

# PORTS *and* HARBORS

September, 1973 Vol.18, No.9



**The Publisher: The International Association of Ports and Harbors**

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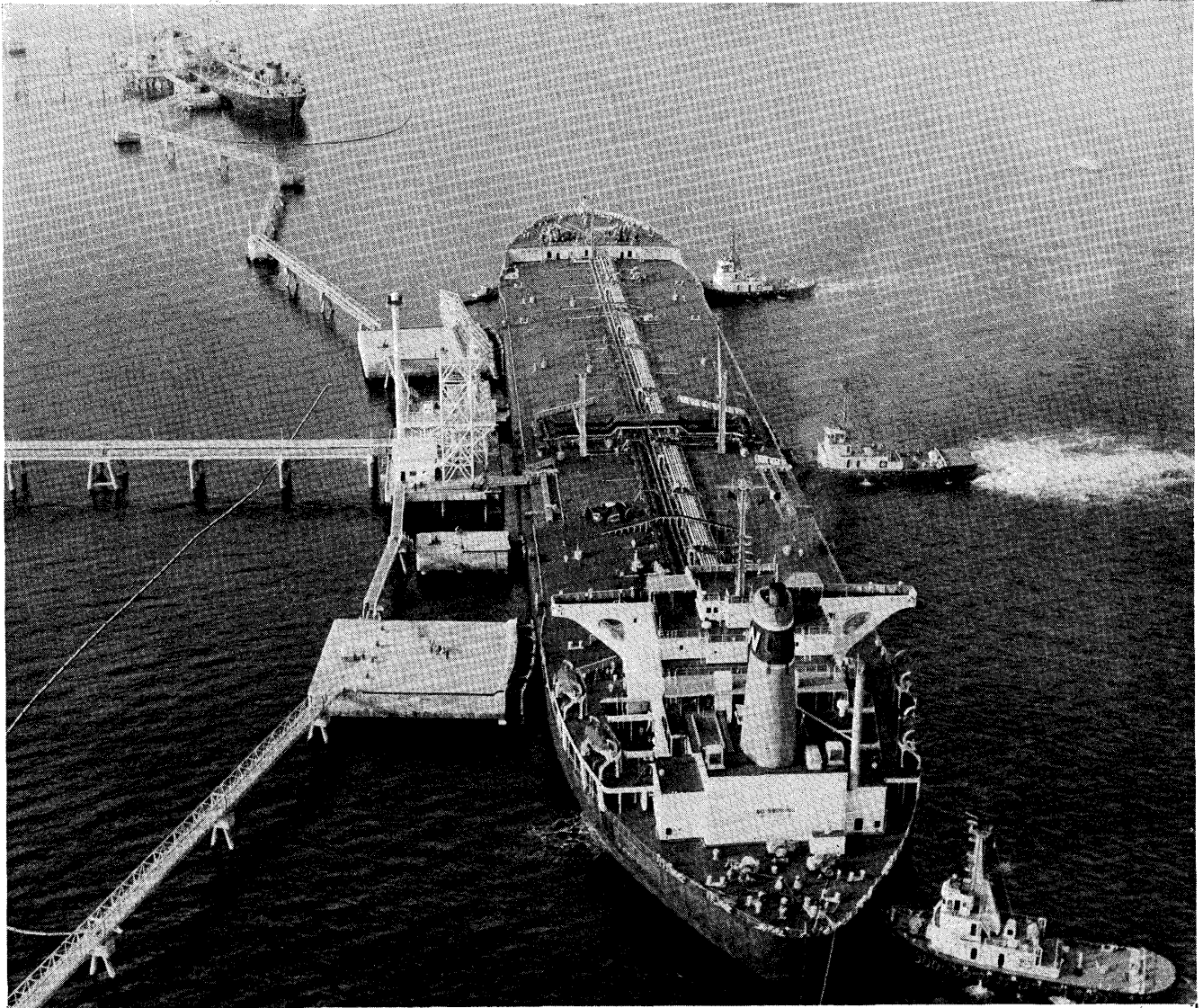
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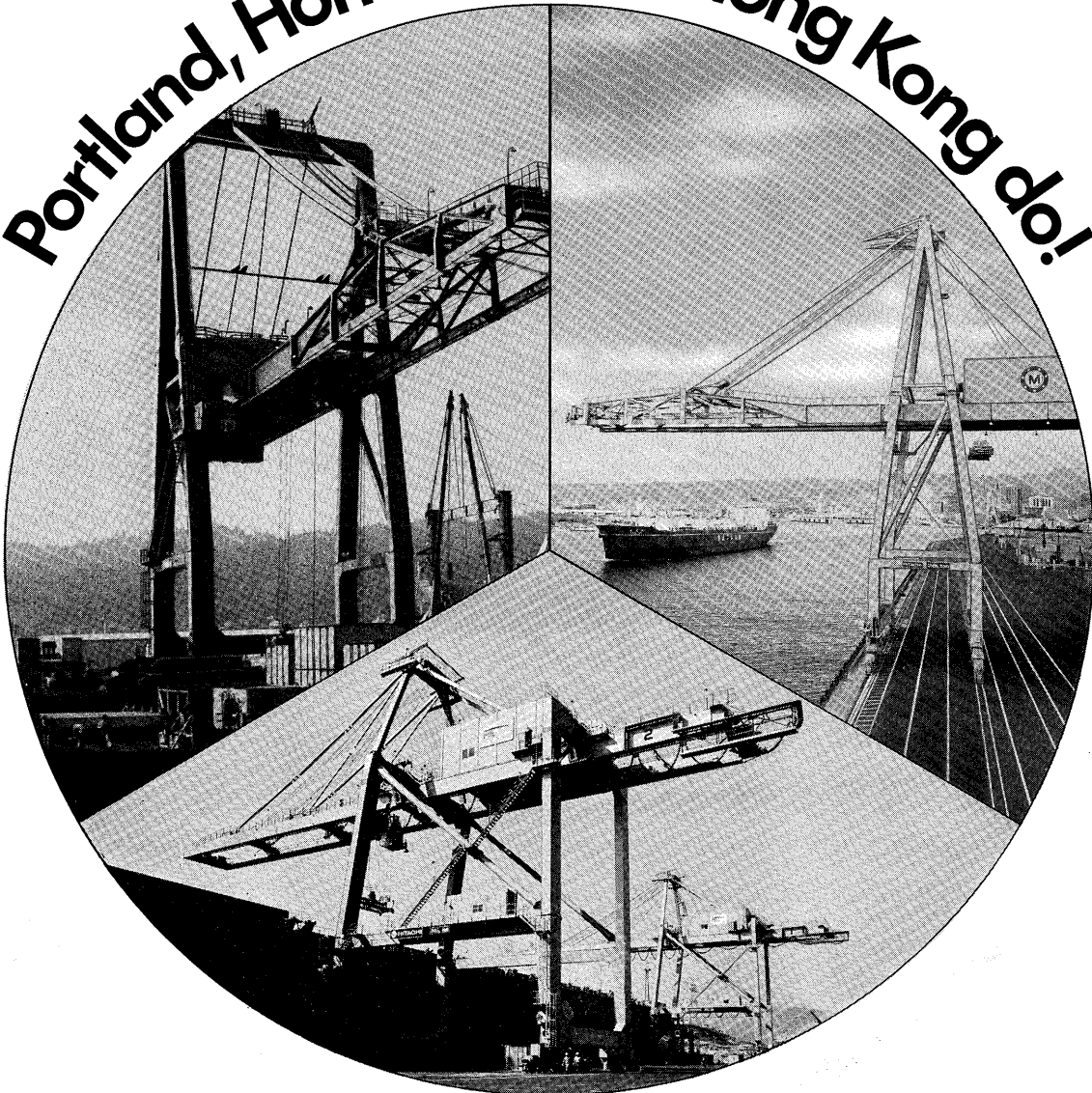


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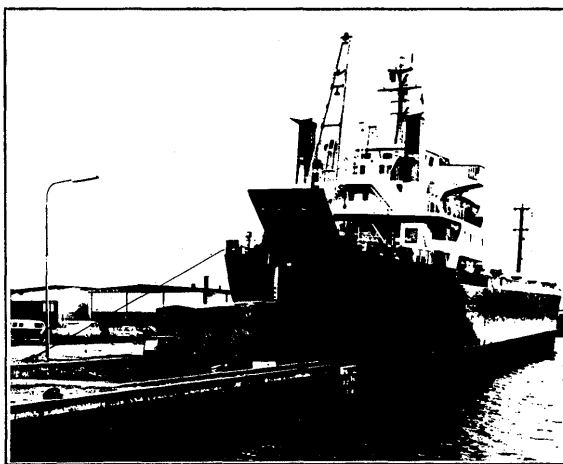
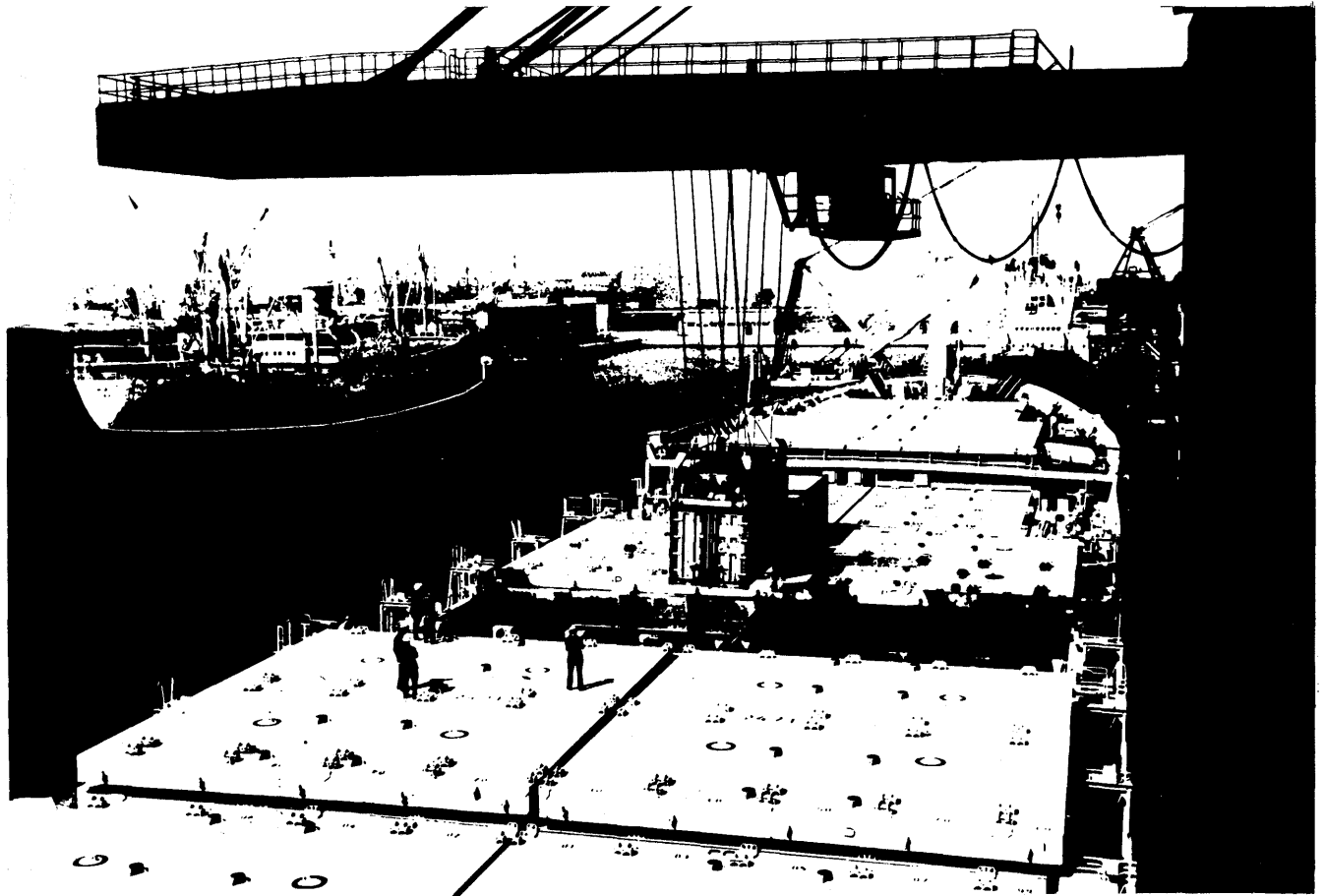
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# PORTS *and* HARBORS

Editor: Yoshio Hayashi

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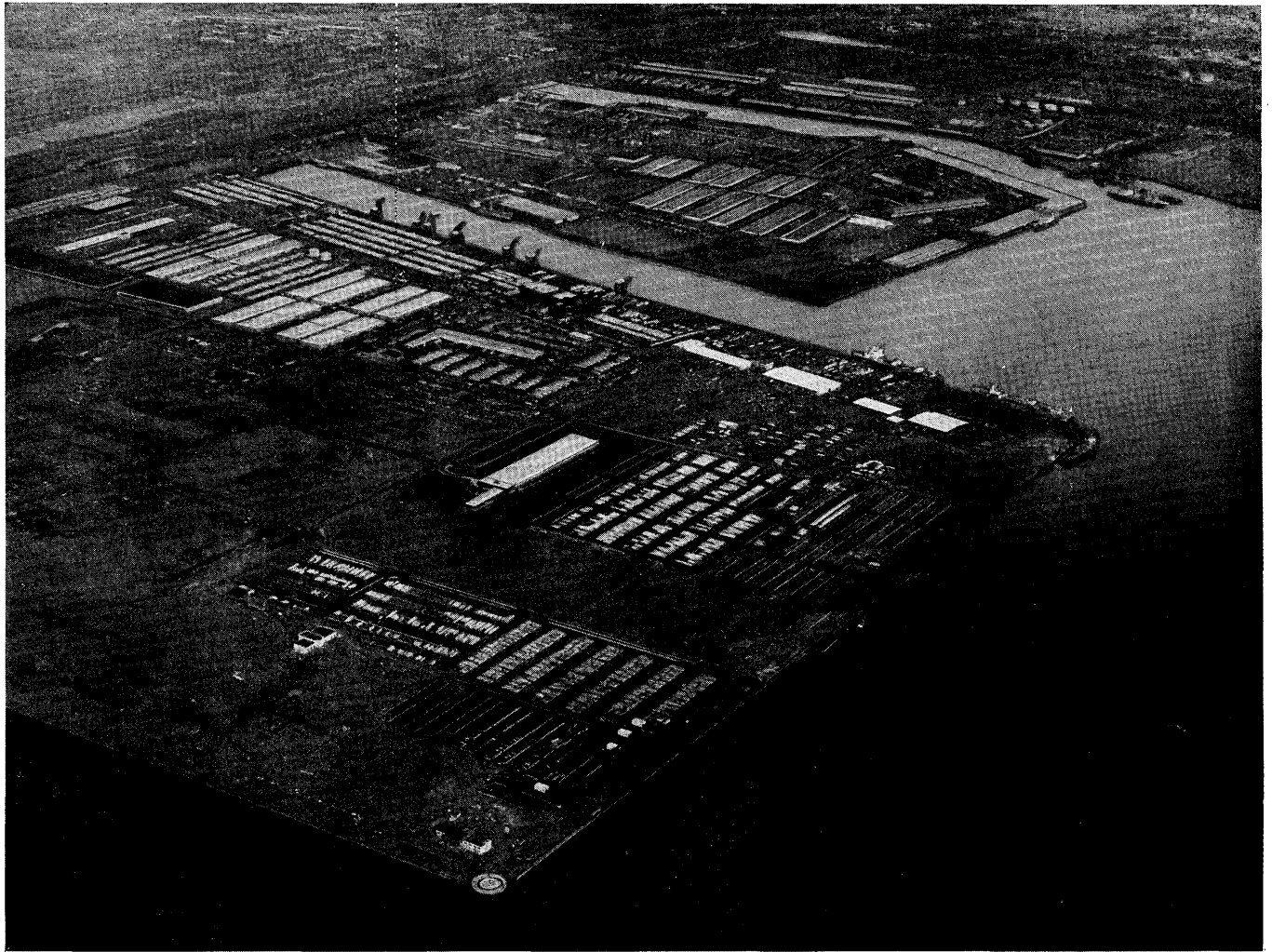
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### The Cover:

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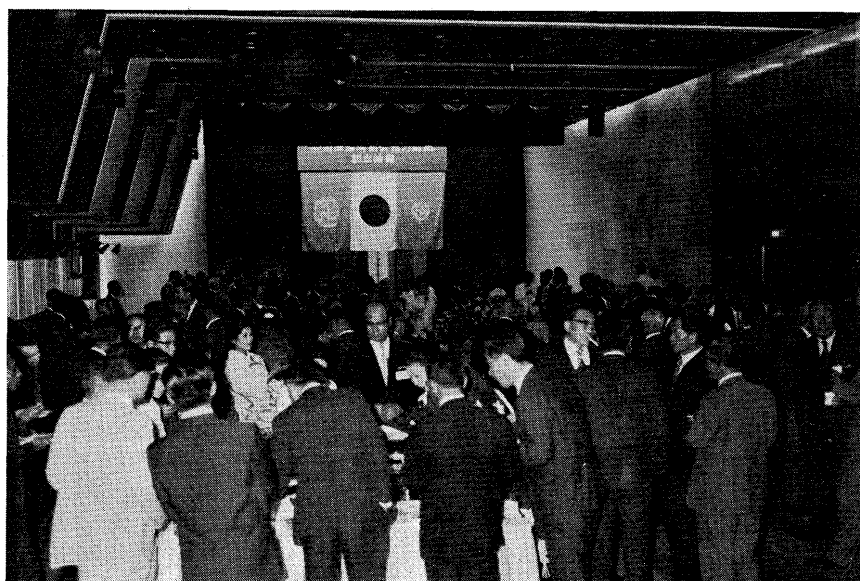
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# PORTS *and* HARBORS

## *Opening Reception of the IAPH Head Office Maintenance Foundation*



President and Directors of the Foundation are now on a receiving line to greet their guests of the evening. From left to right, next to a guest, Mr. Toru Akiyama, the Foundation President (IAPH Secretary General Emeritus), Dr. Hajime Sato (IAPH Secretary General), Dr. Shizuo Kuroda (IAPH Founder Honorary Member), Mr. Takemasa Okumura, Director, Bureau of Port & Harbor, Tokyo Metropolitan Government (IAPH Japan Director), Mr. Fumio Kohmura, Vice President, Nagoya Port Authority (IAPH Executive Member).



Reception was attended by as many as 300 guests.

(By Kimiko Takeda) On July 5th (Thursday) from 18.30, a reception to celebrate the establishment of the International Association of Ports and Harbors Head Office Maintenance Foundation was held at Kaiun Building in Tokyo.

Invited were all of IAPH member ports which have their office in Japan besides those guests from governmental agencies as well as from various business fields of Japanese enterprises who were assisting the establishment of the Foundation.

Mr. Toru Akiyama, President of this newly created Foundation and the host of the reception, delivered his address of opening before about 300 guests attended in the evening. (See the English translation on Page 9)

Following to Mr. Akiyama's speech, message of His Excellency, Tomisaburo Shintani, the Minister of Transport of the Japanese Government was introduced by Mr. Koh-ichi Takabayashi, the Vice Minister.

IAPH President, Mr. Robert L. M. Vleugels, General Manager of Port of Antwerp sent his message to Mr. Akiyama, which was read by Mr. E. de Guchteneere, the Representative in Japan of the Port of Antwerp. Also, Mr. A. Lyle King, Director of Marine Terminals, The Port Authority of New York and New Jersey, who is the immediate past President of IAPH, sent a message, which was read by Mr. T. Sakai, the Port Authority's Special Representative in Tokyo. (See Pages 8 and 10)

The last message was from Mr. Ryoichi Sasagawa, President of Nippon Senpaku Shinkokai (Japan Shipbuilding Industry Foundation) who is a Founder member of the IAPH Head Office Maintenance Foundation and a Counselor as well. The message was read by Mr. Terutaka Akutagawa, Director General of the Japan Shipbuilding Industry Foundation, who is a Director of the IAPH Head Office Maintenance Foundation.

# Congratulatory Message of Mr. Robert L. M. Vleugels President of IAPH

(Delivered by Mr. E. de Guchteneere)

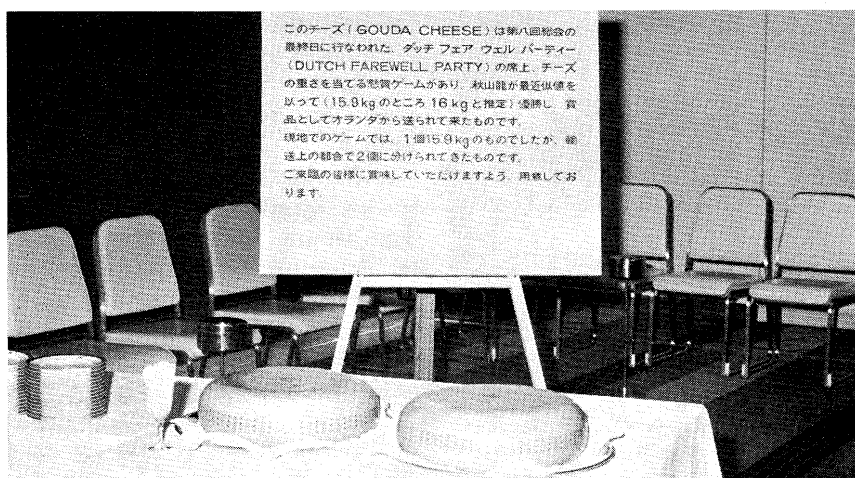
Excellency, Ladies and Gentlemen,  
It is a honor for me, as the permanent representative in Japan of Antwerp to read to you the message that Mr. Robert Vleugels, President of the International Association of Ports and Harbors has send on the occasion of the public

announcement of the creation of the International Association of Ports and Harbors Head Office Maintenance Foundation.

—“As president of the International Association of Ports and Harbors, I want to thank sincerely all those who have made possible

the creation of this foundation. But I want to thank especially Mr. Lyle King, immediate past president, whose continuous efforts have made possible this day. Considering the growing activities of the International Association of Ports and Harbors, the support given by the foundation is of considerable importance. With the active contribution of all members, our worldwide organization will grow and develop to the benefit of the Ports, and will be able to promote international friendship and understanding.”

Robert L. M. Vleugels  
General Manager Port of Antwerp.  
President of IAPH



## Gouda Cheese in Tokyo

by Kimiko Takeda

In the last issue of the magazine, there appeared an article on “weight guess contest for a big Gouda cheese” featured as attraction program at the Special Dutch Farewell Party on the last day of the 8th Conference.

Readers might be interested to know who was the winner?

It was Mr. Toru Akiyama who guessed the closest weight. His estimation was 16 kg while the true weight of the cheese was 15.9 kg.

Later the cheese was delivered to Mr. Akiyama's Tokyo home through the good arrangement of the Organizing Committee of the 8th Conference in two pieces for the convenience of transportation.

Mr. Akiyama brought the cheese into the reception party of the Foundation on the evening of July 5th.

All the guests were served with generous slices of the cheese enjoying the taste of the beautiful prize Mr. Akiyama won, while listening to the story of the exciting Dutch Farewell Party in Amsterdam.

The upper photo shows the display of the cheese, and the bottom shows guests gathering around the cheese table awaiting their turns in a queue.





# *Statement By* *Mr. Toru Akiyama*

President

IAPH Head Office Maintenance Foundation  
(IAPH Secretary General Emeritus)

at Kaiun Kaikan, Tokyo  
July 5, 1973

His Excellency, distinguished guests, ladies and gentlemen,

It is my utmost pleasure to be able to give here this evening a party commemorating the founding of the International Association of Ports and Harbors Head Office Maintenance Foundation with the presence of so many of the distinguished guests representing all fields concerned. As you already know, this Foundation was established for the purpose of assisting the International Association of Ports and Harbors with the official approval of the Minister of Transport granted on the 31st of January 1973.

On the 11th of May 1973, at the 8th biennial Conference of the International Association of Ports and Harbors convened in Amsterdam and Rotterdam, The Netherlands, it was unanimously agreed with appreciation of the entire membership that IAPH would entrust its business at the Head Office to the IAPH Head Office Maintenance Foundation, and the Agreement thereof was signed by both the President of the Association (Mr. A. Lyle King) and the President of the Foundation (myself), to become effective as from the first day of June 1973, thus completing the intended set-up in full. I express my sincere thanks and appreciation to each one of you present here this evening, without whose support and cooperation, I am sure, this arrangement would not have been possible.

The reason why we thought we should establish this Foundation and help IAPH now lies simply in the historical facts that the Association is the only organization of a world-wide coverage which was established with the initiative of our far-sighted predecessors, Mr. Gaku Matsumoto, Dr. Chujiro Haraguchi

and many other Japanese port people with the purpose of advancing international friendship and understanding among the port administrators in the world and helping develop the waterborne commerce of the world contributing thereby to the world peace and the welfare of mankind, and that its Head Office has been put under our care in Tokyo ever since its establishment, developing a special close relationship with this country.

IAPH since its establishment has steadily won the sympathy of port administrators throughout the world to expand its membership to as many countries as 61 (182 ports) from the original 18 countries at the outset. By now eight conferences have been held biennially since the first conference in Los Angeles, U.S.A., not to mention, the meetings of the Board of Directors, the Executive Committee and ad-hoc Committees called from time to time to keep the Association active. The outline of the wide activities that have been done so far by IAPH is displayed in this room. I hope you will have a look at them over your drinks.

At the 8th Conference recently convened in Amsterdam and Rotterdam, the following two resolutions were approved to be presented to the agencies of the United Nations.

- 1) Resolution relating to Water Pollution in Ports Areas
- 2) Resolution relating to Legal Protection of Ports and Navigable Waterways

Positive actions and achievements by IAPH as such are being highly appreciated world-wide and non-government consultative status of ECOSOC and IMCO have been given and the same of UNCTAD is expected to be given shortly to

IAPH, its status as an international organ growing increasingly important and its responsibility further added.

However, the recent economic turmoil in Japan inflicted a heavy blow on the financial situation of the Association, confronting the Association with a serious difficulty in executing its minimal duty as an international organ. The changes of situation were so abrupt and drastic that it was impossible for such a huge world-wide organization as IAPH to put itself on a rationalized track of management instantly. In view of the important role that our country has played for IAPH since its establishment and the present international circumstances our country is under, it is considered to be our responsibility as well as a worthy contribution to seek an effective solution at once enabling IAPH to continue its activities at the Head Office and further if possible, to help improve the services and activities of the Head Office for the attainment of the Association's objectives and purposes.

The establishment of the Foundation was proposed to assist the IAPH with such reasons as aforementioned. Very fortunately, thanks to your great understanding and generous supports, this Foundation was established and the Agreement on the maintenance and operation of the Head Office of the IAPH was signed between IAPH and this Foundation as previously mentioned, enabling us now to fulfil our responsibilities through the Foundation.

Although there may be many more difficulties in the future, all of us who are responsible for this great mission are determined to do our best with the initial spirit of the establishment of the Foundation in mind to fulfil the desired objectives.

I sincerely hope you will kindly continue to extend your guidance and cooperation to us.

In conclusion, I wish you will enjoy the party this evening as much as your time permits and find time to take a look over the display which will give you a rough idea of what IAPH is.

Thank you.

# ***Statement of Mr. A. Lyle King, Immediate Past President of IAPH, Regarding the Maintenance Foundation***

The Japanese industrial community, by establishing the Maintenance Foundation for the International Association of Ports and Harbors, has demonstrated creative international leadership in accepting an opportunity to assist the ports of the world in their important task of serving the movement of trade and commerce.

This enlightened action is consistent with the emerging preeminence of the Japanese business community in developing international markets. The volume of Japanese exports, complemented by imports of raw materials and finished products, is unprecedented. It is therefore fitting that Japanese industry, through the IAPH Maintenance Foundation, has chosen to play an active leadership role in the economic interest of the ports of the world.

Ports are of vital concern to every citizen and the community where he lives. They have a tremendous influence upon the economic well-being of all people. The great network of worldwide ocean and inland ports, provides a "built-in" asset which generates an amazing amount of economic activity, permeating and strengthening virtually all phases of a nation's economy.

It would be difficult to over-emphasize the paramount importance for all developing countries of having a direct access to the sea through a modern and well-organized national port. Without an efficient port, national economic progress is drastically curtailed.

It should also be remembered that efficient ports in developing countries are of considerable benefit to international shipping interests, to merchant marines of affluent nations and to global com-

merce. Opportunities for trade, for selling industrial equipment and for import of much-needed minerals and various specific products are greatly expanded if reliable services can be obtained in all remote parts.

In advanced countries, ports are, of course, also playing an essential role in economic development. They serve as gateways for global trade, for imports of raw materials, timber, mineral ores and oils, and for export of manufactured goods.

The conclusion is inescapable that ocean ports have tremendous economic significance, not only to the port city and its surrounding community, but also to the hinterland wherein industry and trade are dependent upon the movement of goods through the port system.

The valuable work of the International Association of Ports and Harbors is well known throughout the 58 nations which comprise the Association's membership. Traditionally, seaports throughout the world almost universally require financial assistance in carrying out their day-to-day responsibilities. Many of the Association's members develop and operate their ports on a non-self-supporting basis and in view of present financial conditions, would have been unable to continue their valuable IAPH affiliation without the assistance offered by the Maintenance Foundation. The Japanese Industrial Community was in the best position to display the leadership and motivation required to provide this assistance for as long as it is needed.

The International Association of Ports and Harbors has performed an important service in associating its members from all countries together in the common cause of

mutual international friendship and understanding; in exchanging views and information relative to port and harbour organization, administration, management, development, operation and promotion; and in encouraging, developing and promoting waterborne commerce to and from all world ports and harbors. The Association has played a leadership role and provided an important service in exchanging views on the most efficient types of port facilities from the standpoint of construction costs and cargo handling, and the needs of ports throughout the world regarding channel depths, and port administrative matters of many kinds.

Some of the work of IAPH deserves special consideration; for example, that of the Committee on International Port Development. The Committee conducts a program of direct communication between developed ports and developing ports in an effort to supply training to personnel from the developing ports and provide other expert guidance and advice on port practices and development operations as required.

The objectives of the International Association of Ports and Harbors in authorizing such a program and establishing the Committee were:

1. To contribute to the expansion of world trade by actively assisting in the important and constructive development of the world's ports and harbors.
2. To encourage the more developed and experienced ports to extend, when requested, their advice and active assistance to the developing ports, on a direct port-to-port basis, and so to share with them their professional and technical knowledge of port development and operations.

The assistance of the Foundation in assuring the future viability of the International Association of Ports and Harbors in pursuit of its goals and objectives is an investment in the future of international trade, continued global industrial development and socio-economic progress for all people throughout the world.

Thank you.

# *Memorial Resolution in Honor of The Late Mr. John P. Davis*

Board of Harbor Commissioners of  
The City of Long Beach

The Secretary General was informed by a letter dated July 18, 1973 from Mr. T. J. Thorley, General Manager of the Port of Long Beach, that Mr. John P. Davis passed away on July 9, 1973. Mr. Thorley's letter was accompanied by the Memorial Resolution in Honor of The Late Mr. Davis by the Board of Harbor Commissioners of the City of Long Beach which is reproduced here. Mr. Davis was one of the founders of our Association, and was also the fifth President.

Mr. Gaku Matsumoto, former Secretary General, IAPH, and others have sent us messages of condolence. (See below.) A telex message was dispatched to Mrs. Davis in the names of Mr. Toru Akiyama, former Secretary General, IAPH and Dr. Hajime Sato, Secretary General, IAPH.

## **Message of Condolence**

The following message of condolence was sent to Mrs. Davis by telex through the office of Mr. Thorley:

DEAR MRS. DAVIS:

WE HAVE LEARNED WITH PROFOUND SORROW THAT YOUR HUSBAND HAS PASSED AWAY ON JULY 9TH, 1973.

HE WAS THE PRESIDENT OF OUR ASSOCIATION DURING 1963-1965, AND WAS KNOWN AS ONE OF THE MOST ACTIVE SUPPORTERS OF THIS ASSOCIATION. HE WAS ELECTED AN HONORARY MEMBER OF THE ASSOCIATION IN 1965 FOR HIS LONG SERVICE AND DEDICATION.

ON BEHALF OF ALL THOSE WHO HAD THE PRIVILEGE OF ASSOCIATING WITH HIM, WE WOULD LIKE TO EXTEND TO YOU AND YOUR FAMILY OUR SINCEREST CONDOLENCES AND SYMPATHY.

