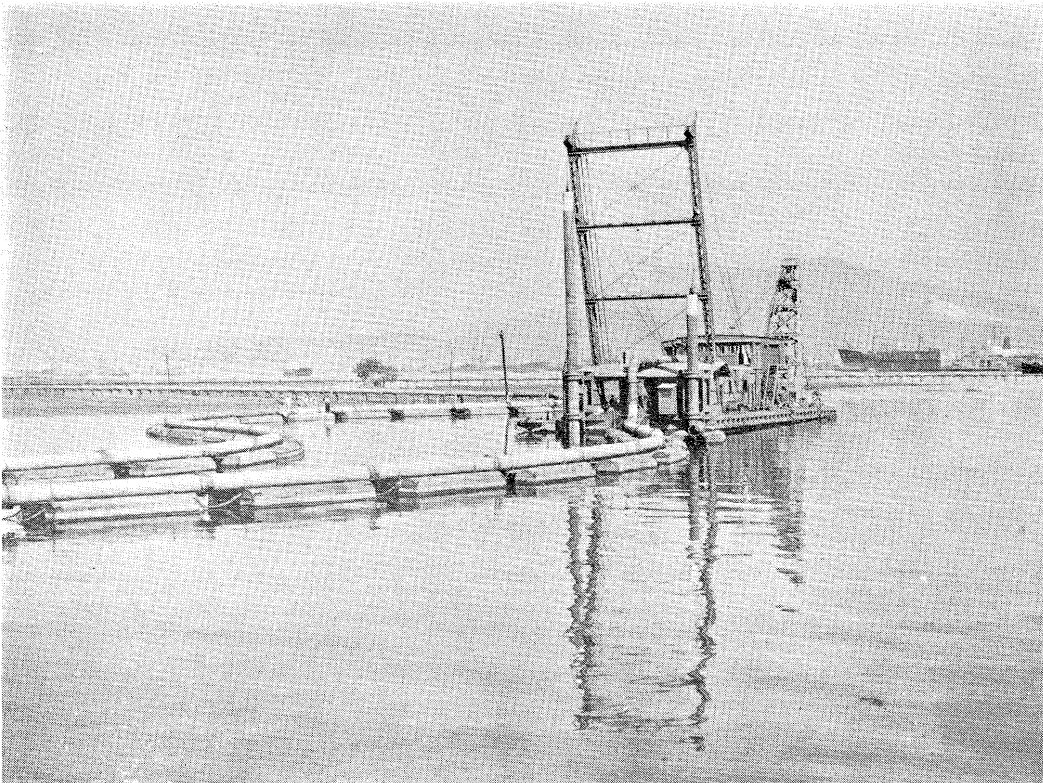
The loading and unloading operations in Kaohsiung Harbor are performed by the Stevedoring and Warehousing Office of the Harbor Bureau and private-operated com-

panies. The former shares 55% of the total business while the latter 45%. The Harbor Bureau is, therefore, a provincial enterprise whose administrative expenditures are financed by its own annual revenues.

As a result of incessant improvement in harbor operation and fast growth of Taiwan's economy, the volume of trade, ship's tonnage, storage amount, and cargo-handling capacity have renewed the records year after year. In 1961, for instance, the total volume of imports and exports exceeded 4,100,000 tons, the amount of cargo-handling reached 3,110,000 tons, and cargo storage in sheds amounted to 18,780,000 ton-days. In the last 10 years, the volume of trade at the port has increased at a rate of about 16% a year.