SINCERELY YOURS

TORU AKIYAMA,

FORMER SECRETARY GENERAL, IAPH  
HAJIME SATO,

SECRETARY GENERAL, IAPH

WHEREAS, the members of the Board of Harbor Commissioners of the City of Long Beach are deeply saddened by the passing of John P. Davis, who had served as a member of this Board for 16 years; and

WHEREAS, he devoted himself wholeheartedly to the task of guiding the development of the Port of Long Beach during his tenure on the Board, including service as its president in 1954-1956, 1960-1961; and

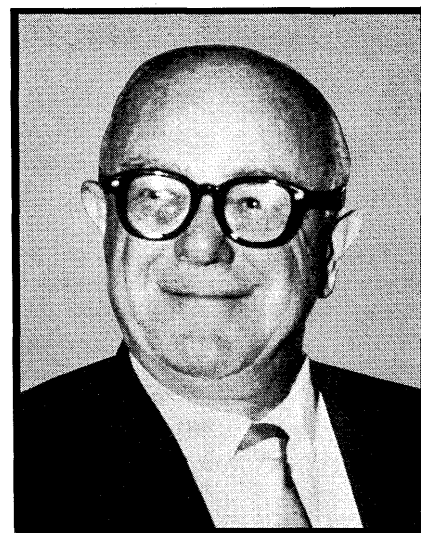
WHEREAS, John P. Davis, a native of Oregon, and a Long Beach resident for 63 years, was president of Davis Furniture Company at the time of his retirement in 1965; and

WHEREAS, his dedication to the civic life of Long Beach was evidenced by his presidency of the Long Beach Board of Harbor Commissioners, president of the Long Beach Chamber of Commerce, a board member of Memorial Hospital as well as St. Mary's Hospital, director of the YMCA, member of the Salvation Army Board, director of the American Cancer Society and president of Long Beach Rotary; and

WHEREAS, because of his intimate association and guidance in the California Association of Port Authorities, Pacific Coast Association of Port Authorities, American Association of Port Authorities and the International Association of Ports and Harbors of which he was the founder and first president; and

WHEREAS, his sound judgment and unswerving integrity and loyalty endeared him to all who were privileged to be associated with him; and

WHEREAS, it is the desire of this Board to pay tribute to the memory of one whose accomplishments will ever be remembered and who was a gentleman in every sense of the word;



**The late Mr. John P. Davis**

NOW, THEREFORE, BE IT RESOLVED that the Board of Harbor Commissioners of the City of Long Beach hereby adopts this resolution as an expression of its sorrow and to commemorate the passing of a personal friend, a faithful public servant, and one of our finest citizens; and

BE IT FURTHER RESOLVED that this resolution be entered in the minutes of this meeting and that a copy thereof, suitably inscribed, be forwarded to Mrs. Davis and the members of his immediate family as an expression of the deep sorrow and sympathy of each member of this Board; and

BE IT FURTHER RESOLVED that when this meeting adjourns it be adjourned in tribute to his memory.

Adopted by the Board of Harbor Commissioners of the City of Long Beach at its regular meeting held Monday, July 16, 1973.

President

ATTEST:

Secretary



# *With Sincerest Sympathy*

**Robert L. M. Vleugels**

President, IAPH

The sad news reached me on August 4th. I was in the garden of a summer house on holiday. One of the kids brought an envelope which the local postman just had delivered. It contained a telex message from the IAPH secretariat in Tokyo, which my port office had sent to me urgently.

"John P. Davis, honorary founder Member of IAPH and former Commissioner of the Port of Long Beach California, passed away on July 9th, 1973 at the age of 76".

That was the message which in these circumstances struck me more than ever and I really felt a deep

sorrow.

My ideas went way back to the day when I met John P. Davis for the first time. It happened 1961 some day in October when a delegation of the Port of Antwerp was visiting Long Beach. Commissioner Davis was our friendly and very informed host. Being impressed so much by his cordial approach and not less by his broad knowledge of port matters, I cannot forget that day.

In the course of the following years I had the opportunity to meet him again in other places, also in our city.

I got still better acquainted with his admirable personality when I saw him active in the frame of the Congresses of our Association which I attended from 1965 and onwards.

As one of the founders of IAPH and President from 1963 to 1965 he was one of the very meritorious men who have built up our Association to what it is today.

His colleagues of the early years certainly would be able to illustrate in more details than I could do how much the ideas, the initiatives and the leadership of John P. Davis have promoted the interests and the success of IAPH. As members of this Association we are all much indebted to him.

On behalf of all the members, the Board of Directors, the Executive Committee and in my personal name I want to express our deepest sympathy to the esteemed family of John P. Davis.

We shall not forget him.

---

# *We Will Be Ever Grateful*

**A. Lyle King**

Immediate Past President, IAPH

I was saddened to learn of John Davis' recent passing. The news of John's death on July 9 was quite unexpected and caused me to reflect on a friendship of long-standing. I am sure my sentiments and thoughts are shared with many of John's friends both in the port industry and international trade.

John will be best remembered for the important role he played in the founding of our Association in 1955

and his outstanding leadership as President from 1963 through 1965. John had the prescience to recognize the potential value of an association among the ports of the world and a strong determination to assure that potential was achieved. His singular executive abilities and perceptive organizational skills were directed completely toward furthering the goals and objectives of the international port community. For this,

our Association will be ever grateful.

When I think of John's accomplishments, I can't help but focus on his exceptional interpersonal strengths—an asset which served him well in earning the friendship, respect and confidence of peoples throughout the world. More than most, John was extremely sensitive to the needs of others and was always willing to accommodate the diverse requirements of a truly international community. In every sense of the term, he was an international man.

John's former colleagues and friends join with me in expressing our heartfelt sympathy to the Davis family at their time of personal loss.

# *Viscount Simon, IAPH*

## *President 1965-67, Writes—*

"All those who remember the early days of I.A.P.H. will have felt a deep sense of loss on hearing of the death on July 9th of John P. Davis. John Davis was one of our Founder Members and was President of the Association from 1963 to 1965.

"A man with wide business interests, he had become a Commissioner of the Port of Long Beach, California, some years before and had devoted a large part of his tremendous energy to the affairs of that Port. But he had an even wider vision and

espoused enthusiastically the project of an International Association which was then under consideration.

"He was a close friend of Gaku Matsumoto and shared with him the belief that such an Association should not only bring together Port Administrators from all over the world to discuss matters of mutual interest and concern, but should also provide a meeting place for the promotion of better understanding and friendship between nations, on a personal rather than Governmental basis.

"That the Association has indeed in no small measure contributed to this better understanding and that we have all had our lives enriched by new friendship across national boundaries must have gladdened the heart of John Davis. Although, shortly after he completed his term as President, he left the Board of Commissioners of the Port of Long Beach, he retained a deep interest in the affairs of the Association, and his successor as President remembers with gratitude the valuable help and advice he was always ready to offer.

"Our hearts go out to his widow and his family, whom many of us were also privileged to count as friends. We share with them happy memories of a remarkable man".

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## *Message of Condolence for The Late Mr. John P. Davis*

**Gaku Matsumoto**

Former Secretary General, IAPH

(President, The World Trade Center of Japan, Inc.)

A sad news came to me quite suddenly that Mr. John P. Davis passed away who, as one of the co-founders of International Association of Ports and Harbors, made his tremendous efforts and encouraged me at the early days of the Association. At the first international port and harbour conference held in Kobe, 1952, Mr. D. W. Frost, Oakland delegate, proposed to inaugurate a permanent body. Mr. J. P. Davis, Chairman of Long Beach Board of Commissioners, proposed to impose the ground-

work on Japan Port and Harbor Association and Port of Los Angeles, and Mr. J. E. Carroll, Los Angeles representative, proposed to convene the second international conference in Los Angeles, and the three propositions were adopted unanimously as proposed.

One year before the inaugural general assembly of I.A.P.H. in 1955, we had a preliminary meeting with the leading members in San Francisco where the general meeting of AAPA was being held, that always reminds me very vividly

the hard days and I should like to extract some paragraphs from "I.A.P.H. Dawn Hours" to show how the late Mr. Davis encouraged me in establishing the Association, "Down in San Francisco I joined inadvertently with port people representing about ten nations, from Glasgow, Bordeaux, Bremen, Melbourne, the Philippines and others. Those people had departed from their shores in time for the miscarried Los Angeles meeting.

Gen. Wylie, President of AAPA, offered a dinner for me and other delegates which would lend itself to exchange of views. Even after the dinner, from ten at night, the talks went on, with Mr. Frost of Oakland at the chair. At the Chairman's demand, Mr. L. A. Menveg, President of Los Angeles Board of Harbor Commissioners, explained the situation. Mexico, Canada, Brazil concurred. Glasgow and Melbourne opposed, saying that they were happy with the Commonwealth ties, and saw no need for any new

binding network. France favored a not-so-soon approach.

Then Mr. Frost rose to ask how Los Angeles felt. Mr. Menveg answered clearly that Los Angeles had decided to hold the meeting the next fall as agreed with Mr. Matsumoto. Mr. Frost said, "That settles it" and broke up the gathering. It was past 1 a.m. Mr. Menveg came down to me to shake my hand and said warmly, "I've made up my mind. Take it easy." Another time, on the eve of my departure from San Francisco, Mr. Menveg threw a send-off party for me, and told me reassuringly, "Mr. Matsumoto, take it easy and go home, and get a good sleep. I've made up my mind." That made me very happy.

Other West Coast men, like Mr. Frost of Oakland and Mr. Amar of Long Beach, came up to me and took turns to say, "Mr. Matsumoto, keep your chin up. Our minds are made up. Let others balk if they want. We'll back up Los Angeles to the hilt. Even three or five countries will be enough to get it organized. If someone speaks up and gather only those for it. You know how the Rotary Club got started? Only five men banded up in Chicago 40 years ago. Now it's a worldwide club. At worst, we could organize Pacific Basin countries first, and then gobble up others one by one. We are all with you. Take it easy." Mr. John P. Davis said, "Gaku, take a good care of

your health." I said to him, "Go for broke." "That's a boy," he said, and we shook hands in a vehement laughter. I knew enough of him to call him by the first name, and he called me "Gaku." We also shared good memories of I.A.P.H. with him and he said, in his letter (May 22, 1968) ". . . As I look back over the years and recall with nostalgia those early discouraging days, then compare it to what it has become today, I take great pride in being a small part in such an achievement. Make no mistake, there would be no I.A.P.H. today if you had not stubbornly held on during those early years." But John is not with us now.

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## *Message of Condolence*

**Toru Akiyama**

IAPH Secretary General Emeritus

The news of the passing of Mr. John P. Davis, out of the blue, was a great shock to me. That such a good-natured, always smiling and ever brightly healthy individual should so suddenly end his life I could not believe for a moment, and I would not have done so, had I not thought then of an axiom of Zen Buddhism philosophy that went "All things with life must die; all things with forms must collapse".

My acquaintance with Mr. Davis

and his affable personality, as I recall it, is as old as the first concept of IAPH that was brought into existence by the founders of our Association at Kobe, Japan, in 1952.

Mr. Davis at the Kobe International Port and Harbor Conference in October, 1952, moved the historical resolution to make Japan Port and Harbor Association act as the medium for the exchange of information among the parties concerned pending the actual formation

of IAPH, thus moving a mere idea onto the track of processing it into a solid realization. Ever since, as all of us know, we had found him whenever and wherever IAPH made public appearances and actions. His devotion of time and endeavors to IAPH reached the climax when he presided over the 4th Conference at London as the 5th President of IAPH, 1963-65.

After he did all the great achievements that he had planned to do in his life-time, he departed, leaving with us his million-dollar smiles and all happy memories we shared with him.

All of his friends will join me in sending our deepest sympathy to his bereaved widow and his family.



**Report No. 22**

(Last Report was printed in the November 1972 issue on page 23)

This report addressed to Dr. Hajime Sato, Secretary General was received recently from Mr. A. J. Smith, Secretary of British Ports Association, who has been newly assigned as IAPH Liaison to IMCO by Mr. Robert L. M. Vleugels, President of IAPH on the 12th of June 1973.

**IMCO-Maritime Safety Committee**

The following is a brief report of current aspects of the meeting of the Maritime Safety Committee of IMCO which took place during June 1973 at which IAPH's representative was Captain R. A. Gibbons:—

The principal relevant items under discussion were:

**a) National Co-ordination of Promulgating Navigational Warnings to Shipping**

A paper on this subject was submitted by an ad hoc joint IMCO/IHO Committee whose Chairman emphasised the preliminary nature of the report. Basically it proposed the allocation of responsibility for the co-ordination of certain categories of navigational warnings to particular national Governments having a coastline in the area covered. Annex 3 to the paper, a copy of which is enclosed herewith, sets out a provisional plan for the establishment of a world-wide navigational warning system.

**b) Use of Common Language for Navigational Purposes**

Papers on this subject were presented by the United Kingdom, Western Germany and the Secretariat. The United Kingdom paper, which proposed a wide range of vocabulary such as covering the areas of safety and distress; close water tactical navigation — to include pilotage, routing and navigation VHF communication; other navigational matters; casualties;

medical; meteorology and training, was resisted by a number of the delegates present who emphasised the need for simplicity and who considered that the vocabulary should be restricted strictly to matters relating to the safety of navigation. Our representative thought it right to interpose on behalf of IAPH to point out that safety of navigation should not be construed simply as relating to the conning of ships. It was necessary he said to consider every factor of emergency situations and their containment.

We understand that a small discussion group will look further at this matter in November this year and we have represented that IAPH should be asked to attend such a meeting. It may be, however, that IMCO will wish to restrict numbers and in the event may well ask that a paper on the subject expressing "IAPH views" might be more appropriate. We shall keep the matter under review.

**ANNEX III****PROVISIONAL PLAN FOR THE ESTABLISHMENT OF A WORLD WIDE NAVIGATION-WARNING SYSTEM**

For the purpose of establishing an effective international co-ordination of promulgating radio navigational warnings to shipping the following outline is proposed:

1. A number of areas should be established for each of which there shall be one authority responsible for co-ordinating navigational warnings and for each of which a radio station shall be chosen to transmit the warnings. The station should have the capability to cover the entire area and, in addition, as much of the adjacent areas as can be covered by 24 hours' sailing of a fast ship (say 700 miles). The areas suggested by the Joint Committee appear at the Appendix to this Annex.

2. Warnings transmitted by the radio station should refer only to

the area it services.

3. The time of transmitting warnings should under no circumstances be simultaneous in adjacent areas.

4. Each country within an area should with the least possible delay communicate all relevant navigational information to the co-ordinating authority responsible for the area. In so doing the originator of the message should, where this is felt necessary, prefix the message by the desired degree of priority. However, the compilation, co-ordination and processing of the warning messages to be transmitted should be left to the discretion of the co-ordinating authority.

5. The following list of messages considered suitable for transmission as warnings in this system is not exhaustive and should only be regarded as a guideline. It furthermore presupposes that sufficiently precise information about the items has not previously been disseminated in Notices to Mariners:

(a) Casualties to lights, fog signals and buoys affecting main shipping lanes;

(b) the presence of dangerous wrecks in or near main shipping lanes and, if relevant, their marking;

(c) establishment of major new aids to navigation or significant changes to existing ones when such establishment or change might be misleading to shipping;

(d) the presence of large unwieldy tows in congested waters;

(e) drifting mines;

(f) areas where search and rescue (SAR) operations are being carried out (for avoidance of such areas);

(g) the presence of newly discovered rocks, shoals, reefs and wrecks likely to constitute a danger to shipping and, if relevant, their marking;

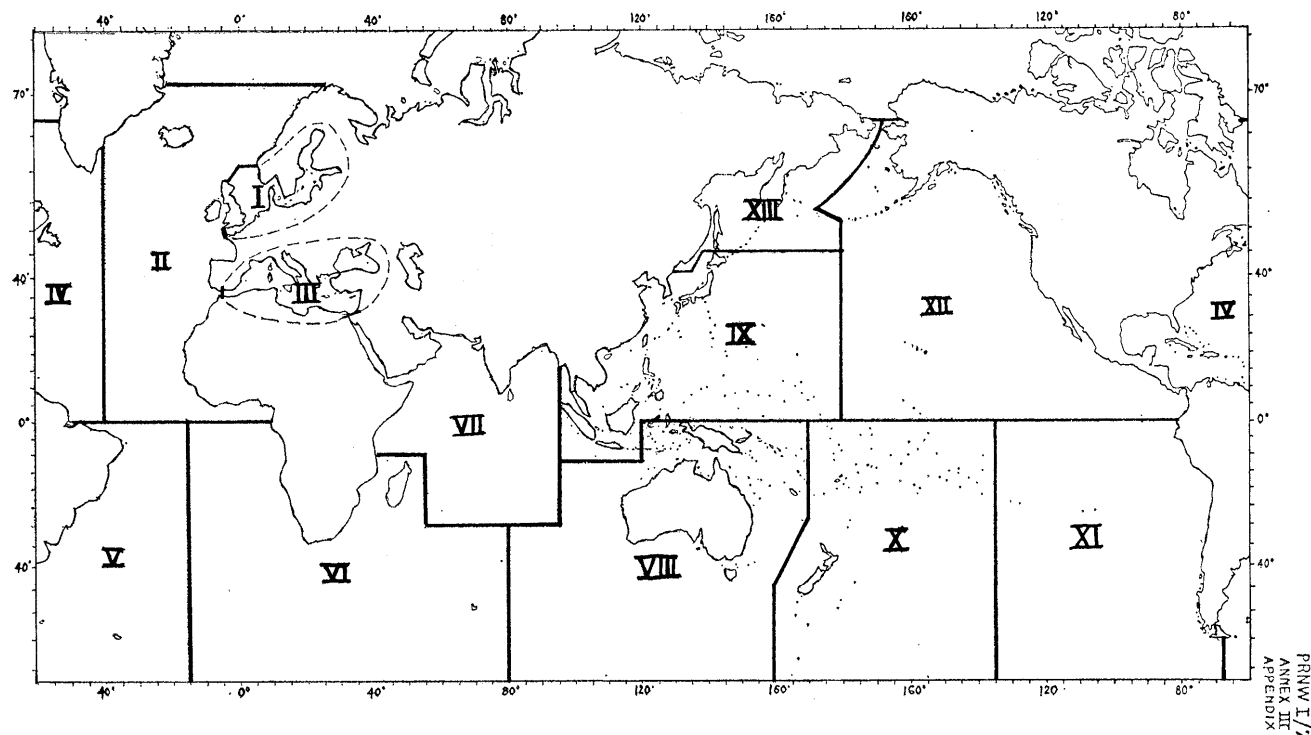
(h) unexpected alteration or suspension of established routes;

(i) cable or pipe-laying activities or other underwater operations constituting potential dangers in or near shipping lanes;

(j) establishment of off-shore structures in or near shipping lanes;

(k) significant malfunction-

PROPOSED AREAS FOR PROMULGATING RADIO NAVIGATIONAL WARNINGS  
PROJECT DE DECOUPAGE DES ZONES POUR LA DIFFUSION DES AVERTISSEMENTS  
RADIO DE NAVIGATION



ing of radio-navigation, services;

(1) occurrences mentioned in paragraph 8, i.e. naval exercises, missile-firings, space missions, nuclear tests, etc., which may affect the safety of shipping.

The categories of messages to be transmitted as warnings should be reviewed after a period of, say, 36 months subsequent to the implementation of the system.

6. The following list gives examples of information not considered suitable for transmission as navigational warnings in this system:

(a) The establishment of new aids to navigation and displacement and changes in the operation of aids to navigation in ports and harbours;

(b) changes in the visibility range of lights;

(c) small displacements of aids to navigation along the edge of a fairway or a coastal shoal;

(d) establishment of buoys and lights which do not affect main shipping routes;

(e) data on shallow fairways and channels of minor importance to navigation, and depth changes within ports and harbours;

(f) establishment, displacement and removal of objects located among others of similar types previously charted and/or described in guides to navigation;

(g) the presence of small floating objects, e.g. logs, buoys or small boats.

7. Navigational warnings should normally be repeated not less than twice in consecutive 12 hour periods, and thereafter as considered necessary.

8. Information concerning certain special operations which might affect the safety of shipping, sometimes over wide areas, e.g. naval exercises, missile-firings, space missions, nuclear tests, etc., shall be initially promulgated over the system by the area hydrographic authority concerned not less than five days in advance of the scheduled event, wherever possible. The messages should be repeated as considered

necessary until the event is completed.

9. Details and accuracy of the information contained in the warnings shall satisfy the requirements of large scale charts.

10. It is envisaged that arrangements will be made for warnings to be available at port offices and, where appropriate, for their eventual inclusion in Notices to Mariners.

11. All navigational warnings should be transmitted in English and may be repeated in one or more of the official languages of the United Nations as considered necessary.

12. Navigational warnings transmitted within an area should be consecutively numbered throughout the calendar year.

# Financing of Port Projects

by Bohdan Nagorski

Reprinted from IADC Journal "Terra et Aqua" 3/4

(Through the courtesies of the author and IADC or  
International Association of Dredging Companies,  
The Hague, The Netherlands)

*Mr. Bohdan Nagorski was born in Poland. He studied at the Sorbonne University of Paris, the Ecole Nationale des Ponts et Chaussées and the Polytechnical School in Zürich. After completion of his studies he became Managing Director of the Harbour and Waterway Board of Danzig. Because of the war Mr. Nagorski had to leave his native country and acted respectively as Joint Managing Director of the Gdynia America Line in London and later in New York, and as Head of a division in the British Ministry of Transport.*

*In 1952 he joined the United Nations Technical Assistance Organization as port and shipping expert in developing countries. He acted for almost fifteen year as a senior advisor on ports and shipping matters on behalf of the UN Technical Assistance to several governments.*

*Mr. Nagorski's most important brainchild, 'Port Problems in Developing Countries' is, in effect, a manual for port planners and operators and has been published in book form by the International Association of Ports and Harbours.*

## Foreword

Financing port projects may appear to be a dull subject, suitable only for a gathering of specialist accountants rather than port planners and managers.

It is however a matter of capital importance for every individual port scheme as well as for the general port development policies.

Financing is the ultimate stage of planning, a final yes or no verdict on elaborate and important schemes. Refusing funds for a vital port project may result in heavy losses, not only for the port but also for the

entire national economy. On the other hand, extending credits for an ill conceived or not essential scheme may prove to be a waste of scarce money resources, and detrimental to other, more profitable development projects.

It appears worthwhile, therefore, to make a brief review of successive stages by which a quest for funds should be carried out, of methods to be employed and of the usual sources of credits. Main emphasis will be put in this study on financing port projects in economically less developed countries.

## Eligibility for financing

There are many port projects that appear useful and attractive, and which would certainly bring substantial benefits to the relative ports and perhaps to a wider region. But the harsh reality is that to implement all of them is neither possible nor even advisable.

First of all, the demand for capital investments is almost unlimited while financial means are scarce in all parts of the world. Secondly, excessive port extensions can result in overcapacity or wasteful duplications.

Before embarking on a costly project-and most port schemes are very costly-all its aspects must be thoroughly examined on their own merits and in comparison with other possible investments within the port area or in its vicinity. Obviously, the exact purpose of each project must be clearly identified. It may consist in increasing the capacity of existing facilities, or making the port accessible to larger vessels, or in building specialized terminals for containers, ores and oils, or in creating



Mr. Bohdan Nagorski

by reclamation new land areas for port-related industries. The direct aim of all such schemes is to avoid a loss of traffic and further to attract additional traffic and new economic activities by offering improved facilities and services resulting in the faster turnaround of vessels.

The initial criterion of the validity of a port project is the existence of a real need for the proposed construction works and of sufficient demand for services to be offered. It may happen, for instance, that congestions can be avoided and port capacities increased by improving operating and administrative procedures rather than by building new costly facilities. Prospects for the growth of traffic should be evaluated from realistic and very careful economic forecasts.

The next preliminary condition is the technical soundness of the relative project. The safest possible and economically most profitable solution should have been found for each particular purpose. The depth of water, the kind of shore installations, their capacity and speed of handling should make it possible to operate a terminal under optimum conditions of efficiency and costs for all interested parties, not only for the owners or operators of the terminal.

Projects that appear to satisfy the two above preliminary conditions, viz. sufficient demand and correct planning, are submitted to further financial and economic tests in order to fully qualify for allocation of public funds or obtaining credits

from local and international lending institutions.

The most common approach to estimating validity of a request for funds is to evaluate the financial prospects of the scheme, whether enough revenue can be expected to cover interests and amortization of the initial capital and to make repayment of the loan reasonably secure. In Britain, for instance, port investments are required to produce at least a ten per cent rate of return on the capital expenditure.

This simple and purely commercial approach provides a first important measure of the financial soundness of a project.

However, port projects, especially the common use facilities, should be judged not solely in terms of direct financial profitability but also on the basis of their impact on the economy of the region and the country as a whole, on raising the national income and providing opportunities for additional or better employment. Projects with limited prospects as for earning power may in final analysis be found fully justified if their stimulating impact on economic development is expected to be substantial. To evaluate this effect is the second step in testing eligibility of a port project for financing and implementation. Yet, testing the validity of a port project does not end with the examination of its inherent merits, especially in situations when funds are scarce and labour is in short supply. The superiority of a project over other possible schemes which could be implemented by allocation from the same funds should be established. Benefits to the national economy are the ultimate goal, and verification should be made as to whether another investment would not bring more favourable over-all results.

Projects selected for comparison may consist in a different port improvement scheme as, for instance, modernizing common use berths instead of straightening and deepening the access channel (a situation that arose in Bangkok), or building an adequate inland access road rather than providing several deep water berths (like in Assab, the new Ethiopia port). But the alternative

may also be an industrial venture within the port's region. Usually, the benefits of the next most promising scheme are compared with the expected benefits of the port improvement project, when each scheme can be implemented at a comparable cost but not enough funds are available for simultaneous implementation of both.

### Methods to be employed

Considerable progress has been achieved in improving means for qualitative and quantitative evaluation of investment projects. Advanced econometric methods enable port planners to make economic traffic forecasts with a higher degree of probability without, however, eliminating the element of risk. The use of computers makes possible an extremely rapid and very accurate comparison of alternative technical solutions by calculating the impact of more elaborate and expensive installations on lowering future operating costs.

The need for applying sophisticated methods in place or on top of conventional ones and the degree of their usefulness may vary from one project to another. Yet, they offer so many advantages, in particular for comparing alternatives, that they should be used whenever circumstances permit. Absolutely correct answers to all problems cannot be expected but the probability is increased that the best one has been found. Common sense and sound judgment should always be applied for detecting possible mistakes and interpreting final conclusions.

Conventional accounting methods appear quite suitable for evaluation of the earning power of a port project. Charges arising from the full cost of the project, planning, construction, supervision and interests during the building period, should be calculated on a yearly basis, taking into consideration the time to be allowed for depreciation of each particular facility. To this fixed annual charge must be added presumable yearly costs of maintenance, administration, insurance, etc. The probable escalation of current expenses, due to inflation and general increase of costs, should be taken into account.

The expected annual revenue

should be at least sufficient to cover all expected yearly charges, but preferably a certain surplus of income over expenditure should provide a safety margin. The revenue may take the form of a yearly rent for facilities leased to a shipping company or a terminal operator, as is the usual practice in some major ports, such as in New York. A proper share of port dues on vessels that use the terminal, should be added to the income from rent.

For the general infrastructure of the port, such as breakwaters, navigating channels and quay walls, the probable revenue should be computed on the basis of dues on vessels expected to use the port. Land facilities on common-use berths can be amortized by revenue from port dues on cargo. An accurate forecast of future port traffic is the point of departure for general revenue calculations.

A simple and frequently used method for estimating future port traffic is the extrapolation on figures showing the actual growth of traffic during a reasonably long period of time. It might, however, be quite misleading if necessary corrections are not made to reflect changed trends in international commerce, in industrial technology and transport techniques. A rapid growth of a certain kind of traffic may have been of temporary character, to be followed by a considerably slower increase in the future. The use of giant bulk cargo carriers can result in a sharp decline of traffic in a port where deepening of access channels cannot be carried out for technical or economic reasons. In brief, the past is not always a reliable guide for the future.

Advanced computer methods may be required for a quantitative verification whether the best possible technical arrangements have been selected for providing optimum operating costs and conditions with a reasonable initial capital expenditure. However, less complicated procedures can also be applied with great advantage.

The general layout of an all-purpose commercial port can, for instance, be tested by a simplified application of system analysis. Capacities of each part of port installations which are to be used one after the



other by vessels entering the port can be estimated on hand from experience and they must be strictly co-ordinated if bottlenecks are to be avoided. Delays incurred during one phase of port operations, during the use of one particular 'sub-system,' will render higher capacity of remaining sub-systems ineffective. A more accurate quantitative estimate may be obtained if the system analysis is carried out with the help of computers.

For comparison of alternative layouts of port facilities, the use of flexible scale models can be very helpful. This method has been recently developed by the British Transport Docks Board at their Staff College in King's Lynn, Norfolk. Various arrangements of transit sheds, open storage yards, access roads or of different port zones can be reproduced on the model by positioning accordingly movable parts of the model. The resulting conditions of port operations are then evaluated by experienced port officials by a kind of visual simulation.

A more sophisticated and more difficult procedure is to create a theoretical model of the port and to simulate port operations by appropriate computer programs. A physical model may help to visualize working conditions under different lay-outs and to detect possible sources of bottlenecks, but simulation tests on a mathematical model will provide quantitative estimates of expected operating costs. The purpose of computer simulation is to find under which conditions the cost of operations will be the lowest for all concerned or how the delays and waiting time will be minimized.

Simulation tests cannot be successful carried out unless accurate statistical data on various aspects of port operations are available and unit costs for cargo handling and port construction have been realistically determined. Further, programmes for the tests must be prepared by highly competent and experienced staff. Errors in programming or inaccurate input data will result in worthless and misleading answers from the computer. Preparation of a correct model also requires a thorough knowledge of computer techniques and of port

problems.

The task of testing correctness of technical planning may be easier for a bulk cargo terminal where the pattern of operations is much more uniform than on general cargo berths. A major terminal for export of iron ore, to take an example, should be planned as an integral part of the entire transport system, from the mines to the port of final destination. Capacities of all subsystems, inland transport from the mines to the terminal, volume of ore in stock close to the waterfront, the speed of loading, the expected frequency of vessels' arrivals and their tonnage, should be strictly coordinated in correct proportion to the planned yearly volume of exports. The ultimate aim is to obtain the lowest possible real cost per ton for the entire transport and intermediate handling.

When several million tons of ore are to be shipped each year to a remote overseas destination, an expensive high capacity terminal, with a considerable depth of water may prove to be the most economical: high initial construction costs may be fully offset by future savings on ocean transport in big bulk cargo carriers. The use of computers becomes almost unavoidable for calculations of this kind. Manual calculation of costs under several alternatives would take too much time and could become very expensive.

The next step in scrutinizing a port project, namely evaluation of its economic and financial justification, may be relatively easy if the need for radical improvement is so evident that it can be fully substantiated by a general knowledge of inadequate conditions in the port and of difficulties and losses arising therefrom for the national economy.

An approximate quantitative evaluation can be obtained by applying the simple and frequently used 'with and without' method. 'Without' means the situation as it exists and as is expected to further deteriorate with the growth of traffic if the proposed improvements are not carried out. 'With' is the probable amelioration once the port project has been implemented. In a congested port, 'without' may

consist of losses incurred due to waiting of vessels, slow dispatch, increased freight rates and other extra expenses usually connected with serious congestions.

'With' are savings which will be realized by all interested parties, the port, its users, the business community and the consumers, once the danger of congestions is eliminated or drastically reduced.

But with respect to marginal projects whose impact on the economy is to be more accurately estimated by advanced methods, the task of testing a project's justification may become very complicated and evasive. There are many important factors that cannot be expressed in figures and translated into computer language, as for instance considerations of economic independence of a country, national security, social and environmental effects of the proposed works and similar imponderabilia. Nevertheless, valuable though incomplete conclusions may be obtained by a quantitative analysis of all such economic factors that can be subjected to quantification.

#### **Cost-benefit analysis**

Finally, for establishing priority of a port project over other investment schemes, the cost-benefit analysis can be applied with great advantage. Losses due to inability of implementing the alternative scheme for lack of funds, should be included in the cost items of the port project, in addition to the direct expenditure for implementation of the project. Under benefits should be listed savings on transport costs when larger vessels can call at the port, reduced danger of delays, higher port revenue from increased traffic, income from reclaimed land areas, increased earnings of the labor force and of various service organizations, favourable impact on the balance of payment and other possible factors.

The scheme with the most favourable balance of benefits over costs should in principle be given priority.

It appears advisable to emphasize once more that scientific and mathematical methods should be considered only as auxiliary means for decision taking.

The results of simulations and computer calculations should not be un-critically accepted for arriving at final conclusions. Their value is limited by frequent imperfections in input material or in formulating correct programmes. Inability of including intangible factors in computer investigations may also distort the results of the study.

Decisions in financing major projects should be strongly influenced by findings and indications obtained by application of advanced methods, but in final analysis they must be taken on the basis of a deep practical knowledge of social and economic conditions of the country.

In the young, newly independent countries there are additional limitations on the use of sophisticated methods. The need for port improvement or for building an entirely new outlet to the sea is often so evident and so pressing that there is no real need nor time enough for the carrying out of complicated and long lasting studies. Moreover, neither qualified personnel nor reliable input data are available, and proper equipment may not be easily obtainable. Risks of excessive capacity or duplications are much smaller than in ports of affluent nations.

Simple conventional methods can mostly be sufficient in such circumstances although they should preferably be guided by the same principles on which advanced economic investigations are based. Both the system analysis and cost-benefit comparisons can be carried out in an approximate, simplified way, without mathematical formulae or computer operations. However, stringent tests with the help of advanced methods may be advisable for checking correctness of technical planning and selecting best alternative designs. They are often carried out by lending institutions prior to final approval of a loan.

With respect to some kinds of port investments profitability can scarcely be estimated in exact money terms. Their high usefulness can be beyond any doubt but they may not bring direct revenue as, for instance, straightening of the navigation channel by dredging or installation of radar. For some very profitable schemes, as reclamation

of land with the help of dredging, the magnitude of possible profits is difficult to foresee in advance. The value of land can perhaps be estimated but the main benefit may consist in attracting various industries into a newly created industrial zone. The Jurong Estate in Singapore is an outstanding example of extraordinary benefits for the national economy obtained by attracting hundreds of factories to a correctly planned industrial zone on reclaimed land. It would have been difficult to estimate in advance the extent of such benefits, not even in an approximate way.

Investments of above mentioned kinds seem to confirm the paramount importance in decision taking of an economic foresight based on intimate knowledge of local conditions, especially when quantitative financial estimates are not feasible. Another example, from the personal experience of the author of this paper, will show that a pretty accurate quantitative evaluation of a port related project can sometimes be made without the use of advanced methods, as it has been the case for the access road to the port of Aqaba in Jordan.

For quite a few consecutive years the rapidly increasing imports of valuable general cargo had to be driven, on a 200 kilometre sector, through a primitive desert track, for shipment from the newly built port to the capital city of Amman. A decision to build a hard surface road had been constantly postponed by the fear of creating excessive competition to the ailing and inefficient narrow gauge railway with a terminal station at 80 kilometres from Aqaba, at an elevation of 1,700 metres above sea level.

The long lasting impasse has been decisively broken by calculating, in cooperation with trucking contractors and experienced drivers, the yearly losses due to forbidding driving conditions on the treacherous desert track. Excessive consumption of gasoline and oil, extremely rapid deterioration of vehicles and tyres, frequent repairs and ex-orbitant time spent by drivers on each round trip, were expressed in exact money terms, with the conclusion that roughly 800,000 pound sterling were wasted every year,

mainly in foreign exchange, while the cost of building a modern road was estimated at that time to be about two million pounds.

Obviously, in the face of above figures, the British Government who financed the entire Aqaba port project in addition to covering Jordan's foreign exchange deficit, did not hesitate any longer in supplying necessary credits for construction of the new road. Situations as clear and as simple as that seldom arise in economically advanced regions but they may frequently occur in developing countries, where project evaluation by conventional methods might be entirely sufficient.

### Sources of funds

Implementation of fully justified and most profitable port projects can obviously not be carried out unless necessary funds are available or a source of external capital can be found.

In long established and well managed ports improvement and extension of existing facilities should be financed in the first instance by accumulated reserves and renewal funds. Accumulated surpluses of revenue over current expenses exist not only in advanced ports but also in some ports of developing countries as, for instance, in Bombay or Piraeus.

A renewal fund should preferably be high enough to cover the estimated future costs of installations that will have to be built when the old ones are depreciated and became obsolete. The real value of capital invested in the port should possibly be kept undiminished, irrespective of inflation and the general increase of costs.

Formation of reserves and renewal funds requires, of course, a full self-sufficiency of the port, with respect both to current operations and to means for keeping up with the growth of traffic and technological progress.

The big ports of the world have an obligation to meet all reasonable requirements of port users and to provide them at all times with modern and efficient facilities and services. A strong financial situation and high credit rating are the most solid basis for fulfilling these responsibilities.

Financial independence enables the port management to follow a consistent long range policy of port improvement and extension, unaffected by changing budgetary considerations of local municipalities or governmental departments. Reliance on external help or subsidies should be minimized if it cannot be entirely eliminated.

An appropriate system of port due on cargo and vessels is the main instrument for achieving self-sufficiency in ports where the system of common use berths prevails while income from rents, if any, is rather negligible. Most ports are public trusts and making profits is not their aim. But it is only fair to expect port users to pay an adequate compensation for services received.

Port dues are a small part of vessel's port expenses. Ports where dues on vessels and cargo are too low often prove to be the most expensive as their improvement and modernization is hampered by lack of funds. Each day of unnecessary delays in neglected ports costs much more than the amount of port dues. A proper structure of tariffs, with rates in correct proportion to the value of services and their actual cost, can provide a fair and equitable repartition of charges on different types of vessels and various categories of cargo. A balanced port budget, with full provisions for amortization and renewal, as well as for pension and provident funds, should be achieved not only by a proper level of dues but also by exercising utmost economy in port administration and operations with the help of an efficient organization and modern management methods.

Yet, the best-conceived renewal funds and reserves cannot be sufficient for covering full costs of major port extensions, building of new basins or container terminals and other facilities that previously did not exist. It is by no means inconsistent with the principle of self-sufficiency to use external capital for such purposes, in addition to own funds. Most big and prosperous private corporations make use of borrowed money for expansion of their business activities. There is no reason why ports should not avail themselves of similar opportunities.

The most frequent and probably the most appropriate form of obtaining needed funds for extension of major ports is to offer bonds to the public on open financial markets, at prevailing rates of interest and conditions of amortization. This method is widely applied to financing of the continuous extension of marine terminals of the Port of New York Authority or for the remarkable expansion of modern port facilities in Copenhagen. Neither of these two ports appear to have had any difficulties in raising money or in repaying bonds. Thanks to a sound financial management, indebtedness of the Copenhagen Port Authority decreased from 35.4 million kroner in 1957 to 2.7 million in 1971, plus a 10.6 million guarantee of loans to the separate administration of the Free Port.

The next source of capital for major investments may be the national treasury or municipal funds. In ports owned and managed by municipalities, reserves are sometimes used which do not necessarily originate from port revenue. But unless public funds are advanced to ports as repayable loans, they acquire the undesirable character of subsidies, contrary to the principle of full financial self-sufficiency.

It is generally accepted that a part at least of the basic infrastructure of a country must be provided with the help of public funds, regardless of earning power, as otherwise economic progress would be seriously impaired. A net of roads is a typical example. Their effect on the economy is so pronounced that building costs can be indirectly recovered through increased income from taxes, without tolls on major highways or reliance on revenue from automobile licenses.

But ports, unlike roads, are centers of an intensive commercial activity in the form of various services to vessels and cargoes. They are in a much better position than roads for achieving self-sufficiency. Under normal circumstances they should be fully self-sufficient, without subsidies or grants out of national or municipal budgets. Nevertheless, governments of some prosperous countries consider major ports to be so vital for the national economy that they deserve financial assistance of the

State for modernization and extension, be it only for the sake of meeting competition of foreign ports. In France, for instance, an up to eighty percent participation of the State in costs of major infrastructure works is guaranteed by law to six principal French ports. Remaining costs of these works can be covered by long term loans from public funds at advantageous rates of interest.

A few other ports in Western Europe receive direct or indirect subsidies out of taxpayers' money. But probably a majority has to stand financially on their own, like Copenhagen and the British ports.

All above remarks apply predominantly to ports in economically advanced regions. Situations may be very different in many developing countries. Although financial self-sufficiency for current operations is still an essential and realistic goal, it can scarcely be attained with respect to capital for investments, especially in the early stages of port development.

#### Funds for the developing nations

Few ports of younger nations had an opportunity for building up reserve funds which could be used for modernization and improvements. Their credit rating may not be very high. Besides, open markets strong enough for floating bonds seldom exist. Earning power of ports that must be built or radically extended may be uncertain or very questionable.

And most governments are short of funds for investments.

Yet, fundamental improvement of ports in developing countries is an absolute necessity as otherwise an acceptable rate of economic progress could not be achieved, and losses due to congestions could become unbearable.

In such circumstances to rely on financial assistance from more affluent countries and international aid organizations is unavoidable.

The most prominent among the latter in the field of financing is the International Bank for Reconstruction and Development, popularly known as the World Bank. It operates partly with funds provided by governments of member countries but also with means obtained by

floating bonds. Prevailing rates of interest must be paid by the Bank for bonds and similar rates are charged therefore to the recipients of loans in developing countries.

Loans are extended by the World Bank for a great variety of development projects in the fields of agriculture, industry, power plants, water supply, transport and communications, health and education. Roads occupy a predominant position among loans for transport but Bank's assistance on port improvement schemes has also been substantial. About thirty loans have been approved for major port projects between 1950 and July 1972 in 25 developing countries in the total amount of roughly 500 million US dollars.

Interest rates on World Bank's loans have fluctuated between the low level of  $3\frac{3}{4}$  percent for one of the earliest port loans extended to the Port Authority of Thailand in 1950, and the high of  $7\frac{1}{4}$  percent charged in 1971 and 1972. Repayment of loans is usually spread over 20 years with an initial grace period of 3 to 5 years.

The largest amount advanced to a single port appears to consist of two loans to the Port Trust of Calcutta, in 1958 and 1961, to the total amount of 50 million dollars at  $5\frac{1}{2}$  and  $5\frac{3}{4}$  percent. One of the most recent loans was extended last July (1972) to Iran for improvement of her ports, to the amount of 29 million dollars at  $7\frac{1}{4}$  percent.

Much more favorable conditions are attached to loans of World Bank's younger subsidiary, the International Development Association. Lending activities of IDA started in 1961 with interest-free loans for which only countries with a very low per capita income can apply. A charge of  $\frac{3}{4}$  percent must be paid on these zero-interest loans to cover administrative and handling costs. Repayment is spread over 40 years with a grace period of ten years. Barring outright grants it would be difficult to imagine better conditions of financing. So far IDA has extended loans for seven port projects in six countries to the total amount of about 45 million US dollars. The largest single loan was 18 million dollars for the modernization scheme of the dock system in

Bombay, extended in 1962, mainly for covering foreign exchange expenses under the project. A few years earlier, when IDA interest-free loans were not yet available, India had to accept commercial terms with respect to the financing of Calcutta's outports.

The oldest and strongest among regional lending institutions is the Inter-American Development Bank, founded in 1959. The United States alone contributed to the working capital 3,500 million US dollars and they promised 1,800 million more. The Bank has extended loans to fourteen ports in five Latin American countries, to the total amount of close to 90 million US dollars. For some of these projects Canadian and Dutch development funds have been used by the Bank. Interest rates for IAD Bank loans have varied from  $3\frac{1}{4}$  percent in 1963 with respect to the Buenaventura port project in Colombia, to 8 percent in 1970 on a \$8 million loan for the construction of a new port in the State Bahia, Brasil, intended to serve the Aratu Industrial Center. However, an interest-free loan with a service charge of  $\frac{3}{4}$  percent was extended to El Salvador for modernization of the Port of Acajula, on the Pacific coast; this was made possible thanks to a liberal contribution by the Canadian Government.

The much younger and less prosperous Asian Development Bank advanced, from 1968 to October 1972, a total of \$39.3 million for eight port projects in six countries of the region, ranging from Ceylon (Sri Lanka) to Taiwan.

The two largest amounts of \$8.31 and 8.1 million went to Singapore for the extension of wharves in the Jurong Industrial Estate and for new facilities in Singapore's main port. \$5.5 million were provided for a fisheries port in the Philippines. Interest rates for most projects were  $6\frac{7}{8}$  and  $7\frac{1}{2}$  percent, amortization in 13 to 25 years. However, a soft loan of \$5.3 million was extended to Indonesia for the Tandjung Priok port with a  $2\frac{1}{2}$  percent rate of interest. The main purpose of all above loans was to cover the foreign exchange element of port projects.

The African Development Bank was endeavouring in 1971 to form

a special Development Fund for granting loans on liberal terms. Eight transport projects were under consideration for 1971 and 36 projects for the following years, mainly for roads and ports.

The European Development Fund in Brussels is a regional institution of a different kind; it is not a bank but a multilateral aid agency of the six member States of the European Common Market. Economic and social projects in 18 African associated State and in French and Dutch overseas territories are financed by the Fund through non-repayable grants. To a much smaller extent, soft loans of the Fund and normal loans of the European Investment Bank are used for the same purposes. During the first two periods of its activity, that is from 1958 to 1970, 33 port projects have been financed by the Fund at a total cost of 78.5 million dollars. The Gabon government received for instance, \$13.37 million for the construction of a new deep water port at Owendo, south of Libreville, and Curaçao in the Dutch Antilles 1.78 million for deepening the access to the port of Willemstad. Radical extension of the Port of Pointe Noire is another example of port projects carried out with financial assistance of the Fund, mainly by non-repayable grants.

It should perhaps be mentioned that the United Nations Development Programme is not engaged in financing major projects. Its role is to provide technical rather than financial assistance. Only some feasibility studies can be financed by the UNDP or quite exceptionally minor pilot projects.

In addition to international and multilateral assistance, a significant number of port projects has been financed in the framework of bilateral aid. France is probably in the forefront among all advanced countries with respect to her direct contribution to economic and social progress in many younger states, mainly her previous colonies in Africa. More than a 250 million US dollars have been allocated every year from the state budget to bilateral assistance to the 'associated countries,' on top of French contributions to the European Development Fund and to various in-



ternational and agencies. Obviously, many ports in West Africa received from France considerable technical and financial assistance.

The British Overseas Development Administration is also a major contributor to port improvement in a vast range of countries. It offered, among others, a grant of over 3.5 million pound sterling for the first stage of the Aqaba port scheme and for the connecting desert road. The second stage was financed with the help of a West German loan on favourable conditions.

Activities of the United States Agency for International Development are focused, like those of the World Bank, mainly on agricultural, industrial and social schemes, with much less emphasis on transportation. The AID advanced up to the end of 1971 slightly over 50 million dollars for major port improvements in seven developing countries. In addition, grants in the amount of \$15 million were used for financing lesser projects in twenty countries.

The governments of Belgium, Holland, Scandinavian countries and Canada also provide financial assistance to developing ports by the way of bilateral aid, in addition to their participation in international development organizations. Japan seems to be following suit; she is, of course, a major contributor to the Asian Development Bank.

The sum total of above grants and loans has radically contributed to considerable improvement of previous, often quite primitive conditions in many developing ports without, however, attaining as yet the desirable measure of progress. Were it not for various forms of financial assistance, the technical level of many ports would have remained extremely low.

### Recapitulation and conclusions

The problem of financing port projects should be divided in two quite distinct parts: one appertaining to ports of prosperous and economically advanced nations, and another for ports in the less affluent developing countries.

Serious difficulties seldom arise in financing well justified projects in advanced countries. Their problem is rather one of properly selecting for implementation, with the help

of modern scientific methods, the most promising schemes. Continental Europe aims to achieve a certain degree of coordination with respect to major port extension schemes within neighbouring states in order to avoid duplications and excessive competition, and to reduce the pressure for subsidies.

An opposite situation prevails in most developing countries. Funds for port modernization are scarce and difficult to obtain. The need for improvements is more pressing and dangers of duplication seldom arise. Conventional methods usually suffice for economic justification of port improvement schemes. But, in spite of significant progress, radical improvement of ports does not proceed fast enough.

From the point of view of global economic interests, efficient ports in developing countries are about as important as in industrialized regions. Not much is achieved by investing millions of dollars in order to reduce loading time in a Western port by say half a day if the same vessel must wait three or four days before starting unloading in a congested port of destination, in Africa or Asia.

Affluent nations, in their own interest, should generously contribute to improvement of ports in economically less developed countries. In the first instance, it appears that international lending organizations should substantially increase the share of ports in financial assistance to developing countries. Until now, this share has been clearly inadequate, with the shining exception of the European Development Fund.

Out of a total amount of grants and soft loans of 1.080 million dollars the Fund allocated to ports till the end of 1970 about 78.4 million, or slightly more than 7 percent. This figure compares very favourably with the share of ports in loans of large international Development Banks, especially so as financial assistance of the Fund was extended mainly in the form of non-repayable grants.

The World Bank, the main source of development credits, advanced for port improvement schemes not more than 3 percent of the amount of loans approved till July 1972,

\$550 million out of \$18.5 billion. The soft loan subsidiary of the Bank, the International Development Association, assigned to port projects only 1.1 percent of the loan capital, \$45 million out of four billion.

Not much better is the record of the Inter-American Development Bank with respect to port improvement loans. The former President of the Bank emphasized in one of his yearly reports the paramount importance of ports for the economic development of Latin America where 89 percent of exports went, in the 1960s, to countries outside of the region, and 80 to 90 percent of foreign trade moved by sea and had to be handled in ports. Nevertheless, slightly below 2 percent of Bank's funds have been allocated to loans for port projects, \$90 million out of five billion, and 14 loans out of 700.

Port projects undoubtedly deserve a much higher priority than that, a priority in proper proportion to considerable benefits derived from increased efficiency of ports, such as lower ocean freights, reduced handling costs, improved conditions for exports of raw materials and elimination of high losses due to port congestions. A ten percent share in international development loans would not be excessive. But even a modest 5 percent would almost double the present rate of financial assistance from the main lending institutions. Alone the young Asian Development Bank surpassed slightly the 5 percent goal by allocating to ports \$39.3 million out of a total amount of development loans of \$728.8 million.

It does not depend exclusively on the lending institutions and the donor nations to achieve a repartition of financial assistance more favourable for ports.

The receiving countries must play their role. Neither the World Bank nor any other development organization are free to select projects for loans or grants. The initiative must come from the interested governments. The low percentage of port loans certainly reflects a limited number of requests for financial assistance in the field of ports.

In order to achieve the much needed radical improvement of con-

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# The World Trade Center of New York Formally Dedicated

News from  
The Port Authorities of New York and New Jersey

(See front cover also.)

New York, Apr. 4: — President Richard M. Nixon today hailed The World Trade Center in the Port of New York-New Jersey as “a major factor for the expansion of the nation’s international trade.” In a message read by Secretary of Labor Peter J. Brennan at the ceremonies formally dedicating the Trade Center in lower Manhattan this afternoon, the President noted that “the trade expansion activities at this new Center will surely benefit the United States and its trading partners and serve the well-being of countless fellow citizens and friends abroad.”

The Trade Center has been in operation since December 1970. A project of The Port Authority of New York and New Jersey, it is designed to expand the flow of international trade by bringing together business and government agencies involved in the marketing and processing of exports and imports in the bi-state port region.

## Secretary Brennan Principal Speaker

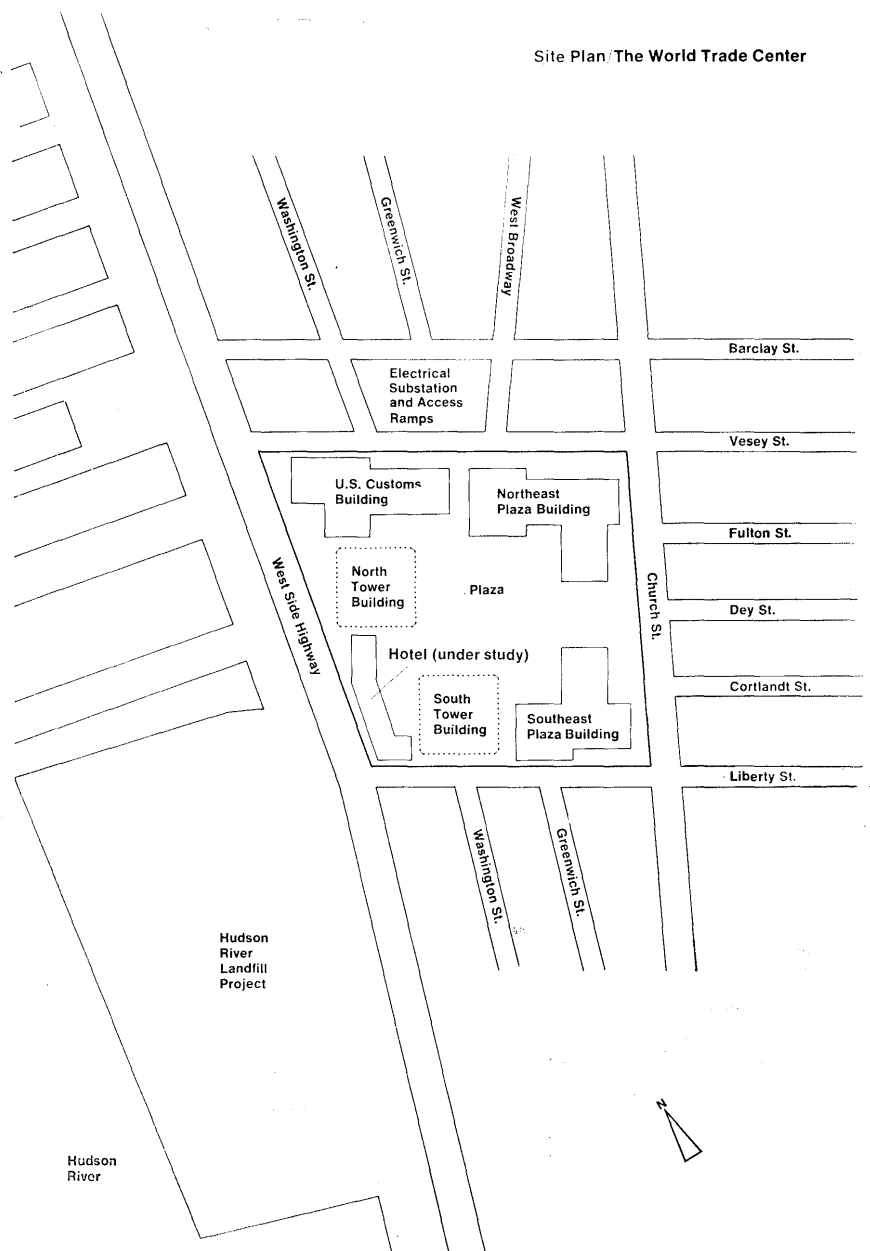
Secretary Brennan was the principal speaker at the ceremonies held on the Trade Center’s five-acre plaza. Governor Nelson A. Rockefeller of New York, Governor William T. Cahill of New Jersey and Deputy Mayor Edward K. Hamilton of New York City also spoke. Port Authority Chairman James C. Kellogg, 3rd, presided. The ceremonies were attended by Federal, State and municipal officials; lead-

ers in business, industry and labor; diplomatic representatives from 45 European, African, Asian and Latin American countries; and delegates from World Trade Centers in some 30 countries.

Secretary Brennan said “No man, least of all a Secretary of Labor, can view these buildings without feeling a deep regard for the thousands of workmen whose skill and industry have translated a magnificent architectural plan into a brilliant reality.”

The Secretary of Labor noted that “this building stands for **cooperation**. For the pleasure we feel in this moment is made more perfect and more satisfying through the fact that this is not a selfish occasion, when our gain here is at the cost of others elsewhere. “For these great twin towers and the entire World Trade Center complex serve as sym-

(Continued on Page 26)



ditions in all major ports of developing countries both sides should be fully aware of the substantial impact of ports on economic development, and they should accord to the relative projects the high priority they undoubtedly deserve.



**The World Trade Center occupies a 16-acre site in lower Manhattan bounded by West Street and the Hudson River on the west, Barclay and Vesey Streets on the north, Church Street on the east and Liberty Street on the south.**

(Continued from Page 24)

bols to the positive spirit of cooperation."

"This kind of cooperation," Secretary Brennan said, "is not only responsible for building the greatest structure the world has ever seen—it is also responsible for creating the greatest country the world has ever seen."

"And so, when we look up and see these towers stretching upward against the sky, let us never forget that they stand as exclamation points to the reality of cooperation among many different kinds of people, and to the hope of greater cooperation among the different nations and peoples who must learn to work together if the world is to prosper and, indeed, survive."

Governor Rockefeller said that The World Trade Center is "not only a magnificent structure functionally, it is the visually exciting extension of the most breathtaking skyline on earth." The Governor pointed out that "whatever we do to increase the flow of goods through the Port of New York increases the level of jobs in this state and that is exactly what the World Trade Center is doing." The World Center, he said, "is spurring new business activities, it is opening new job opportunities, it is enabling New York to retain its accustomed place as the major capital of world commerce."

Governor Cahill noted that "the Trade Center means a great deal to New Jersey" because of that State's prominent role in the manufacture of products for export. "More than a billion dollars of export goods are manufactured in New Jersey each year. Our 80,000 New Jersey citizens are employed in the manufacture and shipping of exports," he said. Governor Cahill added that this Trade Center "will help overseas businessmen learn more about New Jersey and attract them here. New Jersey thus will benefit greatly from the Trade Center, and with it now a reality, we are looking forward, too, to the Port Authority's increasing involvement in commuter transportation."

Deputy Mayor Hamilton, speaking on behalf of Mayor John V. Lindsay, who was away from the City, said "For the past quarter of a

century, at least since the establishment here of the United Nations, New York City has been the unofficial political capital of the world. Now today we have, officially, the Trade Center of the world housed in the world's two tallest buildings. The World Trade Center belongs in New York and all 8 million of us are proud to have it."

At the ceremonies, Guy F. Tozzoli of Westwood, New Jersey, Director of World Trade for the Port Authority, was awarded the bi-state agency's highest recognition for meritorious service, the Distinguished Service Medal, for "the superb leadership and high skills, abilities and enthusiasm" which he brought to his assignment to direct the design and construction of The World Trade Center. Mr. Tozzoli was also cited for his efforts in the creation of the World Trade Centers Association, a network of 74 members—trade centers and related international business organizations—from 29 nations. Mr. Tozzoli has been President of the Association since 1970.

The World Trade Center is located on a 16-acre site along the Hudson River. The project, which features two 110-story, 1,350-foot-high buildings, tallest in the world, also includes an eight-story United States Customs Building, two nine-story plaza buildings, and a hotel which is presently under study. Six below-grade levels feature a new PATH World Trade Center terminal, parking for 2,000 cars, truck docks, storage areas and space for international shops and restaurants.

As many as 3,500 construction workers were required at the peak of construction during the seven years since work began in 1966. Some 1,500 workers are now employed on the project which is scheduled for completion in 1975.

#### Services to Businessmen

The Trade Center has been called a "United Nations of Commerce." Some 300 international trade firms are now doing business at the Center, including exporters, importers, freight forwarders, Custom House brokers, international banks, trade associations, U.S. and foreign government trade

agencies, state government trade representatives and other world trade organizations. More than 7,000 people are working now at the Trade Center. Ultimately, some 50,000 people will be working at the Center every day.

As part of its efforts to expand international commerce, the Trade Center offers its international business tenants a variety of world trade services: The **World Trade Institute**, which occupies the entire 55th floor of One World Trade Center (North Tower Building), offers practical courses in all aspects of world trade. It also provides a forum where international businessmen can meet to explore new markets, discuss mutual problems and develop concepts, techniques and procedures to facilitate and increase the flow of exports and imports among all nations of the world. Among its major meetings since the Institute's opening in September 1971, have been seminars on trade with China and Japan; conferences on the Domestic International Sales Corporations (DISC) program; an East-West Trade Consultation Conference for American businessmen with participation by representatives of seven eastern European nations; and a "Consultation Meeting on Product Adaptation," designed to help manufacturers from developing nations sell their products on the American market.

The **World Trade Information Center** provides a vast international trade information service to help Trade Center tenants and businessmen throughout the world.

**Interfile**, the first automated library of world trade information sources, is designed specifically to handle practical questions on international trade and commerce. Questions are translated by a trade information specialist into a three-part code which is punched into the interfile computer terminal. The remotely located computer scans its data bank of 20,000 entries and prints out at the terminal descriptions of trade information sources that correspond to the precise questions asked. The sources can then be referred to in the Information Center's specialized library.



Interfile will soon be a global information service when other trade centers around the world, members of the World Trade Centers Association, tie in to the computerized system, giving businessmen in other nations instant access to the entire Interfile data bank. The system already contains substantial data provided by other trade centers, and this information will grow with each new Trade Center joining the network.

The Information Center also provides visitors to the Trade Center with a quick and complete guide to the locations and services of Trade Center tenant firms by means of the New York Telephone Company's Electronic Yellow Pages, a unique directory of tenant services.

To speed the transaction of international business, The World Trade Center's Integrated Communications System incorporates the latest in telephone, computer, microfilm and television technology and services.

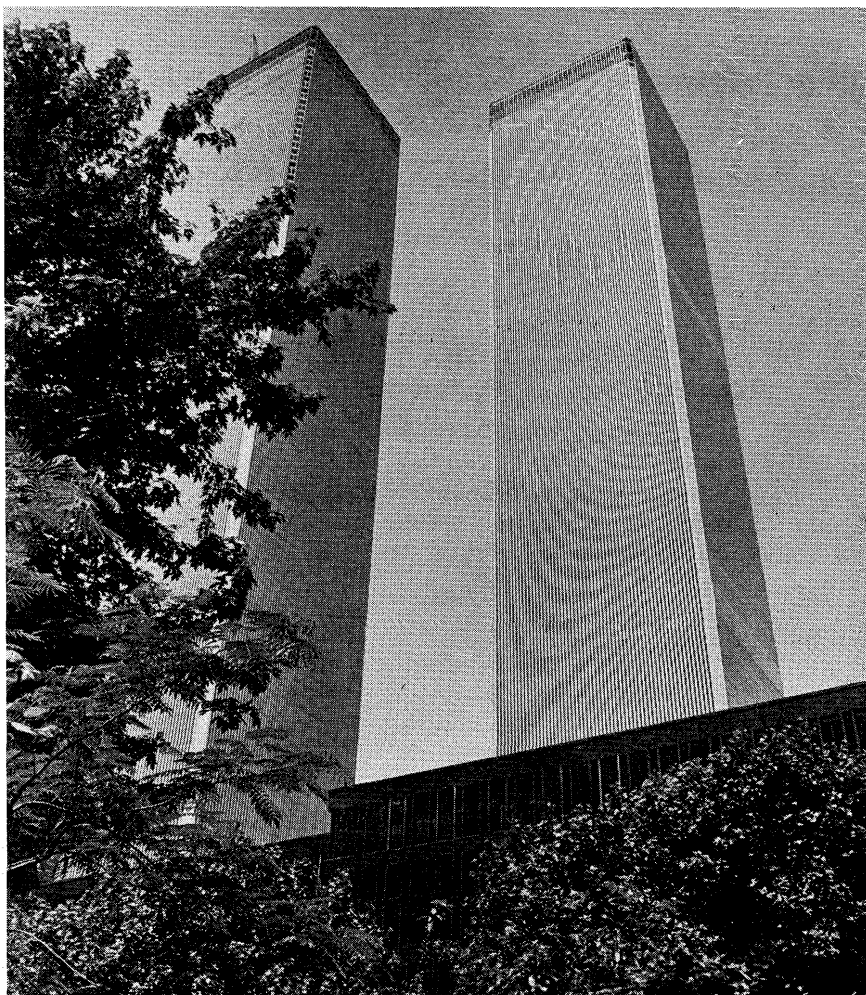
The World Trade Center in the Port of New York-New Jersey is one of 13 trade centers already operating or under construction in the network of the World Trade Centers Association, established in New Orleans in 1968 to encourage mutual assistance and cooperation among members, promote international business relationships and foster increased participation in world trade by developing nations.

#### **Design and Construction of Trade Center**

The architects of The World Trade Center are Minoru Yamasaki and Associates of Troy, Michigan, and Emery Roth and Sons of New York City. General contractor for the project is Tishman Realty and Construction Company of New York City.