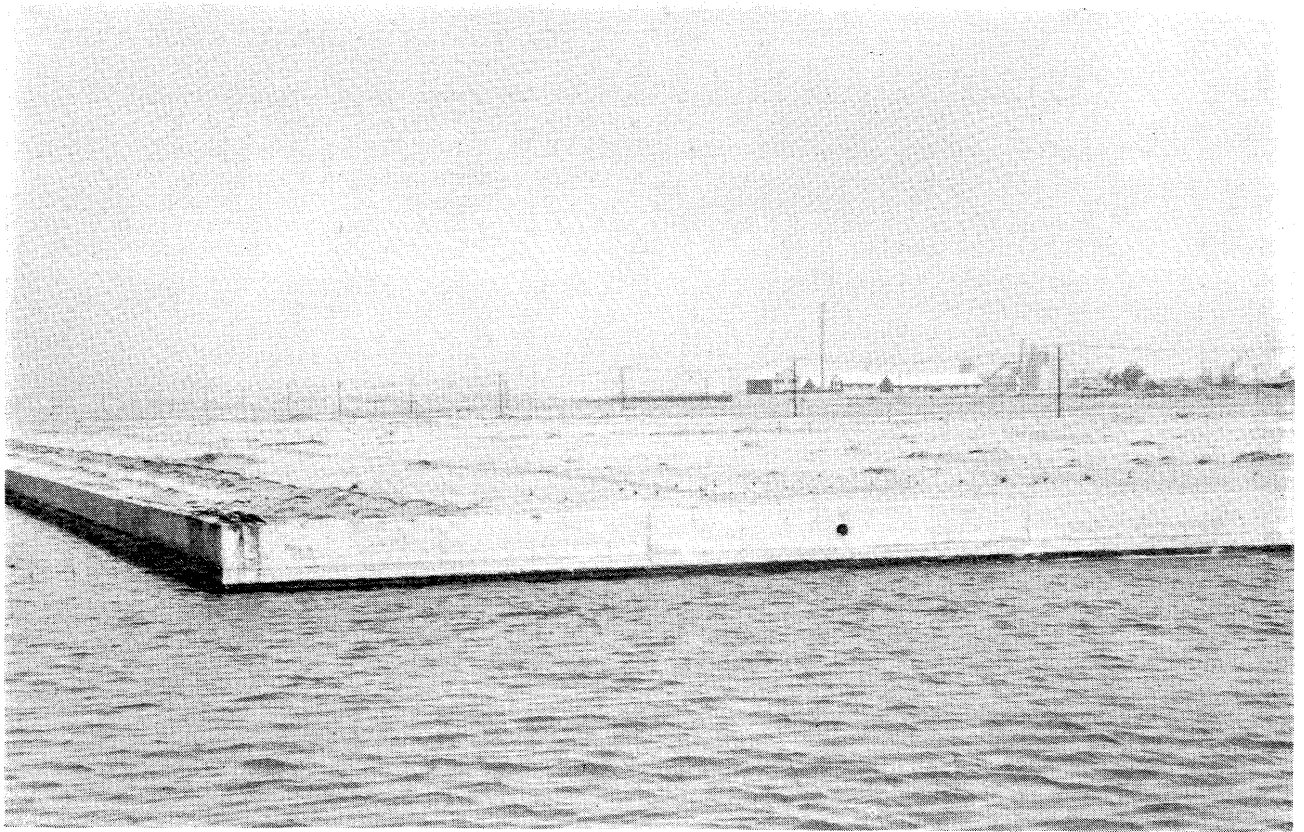
#### **Harbor Development Plan**

Kaohsiung Harbor has a vast water area of which only 17% is developed and utilized. In order to cope with the present and prospective developments of trade, industry, fisheries, shipping and city planning, a 12-year Kaohsiung Harbor Extension Project is being carried out since its start in September 1958. The huge project calls for a total expenditure of NT\$548,000,000.



One of the dredgers used for the Kaohsiung Harbor Extension Project.





The land newly reclaimed on the Kaohsiung Harbor Extension Area.



One of the plants  
newly built on the  
reclaimed land.

The primary work is to open new fairways and the spoil dredged from the fairways will be used for reclaiming new land by filling the shallow water areas and fish ponds. Revetments and a deep-water wharf will be built to provide more berths for ocean-going ships. Except for a portion of land which will be reserved for a new commercial harbor, the reclaimed land will be for industrial and fishery uses.

The project is being implemented in three successive phases of 5, 3, and 4 years respectively. Work of the 1st phase is financed by US aid loans. Funds for the latter two phases and repayment of loans and interest payments will be made available partly from the Provincial Government budget and partly from the revenues of leasing or selling the reclaimed land.

The project, when completed, will bring about the following accomplishments:

1. The harbor area will be expanded six times the existing one, the fairway extended 15.2 kilometers, revetments increased 29 kilometers, landing stages built 22 sets and a deep-water wharf constructed. (Additional deep water wharves will be built gradually under a separate project.)
2. The reclaimed land totaling 820 hectares will provide 1 commercial harbor, 1 oil harbor, 4 fishery harbors and 7 industrial zones. The total land to be created for industrial use in the harbor extension area (including portion of original existing land) will be 1,080 hectares, about 4 times the existing industrial district of Kaohsiung city.