The site on which the \$800 million international trade complex is being completed is bounded by West Street on the west, Barclay and Vesey Streets on the north, Church Street on the east, and Liberty Street on the south. During construction, which began in 1966, as many as 120 prime contractors and 360 subcontractors were involved.

The buildings of The World



**The twin towers of The World Trade Center rise 110 stories—1,350 feet—above the streets of the Lower Manhattan shipping district.**

Trade Center are unique. In architecture, structural design, new uses of steel and other materials, improved elevator service, and advanced engineering ideas, the Trade Center represents a new era in skyscraper construction. Its buildings have been called "the first buildings of the 21st century."

Newly used in the United States for building construction was the slurry trench method of equalizing pressure while excavating for foundations. The Trade Center towers' foundations, built with this method, rest on bedrock some 70 feet below grade. The exterior walls of the tower buildings carry the vertical loads in a unique structural framing system which permits column-free interiors and resists lateral wind loads. The "skylobby" elevator system divides the towers into three zones, each with its own lobby and its own set of local elevators, thus reducing space consumption by elevator shaftways.

#### **History of the Project**

The original impetus for the establishment of a World Trade Center in the Port of New York-New Jersey came from the Downtown-Lower Manhattan Association in January 1960 when it requested the States of New York and New Jersey and the City of New York to authorize a Port Authority study of the planning, financing, construction and activation of such a big-state facility of commerce.

The Port Authority completed the study in 1961. It found that the development of such a Center would be economically feasible and would benefit the people of the entire Port area by maintaining and stimulating the flow of international trade in the Port.

The following year legislation directing the Port Authority to develop The World Trade Center and acquire the Hudson and Manhat-

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# *Preventive Measures Against Air and Water Pollution in Port Areas*

by **W. H. Brotherson, C. B. E., President,  
Maritime Services Board of New South Wales,  
Australia**

Paper presented at the panel discussion of the Eighth Conference of the International Association of Ports and Harbors held in Amsterdam on May 8, 1973.



**Mr. W. H. Brotherson**

## **Introduction**

Consideration is given in this report to some details in the control of water and air pollution in port areas. Various aspects of this problem are dealt with and special emphasis is given to the problem as related to vessels. Experience in New South Wales ports and particularly the Port of Sydney provides the basis for the report.

With close attention being given generally to pollution problems and community standards demanding effective control of these matters, the Port Authority has important responsibilities in this field. In a special way the natural beauty and attraction of Sydney Harbour and its popularity as a recreational waterway, unusual for a major port,

demand enforcement of stringent

tan Railroad (now the Port Authority Trans-Hudson system) was passed by the legislatures of both States.

In 1962, the Port Authority selected the architects for the project. Architectural plans were announced in 1964 and construction began in 1966. In 1968 the first steel for the North Tower Building (One World Trade Center) was placed.

In December 1970, the first tenants moved into the project. In July 1971, the new PATH World Trade Center terminal was opened, and that fall the World Trade Institute held its first classes.

environmental requirements in order to preserve this natural asset.

## **Oil pollution from vessels in port areas**

The control of pollution of navigable waters by oil is exercised in New South Wales under the Prevention of Oil Pollution of Navigable Waters Act which was introduced consistently with legislation in other States and the Commonwealth in accordance with the International Convention. The Board has adopted a policy of determined enforcement of this legislation and this has resulted in waters being maintained significantly free of oil.

Oil pollution reports are immediately investigated by trained officers of the Board having in mind dual considerations—the minimising of the effects of the pollution and the acquisition of evidence.

The Board maintains oil dispersal equipment and materials, smaller units being available for treatment of quantities up to about 20 gallons and larger units being available for greater quantities of spilled oil. Costs are recoverable where responsible parties are identified.

The acquisition of evidence follows procedures set out to enable satisfactory evidence for legal action to be obtained. Evidence necessary for legal action has invariably consisted of direct observation of oil discharge by witnesses or admission of vital matters by the Master of the vessel. Comparative analysis of oil samples has been use-

ful as confirmatory evidence and as information to support enquiry along particular lines but it has not been possible to date to successfully prosecute in New South Wales based on circumstantial analytical evidence alone. It is believed that some success has been achieved interstate and in New Zealand on this evidence alone.

The Board has made use of an "authority and undertaking" document to enable subsequent legal proceedings to take place without delaying vessels. Completion of this document by a Master and an agent authorises the agent to accept service of process on the Master's behalf and to appear on his behalf in any proceedings.

There were 17 successful prosecutions concerning vessels under the Prevention of Oil Pollution of Navigable Waters Act in the year ending June 30, 1972, and a further 12 successful prosecutions concerning land sources in this period. Fines imposed have ranged to \$1,000, the maximum penalty under the Act being \$2,000.

Consideration is currently being given by the Government to a number of proposed amendments of the Prevention of Oil Pollution of Navigable Waters Act and one of these amendments provides that the maximum penalty would be \$50,000. Other amendments concern extension of the Board's powers in serving notices requiring certain actions to be carried out where oil is escaping or is likely to escape from

a ship.

Most known instances of oil discharge from vessels involve some accidental aspects, or circumstances of inattention or even negligence by personnel. It has been very difficult to obtain evidence of deliberate discharge of oil as such discharge is likely to occur in the absence of witnesses and admissions regarding such operations are not generally made.

Oil discharge from vessels in port areas has frequently been due to the development of an air lock during bunkering or other transfer of oil. While in some instances this has been successfully pleaded by the defendant as a special defence, in other instances this has not been accepted by the Court and the prosecutions have been successful. It has been found that thorough investigation in these instances provides information useful in subsequently refuting these defences.

The prohibition of discharge of oil or mixtures containing oil is regarded by the Board as an absolute prohibition. Some concern does exist regarding mixtures containing oil where water may contain oil in the vicinity of 0 to 10 ppm. There are considerable technical difficulties in removing traces of oil from water at these levels especially in oil water separators designed for use in vessels. The need for administrative discretion in dealing with such instances is appreciated although no precise figures have been adopted and in any case it is not proposed to amend the Act by including any such limits.

In the area of oil spillage control and collection the Board's research officers are currently assessing commercially available equipment for the containment, absorption, mechanical collection and disposal of spilled oil. Whilst experience thus far has indicated that most spillages of oil occurring in New South Wales waters are of a minor nature and can most readily be removed by treatment with dispersants, the Board nevertheless recognises that there is a potential for major spillages of oil into the waters under its jurisdiction and also that should such a spillage occur, action to contain and collect the oil will be preferable to dispersal of the spilled oil

into the natural environment. Accordingly, in its role as the New South Wales Authority responsible for the implementation in the State of the recently announced National Plan to Combat Pollution of the Sea by Oil (mentioned overleaf) the Board intends in conjunction with other Federal and State Government Departments to become fully equipped to deal with any major oil spillage.

One procedure specifically aimed at the prevention of oil pollution by vessels is the issue to the Master of every vessel entering the Port under pilotage a printed warning concerning oil pollution. In addition the Board provides an oil waste collection service for the use of shipping in the Port although experience has been that only limited use is made of this service.

The recently formulated National Plan to Combat Oil Pollution co-ordinated by the Commonwealth Department of Transport and involving various State authorities provides that in the event of major oil spillage the Commonwealth assists materially and financially in oil clean up action, finance to be raised through a levy to be made on each vessel operating into and out of the ports of the country. Implementation of this plan is proceeding and when operational should provide smooth control of emergency situations involving major oil spillage.

#### **Discharge of sewage from vessels in port areas**

In general the discharge of effluent not conforming with certain standards into navigable waters is prohibited under the Navigable Waters (Anti-pollution) Regulations. Specified standards include a maximum of 15 ppm Biochemical Oxygen Demand (B.O.D.) and 10 ppm Suspended Solids. Sewage wastes from a vessel are likely to be up to 800 ppm B.O.D. and 400 ppm suspended solids. The direct discharge of untreated sewage wastes is thus contrary to the general requirement of the Regulations.

However, in instances of discharge of sewage, the Regulations provide that it shall be a defence "to prove that no danger to the health of, and no unreasonable nuisance or annoyance, to any persons

was occasioned by the discharge concerned." On this basis legal action has not been pursued regarding sewage discharge from vessels.

The need for improved control over such discharge, having in mind practicable alternatives, has been under consideration by a sub-committee of the Australian Association of Port and Marine Authorities and that Committee's report on "Disposal of Sewage from Commercial Vessels" examines the problem in detail and makes certain recommendations which it is anticipated would form the basis for a uniform code for the control of discharges from commercial vessels. Significant amongst these recommendations are proposals that the discharge of untreated wastes to port waters be prohibited and that vessels should either be equipped with self-contained sewage treatment units or retention tanks of sufficient capacity to retain all wastes while vessels are in port areas. The recommendations allow for orderly implementation of the proposals including certain exemption provisions.

The quality of effluent from on board treatment units is unlikely to meet the 15 ppm B.O.D. and 10 ppm Suspended Solids standards referred to previously as these are difficult standards to achieve in land based units without the added limitations involved in fitting to vessels.

An effluent quality of 50 ppm B.O.D. and 80 ppm suspended solids has been specified by naval authorities and it is understood that commercially available units do meet this specification. For the quantity of effluent likely to be discharged from vessels and, having in mind the assimilative capacity of receiving waters in port areas, this standard could prove to be acceptable in a number of ports throughout the world.

#### **Discharge of miscellaneous wastes from vessels**

Consideration is given in this section to the discharge from vessels of wastes such as solid wastes, garbage and waste-waters other than sewage. These are controlled by the Navigable Waters (Anti-pollution) Regulations. The Regulations prohibit the discharge of "pollu-

tants" and the definition of "pollutant" includes, inter alia, refuse and also any liquid matter which does not conform with specified chemical standards. Previous reference has been made to two of these standards, Biochemical Oxygen Demand and Suspended Solids content, and other critical standards include:—

pH (Acidity or Alkalinity):

Must be within the range 6.5 to 8.5

Iron: 5 ppm maximum

Wastewater which may not meet these standards may arise from tank cleaning operations on vessels, including fresh water tank cleaning. The discharge of such wastes has been observed to cause extensive discolouration of the water in port areas and has been the subject of legal action in the Port of Sydney. Other instances of paint spillage during maintenance work on vessels have been known to cause unsatisfactory conditions, especially at major passenger terminals located near popular tourist areas and ferry wharves. The Board is concerned over such instances but legal action has not always been possible.

The prohibition on discharge of refuse has previously been difficult to police especially where passengers or crew members have discharged litter or garbage and individual identification has not been possible. Recent amendment of the Regulations now places the responsibility in these matters with the owner and the Master of the vessel. It is anticipated that this will result in better control in these matters and that greater provision will be made on board vessels while in port for suitable receptacles for this refuse. Special refuse collection services operate for the use of shipping in the ports and this ensures that there is no justification for any overboard discharge of refuse.

The Board provides a harbour cleaning service for removal of floating rubbish and debris from the port and recent figures indicate that some 350 tons per month are recovered from the Harbour. Only a minor portion of this is attributed to shipping with the main contribution being from land sources.

#### **Air pollution from vessels**

The most serious aspect of air

pollution in port areas which the Board has given attention to is the control of the emission of smoke from shipping.

In 1970 Regulations were promulgated specifying certain permitted densities of smoke and the maximum periods of time in each hour or part of an hour which each specified density may be permitted.

The smoke density is measured by the Board's wharf patrol staff who carry with them miniature smoke density charts called Ringelmann Charts on which are printed five shades of grey. The density of smoke emitted by a vessel is compared with these grey scales and a grey selected which is as close as possible to the density of the smoke. The period of time during which smoke of this density is emitted is measured and if this period of time exceeds that specified in the Regulations as the maximum permitted then legal action is taken against the Master of the vessel.

A number of successful prosecutions for breaches of these Regulations have occurred and as a result a considerable decrease in the amount of smoke emitted in the Port of Sydney has resulted. The Regulations prohibit the emission of black smoke entirely, and soot blowing is not permitted. Provision is made in the Regulations for temporary relaxation of the Regulation requirements upon application to the Board and this application may be approved in cases such as mechanical breakdown or navigational difficulties.

So far as other forms of pollution from ships are concerned sporadic complaints are received of odour from funnel emissions. These complaints come mainly from occupants of non-airconditioned buildings adjacent to berths and are caused by sulphur fumes created by the combustion of fuel oils with high sulphur contents. If such complaints were to increase to a significant level it may be necessary to take action to require the use of low sulphur content fuel oils whilst vessels were within the port confines.

On occasions problems have arisen during the handling of bulk quantities of liquefied gases, such as liquefied petroleum gas and am-

monia, due to the necessity to release small amounts of gas when disconnecting pipelines. The odour of such gases is unpleasant and irritating and in high concentrations can be hazardous. Such problems can usually be minimised, however, by requiring stringent operating procedures.

#### **Pollution from port lands**

The control of pollution from port operational areas and lands associated with port activities is a matter aligned with control of pollution from land sources generally and as much the legislation appropriate to land sources is applicable.

In port areas as referred to in this section sources of pollution are related particularly to bulk handling operations whereas conventional cargo handling and container facilities do not present any major difficulties. The Board has had first hand experience in dealing with dust emission from coal loading facilities and from unloading operations involving substances such as rock phosphate, alumina and sulphur. Provision of appropriate water sprays, partially enclosed hoppers, covered conveyors and specially designed stacking and reclaiming equipment have been incorporated into these facilities in order to eliminate or minimise nuisance.

Oil berths and terminals are, of course, a potential source of oil pollution but it has been found that while pollution instances, including some relatively major discharges, have occurred at these sites, the position generally is satisfactory. Close control, efficient operations and acute awareness of the possible problems have contributed to this situation.

The Australian Association of Port and Marine Authorities Rules for the Handling of Dangerous Goods in Ports control the handling of dangerous goods in port areas. While specifically directed towards eliminating and minimising hazards in handling these substances they incidentally provide effective control over possible pollution by these substances.

#### **Conclusion**

This report serves to illustrate the  
**(Continued on Next Page Bottom)**

# SEAWAY TOLLS—

## *The Issue Smoulders*

The Toronto Harbour Commission  
Toronto, Ontario, Canada

Toronto, April 26th:—There will be no increase in tolls on the St. Lawrence Seaway this season, according to Canada's Transport Minister Jean Marchand. He said in the House of Commons recently that he was "certainly not ready to recommend to the Cabinet any increase in Seaway tolls this year."

The Government has been considering a report recommending a 27.5 per cent increase in tolls on the Canadian section of the Seaway over a period of five years. The report was made public in January, 1971.

The issue of increased tolls has caused varied reactions across Canada.

Port of Toronto's General Manager E. B. Griffith pointed out that tolls on the St. Lawrence Seaway are a deterrent to growth. He added: "It is incongruous that of all the moneys spent by both the Canadian and United States governments in developing water transportation, this waterway is the only one for which charges are made to users."

"There are encouraging moves in Canada in the adoption in our transportation policy in user payments," said Griffith. He added that if all means of transportation were put on the basis of payment, the Seaway would move ahead by "leaps

existing control of air and water pollution in port areas of New South Wales and attempts to examine possible future requirements and developments in these matters. It is well recognised that port authorities cannot move as independently in these matters as they may wish in view of the international movements of vessels and a realisation of practicable limitations. However, it can be presumed that the standards of the past are not necessarily satisfactory for the future.

and bounds."

The International Association of Great Lakes Ports has always been in the forefront of the fight against rising Seaway tolls. "It only stands to reason that if tolls go up, the shipping lines will be affected," said an IAGLP spokesman.

"Many of our customers," said Griffith, "realize that the disappearance of water transportation on the Great Lakes will very seriously affect their competitive position in the general cargo field, and in many cases, their commercial existence."

"The use of the Seaway prevents the completion of the monopoly objective of the large shipping companies and maintains a competitive rate."

The Port of Toronto's general manager said that at a recent Canadian Industrial Traffic League breakfast last March, a major shipping representative said on behalf of the Canadian Chamber of Shipping that ocean carriers "cannot continue to absorb the inland cost of transportation" and that the day was coming when the ocean freight rates would be adjusted to cover such costs.

"In spite of all the changes to date," Griffith said, "Water is still the cheapest form of transporting goods, and in the long run, economics will have to prove effective."

During a recent speech in Winnipeg, Man., the vice-president of CP Rail's prairie region, R. S. Allison, said that seaway tolls should be raised by 25 per cent—just beneath the point at which it would be uneconomic to carry iron ore along the waterway.

A newspaper report said that raising tolls by 25 per cent would mean the average Great Lakes bulk carrier would pay about \$15,750 for each Seaway transit between Montreal and Lake Ontario. Eastern

shippers have been saying for several years that even a minimal cost increase in shipping iron ore—the usual upbound cargo for grain ships—could divert much of the ore down the United States east coast, resulting in a hefty increase in grain shipping rates, since carriers would either have to deadhead to the Lakehead or carry less lucrative cargo.

George Franklin, a Manitoba farmer and wheat pool director, who is Chairman of the Great Lakes Waterways Development Association, claimed a toll increase would be reflected in an increase of at least 15 per cent in transport costs to farmers.

He argued that Seaway tolls should be removed completely and the Seaway subsidized through general revenues, as are highways, airports and railways.

Subsidies paid to railways under National Transportation Act amounted to more than \$100 million last year, according to a Winnipeg Free Press report.

The fight over increasing tolls was also evident in Regina more than a month ago when J. W. McGiffin, Chairman of Canada Steamship Lines Ltd. of Montreal, told representatives of western farmers that the cost of moving their wheat to export markets would go up if Seaway tolls were raised.

He said that the government should be persuaded to follow the policy adopted several years ago by the United States to forego interest on the Seaway debt past, present and future.

"Existing levels of tolls are more than enough to pay operational and maintenance costs of the Seaway," said McGiffin. He noted that the St. Lawrence Seaway Authority returned "more than \$115 million to the Federal Treasury" from 1959 to 1971.

"Surely," he said, "in a country such as Canada a substantial measure of government support for transportation is inevitable and indeed essential."

"The support given the railways in the past and the present under sizeable subsidies, the privileges accorded air transport through the provision of airports, without any real thought of recovery from the

**(Continued on Next Page Bottom)**



# Pilot Projects Provide Dredging Data

The Toronto Harbour Commission  
Toronto, Ontario, Canada

Toronto, April 27th: — Heavy equipment is being assembled to start on the main phase of the dredging contract to create a new entrance into the Port of Toronto early in June.

The work, which includes the dredging of a new shipping channel to Seaway depth, as well as the widening of the present Eastern Gap, is expected to take about eighteen months to complete.

McNamara Marine, who won the \$7 million contract over three other bids, will be using as part of its equipment a 1,400-ton dredge capable of digging to a depth of 75 ft. below water level.

The "Canadian" will pump 1,000,-

so-called user, are precedents which should be applied with at least equal force to water transportation," he added.

"The Seaway has brought substantial savings in costs, in absolute terms in the transportation of Prairie grain to the markets of Eastern Canada and to overseas destinations," he revealed and added that through competition the Seaway has held down the costs of other modes of transportation.

In an editorial earlier this year the St. Catharines Standard said: "Relieved of the burden of capital debt and interest charges, the St. Lawrence Seaway System, including the Welland Canal, would be able to more than cover its operating and maintenance costs.

"The St. Lawrence Seaway is every bit as important and vital to the National economy as the railways and highways. Neither railway passengers nor highway users are expected to pay the capital cost of railway or highway construction. Why should the Seaway users be treated differently?" the newspaper asked.

000 cubic yards or 1,500,000 tons per month. This is the equivalent of 140,000 truck loads of material.

The large dredge, 176 feet long and 50 feet wide, is powered by a 10,000 h.p. engine and has a cutter head 15 feet in diameter. It is expected that the teeth on the head will wear down approximately every five days and will have to be replaced at the McNamara yard in Whitby, a two-hour operation. Spare cutter heads are available while this is being done.

Dredged material will be piped to the end of the Outer Harbour Headland where it will be placed in position to form a landfill base for the 188-acre Aquatic Park.

In order to ensure that there are no detrimental environmental effects, the dredged material will be placed initially in position at the end of the headland to form a semi-

circular berm. This will be topped off with trucked fill which has good wave resistance.

Material from the central area of the Eastern Gap, which is of poorer quality, will be placed inside the specially-made basin and buried deep in the landfill mass.

Another material which will be placed in the basin is the wood which forms the wall foundation of the present Eastern Gap. The demolition of the wall, which is expected to take place later in the year, consists of the removal of approximately 3,320 linear feet of structure. Part of the concrete slab material will be reserved for the construction of a new wall while part of it will be used for strengthening the landfill.

The wooden cribs which form the foundation will be boomed off during the demolition of the wall to conform to strict environmental safety conditions.

The breaking up of the wall was expected to be completed early in the project, but high lake levels have meant that the removal of the wall could create a safety-hazard to boaters in the Eastern Gap area.

Many of the technical and environmental precautions being carried out during the dredging are a result of earlier dredging programs



**Aerial shows the land formed (arrow) at the Outer Harbour Headland during one of the pilot dredging programs last year. The semi-enclosed area (right) is the new Outer Harbour.**

carried out by the Toronto Harbour Commission.

The original pilot dredging program, for instance, revealed that it is possible to drive a truck over the dredged material just 24 hours after it has been placed in position.

The pilot program involved the dredging of 10,000 cubic yards from the bottom of the Outer Harbour to form a hook at the end of the small promontory to the east of Cherry Beach.

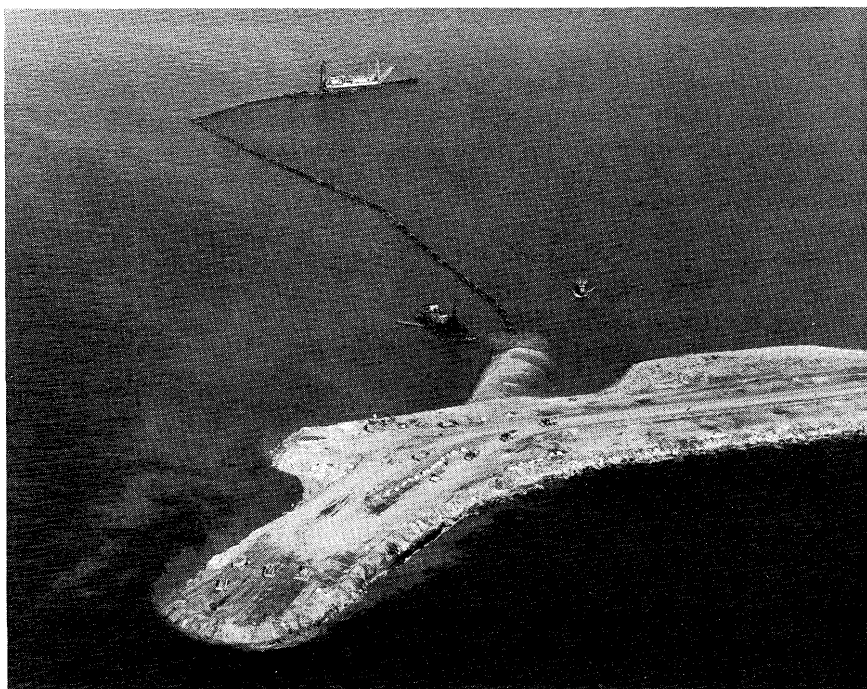
Prime purpose of the project was to study exactly how the dredged material would settle under water. It was possible to calculate the gradients of the slopes from the nature of the dredged material and where it was being placed, but accurate first-hand information was required before embarking on the major 10-million cubic yard program.

The secondary purpose of the project was to study what environmental effect, if any, the dredging would have. To this end, observers from the Federal Ministry of the Environment were on hand during all stages of the program.

The gradients of the slopes were measured by means of a special device called an "inclinator" operated by a scuba diver under water. Karl Fricbergs, the Port of Toronto's coastal engineer working the buddy system with Doug Wilkins of the Ministry of the Environment carried out tests on a one-day old berm.

Measurements were also taken by means of a lead line. The slopes were shown to have an average gradient of 4:1 but the sandy material was also proved to need the protection of coarser materials against wave action in high winds.

The dredged material settled very quickly. This was due to the absence of fine clays and silt which would shift and prolong the settling period. The origin of the material dredged from the Outer Harbour is almost all a result of wave action against the Scarborough Bluffs, about 90 percent of which is of the fine clay variety, was deposited along the shoreline. The fine materials were immediately washed out into deeper parts of the lake leaving the coarse sand deposited on



**Dredged material is deposited at the end of the Outer Harbour Headland during one of two pilot projects carried out last year by Toronto Harbour Commission engineers. The purpose of the programs was to determine how dredged sand would fall into place, what the environmental effect would be and how best to carry out the building of Aquatic Park from an engineering point of view. The park is a by-product of the main dredging operation to create a new entrance into the Port of Toronto.**

shore.

Tests were carried out on the berm of dredged material to find its compaction rate. A 210-lb. man pushing a 2" by 4" board into the material reached a depth of eight inches in a one-hour berm and one inch in a five-day old berm.

This would seem to indicate that a one-day old berm would support trucks bringing in armouring material.

Another interesting factor which emerged from the pilot program also concerned the quality of the material.

About five percent of the dredged material proved to be of a valuable coarse gravel type. This gravel has good resistance to wave action and can be used for strengthening the sandy material at and below water level.

Harbour Commission engineers immediately began working on methods of separating the materials in order to make best use of their qualities.

The dredged spoil displayed very little turbidity or visual cloudiness. No turbidity streamers were observ-

ed to reach more than about 300 feet from the discharge end. Ministry of the Environment officials, who co-operated throughout all stages of the test dredging, expressed their satisfaction at the virtually turbidity-free performance.

The pilot project represented one tenth of one per cent of the total dredging program to be carried out and resulted in valuable engineering data.

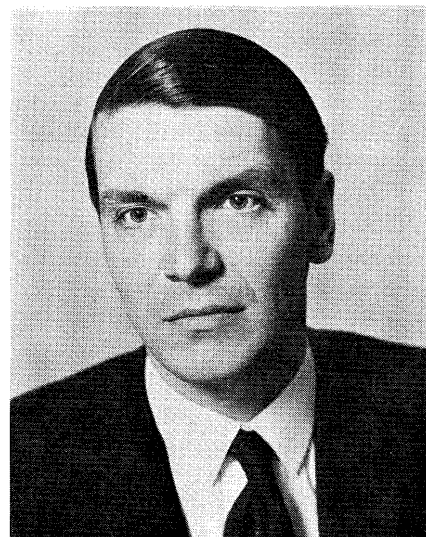
Another test 20 times as large was then carried out. Some 200,000 cubic yards of material were dredged from the area immediately north of the tip of the Outer Harbour Headland.

Canadian Dredge and Dock Ltd. carried out this phase of the study. Because of the exposed position of the end of the Outer Harbour Headland, Commission engineers were able to gain more valuable information about the behaviour of the dredged material under conditions of stronger winds and wave action in deep waters.

# A Year of Progress for British Ports

Statement by  
Mr. Philip Chappell, N.P.C. Chairman

News Release from  
National Ports Council, London



Mr. Philip Chappell

In presenting the Annual Report of the National Ports Council for the year 1972, Mr. Philip Chappell, Chairman of the Council, said that 1972 was a year of real progress by British Ports. The highlights were:

The finding of a solution by the industry itself, with financial help from the Government, to the industrial troubles of mid-1972. There were now significant signs of a better industrial climate in the ports.

The final out-turn of ports' financial results in 1971 confirmed the prediction the Council made, in its report last year, of an improvement of some £10 million. On current estimates the improvement was being maintained; results looked like being £3 million better for 1972 than the comparable figure for 1971.

The demands imposed on the ports by tasks of exploration for and development of North Sea oil resources were being met on the basis of continuing careful assessment of supply/demand.

Mr. Chappell said that in relation to last summer's industrial relations troubles, British ports were not alone in suffering from these problems.

"Other countries have felt the consequences of feelings of insecurity engendered by the sharp impact of new technologies on the numbers of dockworkers required for cargo handling."

That was why the emphasis now being placed by the Joint Special Committee on the Port Industry (the Jones/Aldington Committee) on the best possible forecasting of manpower requirements was so important. The forecasts were being

prepared for the Committee by the staff of the NPC.

"These forecasts are one of the essential bases for long term planning and can do much to reassure dockworkers that manpower decisions are based on the best available forward estimates."

The Council particularly welcomed the trend for port authorities to become the major employers of registered dock workers. Port authorities now employed more than half the registered dock labour force as compared with about a quarter only five years ago.

"This must make for greater stability and greater identification with the prosperity of the port," said Mr. Chappell. "And it has the additional benefit that it should become easier to deal with the problems arising from the present division in ports between the 'registered' and the other workers in the port, a total of roughly equal numbers, mostly employed by these same port authorities."

## Port Finances

Mr. Chappell said the Council were heartened by the way in which the increasingly vigorous approach of the ports towards profitability was showing through in their financial results. The achievement of a turnaround of £10 million between 1970 and 1971 had, according to their best estimates, been maintained in 1972 with a further improvement of £3 million. These were overall figures and naturally individual ports varied. One or two had regularly been profitable, but an across-the-board improvement of this order was something new, and owed much to management and the encouragement given by the present administration, notably the

Minister for Transport Industries, Mr. John Peyton.

In the following table of results the 1972 figures are estimates only:

	£ million		
	1970	1971	1972
Capital employed	£ 549.8	£ 572.4	£ 587.9
Operating revenue	134.5	156.1	171.2
Operating expenses	106.5	115.5	15.5
Depreciation	12.5	13.8	15.5
Profits before interest	15.5	26.8	28.8
Interest payable (less interest received)	21.2	22.9	21.9
Net surplus	(5.7)	3.9	6.9

Three things more needed to be said. First, the Council were not at all complacent about the position—the return on capital was still under five per cent, and that figure was calculated after what appeared to be a rather low charge for depreciation, a matter about which the Council were in discussion with the ports.

Second, profitability was in no way inconsistent with service: it was often, indeed, the best proof that a good service was being given.

Third, massive capital expenditures were undertaken by the ports in the latter half of the 1960s, mainly to meet the needs of unitised cargo handling in its various forms.

"Both ship operators and ports have suffered losses on these facili-

ties in the early years, but now that the traffic is building up to levels which generate profits for the operator there is no reason why those ports which accepted the risk of a developing operation, and entered into flexible agreements, should not also share in that prosperity and take the proper reward for their investment."

### North Sea Oil

The decision of the Norwegian Government to allow oil from their Ekofisk fields in the North Sea to be piped to the Tees was a decision of immense significance for the Tees and Hartlepool Port Authority, said Mr. Chappell.

East Coast ports all the way from the Tees to the Shetlands hoped for a share of the traffic that the North Sea developments would generate. Once the oil started to flow the benefits for some ports, such as the Tees, would be substantial; nevertheless it was necessary to sound a note of caution, since if too optimistic a view were taken of traffic levels some ports might invest in facilities that proved, in the event, to be surplus to requirements.

"For instance," Mr. Chappell pointed out, "Council staff recently completed a study of the demand for berth facilities in Scotland related to drilling activity; their findings were presented recently by the Council's Director of Engineering to the Standing Conference on North Sea Oil. Our conclusion is that the extent of the port traffic generated, while significant, will not of itself justify a proliferation of port facilities particularly on the mainland of Scotland, and we recommend any port authority contemplating investment in new facilities to endeavour to reduce and preferably eliminate the risk involved by obtaining financial guarantees from the operator or user."

### Port Development

In the body of the Report the Council reviews the capital expenditure of port authorities in the years 1965 to 1972 on the basis of constant 1965 prices. On this basis it is shown that after a peak of expenditure in the year 1967, capital expenditure had declined and investment in 1971, at 1965 prices, was

not much greater than in 1965, the year when investment began to increase consequent upon the stimulus given by the Rochdale Report.

The Report comments: "This reflects the fact that the backlog of investment has now been caught up."

The actual expenditure of port authorities in 1971, at current prices, was £40.3 million. The Council expects the 1972 figure to be of the order of £45 million.

During 1972, 17 major schemes for port development were referred to the Council. The aggregate estimated cost of these schemes was £55 million, which included two submissions in connection with the Maplin Seaport project which were of a preliminary nature. Among other schemes submitted, four were related to North Sea Oil, and estimated to cost, in aggregate, some £11 million.

### Mobility of Traffic

The Report calls attention to technical and management changes in the transport industry which are having far-reaching consequences for transfers of traffic between ports. In particular the increasing skill of transport managers, whether working on behalf of major foreign commodity agencies or domestic importers and exporters, was leading to substantial shifts of traffic to new port/inland transport configurations.

"A notable example of this is the success of Cardiff in capturing important citrus fruit traffics for distribution over a large part of Great Britain, although on the face of things ports nearer the major population centres would appear to be the more natural route for such traffics. Cardiff was not alone in its success—other beneficiaries of this type of traffic transfer were ports in the north-east.

"It appears to the Council that selection of these ports has been made by transport managers on a basis of evaluation of total costs, including not only inland haulage costs and published port charges, but also the reliability and speed of turn-round in ports which are clearly matters of great consequence in their cost comparisons of one route with another. As ships continue to

become more expensive the speed of turn-round in ports, and also reliability, are likely to become more rather than less important.

"At the same time it seems likely that while published port charges are probably a small component of total through costs, with the increasing skill of transport managers in shaving through-costs all differences in costs between British ports will be scrutinised with increasing care; this has particular implications for the still considerable quantity of cargo handled by more or less conventional means."

### Financial Objectives of Port Authorities

The Report states that the question of financial objectives is a difficult subject; attention was being given to a cash flow approach instead of, or in addition to, the concept of return on capital employed. In May 1972 the Council invited the chief financial officers of seventeen larger British port authorities to a meeting, at which it was agreed that the participating authorities would carry out three exercises showing the effects of adopting each of three financial targets. These were as follows:

- (i) an annual surplus (i.e. after depreciation but before interest) in the year 1975 and thereafter, equivalent to a ten per cent return on year-end capital employed, assuming continuation of the 1971 depreciation policy throughout the forecast period;
- (ii) as annual surplus as defined above in the year 1975 and thereafter, equivalent to a ten per cent return on year-end capital employed, assuming that the accumulated provision for depreciation on fixed assets in the balance sheet and the annual provision for depreciation in the revenue account are re-calculated from the year 1972 on the shorter maximum asset lives contemplated by the Council;
- (iii) an annual cash flow (including proceeds of asset disposals) in the year 1975 and thereafter sufficient to permit:
  - (a) redemption of loan debt over a realistic period of

- years, plus
- (b) financing of all capital expenditure of a 'replacement' nature, plus
  - (c) financing of 25 per cent of average capital expenditure of an 'expansionary' nature.

(It was expected that the combined totals of (b) and (c) would be equivalent to at least fifty per cent of total capital expenditure in each year).

From the Council's evaluation of the results of this complicated exercise the Report says that it emerged, taking the group of ports as a whole, that there is little difference between the three separate objectives.

So far as individual ports were concerned there were some fairly wide variations. In particular there were the circumstances of three port authorities who contemplated major development projects which had the effect of depressing conventional rates of return until the years when throughputs began to approach planned capacity.

"Additionally, while achievement of the targets would call for an increase of about eight per cent in overall revenue for the 14 ports taken as a whole (after allowing for cost savings which might be effected in the short run) it is satisfactory to report that on the figures submitted to the Council, six of the 14 ports would achieve the targets postulated without any adjustment of current charging levels. The balance of eight ports fall into two roughly equal groups of ports, one group needing increases of less than five per cent, while the other group falls around the 15 per cent zone; one port, however, is less favourably placed in that it would apparently require a charges increase of over 25 per cent to meet the targets specified."

The Report says that the logical next step for these eight ports would have been to encourage such charges increases as were necessary for the financial health of the ports. However, the Council's plans to encourage improvement of their financial performance had necessarily suffered delay as a result of the Government's counter-inflation po-

# *A North Atlantic Deep-Water Terminal*

**by Paul Soros and  
Peter A. Hakman**

Soros Associates Inc.

## **Abstract**

Reference is made to a Study of "Offshore Terminal System Concepts" completed in September 1972 for the U.S. Maritime Commission. General conclusions are briefly presented. The Northeast U.S. is identified as the area most urgently requiring a deep-water marine terminal to handle crude oil to meet the energy crisis. A conceptual design is presented of a terminal located off the Delaware Bay for trans-shipping crude oil and later solid bulks.

## **Background**

The U.S. Maritime Administration authorized a study to be performed

licies; nor was it now possible to say when the target rates should be achieved by the whole industry.

## **Britain and the European Economic Community**

The Report says that over a period of years Britain's entry into the European Economic Community is bound to have a profound effect on the national economy and pattern of trade. As regards a common ports policy the European Parliament, in April 1972, had adopted a resolution recording regret that the Community had not yet established a common policy for ports. The lines such a policy would take on financial matters in particular are not yet clearly drawn, but the Parliament's resolution indicates current thinking in the Community on the subject. The Council's Report says:

"The Parliamentary resolution opts not only for free and fair competition between ports but also for an attempt at forms of co-ordination to ensure that any port development is in harmony with the de-

by Soros Associates in 1971 entitled, "Offshore Terminal System Concepts", the results of which were released in September 1972.

One of the first conclusions reached was that VLCC's cannot be accommodated at any of the existing ports on the East and Gulf Coasts. Another general conclusion was that foreign crude oil imports in VLCC's to the North Atlantic Region represent the primary national need, with similar but somewhat less critical needs existing for the Gulf and West Coast areas. The technical, environmental and political conditions at the Gulf and West Coast locations are generally favorable and indications

(Continued on Page 38)

velopment of other links in the transport chain, with national and regional objectives and with developments at other ports; a ports policy should be non-discriminatory, and the distribution of traffic between ports should reflect the relative costs of using them; the revenue of port administrations should cover most port expenses, including infrastructure costs, and state and municipal subsidies should be eliminated in due course except in agreed circumstances where, for example, there are special requirements for the relief of unemployment or for balanced regional development."

The Council believe that while agreement on proposals such as these may be some way off, it is encouraging to the British ports industry both that the recommendations are broadly similar to the already existing situation in the United Kingdom and that the industry's interests can now be directly represented in the discussions taking place.



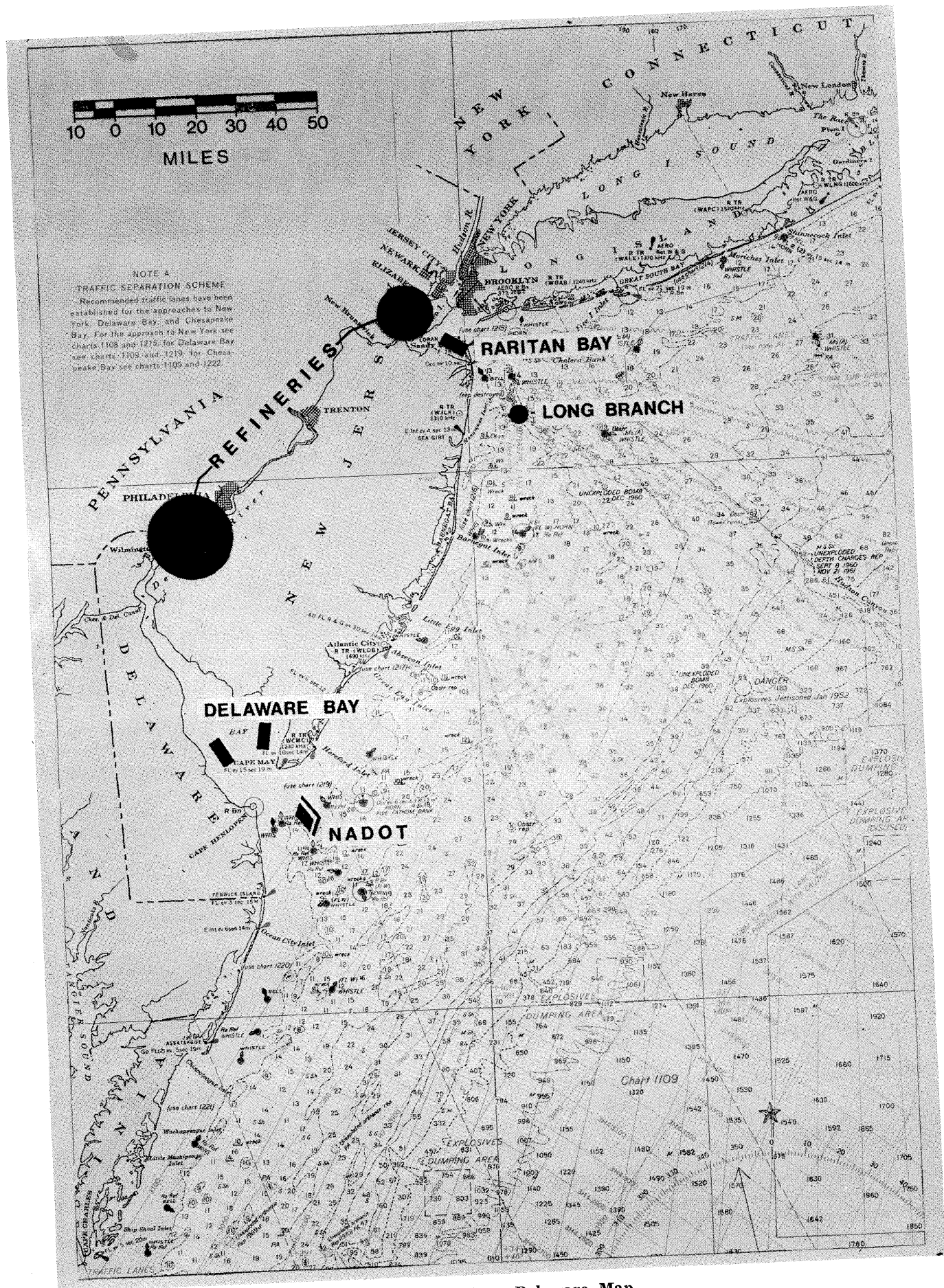


Fig. 1 Offshore Delaware Map

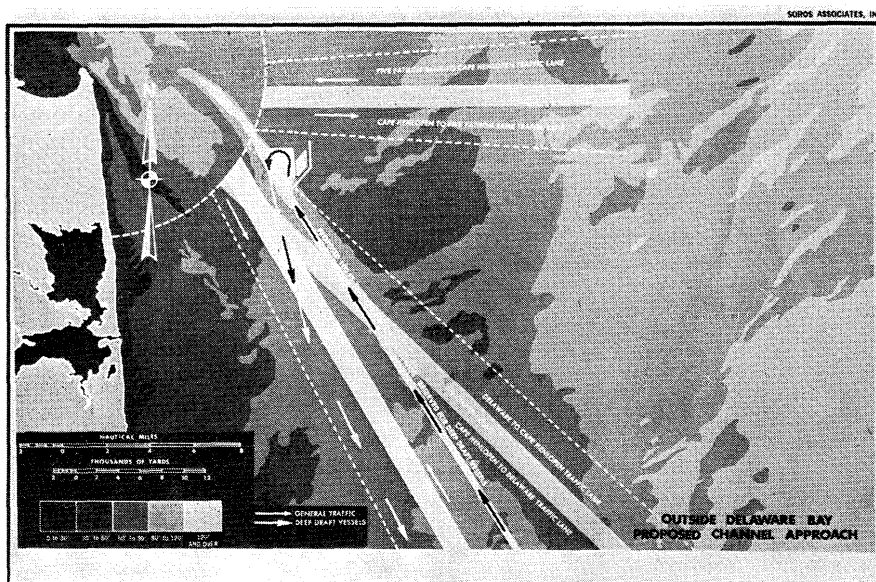


Fig. 2 Delaware Bay Approaches

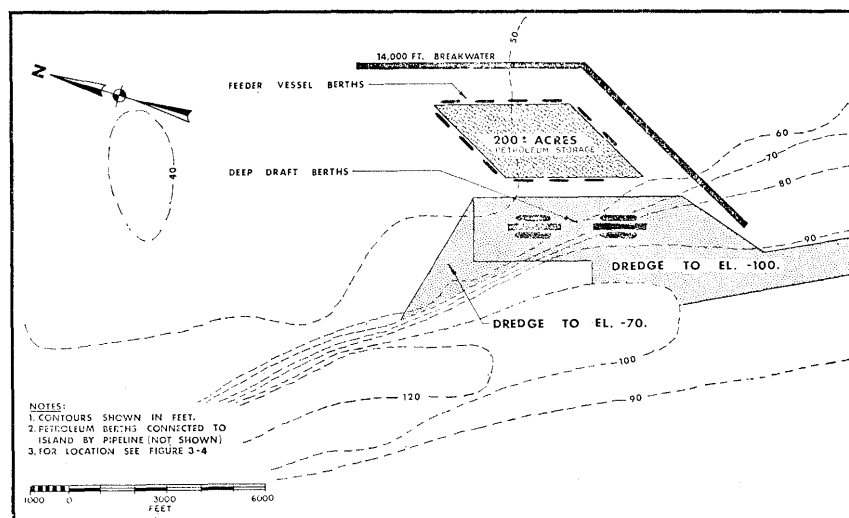


Fig. 3 NADOT Stage 1 development

(Continued from Page 36)

are that the type of facilities envisioned will soon be realized. Unfortunately, the problems on the East Coast are more complex and difficult to solve.

The existing oil refinery capacity in the North Atlantic region is about 75 million tons per year. The crude oil for these refineries is supplied primarily by tanker, partly from the Gulf region with the remainder from foreign sources. As crude oil production declines while demand increases in the Gulf Region, coastwise shipments will gradually diminish and eventually stop, leaving the North Atlantic refinery feed entirely to foreign imports. The East Coast demand by the late seventies is esti-

mated at about 200 million tons per year increasing by the mid eighties to over 300 million tons per year. The capacities of the existing refineries in the East could be expanded to 200 million tons, but the 300 million ton level would require major new grassroots refinery development. In recent years, no firm has been successful in the East in obtaining the necessary approvals to develop such new refineries.

#### Risks with the Existing Conditions

Importing crude at the 200 million tons per year level represents a more than 800 percent increase in throughput compared to 1970 imports. A great number of 40,000 DWT to 60,000 DWT tankers navi-

gating long distances in busy and restricted channels through congested harbor traffic all the way to Philadelphia or up the Kill Van Kull in New York would pose a serious environmental risk.

The use of these relatively small tankers under these circumstances combines maximum risk with maximum potential environmental damage. The basic reason for this is that the tankers would be operating near the wetlands in the estuary regions, inside the bays which are by far the most sensitive and critical from an ecological viewpoint. The following table indicates a summary of the worldwide oil spills from 1956 to 1969.

Cause	Incidents	Gallons Spilled	% Of Total
Grounding	14	43,000,000	48.4
Sinking	2	5,000,000	5.6
Collision	6	6,000,000	6.7
Hull Failure	4	24,000,000	27.0
All Other	12	11,000,000	12.3

An analysis of 51 documented collisions involving tankships revealed that 62 percent occurred in rivers, bays and estuaries, 21 percent on the high seas and 17 percent in harbors. The collisions were caused principally by smaller, nontankers, striking the tankers.

Thus any alternative that reduces the number of tankers entering our bays, either through the utilization of VLCC's or by moving the terminals out of the bays, or preferably both, would be a distinct improvement over present methods.

#### Proposed VLCC Terminal

Figure 1 illustrates the best, most serious proposal put forward by responsible entities.

A solution proposed by one group of oil companies is a fixed-berth type terminal in Delaware Bay. This location is limited to about 75 ft. of water depth and therefore would restrict the vessels to about 250,000 DWT, which is a long term economic disadvantage. The proposed terminal itself could operate at the highest conceivable anti-pollution standards. The principal drawback from the environmental viewpoint is its location inside Delaware Bay. Other alternatives offer less exposure

to grounding and less potential damage to the wetlands resulting from an oil spill.

Single buoy mooring systems located offshore have also been proposed. The technical and economic pros and cons are well known. On the plus side, they would not be limited to 250,000 DWT vessels, the capital costs would be low and construction would be quick and simple. On the minus side, berth availability would be low because of the limitations on line and hose handling operations in the North Atlantic (waves and swells exceed 8 ft. 30 percent of the time in the winter), unloading rates would be lower and hence more berths would be needed, and there would be a number of well-known minor maintenance and operational problems.

From the environmental viewpoint, the big advantage of the proposed single buoy moorings is that the tankers would never come near the shore or, most important, inside the Bay. Thus the risk of grounding or collision would be reduced and so would the damage potential to the wetlands inside Delaware Bay. The principal drawback is that the unloading operation could not be accomplished with any pollution-prevention system. Regrettably, there is no fence or barrier system even in an experimental stage that could reliably operate in an unprotected location in the North Atlantic during normally expected rough seas.

For the time being, all of these plans are stymied due to environmental opposition.

### Basic Concept of NADOT

The basic concept of NADOT (North Atlantic Deepwater Oil Terminal) is to combine the environmental advantages of a location in the open sea, outside any bay, with fixed type unloading berths, that would operate with the most rigorous pollution-prevention systems. The proposed terminal would be protected by a breakwater, which would be essential in the North Atlantic to provide the desired berth availability and safe operating conditions for the containment and clean-up systems.

An artificial island located behind

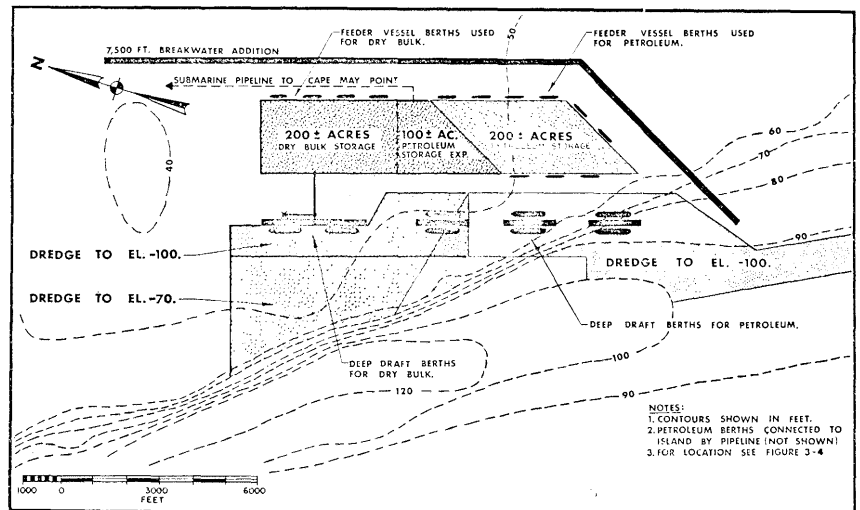


Fig. 4 NADOT Stage 2 development

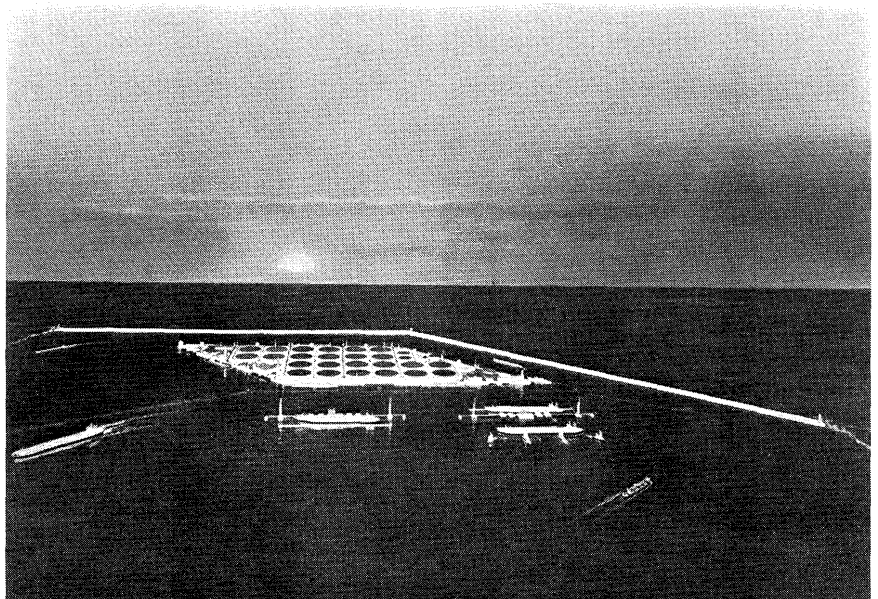


Fig. 5 NADOT model

the breakwater would provide oil storage necessary for trans-shipment to refineries without pipeline connections, and would economize the pipeline costs, accommodate an oily water treatment center, and serve as an operational base for the required supporting services.

Table 1 summarizes the basic design criteria used in the planning of NADOT.

### Location

The concept is to locate the terminal in an area of the ocean where shoals and a natural deep-water channel exists. The terminal would be strategically placed between the fairways for ships entering and leav-

ing Delaware Bay as shown on Figure 2. Deep-draft vessels could approach the terminal along a natural deep-water trench. The terminal facilities would be arranged so that the piers for the deep-draft vessels would be in shallower water on the offshore side of the trench. This makes it possible to provide protected deep-water berths with 100 ft. depth of water and to construct the breakwater and the island in approximately 50 feet of water.

### Design Concept

Figure 3 shows a general arrangement of NADOT corresponding to Stage 1, providing 200 million tons  
(Continued on Page 41)

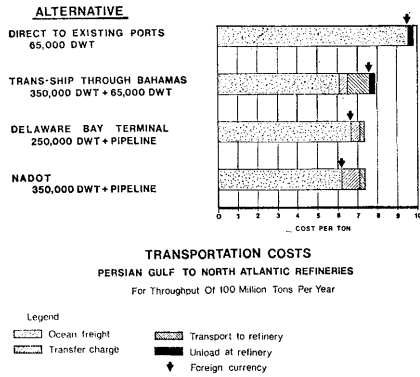


Fig. 6 Cost comparison, 100 million tons/year level.

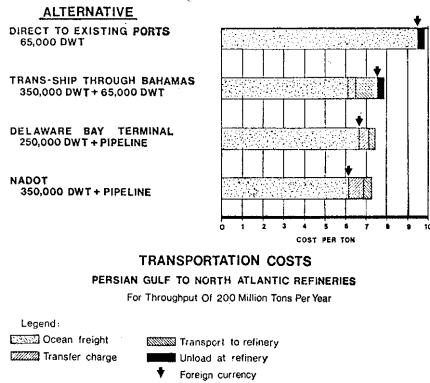


Fig. 7 Cost comparison, 200 million tons/year level.

TABLE 1 - NADOT DESIGN CRITERIA

Ship Size	350,000 dwt
Water Depth Required at MLW for Loaded Ship	100 ft.
Water Depth Required at MLW for Ballast Ship	70 ft.
Maximum Water Height Above MLW Datum	58 ft.
Breakwater Design Wave Height (Single Ampl.)	64 ft.
Breakwater Top above MLW Datum	32 ft.
Maximum Operational Wave Height for Marine Terminal	40 ft.
Maximum Survival Wave Height for Storage Island and Berthing Facilities	8 ft.
Maximum Current	20 ft.
Maximum 1 Hour Sustained Wind	3.1 knots
Maximum 5 sec. Gust	70 knots
Throughput Design: Interim Stage—Crude Oil	104 knots
Stage 1—Crude Oil	100 MTY
Stage 2—Crude Oil	200 MTY
Coal	300 MTY
Iron Ore	20 MTY
	10 to 15 MTY

TABLE 2 - NADOT CAPITAL COSTS

Major Features	Interim Stage 100 MTY or 2 MBD \$ Million	Stage 1 200 MTY or 4 MBD \$ Million
Breakwater (Average depth of 56 ft.) 11,500 ft. for Interim Stage 14,000 ft. for Stage 1	\$174.8	\$212.8
Island 100 acres for Interim Stage 200 acres for Stage 1	50.3	100.3
Petroleum Storage Facilities and Equipment	70.1	140.0
Marine Facilities V.L.C.C. Berths Feeder Vessel Berths	36.3 2.4	72.6 4.8
Pollution Control	50.0	70.0
Dredging not used for Fill	33.2	56.6
Interest during Construction, Miscellaneous	81.9	129.9
Totals	\$499.0	\$787.0

Note: Capital cost estimates are based on January 1972 price levels and do not include escalation.

TABLE 3 - NADOT ANNUAL COSTS

Construction Costs Restated	Interim Stage 100 MTY or 2 MBD \$ Million	Stage 1 200 MTY or 4 MBD \$ Million
Civil Works (Breakwater & Island)	269.5	374.9
Dredging not used for Fill	39.7	67.8
Marine Terminal (Including all Facilities)	189.8	344.3
Total	499.0	787.0
<b>Annual Costs without Capital Recovery</b>		
Maintenance Charges Civil Works 1%	2.7	3.7
Maintenance Charges Dredging Offshore 0.5%	0.2	0.3
Maintenance Charges Terminal 4%	7.5	13.8
Power @ 5¢/ton	5.0	10.0
Labor, Supplies, Admin. & Insurance	11.4	20.6
Subtotal	26.8	48.4
Annual Cost Contingencies	3.6	6.3
Annual Cost without Capital Recovery	30.4	54.7
<b>Annual Cost of Capital Recovery</b>		
Terms	Capital Recovery Factors	
8% over 15 yrs.	0.11683	\$58.3
8% over 20 yrs.	0.10185	50.8
5½% over 25 yrs.	0.07455	37.2
		\$91.9
		80.2
		58.7

TABLE 4 - NADOT TRANSFER CHARGES

Dollars Per Long Ton					
Capital Recovery Terms	Capital Recovery Portion		Maintenance and Operation Portion		Total
	Interim Stage	Stage 1	Interim Stage	Stage 1	Interim Stage    Stage 1
8% over 15 yrs.	\$0.583	\$0.460	\$0.304	\$0.274	\$0.887    \$0.734
8% over 20 yrs.	0.508	0.401	0.304	0.274	0.812    0.675
5½% over 25 yrs.*	0.372	0.294	0.304	0.274	0.676    0.568

Notes: The above transfer charges do not include profits or taxes.  
The transportation system comparisons are based on the highest transfer charges, i.e. 8% over 15 years.  
\*Approximate terms for Port Authority bonding.

TABLE 5 - ENVIRONMENTAL COMPARISON

	Foreign Transfer Terminal	Terminal in Delaware Bay	SBM Offshore	NADOT
COLLISION	-	+	+	+
GROUNDING	-	-	+	+
TERMINAL SPILLS	+	+	-	+
CONTAINMENT SYSTEM	+	+	-	+
DAMAGE POTENTIAL	-	-	+	+



(Continued from Page 39)

per year of throughput capacity. An Interim Stage of operation could begin with the construction partially completed.

Figure 4 illustrates how the later stages of expansion could be carried out without interfering with operations.

Figure 5 shows a model of the Stage 1 Development which was exhibited at the "White House Conference on the Industrial World of 1990". The storage island and berthing facilities would be protected by a rubble-mound breakwater which would provide survival protection during hurricane storms as well as a reduction of ocean waves to a height which would permit operation of the fixed berths and the containment systems during other times

Precast concrete caissons would form the perimeter of the island, serving as berthing structures for the smaller vessels as well as containment and protection for the man-made island. The tanks for storage of crude oil would be the conventional cylindrical shape, buried in the island fill with bottoms at about elevation +5 feet. The cost estimates were based on 20 tanks of 1-million barrels each or a total storage capacity of 20 million barrels for the Stage 1 Development.

The island would be provided with the usual trenches for the petroleum pipelines, utilities and drainage. There would also be major trenches around the perimeter for the interception of run-off from rains and any accidental petroleum leakage or spills.

A treatment plant with 4 million barrels of oily ballast storage and a half million barrels of discharge storage would be inclined to receive island drainage and the oily ballast water from the ships. This plant would separate the oil and other pollutants from the water before reuse or disposal into the harbour.

#### Cost Estimates

The estimates of capital costs, annual operating costs, and transfer charges for NADOT are summarized in Tables 2, 3 and 4.

#### Economic Comparison

Figures 6 and 7 summarize the delivery cost of crude oil imported

# *Duluth-Superior— A Model United States Port*

**by C. Thomas Burke**

Executive Director  
Seaway Port Authority of Duluth  
Duluth, Minnesota

May 9, 1973

Over the past decade, public concern over environmental quality has grown at a very rapid rate. In response, new comprehensive laws and regulations to control pollution have been adopted on Federal, State and local levels. As with other waste sources, discharge of pollutants from vessels is being increasingly restricted. Concurrently, there is increasing need for shoreside facilities to collect, treat and dispose of these wastes in a manner that is environmentally sound while at the same time causes minimum interference with vessel operation.

Recognizing this need, the Seaway Port Authority of Duluth initiated a program to develop comprehensive waste control facilities at the Duluth-Superior Harbor.

from the Middle East. Basically, there would be no substantial difference in cost per ton between trans-shipment through a foreign terminal compared to trans-shipment through a terminal inside Delaware Bay or through NADOT. As can be seen, the higher terminal capital costs of NADOT are offset by lower ocean freight costs resulting from the use of larger VLCC's when compared to a terminal in the Delaware Bay, and by lower trans-shipment costs when compared to foreign VLCC terminals.

The transfer charges at NADOT include the cost of financing in 15 years at 8 percent interest. If NADOT were financed through some form or regional authority, at longer and better terms, the per ton costs would become lower. There is, however, a difference from a balance of payment viewpoint. The arrows (Figures 6 and 7) indicate the portion of the total transporta-

When completed, the program and resulting facilities will serve as a model to other ports in developing required vessel waste control facilities. This project was performed by Environmental Quality Systems, Inc., Rockville, Maryland, with the assistance of the St. Paul District, U.S. Army Corps of Engineers, and funded by the Upper Great Lakes Regional Commission, a governmental body in Washington D.C.

The basic approach of the project was to first collect available data on waste generation and characteristics from the literature and through contacts with those active in research and development programs in our area. A similar effort was performed for both onboard and shoreside treatment

tion system cost incurred in foreign currency for each ton of imports.

#### Environmental Comparison

Table 5 summarizes the environmental pros and cons of doing nothing, which will mean increased foreign trans-shipment; and providing a terminal in Delaware Bay, an SBM facility offshore, and NADOT.

It is worth emphasizing that even though a VLCC terminal in Delaware Bay or an SBM offshore may not be ideal in every respect, they are far superior to doing nothing, which simply leaves us with the increased tanker traffic inside the bays, shuttling back and forth to VLCC trans-shipment terminals in Canada and the Bahamas.

NADOT is an alternative with no advantage or disadvantage to the oil companies, but representing an optimum solution for the coastal zone environment and the national economy.



facilities. A detailed analysis of shipping patterns was performed by the Corps of Engineers ranging from overall projections of shipping at Duluth-Superior to a dock-by-dock listing of vessel visits and dock facilities survey. Waste generation rates were combined with shipping data to develop estimates of current and projected waste loads in the harbor area. A review of Federal, State and local regulations was performed along with the pollution control facilities available at and for the harbor as well as abatement programs currently under way. Using all of the above information, alternative approaches to shoreside waste collection and handling were developed and evaluated. Those abatement projects which could be immediately implemented were identified as were problem areas that require further definition. Vessel wastes considered include sanitary sewage, other contributions to sewage, garbage/refuse, dunnage, ballast, bilge, cargo losses and cargo spills.

A considerable amount of vessel-generated sanitary sewage is discharged at Duluth-Superior Harbor during each shipping season, which usually commences about April 15 and terminates about December 15. The proposed municipal waste treatment plant most likely can handle all of the projected wastes without difficulty. However, facilities are required to remove the sewage from vessels and transport it to the municipal sewer system.

Dockside sewage pumpout facilities are justified at only three docks based upon the frequency of vessel visits and the proximity to municipal sewers. All other docks must be served by mobile collection facilities. At some facilities, it is not possible for a truck to approach alongside vessels.

Current techniques for collection and disposal of garbage/refuse are not acceptable from an environmental viewpoint. Facilities are required which will eliminate infestation or completely destroy the garbage/refuse. Two acceptable approaches are incineration and steam disinfection. In addition to treatment, improved collection and handling techniques are required. While most garbage/refuse can be

collected and transported by truck, there are some docks at which trucks cannot approach vessels. In addition, improved techniques of offloading garbage are needed to minimize the extensive handling associated with current practice.

Dunnage disposal is the most pressing of the port's current environmental problems. The requirement to disinfest within 24 hours of offloading and the highly variable rate of dunnage generation present problems in design of treatment facilities. A shredder to reduce the material size to a more manageable level for feeding to a treatment device certainly would be advantageous, and we are presently exploring this possibility. Such shredders are commercially available and require relatively minor modifications to adapt to use on dunnage. As in the case for garbage/refuse, dunnage collection techniques currently used require excessive handling. New techniques are required to minimize transfer operations. As in the previous cases, dunnage removal by truck will not be possible in all instances.