In the 1st phase of the harbor extension, 218 hectares of land will be reclaimed. As of the end of December 1961, land reclaimed totalled 140 hectares of which about 90 hectares will be for industrial site. Some plants established on the reclaimed land have started operation. Measures incentive to investments are being worked out by the government to attract investments from overseas Chinese and foreigners so as to accelerate the economic growth of this island. The land reclaimed under the Harbor Extension Project will provide



Picture shows the mud-conveying pipes, on the two sides of which is the land newly reclaimed.

ample space for industrial development. As to the construction of such public utilities as water supply facilities, power distribution lines, roads, drainage system, railways etc., the "South Taiwan Industrial District Development Committee" is endeavoring for earlier completion.

#### Others

In addition to carrying out the long-term Extension Project as mentioned above, the Harbor Bureau is constantly seeking further progress in port services and stress is being placed on the mechanization of cargo-handling operation. Plans are under way to build a banana shed with automatic conveying and loading facilities and to procure bulk cargo handling machines and other new cargo-handling equipment. For safety measures, fire-fighting vehicles and working boats of excellent performance have been and are being added. Frequent trainings are given to stevedores to improve their skills in both shore and water operations and to raise efficiency of their service. In a word, Kaohsiung Harbor contributes substantially to the foreign trade and economic development of Free China.

(Continued from Page 7)

Oakland Junior Chamber of Commerce in 1935 and as a leader, particularly as chairman of the highway committee, in the senior Chamber.

Before accepting appointment as executive director of the Port, Frost was a parking consultant with recognition throughout the United States.

As a Port administrator, he has brought international recognition to Oakland. He has served as president of the California and Pacific Coast Associations of Port Authorities and was the first person to serve simultaneously as the president of the American Association of Port Authorities and Airport Operations Council, both international groups.

Also, as one of the promoters, he was related with the creation of the International Association of Ports and Harbors, which was realized in 1955 in Los Angeles.

He has served also as an officer and director of the Marine Exchange, the Northern California Ports and Terminals Bureau and as vice-president of the World Trade Club.

Frost and his wife, Jane, live at 6070 Contra Costa Road, Oakland.

His son, Dudley W. Frost, Jr., lives in Fremont and is associated with Morrison Builders in Oakland.

**Flash !**

**THE THIRD TRIENNIAL CONFERENCE**  
**of**  
**The International Association of Ports and Harbors**  
  
**May 1—4, 1963**  
  
**at Royal Orleans Hotel, New Orleans, La.**  
**U. S. A.**

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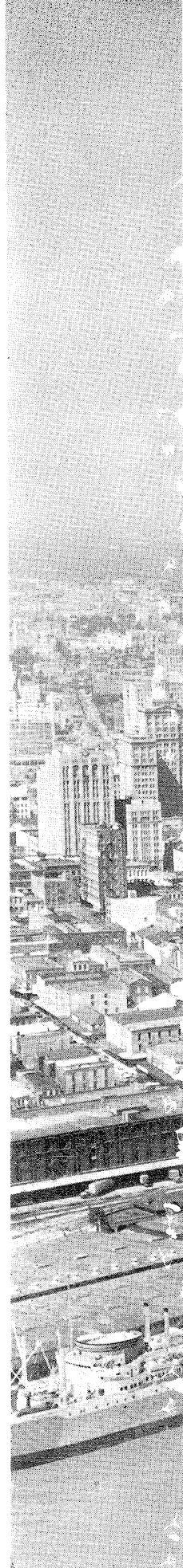
**Central Secretariat of the International Association  
of Ports and Harbors**

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



Photo shows the participants in the Executive Committee meeting held in March, 1962, in Taipei, Taiwan, who were visiting Sun Moon Lake, near Tai-chung, on the morning of March 10.

New Orleans, site of the Third Triennial Conference of the International Association of Ports and Harbors, May 1-4, 1963, is most famous for its port and its old world charm. This view is looking down Canal Street, noted for being one of the nation's best lighted streets; for its sidewalks paved with marble chips, and for the fact that it is annually the site of the city's Mardi Gras and many other celebrations.



**Central Secretariat of the International  
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