Based upon preliminary estimates of the volume of non-oily ballast discharge along with consideration of the quality of water often used for ballasting, there is reason to believe that ballast water discharged in the harbor is a significant source of pollution. However, because there is essentially no actual published data on quality or quantity, it is not possible at this point to carry the evaluation further or to suggest treatment facilities.

Conclusions in regard to bilge water are quite similar to the previous statements on ballast. There is less doubt, however, that bilge water is a polluting substance since the bilge is a repository for leaks and drains. Thus, one would expect to find oil and other organics as well as solids. With the paucity of data on quality and quantity of bilge water generated, it is not possible to suggest treatment techniques for the Duluth-Superior Harbor. What is required is an in-depth study of bilge water generated by various classes of ships, sizes, lengths of voyage, ship age, cargo, mechanical equipment, etc. This data is vital not only for the Duluth-Superior

Harbor but for other major ports as well.

Observations of the harbor in the vicinity of bulk cargo loading docks indicate that lost cargo, particularly grain and ore dust, results in significant degradation of water quality. Most of this dust is released during loading operations. Indications are that large amounts of bulk cargo are also discharged overboard during vessel housekeeping operations.

The following recommendations have been made and will be implemented in further studies this year.

(1) Develop and demonstrate a barge mounted waste collection system capable of collecting sewage, garbage/refuse and dunnage. The barge would be designed to collect wastes from docks that do not receive sufficient traffic to warrant installation of sewers or are inaccessible by truck. Special collection facilities should be developed to facilitate offloading of garbage/refuse and dunnage from vessels.

(2) Develop and demonstrate advanced garbage/refuse disposal systems including disinfection of garbage/refuse with steam and the adaptation of available incinerators to handle vessel garbage/refuse. Included should be special techniques to offload garbage/refuse directly into containers that in turn would be used as a steam treatment chamber.

(3) Develop and demonstrate an advanced dunnage disposal system which would consist of shredding, steam disinfection, and magnetic metal separation. Maximum emphasis should be placed on refuse of the resultant wood chips.

(4) Installation and evaluation of sewage pumpout facilities at the Clure Terminal, DM&IR Ore Docks and Burlington Northern Ore Docks. During the evaluation phase of this program, detailed data on the generation rates and characteristics of commercial vessel sewage will be collected.

(5) Survey of bilge water characteristics. This project will involve an in-depth sampling and analysis program to provide sufficient data to characterize the generation rates and properties of bilge water as a function of vessel class

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and age, cargo, voyage length, onboard mechanical equipment, etc. The results of this project would be used to develop designs for a second phase bilge water treatment facility.

(6) Survey of non-oily ballast characteristics. This project, similar to that for bilge water, involves an in-depth sampling and analysis program to provide sufficient data to characterize non-oily ballast qualities and quantities at Duluth-Superior harbor as a function of vessel class, cargo, design, location of ballast loading point, and length of voyage. As in the previous case, this data will be used in a second phase to design non-oily ballast

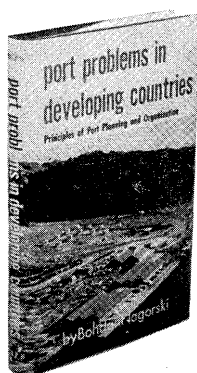
treatment facilities.

(7) Survey of dry bulk cargo losses during loading operations. Intended to develop required data on dry bulk cargo that is released as dust during loading or deposited in the harbor during usual house-keeping operations. Included will be measurement of dustfall and cargo losses as well as tests to determine the pollutional characteristics of various dry bulk cargoes. Recommendations on facilities or improved practices will be developed.

The project I have just outlined will not only give the Duluth-Superior Harbor the advantage of be-

coming the first port in the nation to comply with the international agreements recently signed by Canada and the United States regarding Great Lakes Waste Control Regulations, but will also thrust us into the position of a "MODEL" port, a position we humbly accept.

With the continued cooperation of port users, Federal and State governments and the public, we intend to promote and protect the commerce of our nation and lay the practicable foundations for sound, long-range preservation and enhancement of our human and natural environments.



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# Orbiter Probe

## IAPH News:

### Special Committee on Legal Protection of Navigable Waterways

The Secretary General recently received a letter from Mr. Vleugels, President of IAPH, expressing his eager desires to develop activities of Association's Special Committees. In particular, Committee on Legal Protection of Navigable Waterways chaired by Mr. Andre Pages, Inspection General, Ministry of Equipment, France (32me, Circonscription, Palais de la Bourse—2, Bordeaux-Cadex, France).

Mr. Vleugels emphasizes that since the Committee has some more rooms, those who are interested in the Committee should be invited to participate in.

Applicants are suggested to write to the President, Mr. Vleugels with copies to the Chairman, Mr. Pages and to the Secretary General, Dr. Sato. (IAPH Head Office—Rinnosuke Kondoh)

### Travelers

• From MELBOURNE, two travelers, Mr. Alec J. F. Stevens, Principal Designing Engineer, and Captain Ian Macfarlan, Harbor Master, called at the Head Office on Tuesday, July 10 morning and were received by Mr. Katsuya Yokoyama, Deputy Secretary General, who invited the visitors to lunch at the

### Corrections

In page 36 of this journal, July–August issue, the first column, the last line but two, the word “he” should have been “I”, and in the second column, the last line but three, the word “his” should have stood “my”.—Ed.

Mitsui Club.

The jolly twosome visited the Port of Tokyo that afternoon and inspected the Port of Yokohama on Wednesday. During their ten-day stay in Japan, they also called on ports of Nagoya, Osaka and Kobe.

### 13th World Congress of FIATA

The 13th World Congress of FIATA (International Federation of Forwarding Agents Associations, at 29, Brauerstrasse, POB 342, Zurich, Switzerland) is going to be held in Cannes during the period 17th–20th September, 1973.

### ICHCA Adds Further Expertise

London, 3rd July ICHCA Press Information: — The International Cargo Handling Co-ordination Association has increased the expertise already available to members by the appointment of Mr. Geoffrey A. Stokoe as Technical Secretary to the Association.

Mr. Stokoe is 30 years of age and has just obtained an Honours Degree, BSs. (Tech) in Maritime Studies at the University of Wales Institute of Science and Technology. Prior to attending University he was

## The Association of Danish Ports Praises IAPH Conference

The following letter was received by the Secretary General in Tokyo.

### Correction!

With regrets, this is to inform you that a clerical error was found in articles of the Resolution No. 7 relating to Water Pollution in Port Areas which was adopted at the Amsterdam Conference. In the second sentence from the last; “NOT” should be inserted between ‘a compulsory port sanitary service for ships which’ and ‘fitted with such apparatus’.

The correction should be made to our circular to all members (no. 100/A-R dated June 14th) and to the July–August 1973 issue of Ports and Harbors on page 17. (IAPH Head Office—Rinnosuke Kondoh)

Copenhagen, 25th June, 1973

Dear Sir,

8th Conference, Amsterdam-Rotterdam, May 1973.

Mr. Axel Ivan Pedersen, Mrs. J. Hagemann-Petersen, and I, who attended above Conference as the representatives of Sammenslutningen af danske Havne—The Association of Danish Ports—would ask you to convey our thanks for the well-arranged Conference to the President and directors of your Association.

The discussions in the working sessions and the visits to the ports were of great interest for us, and it gave us pleasure to meet the Conference participants at the social events.

Yours faithfully

Signed

J. Hagemann-Petersen  
President

a Deck Officer with P & O S.N. Company in their General Cargo vessels and subsequently a Chief Officer with Overseas Containers Ltd. He holds a Masters Certificate (Foreign Going).

Mr. Stokoe will commence his duties at the ICHCA Central Office in London. U.K. at the end of July.

### Problems at the Intermodal Interface

ICHCA Press Information, 18th June:—The US National Section of the International Cargo Handling Co-ordination Association (ICHCA) presents a full day seminar learn and teach-in on the subject of *Problems at the Interface—(Intermodal)* (What are the problems and how do you resolve them?) on June 27, 1973 at the Traffic Club of Chicago.

Speakers include: Joseph Malloy—United Airlines; F. S. MacOmer, Vice President, A. T. Kearney, Inc.; John Creedy, Water Transport Association; John A. Grygiel, General Manager, Freight Traffic, Santa Fe; Roger Gerling, Ex. Vice President, Spector Freight System and Gerald Ullman, Attorney and Author.

Further information from:—Abraham A Diamond, Singer & Lippman, 327 S. La Salle St. Chgo. IL 60604.

### IAPC Conference 1974

According to Mr. Thomas F. P. Sullivan, President of International Association for Pollution Control, headquartered at Suite 303, 4733 Bethesda Avenue, N.W., Washington, D.C. 20014, U.S.A., the Association is scheduled to hold its Fourth Conference on May 14, 15 and 16, 1974 at the Shoreham Hotel in Washington, D.C.

### ICB Annual Meeting 1973

Paris, 12th July:—A "FORUM" and the Annual General meeting of the International Container Bureau will take place on *Thursday and Friday, the 18th and 19th October, 1973.*

After the working sessions, the second part of the Programme will include, apart from an outing in the Paris Region during the afternoon of Friday, the 19th, an interesting excursion (very probably to Le

Havre) on Saturday, the 20th. (I.C.B.)

### Seaway Notice No. 12 of 1973

Cornwall, Ontario, July 9:—The official closing date of the Montreal-Lake Ontario Section of the Seaway has been extended from the 30th of November in 1959 to the 15th of December in 1972. This extension of the navigation season has been accomplished following extensive annual review of all conditions encountered and the installation of remedial works to facilitate the closing operations.

As a result of the most recent review, it has been concluded that permitting navigation to continue on a day to day basis after the official closing date contributes to severe traffic congestion and creates a significant risk of trapping vessels in the system.

It has therefore been concluded that a policy of a firm closing date is required and must now be instituted in the best interest of all concerned.

Mariners are therefore advised that for the 1973 navigation season the Montreal-Lake Ontario section of the Seaway will definitely be closed to navigation on December 16th as follows:

- (i) No upbound vessels will be accepted at CIP 2 for transit through Iroquois Lock after 1200 hours (noon) on December 16, 1973.
- (ii) No downbound vessel will be accepted at CIP 13 for transit through Iroquois Lock after 1200 hours (noon) on December 16, 1973.

Studies will be continued and works installed by the Entities concerned with the view of further extending the closing date to the extent feasible in future years. (The St. Lawrence Seaway Authority)

### Welland By-Pass Channel to be Inaugurated

Ottawa, July 3, 1973:—On Saturday, July 14 at 2:30 p.m. on the site of the new Welland Dock located at Welland, Ontario, the Honourable Jean Marchand, Minister of Transport, will officiate at the inauguration of the new 8.3-mile section of the Welland Canal, the \$188-million By-Pass linking Port Robinson to

Ramey's Bend.

The Honourable John Munro, Minister of Labour, will present a scroll to the Welland Canal Construction Council, in recognition of an exemplary and commendable achievement by labour in the construction of this By-Pass.

The event, which will be attended by many other distinguished guests, will be hosted by Dr. Pierre Camu, President of The St. Lawrence Seaway Authority. About 450 people from over 40 countries representing the Permanent International Association of Navigation Congresses (P.I.A.N.C.) will also be attending.

The By-Pass Channel, on which the official party will travel by ship to the Welland Dock prior to the ceremonies, replaces that section of the Welland Canal which runs from Port Robinson to Ramey's Bend through the heart of the City of Welland.

This bridge-crossed area presented many hazards to navigation, particularly to the increasing number of maximum-sized vessels, and was a constant cause of traffic congestion.

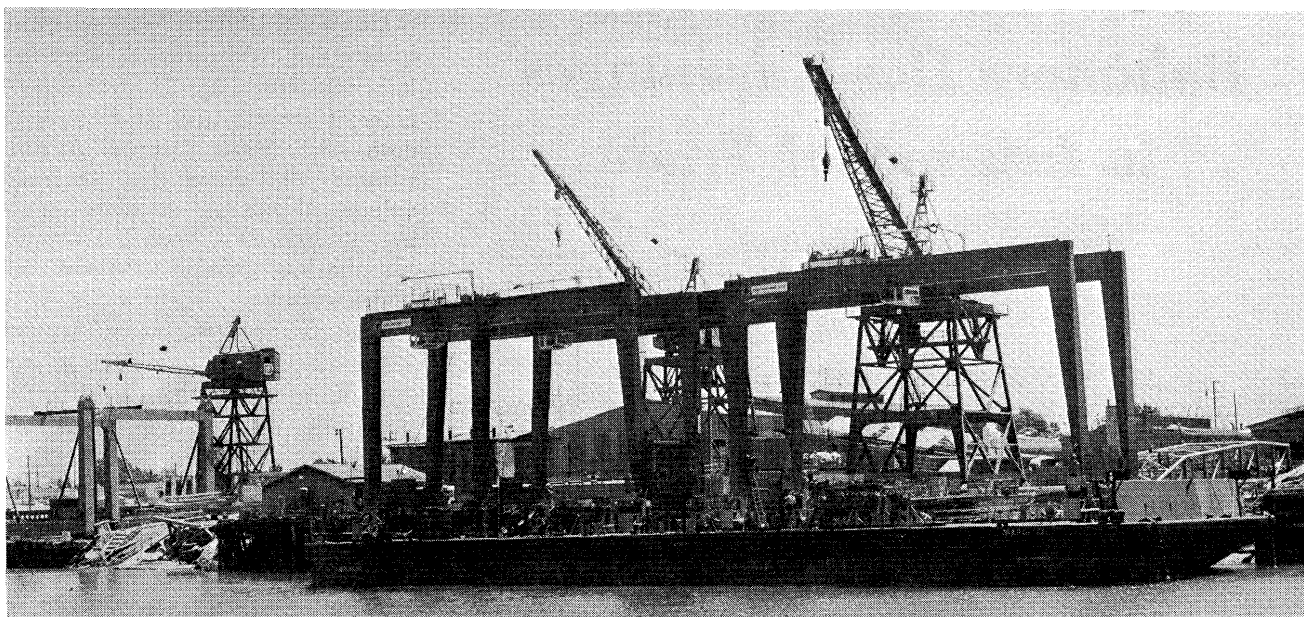
The new channel offers a relatively straight course with a navigable width of 350 feet. Built with two tunnels underneath, it was designed to optimize safety, speed and efficiency for both land and water traffic. (The St. Lawrence Seaway Authority)

### Elected IAGLP President

Toronto, Ontario, June 21:—Ernest B. Griffith, General Manager of the Toronto Harbour Commission, was elected president of the International Association of Great Lakes Ports at the annual meeting held in Chicago on June 14, 1973.

Griffith, who is also Chairman of the Canadian section of the IAGLP, takes over the position held by F.D. Flori of Buffalo. The second Canadian member on the Board of Directors is Oshawa Harbour Commissioner Harry Millen.

Heading the U.S. section of the Association is Tom Burke, Executive Director of the Seaway Port Authority of Duluth. Other members making up the U.S. Board of Directors are: Capt. V. J. Soballe, of Chicago; John Seefeldt, of Milwaukee; Len Bolla, of Erie; Sher-



**Paceco Terminal cranes barged intact from Alameda, California to Long Beach**

wood Hamilton of Oswego and R. H. Van Derzee of Ogdensburg.

The IAGLP was formed in 1960 to promote Great Lakes shipping and to consult and take joint action on matters of mutual interest. It represents 17 U.S. and five Canadian ports and consists of two sections, one for each country. Six of the eight members on the Board of Directors are from U.S. ports while two are from Canada. (IAGLP)

### **Huge Terminal Cranes Barged Intact**

Alameda, Calif., June 4:—Three Paceco "Transtainers" (container cranes) as high as a five story building were loaded aboard a single barge at Alameda, California this week and towed to the Port of Long Beach for service in the I.T.S. container terminal.

The cranes were designed and built by Paceco, A Division of Fruehauf Corporation, for loading and unloading containers in a port terminal area. They can straddle six rows of containers and a truck roadway, and are able to stack containers four high for maximum utility of the storage area.

The new Transtainers are capable of lifting two 20 ft. containers simultaneously and are equipped with telescoping spreaders to handle 20 ft., 27 ft., and 40 ft. containers. Each crane has a rated 40 Long Ton

capacity.

The cranes were ready for operation shortly after they were unloaded from the barge at the Port of Long Beach. (PACECO News)

### **Port Handbook**

Baltimore, Md., June 19:—A 96-page volume describing in complete detail the ports of the state of Maryland has been published by the Maryland Port Administration.

The 1973-74 "Port of Baltimore Handbook," designed for use as a sales tool in attracting additional waterborne commerce to the state's harbors, is being distributed to shipping interests and international business houses throughout the world by the MPA, an agency of the Maryland Department of Transportation.

Featured on the cover of the new Handbook is an original artistic rendering symbolically representing Baltimore as it is today: a great city, its industry, its transportation network and its modern port facilities, all fused into a single working entity.

On the inside pages, the revised 1973-74 edition is divided into four informational sections — historical and background material on the state's maritime commerce; a look at Maryland's ports and their facilities; leading cargoes moving in international trade through the state's marine terminals and other pertinent statistical information; and a direc-

tory of port services.

The current issue of the Handbook is the eighth Port Administration printing of the biennial publication. A total of more than 13,000 copies have been prepared for distribution.

Copies of the Handbook are available upon request from the MPA's Port Promotion Department, 19 South Charles Street, Baltimore, Maryland, 21201 (Telephone: 301-383-5721). (News from Maryland Port Administration)

### **Record Petroleum Import**

Baltimore, Md., July 11:—The port of Baltimore continued a record 1973 petroleum import surge with its first "million-ton" month during May.

Total petroleum imports during that month registered 1,010,255 tons, according to figures just compiled by the Maryland Port Administration, an agency of the Maryland Department of Transportation.

The May tonnage figure represents the highest monthly petroleum handling total for the port on record. It is better than the same figure of a year ago by 200,000 tons, or about 25 per cent.

The record-breaking month brought Baltimore's overall petroleum import totals for the first five months of 1973 to 4,358,157 tons, an increase of more than 570,000 tons  
(Continued on Next Page Bottom)

# *Baltimore Has Advantages in Intermodal Trade*

News from  
Maryland Port Administration

Baltimore, Md., May 11:—Intermodal transportation, a much-criticized concept in many maritime circles, is alive and well in the port of Baltimore, according to Dr. Walter C. Boyer, Deputy Maryland Port Administrator for Engineering

or about 15 per cent over the pace set in 1972, one of the most active petroleum import years in the history of the port.

Of the overall May figure of 1.01 million tons, more than 80 per cent or 827,541 tons consisted of fuel oil. Gasoline comprised 5.1 per cent of the total, registering 32,502 tons.

Other commodities included in the figure were 121,608 tons of crude oil; 10,610 tons of kerosene; 7,833 tons of aviation fuel; 5,002 tons of diesel fuel; and 5,159 tons of asphalt. The high percentage of fuel oil and other refined petroleum products comprising the overall figure is the result of a Maryland law prohibiting petroleum refineries in the State.

While the majority of the record one million tons was unloaded at Baltimore's 12 petroleum piers, 368,569 tons of fuel oil or about 36 per cent of the overall total, was handled at a petroleum facility located in southern Maryland at Piney Point. All ships calling at this pier are husbanded from Baltimore, Piney Point's official port of entry.

The 1973 upswing in the port of Baltimore's petroleum imports follows a pattern established for that commodity last year when refinery production in the U.S. began to fall behind the unprecedented demand of the domestic consuming market.

In 1972, petroleum products were the largest single item handled in the port, reaching a total of 9.2 million tons. (News from Maryland Port Administration)

and Operations.

Speaking this week before the Eighth Biennial Conference of the International Association of Ports and Harbors (IAPH) in Amsterdam, Dr. Boyer discussed several criticisms of "intermodalism" directed at U.S. ports as a whole and explained how Baltimore has been able to maintain a high level of operation and service in that area of cargo movement.

Intermodal service, or the house-to-house movement of cargo on a through bill-of-lading, is considered a key word in modern freight transportation, especially in connection with containerization. However, many U.S. ports, especially New York, have come in for recent criticism relating to their ability to provide efficient and less costly service in this field.

Citing actual percentage of house-to-house cargo, transportation and TOFC/COFC facilities and Baltimore's geographic location, Dr. Boyer clearly underscored the port's advantages over its East Coast competitors in handling intermodal movements.

In the area of house-to-house cargo transport, the Deputy Port Administrator noted that while New York accommodated more than 8 million tons of containerized cargo in 1972 as compared to Baltimore's 1.8 million tons, a substantial portion of the New York traffic was pier-to-pier rather than intermodal in nature.

Dr. Boyer quoted 81 per cent of Baltimore's container cargo as being house-to-house or intermodal. "Actually, Baltimore—percentage-wise—draws its cargo more completely from the industrial hinterland than does New York, which draws most heavily on its contiguous area," he said.

Discussing another component of intermodal service that is frequently criticized by shippers—poor transfer service and high transfer costs—the MPA Deputy Administrator pointed out that the great volume of marine containers moving through New York has created rail marine transfer problems and higher charges.

According to Dr. Boyer, the major cause of the problem is unreasonable truck delays within the port area, which can occur at rail terminals, in transit or at marine terminals, resulting in poor service and detention charges.

"In the port of Baltimore at Dundalk Marine Terminal," he said, "TOFC containers are switched directly into the terminal by the railroads, thereby avoiding drayage transfer. If one of the three trunk-line railroads serving the port area elects to transfer any or all of its containers at its domestic yard," Dr. Boyer continued, "the resultant drayage is absorbed by the railroad."

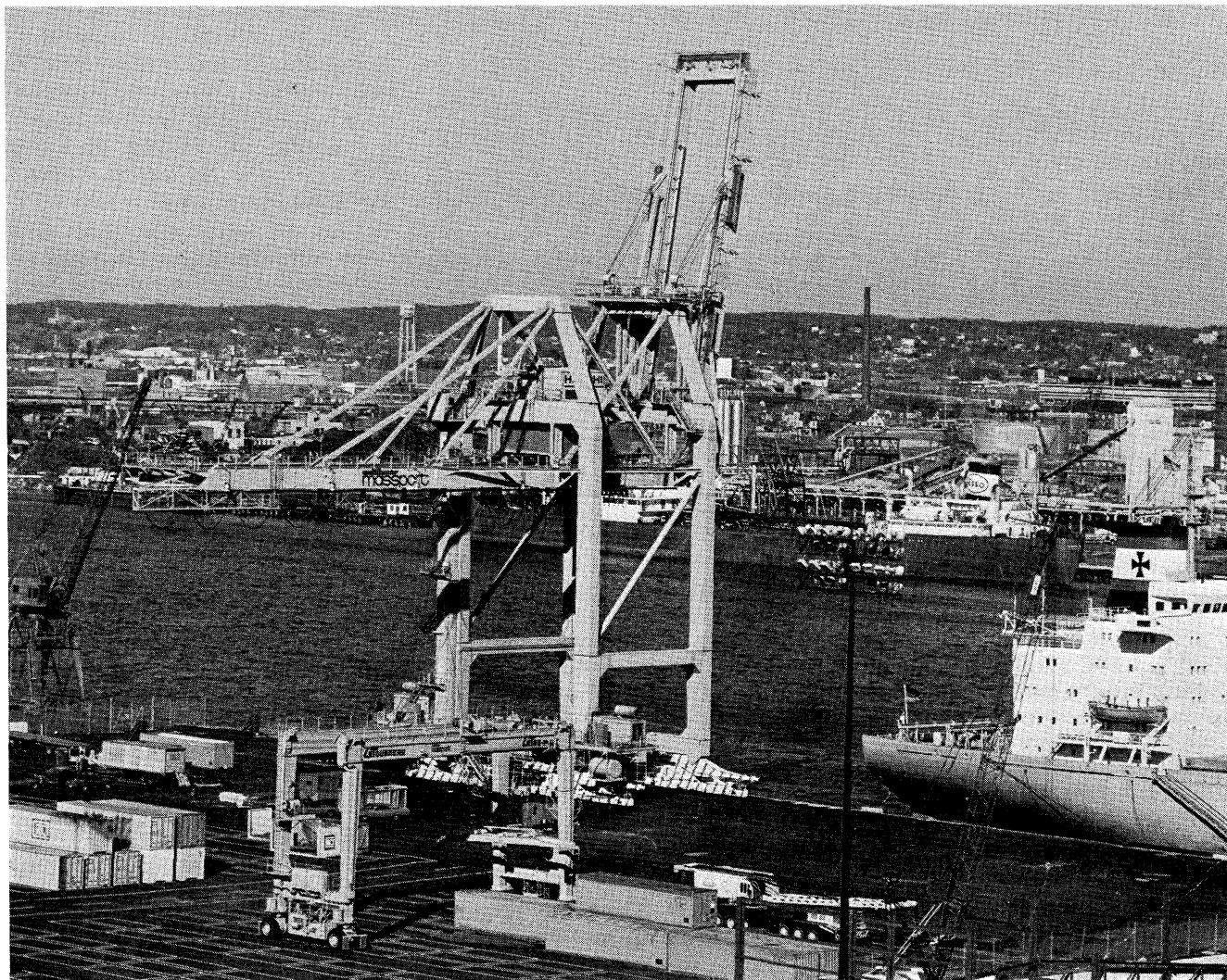
With equalization rates in effect for 10-car container consignments moving from North Atlantic ports to extensive portions of the Midwest, the absence of a drayage charge in Baltimore can result in dramatic savings to a shipper using the port.

Turning his attention to another major area, Dr. Boyer said: "A most serious question that a port must assess is: 'Does it possess a unique advantage or inherent characteristic which assures a share of container traffic?'"

"We in the port of Baltimore consider that our geographical location, which provides a distinct distance advantage over competing ports in vying for the Midwestern industrial heartland traffic, is such an inherent characteristic."

He went on to note that despite rate equalizations, land carriers cannot escape the reality that they serve this area through Baltimore at less expense to themselves than through any other competing North Atlantic port.

In closing, Dr. Boyer said: "I believe substantial progress has been made in fostering an efficient ap-



**The largest container crane in the United States, the Hitachi crane, is located at the John F. Moran Docks, Mystic Public Container Terminal in Charlestown, Mass. The crane is capable of lifting any size container or any special type of cargo up to 70 tons. The container facility is owned and operated by the Massachusetts Port Authority.**

plication of real intermodal service."

Acknowledging that many obvious operational difficulties exist in many U.S. ports, he said, "We have reason to believe that many of the problems that still deter full realization of intermodal movement are susceptible to solution."

In addition to Dr. Boyer, representing the MPA, an agency of the Maryland Department of Transportation, at the IAPH Conference was Joseph L. Stanton, Maryland Port Administrator.

### **Hong Kong Manager Appointed**

Baltimore, Md., June 5:—The Maryland Port Administration today

announced the appointment of Robin E. Routley as manager of the port of Baltimore's new Trade Development office in Hong Kong.

Baltimore's second Far East office opens its doors for the first time on July 1, 1973. The MPA currently operates a field office in Tokyo, which was established in 1968.

As manager of the new office, Mr. Routley's responsibilities will be the promotion of the port of Baltimore through the active solicitation of international trade moving in the greater Hong Kong area.

He also will service the needs of shippers in the growing trade areas of the Malaysian Peninsula, Thailand, Singapore, Indonesia and the Philippines.

Mr. Routley will carry out duties and assignments as delegated by the MPA Director of Trade Development, Joseph J. Giancola.

The Hong Kong office, located at 1105 Tak-Shing House, des Vaux Road Central, will be the fourth overseas location and the eighth overall to be operated by the Port Administration, an agency of the Maryland Department of Transportation, on behalf of the port of Baltimore.

In addition to Hong Kong and Tokyo, the others are situated in London, Brussels, Baltimore, Pittsburgh, New York and Chicago. (News from Maryland Port Administration)





**Charleston, South Carolina, May 2:—TWINS AT WORK—**The South Carolina State Ports Authority's second container crane is now on line at North Charleston Terminal, doubling container service capability as it joins its two-year-old sister at work. The expanded \$10-million facility includes 57 acres of paved back-up space and a marginal concrete berth nearly 2,000 feet long with 150-foot apron. SPA has already ordered its third 40-long ton container crane for Columbus Street Terminal in downtown Charleston. Some \$5.8 million is being invested in the container facility there which includes a 989-foot concrete berth, already in operation, and paved staging areas for 1,000 containers and chassis.

### First Grain Cargo by China-Operated Ship

Duluth, Minn., July 5:—The first oceangoing ship directly operated by the Peoples Republic of China to enter the Great Lakes-St. Lawrence Seaway system was loading a grain cargo Thursday in the Port of Duluth-Superior.

The Seaway Port Authority of Duluth announced that the Greek-flag motor vessel Aristandros, time-chartered to the China National Chartering Corporation of the Peoples Republic of China, was taking on her cargo at the Continental Elevator in Superior.

Stuart A. McLennan, Duluth agent for the Aristandros, said the ship is loading approximately 12,600 tons of spring wheat for delivery to Shanghai. The vessel is expected to depart Friday.

Duluth Port Director C. Thomas Burke said he has been advised by principals handling the Aristandros that the timecharter of the Greek

bulk carrier to the Peoples Republic of China represents the first vessel operations by the Chinese in the Great Lakes. (Seaway Port Authority of Duluth)

### LNG Marshalling Port

Galveston, Texas, June 29:—Galveston has been chosen as the export packing and shipping port for another large liquefied natural gas project.

Chemical Construction Corporation, New York, a subsidiary of Aerojet-General Corporation, will be the major U.S. contractor for the plant, to be constructed at Arzew, a port in Western Algeria, through its subsidiary, Chemico (Africa), and will provide engineering and procurement, as well as construction services for its client, Sonatrach, the Algerian State Oil Company.

Movement of materials to Galveston for packing and loading on ships will begin in 60 to 90 days and should continue for nearly four years, C. S. Devoy, Galveston Port Director, has

been advised by Chemico officials.

"We are pleased to welcome a new customer and project to the port, and this business will provide more work on the wharves as well as assuring the loading of many ships that will lift project cargoes under the project," Devoy said.

The contract marks the third major LNG project to be staged at Galveston. Since the unique concept of combining the services of the port and the packer was begun in Galveston in 1967 more than 200 project ships have been loaded here. The Port of Galveston Pier Point Packers Division performs all necessary packing, processing and export preparations for these projects. (News from The Port of Galveston)

### \$40 Million Expansion

Houston, Texas (Special), June 15:—The Houston Port Commission has approved issuing the first \$15 million of \$40 million in general obligation bonds for further construction of the Barbours Cut container/barge ship facility and additional improvements in the Turning Basin area.

Harris County taxpayers voted overwhelmingly for the bonds on April 14th, as part of a \$153 million County tax bond package, which will be spent over the next four years, without additional taxation expected by the County government.

Barbours Cut is slated to get nearly three fourths, or just over \$11.2 million, of the Port's first \$15 million approved Friday, with the remainder scheduled primarily for environmental improvements such as soil disposal areas, sanitary sewers, dust control and land improvements behind Wharves 8 and 9.

Port Commission Chairman Fentress Bracewell said the Port Authority plans to open bids on the bond purchase on July 12th, with funds available shortly thereafter. R. P. Leach, deputy director—engineering and planning, for the Port Authority, said that property acquisitions, topographic mapping, soils exploration and engineering lead time indicate January 1st of 1974 as a logical date for beginning this first part of the bond program.

In a proposed breakdown submit-

**(Continued on Next Page Bottom)**

# ***Barbours Cut—Houston's Answer to the Barge-Container Challenge***

Port of Houston News Release

Engineering is already well underway and the Port of Houston is moving full ahead on Phase II of its Barbours Cut terminal for LASH and container ships following a resounding 3-1 favorable mid-April bond issue election which will provide \$29 million for the facility.

Lying but 25 miles inland from the Gulf and an equal distance down channel from the present Port of Houston facilities, Barbours Cut is Houston's answer to the sea/barge-container challenge. It is on a straight route across Galveston Bay and already is handling giant LASH ships at its U-shaped phase I pier installation opened last June.

Phase II will provide for two additional berths lying immediately behind Phase I, each capable of handling vessels 1,000 feet long, each with two container cranes and each backed up by a container marshalling yard.

Barbours Cut already has been dredged to 40 feet at its mouth, with the U-shaped mooring pier 300 feet long which stretches 500 feet into the entrance off the south side of the Ship Channel where Barbours Cut meets Galveston Bay.

Mooring dolphins extend out to either side to handle vessels 900 feet and more in length. Nearby is a fleeting area for marshalling the barges being loaded and unloaded by the giant LASH vessels. It

ted by Leach to Port Executive Director, G. W. Altwater, he stated that \$15 million on the bonds would be available the first year, \$10 million each for both the second and third years and \$5 million the fourth year. (Port of Houston News Release)

places the port a short two hours from the open sea as against the six hours or more required to navigate the present 50 mile Ship Channel to its modern Turning Basin area.

The \$29 million approved for Barbours Cut will be expended over several years but hopefully the first \$15 million worth of bonds will be available for sale within 90 days, according to Port Commission Chairman Fentress Bracewell. Completion of the phase II facility should take about 34 months, according to Deputy Director for Engineering and planning, Richard P. Leach.

Port Executive Director George W. Altwater said the emphasis at Barbours Cut now will be on the facilities for the additional barge carrying and container ships. He predicted that by 1975 at least 14 of the giant ships will be calling regularly at Barbours Cut as compared to the seven ships which will be making regular calls here by the end of this year.

The 875-foot, 43,000-ton Dutch flag vessel BILDERDYK of the Combi Line (a combination of the Holland-America and the German Hapag-Lloyd AG) inaugurated the new Barbours Cut facility at the end of June, handling approximately 10,000 tons of import and export cargo aboard its fleet of barges in one and one-half working days.

A sister ship in the Combi Line service, the German-flag vessel MUENCHEN, arrived in November.

While the Combi Line's LASH vessels have been calling at the Phase I U-shaped LASH mooring

facility since last June, the Delta Line's first new barge and container carrying vessel, the DEL MAR, will begin calling there in July. It will be followed soon after by its sister ship, the DEL NORTE, in August and another sister ship, the DEL SUD, later in the year.

Waterman Steamship Corporation, another American Flag line will build three barge carrying or LASH-type vessels, and is giving serious consideration to Barbours Cut as its West Gulf terminal. The keel for the first of these ships, the SAM HOUSTON, is now being laid and will be followed by the ROBERT E. LEE and the STONEWALL JACKSON.

The Port also hopes to interest Central Gulf Lines and Lykes Bros. Steamship Co. in using Barbours Cut with their present LASH and Seabee vessels. At present these two lines serve the Port of Houston with their barges but the mother ships, which carry the barges, do not call here.

Actually, the voters of Harris County approved \$40 million for the Port Authority for needed facilities and improvements as part of a \$155 million package for Port, road, flood, and other improvements in the County. Of this \$40 million in funds for the Port, \$11 million will be spent in the present Turning Basin area.

The \$29 million of funds earmarked for the Barbours Cut project have already been designated and \$8.3 million will go for the two huge container wharves and \$6 million for the four giant container cranes to serve them.

Another \$4 million will go for a fleeting area and terminal for the barges of the LASH type vessels, and \$3.6 million for site development and nearly another million for additional dredging.

At present Barbours Cut is dredged to 40 feet at its wide mouth but the dredging will continue further back into the cut for the additional two berths so that the entire facility ultimately will be dredged to at least 40 feet with a huge turning basin. When completed several years hence, at estimates in excess of \$100 million, Barbours

Terminal will be capable of handling 20 of the LASH and container giants.

Additional funds at Barbours Cut under Phase II will be one million dollars for roads and railroad tracks and another million for a breakwater and recreation park for the public, as well as 1.25 million for four yard cranes for terminals.

Work is right on schedule for the Barbours Cut facilities to handle joint container-barge movement with a container marshalling yard under construction at the base of the U-head pier.

When Barbours Cut finally is completed it will cover some 600 acres and make the Port of Houston unique in the Gulf, if not in the nation, with its ideal, protected inland location, yet within a short run from open water. It is served by rail through a network of six major railroad trunklines feeding out all over the nation, and is the hub of more than 40 interstate trucking lines.

Upstream at the Turning Basin, which is already busy serving five full container services between the Gulf and Northern Europe, Scandinavia and the United Kingdom, with three container cranes and five marshalling yards in operation, some \$11 million will be spent.

These funds will go for one additional open wharf, just below present covered wharves 30 and 31. This will use up the last of the Port of Houston Authority's land around the Turning Basin area and will lie just below the new high rise bridge over the Ship Channel.

Additionally the funds will go for additional fire protection with a \$750,000 fireboat, environmental improvements such as sewers and dust control costing \$3 million, for channel improvement, rebuilding the areas behind Wharves 8 and 9, and improved container facilities.

As a matter of fact, the Barbours Cut facility will in no way cut down activity at the busy Turning Basin wharves which in 1972 set new tonnage records and are running ahead of last year's figures thus far this year.

Sea-Land Services are bringing in their 180 class vessels capable of

handling 770 containers while Seatrain and Combi Line both have full container service to Northern Europe and the United Kingdom with vessels carrying lesser numbers of containers.

Sea-Land also has a coastwise service with vessels handling 330 of the giant containers. AGS service (a combination of the former Swedish American Line and The Finn Lines) also offers full container service to the Continent, United Kingdom and Scandinavia, and other lines are handling both containers and break-bulk cargo on their vessels overseas.

Houston's entire emphasis is and has been on growth, new facilities, more efficient and faster service and the ability to anticipate and then meet the needs of changing traffic patterns. The whole building concept for the fifteen new wharves built over the last fifteen years has been influenced by this thinking. Today that foresight, in providing a giant open wharf between every two shedded terminals, has paid off handsomely in ability to handle the huge steel, automobile and heavy equipment shipments moving in and out of the Port of Houston.

The Port Authority's 200 acre industrial park immediately behind its wharves on the north side, was completed less than a dozen years ago. At the time skeptics wondered how all that space would ever be rented, but it is now jammed to capacity with container and automobile marshalling yards and companies are clamoring for additional space.

Barbours Cut will be part of the answer as the trend swings to larger container ships—the new Delta Line vessels can carry 1700 containers, for instance — and the LASH vessels can carry 87 barges.

Thus, while the Port of Houston will be moving forward at Barbours Cut to handle the huge new LASH container ships, it also will continue to improve its already modern and efficient facilities at the Turning Basin, which provide berthing space for thirty conventional type vessels.

The \$40 million shot in the arm

which an enthusiastic and interested citizenry has given its Port—which, along with the Ship Channel's industries, accounts for one third of Houston's booming economy—has encouraged port officials.

As Chairman Bracewell put it: "This is the most important decision made by the voters of Houston and Harris County since they decided more than sixty years ago to build a port in the first place."

## Multi-Color "Harbor Highlights" Praised

Long Beach, Calif., July 5:—"Harbor Highlights," the Port of Long Beach's 1972 annual report, has been voted a Certificate of Award in the printing Industries of America's 23rd annual Graphic Arts Competition. The Publication won in the category for "business reports in three or more colors."

More than 4,000 entries were judged in this year's national competition, and winners were selected by a panel of 21 judges, who required more than a week to complete their task. The PIA plaques for excellence in design and production are considered the Oscars of the printing world.

In accepting the certificate, Long Beach Harbor Commission president James G. Craig, Jr. noted that "running the Port of Long Beach has always been a real team effort, and this honor is the result of just such an effort, by our public relations staff, our advertising agency and by the printer, who also printed last year's award-winning Harbor Highlights."

The 1971 annual report was an important factor in Long Beach Harbor winning the top award for general excellence in publications and advertising from the American Association of Port Authorities—the first Pacific Coast Port to win the Admiral Richard E. Byrd trophy.

In addition, that report also won top honors from the Association of Industrial Advertising, the 3M Printing Job of the Year 1972, Best in the West and National Addy awards from the American Advertising Federation and the Belding Award for Creative Achievement. (Port of Long Beach News)

## First Cargo to Russia

Long Beach, Calif., June 8:—What is believed to be the first direct shipment of American goods from the West Coast to Russia on a Soviet ship left the Port of Long Beach this week aboard Fesco Pacific Line's MV Gamzat Tsasada, bound for Nakhodka.

According to K. Erik Baur, president of Salen-Interocean, agents for the Russian flag steamship line, the initial shipment of what is expected to become an important new trade program consisted of 1049 revenue tons of pipe mill and milling machinery, all of it manufactured in Southern California.

Fesco's break-bulk semi-container and more recently fully cellular container ships have been calling regularly at Long Beach for over two years now, but have heretofore been involved in only the West Coast to Japan trade.

Baur noted that the first direct shipment from Long Beach to Nakhodka occurred last March, when 300,000 cases of Sunkist lemons were exported via Salen Reefer Services.

Nakhodka is a major new icefree port located near Vladivostok on the eastern coast of the Soviet Union. (Port of Long Beach News)

## Long-Range Waterfront Master Plan

Los Angeles, June 6: — New concepts for the use of land and traffic flow along the three-mile West Bank stretch of the Main Channel at the Port of Los Angeles were presented in a long-range report form master plan accepted today (Wednesday, June 6) by the Board of Harbor Commissioners.

The waterfront area concerned is in the San Pedro District of the Port, extending from the Vincent Thomas bridge south to the Outer Harbor.

Acceptance of the report, led by Commissioner Frank C. Sullivan, was unanimously agreed to by the Harbor commission, with compliments on the report itself as one showing a great deal of foresight and imagination.

Commission President John B. Kilroy pointed out that the report



New York, N.Y., July 3:—President John D. Kerr, vice president of Calmar Steamship Corporation, met with chairmen of two newly formed committees of The Maritime Association of the Port of New York as plans of action and official launching of these groups got underway. Designation of the committees and the respective chairmen continues the group's 100th anniversary realignment of the organization, capitalizing on its service orientation and its prime liaison position within the industry in the Port of New York. At Kerr's right, chairman Captain Howard Nixon, director of marine services for Sea-Land Services. Assigned leadership for the Harbor Environment Committee, Nixon is charged with informing and advising the membership of issues and options—legislatively, operatively, and cooperatively—to achieve environmentally sound performance and contributions within the maritime community. Chairman Richard LePage at Kerr's left, Farrell Lines Incorporated, holds responsibility for the Harbor Safety and Navigation Committee. Proposing to continue and expand the emphasis of traffic safety in the Port of New York, the committee includes among its immediate promotions the management and development of 24-hour intelligence surveillance center (underway and due for late 1973), to coordinate vessel information, and ultimately to provide strong unified industry voice in implementing new VTS service in the mutual interest of the respective groups and agencies the Association serves. (The Maritime Association of The Port of New York)

will be most useful in the final development of a master plan for the Harbor, scheduled for completion in August 1975.

Three major land use concepts were developed by A. C. Martin & Associates, authors of the report, after a review of existing activities and facilities along West Bank. Another consideration was whether a large landfill project across the Main Channel would be constructed.

Should the landfilling be done, the

consultants recommend that a range of land uses such as commerce, fisheries, recreation and some residential construction be considered.

If there is no large landfill south from Terminal Island, A. C. Martin & Associates indicate the San Pedro waterfront areas should be reserved for the traditional uses of commerce, navigation and fisheries, even though large parcels of land needed in modern cargo-handling methods will not be easily available.

Another possibility would be a concentration of recreation, retail and residential land uses on the waterfront segments. This kind of development would rely on remaining Port areas to absorb future commerce, navigation and fisheries needs.

The Martin report indicates that a final decision is not required for about five years during the first phase of the West Bank improvement, which will be helpful to any long-range land use program.

Major suggestions for development during the Phase 1 period are to remove the Signal Street viaduct, join Harbor Boulevard and Miner Street with a new roadway, and construction of combination parking structures and housing behind the Ports of Call area. (Port of Los Angeles)

### Budget for Fiscal 1974

Los Angeles, June 20: — The Board of Harbor Commissioners today (Wednesday, June 20) adopted a budget of \$33,915,498 to operate and develop the Port of Los Angeles for the next fiscal year, which begins July 1.

In granting approval, Harbor Commissioners John B. Kilroy and Frank C. Sullivan commented that the budget is not only realistic but a conservative one, in view of the wide scope of operations carried out by the Harbor Department.

Income from shipping services, most rentals and special categories are expected to be equal or greater during fiscal 1974 than in the current year.

Wharfage and preferential assignment charges are expected to increase slightly among the shipping services category, while dockage, storage, demurrage, temporary assignment charges and pilotage fees are anticipated to be the same as in the current fiscal year.

Land and building rentals, and wharf and shed revenues are forecast to increase slightly, while warehouse rentals will remain the same.

Special incomes such as municipal concessions and oil royalties are expected to be the same, but funds in the non-revenue sources from the California Department of Navigation and Ocean Development for a

Fish Harbor small craft marina are expected to be up substantially.

On the expenditures side of the budget, the general operating costs for the Harbor Department are up over \$1.8 million.

The total budget includes \$8.8 million in salaries, including City health and medical plan, for 549 permanent regular employees. Over \$5.5 million will be spent for materials, supplies and services.

New equipment will cost about \$474,695, and bond interest and redemption is budgeted for \$3.6 million. Contribution to the retirement fund will be \$650,000 in the coming year, leaving an unappropriated balance of \$1.5 million.

Estimates for land acquisition and capital improvements for the coming year are \$13,239,304. During the current year \$9,733,470 has been provided for these purposes. (Port of Los Angeles)

### Evaluating an Overseas Office

Los Angeles, June 28: — The Board of Harbor Commissioners has decided not to establish an office for the Port of Los Angeles in Australia or New Zealand at this time.

Commissioners indicated that the Port should continue to solicit trade with the developing area by means of periodic trips by representatives of the Harbor Department.

"I think we accomplished a great deal for the Port when we were down there last Fall," noted John J. Royal, past president of the Commission and leaders of a recent trade mission to Australia and New Zealand.

Estimates ranging from \$40,000 to \$53,000 annually were made by the Port's Traffic Division as the cost to establish an office and support a full-time representative in Australia.

The estimates were based on reports from individuals and firms engaged in trade in the area.

The Commissioners indicated that the question of starting an office with either a full or part-time representative would be reviewed in the coming months.

Changes in current Australian, New Zealand or U.S. monetary conditions, or new potential for increas-

ing trade could be the basis for establishing the office sometime in the future. (Port of Los Angeles)

### Terminal Operator Invited

New Orleans, La., July 16: — The Port of New Orleans will receive bids October 15 from concerns or groups wishing to lease, operate and maintain the port's Public Bulk Terminal.

The five-year lease proposal calls for a basic annual rental fee, plus an amount to be paid for each ton of cargo handled at the facility, which is located on the Mississippi River-Gulf Outlet near its junction with the Industrial Canal.

The port has operated the facility since it opened in 1963. The lease proposal is in keeping with the port's policy of creating international cargo handling facilities for the eventual purpose of turning them over to private industry for operation. Similar action was taken ten years ago at the port's Public Grain Elevator, a facility which, like the Public Bulk Terminal, is in competition with similar facilities operated by private industry. Port officials expect that the terminal will continue to be used effectively to augment the ever growing movement of bulk commodities in international trade through the port.

The port has earmarked \$410,000 for construction of new dust collection equipment at the terminal in the near future. The lessee will be responsible for complying with all local, state and national regulations concerning environmental controls.

The \$18 million complex can transfer bulk cargoes between ships, barges, rail cars, truck and open or closed storage. It is the port's fastest growing facility. Principal commodities handled there are coke, alumina, manganese, sugar, barytes and salt. There are three ship berths, and approximately 50 employees who work round-the-clock shifts. These employees are to be given primary consideration by the lessee, who will be given options for two 5-year extensions to the original contract. The contract may be canceled by the port in the event that cargo handled at the terminal for any one year falls below one million tons. (Port of New Orleans)



## Port Authority's New Address

New York, N.Y.,—June, 1973:—The Port Authority of New York and New Jersey has moved its headquarters office to the World Trade Center in lower Manhattan.

For over 40 years, the Port Authority had been housed in its own building on Manhattan's West side at 8th Avenue and 15th Street. With its move to the World Trade Center, it joins the largest community of international trade and commerce organizations ever assembled under a single roof. Located elsewhere in the project are trading companies, manufacturers, exporters and importers, freight forwarders and custom house brokers, steamship lines and agents, international banks, trade associations, and numerous other organizations.

One of the primary functions of the Port Authority of New York and New Jersey is the promotion and development of international trade and assistance to shippers. At its new location at the World Trade Center, the Port Authority will be easily accessible to the thousands of international shippers transacting business at the Trade Center. The Port Authority's new address is One World Trade Center, New York, New York 10048. (News from The Port Authority of New York and New Jersey)

## Construction Contracts Awarded

New York, June 13:—Four construction contracts totaling more than \$5 million were awarded today by the Port Authority Board of Commissioners for work at Newark International Airport and at adjacent Port Newark and the Elizabeth Marine Terminal. Announcement of the awards was made by Chairman James C. Kellogg, 3rd, following the meeting of the Board.

The first contract provides for the construction of a taxiway overpass at Newark International Airport which will bridge the roadway serving the control tower. The overpass to be constructed under a \$2,031,058 contract, will ultimately be part of a taxiway linking Runway 11-29 and the new Central Terminal Area. The contract was awarded to the low



**San Francisco, Calif., June 12:—THE TWAIN MEETS AT GOLDEN GATE**—Increasing Soviet ship traffic in trans-Pacific trade resulted in yet another "maiden voyage" for a USSR container ship to San Francisco Bay. Greeting Captain Nikoli Mogilyan, master of the MV ALEXANDER FADEEV, at Port of Oakland's seventh street terminal container station was Maritime Queen Leslie Valstad, and Marine Exchange director Frank Ewers, of Marcona Corporation. The fast-turnaround cargo liner received an inlaid tray depicting San Francisco Bay and Telegraph Hill, to commemorate its inaugural voyage.

bidder, Schiavone Construction Co. of Secaucus, New Jersey.

A second contract for work at the airport was also awarded to the Schiavone Company for the construction of seven new corrugated metal culverts, each ten feet in diameters, that will replace a wooden culvert in the peripheral ditch at the northwest approach to Runway 11-29. In addition, the \$2,125,227 contract provides for installation of a portion of the drainage system for the apron of Terminal "C" and a haul route for future construction

operations to be built along the airport's western boundary.

Work on both contracts will begin on July 1 and is scheduled for completion by mid-1974.

These contracts embody the program developed by the Port Authority in cooperation with representatives of the Newark Community to provide for greater participation of minorities in construction work at Newark International Airport.

At Port Newark, a \$593,861 contract was awarded to the low bidder, Robert Bossert & Co., Inc. of





San Francisco, Calif., June 14:—**VETERAN FRIEND OF WATER RESOURCES HONORED**—Congressman Harold T. “Bizz” Johnson was recently commended for “outstanding service to California and the nation” in his role as a senior member of the House Public Works Committee. The Washington, D.C. ceremony took place at the annual Golden State Luncheon on Capitol Hill, with Kenneth Sampson (left), president of the California Marine Affairs and Navigation Conference, making the award to Congressman Johnson on behalf of the state’s ports and harbors. California Senator Alan Cranston (center) was also on hand for the event. More than 250 Congressmen, agency and other Washington officials attended the luncheon, which followed House and Senate testimony by C-MANC members seeking increased funding and “new Federal direction” on behalf of commercial and recreational navigation.

Newark, New Jersey to provide grading, paving, Berth 59. The contract also calls for the extension of a railroad spur from the main line to the site.

The annual general maintenance contract for paving and other repairs at Port Newark and the Elizabeth marine terminal was awarded today to C.H. Winans Company of Roselle, New Jersey at the low bid price of \$472,627. The contract provides for resurfacing of existing roadways and parking lots, rehabilitation of pavement and of sections of existing railroad track and miscellaneous modifications to the drainage system at the

New Jersey marine terminals. (News from The Port Authority of NY & NJ)

### Passenger Ship Terminal Interiors to be Completed

New York, June 13:—The new Passenger Ship Terminal on the Hudson River moved closer to its scheduled opening in the Spring of 1974 with the award today of a \$10,076,000 construction contract to complete the interiors of Piers 90 and 92—two of the three piers being rebuilt by the Port Authority as part of the new terminal. Announcement of the award was made by Chairman

James G. Kellogg, 3rd, following the meeting of the bi-state agency’s Board of Commissioners.

The contract calls for the furnishing and installation of elevators and escalators, heating and air-conditioning, plumbing, electrical power and lighting by the low bidder, Nab Construction Corp. of College Point, New York. Nab is presently doing similar work on adjacent Pier 88. Work on Piers 90 and 92 will start early this summer and, as with Pier 88, will be completed in time for the scheduled opening of the Terminal in the Spring of 1974.

The Passenger Ship Terminal involves reconstruction of the three obsolete Hudson River piers between 48th and 52nd Streets to provide six ship berths with the most modern passenger facilities. The exteriors of the piers are being rehabilitated and the interiors rebuilt to include modern heated and air-conditioned areas for passengers and baggage. The ground level of each pier structure is being retained as a service area for the delivery of equipment and ships’ stores. Convenient access to the terminal will be provided via vehicular ramps and a 20-foot-wide sidewalk with a glass windbreak which will permit easy pickup and discharge of passengers and their baggage.

The old peaked roofs on the piers have been removed and the buildings stripped to make way for new flat roofs capable of providing 1,000 public parking spaces. Structural steel has been erected at two piers and is being erected on the third. The installation of concrete decking is virtually completed on Piers 88 and 90 and will begin shortly on Pier 92.

Extension of the roadway bulkhead 60 feet into the river to provide car and taxi unloading positions at both ground and second level, and construction of the foundation for the 1,700-foot-long roadway leading to the second or passenger level of the pier, are nearing completion.

The new terminal is being constructed at an estimated cost of \$35,900,000. It will be operated by the Port Authority under a 20-year lease with the City of New York. (News from The Port Authority of

NY &amp; NJ)

## San Diego Newsletter—July

**Embarcadero Beautification:**—The Port's newest addition to the Embarcadero has been completed, and one of the tenants has opened his doors for business . . . Harbor Seafood Mart at the foot of Market was designed by Innis-Tennebaum in a Mediterranean style and features a harmonious blending of retail and wholesale fish outlets with quick order delicacies, a gift shop and a spacious restaurant . . . the District furnished the building's shell, landscaping, parking facilities, utilities and the like with tenants paying for interiors. The Port invested about \$890,000 and tenants \$700,000 for a cooperative investment total, in the future of San Diego Bay, of \$1,590,000. First of the five tenants to open its doors was Anthony's Seafood Mart . . . others are: San Diego Fish Company; Peoples' Fish Market; J.J. Camillo Fish Broker and Chesapeake Fish Company.

**AAPA at San Pasqual:**—Behind the scenes progress continues as a host of committees prepare for the annual meeting of the American Association of Port Authorities in San Diego next fall. The prestigious NEW YORK JOURNAL OF COMMERCE will host an evening at the San Pasqual Wild Animal Park . . . many San Diego businesses are assisting the Port meet this responsibility and challenge.

**Container Terminal Progresses:**—Construction started in mid-May by the R.E. Hazard Construction Company at the 24th Street container terminal . . . site excavation and preparation of the area keeps equipment rolling with a July 14 delivery date for crane components anticipated from Tokyo.

**New Cruise Service:**—Fiesta Cruises is in business at the Broadway Pier. A 3½ hour cruise from San Diego six days a week to Ensenada, leaving in the morning and returning that afternoon, is scheduled to start later this month . . . cost for the round trip is \$25.

**Dredging Costs Up:**—An extra cost of \$1,400,000 for dumping mud dredged from San Diego Bay and carried out to sea is now being dis-



**SAN FRANCISCO: (June 22)** San Francisco's Telegraph Hill and Coit Tower were backdrops for recent unveiling of a new chart of ship stacks of the Pacific Coast. Golden Gate Maritime Princess Bonita Genova of Sea-Land of California, Inc. was an early and admiring recipient of the colorful reference from Marine Exchange President Edward D. Ransom. Latest and improved version of the popular publication contains 128 color-coded ship stack insignias as well as an alphabetical index. Published by the 125-year old Marine Exchange, copies are available for \$2 plus 11 cents tax at 303 World Trade Center, San Francisco, Calif. 94111; or in heavy mailing tubes, posted for \$2.61 net. (Marine Exchange of The San Francisco Bay Region)

cussed with the Corps of Engineers. Transport of mud to sea is necessary in order to eliminate the unsuitable building material from the Bay. Environmental considerations preclude the less expensive method of mixing it with sand fill.

**Port Salesmen Busy:**—Trade development representatives were selling the Port's new container during June . . . director Robert Mercer was in Japan and the Far East talking to steamship line representatives, 10 in all, during a two week trip . . . sales representative Hank Hess was on the East Coast; sales representative Jerry Murphy in the Pacific

Northwest and marketing manager William Stonehouse in Mexico City.

**New Brochure Ready:**—Trade Development/Marketing will soon distribute a new four-color brochure outlining all the benefits of doing business at the Port of San Diego . . . with an emphasis on a container crane availability by next fall. The brochure was produced by Franklin & Associates with all photographs furnished by the Port's Community Relations Department . . . business prospects also received an insert carrying the Port's principle charges and wharfage rates as of May 1, 1973.

**Busy Cargo Month:**—Forty-four

cargo ships docked in San Diego Bay in the month of June. Thirty passengers left the MARIPOSA, which returned after a three-month Mediterranean cruise and nearly 100 passengers took a two-day cruise on the ITALIA.

**Hitachi Engineers Here:**—Hirowi Akiyama, a Hitachi engineer, is in San Diego awaiting the delivery of the Hitachi-built container crane for the 24th Street container terminal . . . erection and testing is expected to take three months. Wismer and Becker Construction Company is responsible for assembling the crane with Walt Olsen, their supervisor.

**Berkeley Opens in August:**—The BERKELEY Maritime Museum opens in August at the "B" Street pier. A permanent floating museum, it will have exhibits on the Navy, Merchant Marine, the fishing industry and undersea research . . . the BERKELEY is a 75-year-old ferry that carried survivors from San Francisco in the 1906 earthquake and fire. It carried commuters across San Francisco Bay until 13 years ago.

### Maritime Press Association

Seattle, Washington: — Father Eugene Wolfe was unanimously elected 1973-74 president of the Puget Sound Maritime Press Association at members' June 25 business meeting.

An Episcopal priest and waterfront chaplain, Father Wolfe succeeds Stephen Tiebout, past northwest manager of Sea and Pacific Motor Boat magazine.

Newly-elected vice president is Jim Davis, free-lance marine photographer. He replaces Patricia Bailargeon, director of the Port of Seattle's World Trade Center.

Mayo McCabe, associate editor for the Port of Seattle, was elected secretary-treasurer. She succeeds Susan MacDonald, past associate editor for the Port and now director of information for the Government of American Samoa.

Members of the 22-year-old Maritime Press Association are writers, photographers and publicists interested in promoting Puget Sound's maritime industry. Besides gathering for educational marine tours and special presentations, they annually nominate and select a Maritime

Man-of-the Year and presented him the Fred W. Geibel award at the Maritime Day Luncheon each May. This year they honored Philip F. Spaulding, naval architect. (Puget Sound Maritime Press Association)

### High General Cargo Tonnage in 1972

Antwerp Port News, May:—When the pipeline for crude petroleum Rotterdam-Antwerp (RAPL) became adapted for use in 1971, it was generally thought that a substantial drop was going to result in the sea-borne goods traffic proper. The pipeline was namely expected to drain some 20 million tons of crude petroleum, thereby taking the place of a corresponding number of tankships to call directly. It was consequently felt that the overall sea-borne traffic would decline to about 55 to 60 million tons.

The figures for 1972 (this being the first complete year during which the pipeline was in operation), however, show that the evolution in cargo traffic was much more favourable than expected. The total sea-borne traffic or goods namely leapt up to 67.2 million tons.

A main reason for satisfaction certainly resides in the new record figure in the matter of general cargo traffic, which—for the first time in the history of the port — was in excess of 25 million tons. The record covers both the inward and the outward movement of general cargo, same amounting to 9.3 million and 15.9 million tons respectively (figures for 1971 were 8.6 and 15.3 million tons respectively):

### General Cargo Traffic (in 1000 tons)

Year	Inwards	Outwards	Total
1950	3,305	7,033	10,338
1955	4,106	9,076	13,182
1960	4,875	10,576	15,453
1965	5,685	13,096	18,781
1970	8,977	14,034	23,010
1971	8,648	15,348	23,996
1972	9,380	15,902	25,282

These statistics produce a clear picture of the growth of the port traffic all along the years following World War II.

The progress in the matter of general cargo traffic as compared

to the year before is mainly in connection with such items as iron & steel (+ 327,000 tons), timber (+ 76,500 tons), non-ferrous metals (+ 98,500 tons).

### New Record at Tilbury

London, 16th July:—Following the telescoping of shipping schedules resulting in a quick succession of container ships, Tilbury container port experienced exceptional pressure in the first week of July and responded with record breaking efforts.

The PLA multi-user container berths, which work 24 hours a day, 365 days a year, dealt with over 5,000 20ft equivalents achieving a new record throughput. The last record for these berths was set in March 1973 when 4,634 were dealt with in one week.

In the same July week over 1,350 20ft equivalents were handled at OCL's No: 39 berth Tilbury and the two results set an all-time high dock container traffic level for one week's throughput of more than 6,350 20ft units.

Present traffic levels show that the port is maintaining its position as Britain's leading container port and second container port in Europe. (News from PLA)

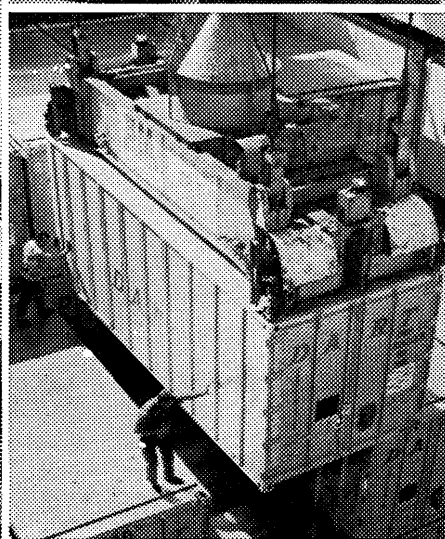
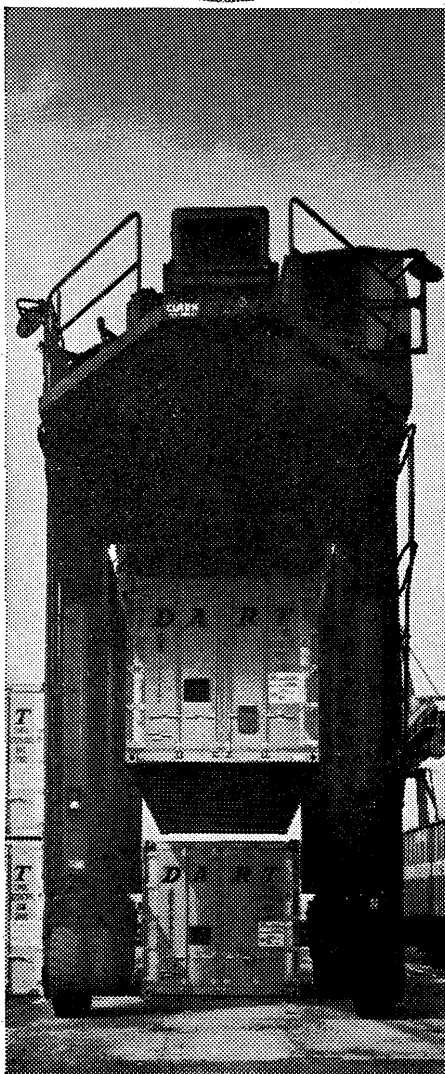
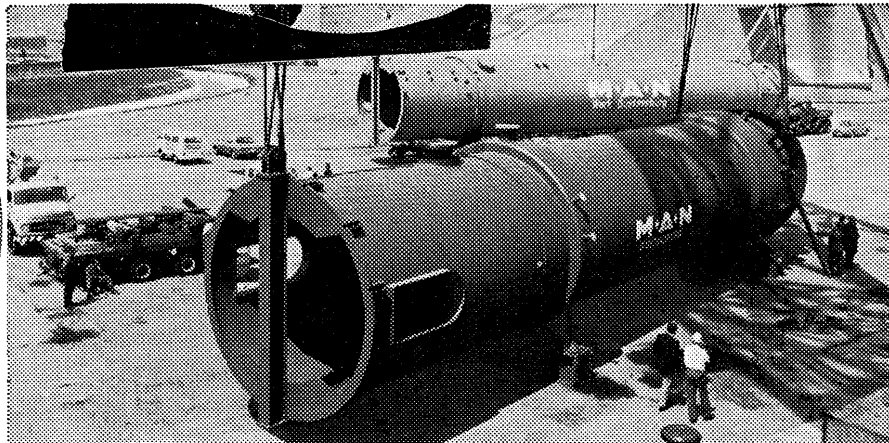
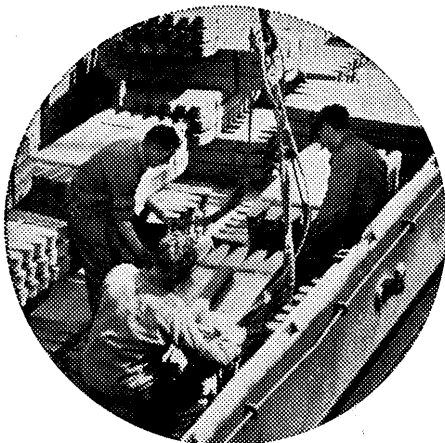
### PLA Acquire Majority Interest in Comprehensive Group

London, 11th June:—The Port of London Authority today (Monday June 11th) purchased a majority share-holding in the Comprehensive Shipping group of companies, acquiring a 75% holding in Comprehensive Shipping Ltd., which becomes the parent company of the Group.

Mr. John Lunch, PLA Director-General, becomes Chairman of the Group and Mr. D. J. Harrington continues as Managing Director, with the existing management. Executive directors and managers will remain in their present positions. Other PLA executives have been appointed directors.

Mr. John Lunch said: "We have a first-class Managing Director—Derek Harrington—with a good team under him. Our aim is to expand the business rapidly by giving

(Continued on Page 60)



**Being  
big  
is not  
an advantage  
in itself  
IT'S SERVICE  
THAT MAKES  
A PORT  
GREAT**

Measured by tonnage of cargoes and ships Antwerp ranks among the largest ports in the world. As a magnet for new industries establishing plant near the waterfront, the port reached international headlines by the scope of its industrial expansion. Fast adaptation to all new transportation techniques earned the port the title of Europe's best equipped container centre. However, Antwerp is more than a lay-out of facilities and industries. It is a community facing the challenge of competition from - even bigger - seaports. The close cooperation of all enterprises and their attitude towards the procurement of service to international trade are the major advantage offered by the Scheldt port to its clency.

**Not being the biggest, it must try harder...**

For information write directly to the General Management, Port of Antwerp, City Hall

**antwerp**  
the "BIG SERVICE PORT"





**Faster route to Felixstowe opened: Some vigorous spadework by Mr. John Peyton, the Transport Minister, at the tree planting ceremony to mark the opening of the new £2½ million road linking the Port of Felixstowe to the A45. Built by the East Suffolk County Council the final stretch of road to the new port entrance was opened on May 7, 1973. Afterwards Mr. Peyton and other guests toured the port and saw the major developments which will double cargo capacity to between five to six million tons a year by 1975. (Port of Felixstowe)**

(Continued from Page 58)

the right service at the right price. PLA resources will back up the Group in this expansion and already H. M. Customs have granted Comprehensive the required facilities for extended groupage operations. Comprehensive is a felicitous name, because that is just the service we want to provide. I see this as an important step for PLA in extending the range of service for customers—on a strictly businesslike basis.”

Comprehensive is centred on London and has an expanding business in freight forwarding and container groupage work with particular emphasis on Continental and Far East traffic. Registered dock workers are already employed by the company on their groupage activities and it is expected that there will be an increase in job opportunities. (News from PLA)

### **Eight Container Cranes at Tilbury**

London, 4th July:—The Port of London Authority have ordered a

sixth Paceco Portainer crane for their multi-user container berths at Tilbury.

With the two container cranes at OCL's No: 39 berth this will increase Tilbury containerport specialised cranes from seven to eight.

This additional capacity will further improve the service to customers at Tilbury—which is Britain's leading and largest containerport, and the second largest in Europe.

This new crane is of the high boom variety of latest and most modern Paceco design with 80 ft clear height from quay to lifting spreader. It will be able to serve the largest container vessel to berth in the dock. The single lift capacity of the crane will be 30.5 tonnes.

Delivery of the crane components is due in August and a prompt start will be made in erection on the berth to achieve early commissioning. (News from PLA)

### **New Fish Dock at Lowestoft**

London, 5 June (B.T.D.B.): — A £3 million scheme for new facilities for the fishing industry at Lowestoft has been agreed by the British Transport Docks Board, the Lowestoft Fishing Vessel Owners' Association and the Lowestoft Fish Merchants' Association.

The scheme involves works in Waveney Dock, Hamilton Dock and Trawl Dock, which were originally constructed for the herring fleet but are no longer adequate for handling the quantity of prime fish which is now landed.

The major part of the work will be in Waveney Dock, where new display and auction halls, packing halls and new quays will be built. In Hamilton Dock a new berth will be constructed in the north-west corner for the use of the inshore fishing fleet and a tanker berth will be built on the east side. The bunkering of trawlers and the loading of stores is carried out in Trawl Dock and the scheme involves the reconstruction of the quays and resurfacing of the western quay.

In addition, a jetty will be removed to widen the entrance to Waveney Dock; the sea wall adjacent to the fish docks will be protected by the placing of concrete blocks; and a new caisson will be constructed for the dry dock.

A Government grant towards the cost of the works has been approved in principle and subject to an authorisation under Section 9 of the Harbours Act 1964, work on the project will begin by November and take three years to complete.

### **Chief Engineer Retires**

London, 19 June (B.T.D.B.):—Mr. Donald G. McGarey, O.B.E., Chief Engineer of the British Transport Docks Board since 1964, and the engineer responsible for the building of Port Talbot Harbour in South Wales, is to retire at the end of July. Mr. Don Jones, currently the Board's Chief Docks Engineer in South Wales, has been appointed as his successor.

MR. D. G. MCGAREY, O.B.E., B.Sc. (Eng.), F.I.C.E., F.I.E.E., F.I.W.E., F.C.I.T.



Mr. McGarey has been a prominent member of his profession for many years, serving on the council of the Institution of Civil Engineers and on many other national and international technical bodies. He is chairman of the British National Committee of the Permanent International Association of Navigation Congresses and was chairman of the International Study Commission which reported on the design of roll-on/roll-off ships and terminals in 1971.

In 1970 Mr. McGarey was awarded the Institution of Civil Engineers' Telford Gold Medal, jointly with Mr. P. M. Fraenkel, his co-author, for their paper on the planning and design of Port Talbot Harbour.

Mr. McGarey began his career with the London Electric Railway Company in 1931. He joined the Grand Union Canal Company two years later, eventually becoming Assistant Engineer of the company. In 1949 he was appointed District Engineer for Hull docks by the Docks and Inland Waterways Executive of the British Transport Commission, and remained on Humberside for the next fourteen years, rising to the position of Assistant Chief Docks Engineer, Humber Ports. He moved to London as the Chief Technical Officer of the British Transport Docks Board when it was established in 1963, and became Chief Engineer the following year.

MR. DON JONES, B.Sc. (Eng.), F.I.C.E., M.C.I.T., C. Eng.

Mr. Don Jones will take up his new appointment as the Docks Board's Chief Engineer on 1st August.

Mr. Jones's career has been spent almost entirely at the South Wales ports. He began his career with the Great Western Railway Company in 1942 shortly before taking a commission in the Royal Engineers. He served in France with a unit responsible for "Mulberry B" prefabricated harbour, and in Holland and the Middle East. On demobilization in 1947, Mr. Jones returned to the G.W.R. at Barry Docks and in 1954 was made Docks Engineer (Civil) at



**SCANDINAVIAN SALES MISSION FROM FELIXSTOWE May 23:—** More than 150 Danish ship owners, operators and users attended the Port of Felixstowe reception in Copenhagen on May 22 1973. Pictured in discussion with Mr. A.A.S. Stark (centre), British Ambassador to Denmark are Mr. Stanley Turner (right), group managing director of the Felixstowe Dock & Railway Company and Mr. John Parker managing director of Felixstowe Tank Developments Limited.

that port. Two years later he was appointed New Works Assistant to the Civil Engineer for the South Wales Ports. As such he was responsible for implementing modernization programmes throughout the South Wales ports for a period of nine years.

In March 1965, he was promoted Assistant to the Chief Docks Manager (Engineering Services), South Wales Ports—a post subsequently redesignated Assistant Chief Docks Engineer. In February 1971 Mr. Jones was appointed Chief Docks Engineer, South Wales ports.

During his time as Chief Docks Engineer, Mr. Jones has become involved in a number of engineering projects outside South Wales, providing advice and facilities for several smaller Docks Board ports including Plymouth, Fleetwood, Garston and Lowestoft.

Mr. Jones is the immediate past-Chairman of the South Wales and Monmouthshire Association of the Institution of Civil Engineers and is also a former member of the Maritime Board of the Institution.

### New Ferry Terminal at Hull

London, 3 July (B.T.D.B.) The major extension of roll-on/roll-off facilities at Hull by the British Transport Docks Board for use by North Sea Ferries Ltd. is now to take place in King George Dock in-

stead of in the River Humber as previously announced.

The new scheme has been decided upon after a review of the accommodation which could be made available in King George Dock following changed requirements for other services. It proved possible to provide in the dock the additional facilities required by North Sea Ferries when their large second generation passenger/cargo vessels are introduced next year. The new scheme will involve less new capital expenditure and also represents a better use of the port's existing capital assets.

As part of the extensive re-development now planned at No. 5 Quay, King George Dock, a total of three roll-on/roll-off berths will be provided, as against the two berths in the original scheme in the River Humber. Provision has also been made in the present plan for the development of a fourth berth when required.

Additionally, the new scheme involves substantial improvements to the existing road access to King George & Queen Elizabeth Dock and to No. 5 Quay; the building of a new passenger terminal; and the extension and re-modelling of the existing passenger terminal building. A large area of land is to be developed for freight marshalling parks and passengers' cars, together with all necessary ancillary facilities.

ties.

In conjunction with this development the England/Sweden cargo service of EWL/Svea Lines will transfer from No. 5 Quay to an extended terminal being provided for them at No. 10 Shed berth. This scheme will include the realignment of the main dock roadway and larger parking areas for vehicles and cargo.

The Docks Board will also construct a shed at King George Dock to provide new groupage accommodation which will enable them to undertake a greater amount of groupage work than they can at present handle at No. 14 Shed, King George Dock.

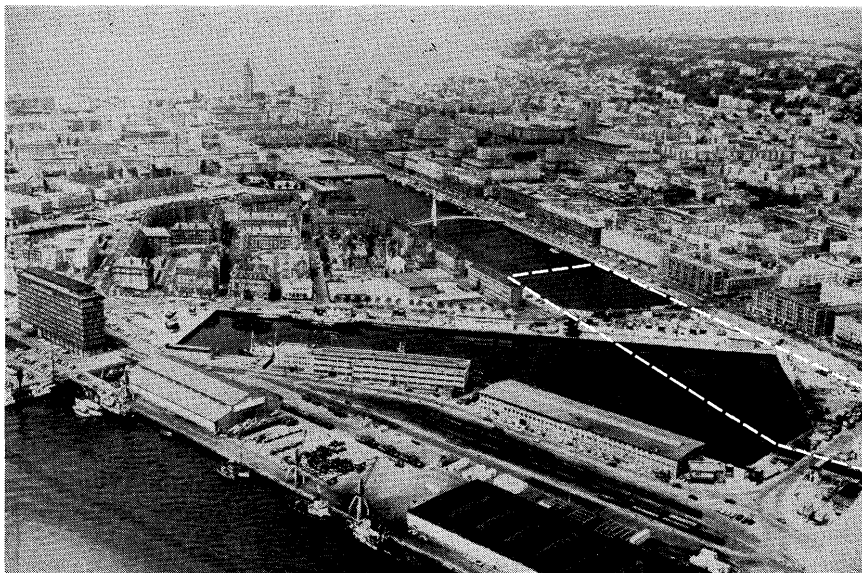
Announcing the new project today, Mr. John Williams, Hull Docks Manager, said that recent changes in the overall pattern of roll-on/roll-off operations at the port had made it clear that the future needs of North Sea Ferries and other port users could now be provided within the dock. As this would promote a better use of existing assets, it was in the best interests of the Board and all their customers at Hull that this alternative should be adopted.

Mr. Williams said the cost of the works would be in excess of £2.5 m and that the new terminal would be completed in time for the introduction of the first of North Sea Ferries' new vessels in May 1974.

### Port of Le Havre Flashes—March

**Le Havre To Have Ro-Ro Terminal:** Ro-Ro traffic is growing so fast in Le Havre that it will soon require even more berths than are already reserved for it. We are therefore building a special terminal on the south side of the Central Ship Canal (Canal Central Maritime), above the François Premier Lock.

The first two berths, with about 25 acres (10 hectares) of storage space, will be brought into service during the next few weeks. When completed, the terminal will cover about 175 acres (70 ha) and will have seven berths for ocean-going vessels and one for barges. The first berth will be able to accommodate



**The site of the W.T.C. of Le Havre: about 7 acres in the center of the city, where the Port and the business area meet, as indicated by white broken line.**

vessels up to 525 ft (160 m) long, with a draught of 33 ft (10 m), while the second will take ships 690 ft (210 m) long and of the same draught. It will be possible to modify this berth at a later stage to take side-loading vessels, should the need arise. The third berth, designed for ships with stern, bow or side loading facilities, is expected to come into service early in 1974.

The terminal will also have ample parking space for new cars destined for export or import and will make Le Havre one of the foremost ro-ro ports in Europe.

**World Trade Center Gets Under Way:** The Association formed by the Port Authority, the Chamber of Commerce and the City of Le Havre to consider the feasibility of building a World Trade Centre has gone into partnership with six banks to form a company with a capital of a million francs.

The Association at present has 40% of the capital but there will be further changes during the next few months, including an increase in capital so that actual construction can start towards the end of the year. The Centre will eventually contain 750,000 sq ft (70,000 m<sup>2</sup>) of office space in the very heart of the city.

**General Cargo Beats Oil In 1972:** The throughput of general cargo

rose by 16% last year, against an 11% increase for oil. The breakdown by categories shows a 3% rise for conventionally packed goods while ro-ro traffic was up by 25% and containers by 34%. 93,000 boxes were handled in 1972 against 66,000 in 1971. For the first time the tonnage of goods transiting in containers was well above the million mark.

### Three More Lines Choose Le Havre:

- On January 15th the Panamanian freighter Audacity inaugurated a monthly Borda Line service to Brazil, Uruguay and the Argentine.

- January 21st saw the start of a bi-weekly service to Ireland (Rosslare), operated by the Irish Continental Lines' ro-ro vessel Grey Master.

- On February 9th the Combi Line (jointly owned by Hapag-Lloyd and the Holland-America Line) inaugurated a monthly service from Le Havre to Charleston, Miami, Houston and New Orleans, using part containerships.

**Good News For Containers:** Mr. Charles Marx, of Intercontainer, Basle, tells us that containers transiting through Le Havre can be accepted for the Paris/Cologne freightliner.

Port users can now count on a

fast, specialized rail service between Le Havre and Cologne, Hanover, Hamburg and Bielefeld.

**Storage Facilities For Liquid Nitrogen:** The Port Authority and the Société Maritime de Dégazage are collaborating with Air Liquide to provide storage facilities for nearly 2,000 cu ft (50 m<sup>3</sup>) of liquid nitrogen at the repair berths on the Môle Central. The plant, which will include an evaporator capable of producing a constant supply of over 100,000 cu ft (3,000 m<sup>3</sup>) of nitrogen gas, is to be set up very shortly.

The nitrogen will be used for gas freeing tankers by the inert gas method as well as for neutralizing storage tanks containing dangerous liquids or gases.

**Office In Tokyo:** With Japan playing an ever more important role in world affairs, the Port Authority decided in November 1970 that the time had come to open an office in Tokyo.

Its staff had four ambitions:

- 1) To publicise the Port of Le Havre, which has for too long been insufficiently known in Japan.
- 2) To win for Le Havre the 20 and more of Franco-Japanese trade that for often rather short-sighted reasons still transits through countries fairly distant from France.
- 3) To interest shipping companies and import/export houses in one of the best container services in Europe.
- 4) To encourage manufacturing firms and big international organizations to come to Le Havre, which will soon be one of the chief industrial centres of Europe—though one that strives to keep man and nature in harmony.

We have every reason to believe that the Japanese are now fully aware that Le Havre is a major European port. Moreover, a number of manufacturers have expressed interest both in our 25,000-acre industrial zone and in the first French World Trade Centre that is soon to be built.

The next step is to win over the companies directly engaged in trade between Europe and Japan and our Tokyo office is busy discussing a number of concrete cases to which the Port Authority has promised



Mr. Jean A. Monnin

to give the most favourable possible treatment.

Mr. Monnin was born at Arras in 1923 and took a degree in philosophy at the University of Lille. He was a lecturer at the Kansai Franco-Japanese Institute and then in charge of cultural and economic questions at the Consulate-General in Kobe-Osaka, before moving to the French Embassy in 1964 as Commercial Attaché. He was then given the task of setting up the Port of Le Havre Authority's Tokyo office.

The pace of life in Tokyo leaves no time for the sports of his younger days, fencing and football, and he has had to confine himself to the subtler pleasures of Japanese literature and art. With his wife and two children he also delights in the opportunities for punning and word play that a trilingual family provides.

Mr. Monnin has no doubt whatever that Le Havre is going to make a big name for itself in Japan.

### Thailand's Kra-Canal: Construction Start 1975?

Bremen International 6/7-1973:—The long narrow tongue of land between the Adaman-Sea and the Gulf of Siam:—to break through this with a deep-sea canal, for joining the South-China Sea and the Indian Ocean one thousand kilometres north of Singapore and the Strait of Malacca, has been a

long-standing project. It has been the pre-occupation of the kings of Thailand, of the European colonial powers—England and France, of the Japanese in the 'twenties (and even more so during the second world war) and is today of interest for practically the whole world: for the one on economic grounds, for another on strategic grounds and yet another, on both grounds—including all the present-day world powers. The oldest plan envisaged the breaking through the Kra isthmus at its narrowest point; which is only 50 kilometers. This plan had then been dropped in view of the mountainous terrain. Further south the tongue of land is wider, but flat and without obstacles — discussions, conjectures, plans.

A resolution of the Thai government in June 1972, meeting under the chairmanship of Prime-Minister Thanom Kittikachorn with a group of Thailand mineral oil undertakings, re-activated this plan by appointing an international commission of experts to investigate new possibilities—under world-wide discussion. Among various possibilities is the question as to whether atomic energy could be used for blasting a 120-metre wide waterway through a mountainous region. If it is shown that the plan for the construction of the new canal, together with respective ports on the west and east coasts of the Kra isthmus, is feasible (on invitingly favourable terms) then it is to be realized as a national project of Thailand. With an eye to the awaited traffic frequency—the Strait of Malacca is already fully overburdened with 40,000 merchant ships—it is unquestionably possible to compare a Kra Canal in significance with that of the Panama Canal, or of the Suez Canal which has been blocked for 6 years.

To the international consortium, which began its preparatory work in January 1973 and which is to submit the results of its investigations to the Thailand authorities in the Autumn, belong American experts from scientific institutes in the USA, as well as — in Europe—Dr. Hans Ludwig Beth, the director of the institute for Maritime

Economy in Bremen; the French shipping consultant, J. Aubert; and the Dutch waterways expert, Professor P. Ph. Jansen.

According to the preparatory work accomplished to date, the construction work could already begin in 1975. The 'Financial Post,' of Bangkok, reports that after completion of the Canal, tankers and freighters will be able to shorten their voyages by 450 nautical miles.

### Bremen Bureau in Tokyo

Bremen International 6/7-1973:—The Bremen•Bremerhaven port operating company, the BLG, has been running its own office in Tokyo since the 1st of June 1973. The BLG thereby acknowledges the growing importance of Bremen/Japanese economic ties. Up to the present time, S. Tsuyama had already taken good care of the interests of Bremen and Bremerhaven in Japan and this he will continue to do; but now with the assistance of the German, Japanese-speaking, colleague — Friedrich H. Kreuzburg. The address of the new office:

Ports of Bremen-Bremerhaven  
Japan Representative S. Tsuyama  
Sanko Mori Building, 1-7  
Shiba Atagocho, Minato-ku  
Tokyo

### Israel Ports Authority Buys Advanced Terminal Cranes

Alameda, Calif., June 20:—The new container terminal at the Port of Ashdod, Israel, will have two of the newest type terminal cranes available.

They are the MACH (Modular Automated Container Handling) Transtainer cranes built by Paceco, A Division of Fruehauf Corporation, Alameda, California, and will have high-speed power packages to reduce both lifting and travel time. They will also have provisions for future automation, which will further increase operating speed. After automation, higher speeds can be attained with the operator's task simply being one of monitoring the entire operation.

Larger than most Transtainers, the cranes will have an overall



**John F. Martin, President and General Manager of Paceco, A Division of Fruehauf Corporation, Alameda, California (center) signs Contract with Meir Siwek (left) and Shmuel Achituv (right) of Israel Port Authority for two MACH (Modular Automated Container Handling) terminal cranes.**

height of 62 ft. and will be able to straddle 14 rows of containers stacked four high. In addition to the 140 ft. span, the cranes are cantilevered 23 ft. on one side to service two traffic lanes outside the legs of the crane.

Both cranes have a 35 MT rating and will be equipped with telescoping lifting spreaders for handling 20 ft. and 40 ft. containers.

First operation of the cranes is scheduled for early 1974. (PACECO News)

### Special Mission

Melbourne Harbor Trust Port Gazette, June:—Two senior officers of the Port of Melbourne left Melbourne towards the end of last month on a special mission.

Deputy Harbor Master, Captain I. Macfarlan, and the Principal Designing Engineer, Mr. A. Stevens, will visit ports in North America, Europe, Britain and the Far East.

They will study at first hand current port development projects, cargo handling methods and the latest engineering trends of a number of overseas ports.

The ports they will visit during their seven weeks study tour will be Oakland, San Francisco, New York, London, Liverpool, Manches-

ter, Southampton, Felixstowe, Oslo, Gothenburg, Copenhagen, Hamburg, Bremen, Bremerhaven, Amsterdam, Rotterdam, Antwerp, Dunkirk, Le Havre, Tokyo, Yokohama, Nagoya, Osaka, Kobe and Hong Kong.

Whilst in London, the two officers will meet the Chairman of the Trust, Mr. A. S. Mayne, and Chief Engineer, Mr. G. McDonald, who both will be in the closing stages of their respective tours.

In San Francisco, they will pay particular note to the Pacific Far East Line LASH terminal, and any new concepts in both ships design and cargo handling in all ports.

# Fourth Berth for Webb Dock in Melbourne

Melbourne Harbor Trust Port Gazette, June, 1973

Work has commenced in the port of Melbourne on a major project, which when completed in late 1974, will further increase the roll-on roll-off capabilities of the port.

The Commissioners last month approved the construction of a fourth roll-on roll-off berth at Webb Dock, which is expected to cost approximately \$5.5 million.

The additional berth is being built at the request of the Australian National Line who plan to introduce a second generation fleet of vehicle deck type ships in their Eastern Searoad Service, between the Port of Melbourne, other Australian ports, and Japan.

The Webb Dock complex as it is today is a tribute to the Commissioners of the Trust, port planners and engineers who went ahead and constructed the first roll-on, roll-off berth for the Australian National Line vehicular ferry "Princess of Tasmania" only 14 years ago.

The roll-on roll-off concept was in fact a well-planned programme which the Australian National Line rightly expected would be the answer to the problems of coastal shipping, as this trade for years had been losing ground to interstate rail and road operators.

The Trust Engineering Division lost no time in constructing No. 1 Webb Dock, complete with stern loading ramp and a backup area of four acres, for the exclusive use of ANL's first venture into roll-on, roll-off shipping.

The "Princess of Tasmania" from the very start, proved an unqualified success, and this roll-on, roll-off service between the Port of Melbourne and Devonport, Tasmania laid the foundations for today's fleet of roll-on, roll-off ships owned and operated by ANL which call at nearly all-Australian ports, and are now

operating on the Japanese trade routes.

As ANL introduced new roll-on, roll-off ships, the Trust constructed two new berths for the ever-mounting throughput tonnages, worked through Webb Dock.

In addition to constructing the two berths, the Trust also embarked on a reclamation programme which increased the original four acres to the present 20-acre terminal.

The second specialized berth was completed in 1961, while the third berth was added only four years ago. As the Port of Melbourne is the Australian terminal port for ANL, the construction of these berths and ancillary works have been amply justi-

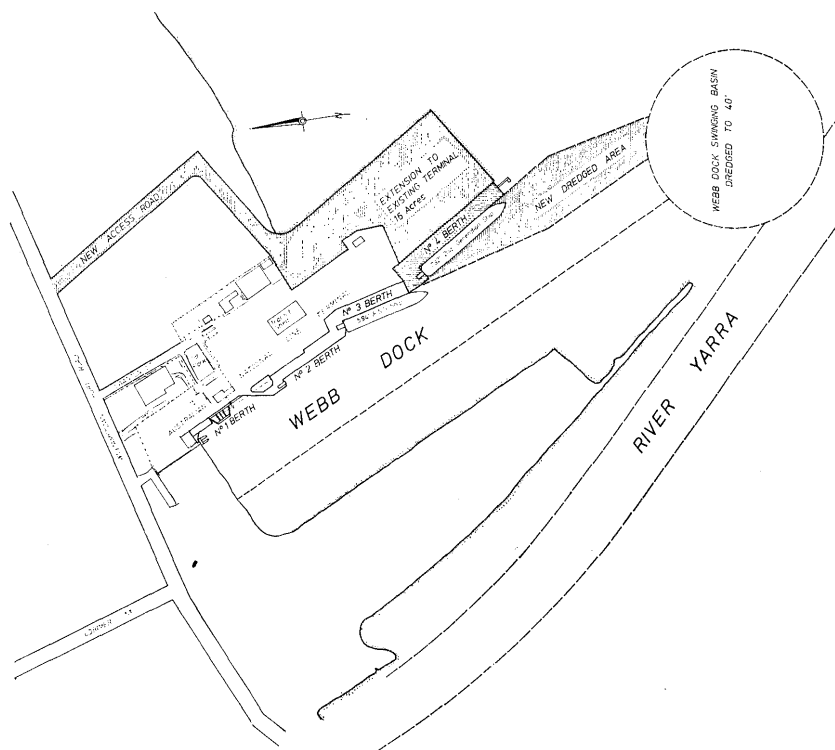
fied when the throughput tonnages handled at Webb Dock are studied.

After the "Princess of Tasmania" entered the Melbourne to Devonport service, the volume of cargo handled at Webb Dock during the latter part of 1959 was 89,263 tons. In 1960 in the ship's first full year of operation the throughput cargo which passed over No. 1 Webb Dock rose to 422,643 tons.

The completion of No. 2 Webb Dock in 1961 saw a continued rise in the throughput tonnage figures to 531,749 tons, passing the million ton mark for the first time in 1965. The decision of ANL to participate in a roll-on, roll-off service to Japan led to the Trust constructing a third berth, for the now well-known Eastern Searoad Service. The three berths at Webb Dock made port history in 1971, when a record 2,124,382 tons was handled, while last year a total of 2,361,698 tons was the highest throughput tonnage handled in the 14 year history of Webb Dock.

The present three berths together with the new No. 4 Webb Dock will

(Continued on Page 68)



**A plan of Webb Dock, shows the proposed fourth roll-on, roll-off berth and ancillary works being undertaken by the Trust's Engineering Division, for the Australian National Line.**



# ***Auckland Container Terminal Linked with North American Ports***

Auckland Harbour Board  
Auckland, New Zealand

10 May:—Three more “firsts” for the busy Port of Auckland were recorded early in May.

Philippine Bear, the first LASH ship to visit New Zealand and at 820 ft the longest yet to use the Fergusson Wharf container complex, was handled successfully despite a two-day delay through an industrial dispute over working her lighters.

The morning after this Pacific Far East Line ship cleared Auckland, Columbus Canada berthed at Fergusson Wharf in the first direct container-ship service linking New Zealand and the West Coast of

North America.

Columbus Canada berthed astern of ACT 2, the first time two container vessels have worked the Auckland terminal at the same time.

In the absence overseas of Mr. R. W. Carr, Chairman of the Auckland Harbour Board, and Mr. R. T. Lorimer, General Manager, the Deputy Chairman of the Board, Captain J. Forbes, and the Deputy Manager, Mr. D. N. Morgan, welcomed both Philippine Bear and Columbus Canada.

Captain Forbes presented Captain S. A. M. Rogenes of Philippine

Bear, and Captain K. Rhode of Columbus Canada with specially carved wall panels depicting Maui, a central figure in Maori mythology, the half-man, half-god credited by ancient Maoris with having fished the North Island of New Zealand from the sea.

The Auckland Harbour Board had another reason for welcoming Columbus Canada, as Captain Forbes said at a Board function for Captain Rhode and directors of Maritime Services Ltd, New Zealand agents for Columbus Line.

“Columbus Canada is the first vessel to link directly the sister ports of Oakland, Calif., U.S., and Auckland, N.Z.,” said Captain Forbes who read a congratulatory cable from Mr. Ben E. Nutter, Executive Director, Port of Oakland.

He also presented Captain Rhode with a set of Auckland Harbour Board cuff links and a copy of “Akarana,” the history of the Port of Auckland written specially for the Board’s centenary in 1971.

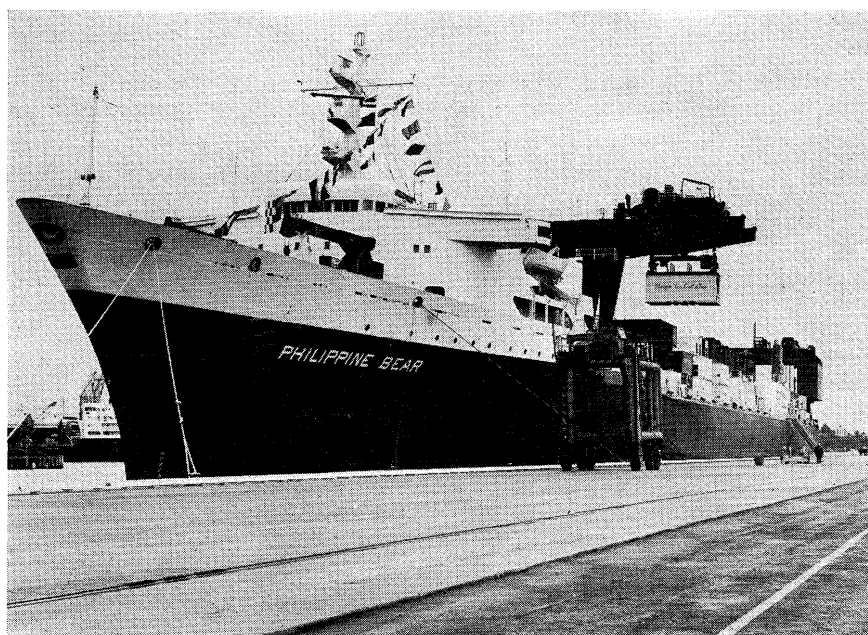
Two LASH vessels of Pacific Far East Line plan to work Auckland every 25 days in their Australian and New Zealand service linking the West Coast of the United States and the South Pacific.

Columbus Canada is the first of three new ships built by the German-owned Columbus Line to introduce the first pure container ship service on the run between New Zealand, Australia and the west coast of North America.

Columbus California is due at Auckland on her maiden voyage early in July and Columbus Capricorn is expected in October.

It was Columbus Line which introduced the first all-container ship to New Zealand, Columbus New Zealand inaugurating the container service between New Zealand, Australia and the east coast of North America in June, 1971.

To May 1, 1973, a total of 74 container ship calls had been successfully handled at the rapidly expanding Auckland container terminal.



**The 820 ft long overall Philippine Bear shown berthed at Fergusson Wharf in the Auckland container terminal early May when it introduced a LASH ship service to New Zealand.**

**(See photos on Next Page)**



**Captain S.A.M. Rogenes of Philippine Bear receiving a carved Maori wall panel from Captain J. Forbes (right), Deputy Chairman of the Auckland Harbour Board, as a memento of the first LASH ship call at a New Zealand port (May 4, 1973).**



**Captain J. Forbes, Deputy Chairman of the Auckland Harbour Board (third from right), presenting Captain K. Rhode (in white) of the container ship Columbus Canada with a Maori carving to commemorate arrival of the first container vessel to link the sister ports of Auckland, N.Z., and Oakland, Calif., U.S.A. Others in the picture, from left, are Captain R. Snushall, (Director, Maritime Services Ltd., N.Z. agents for Columbus Line), Mr. P. Manser (Assistant General Manager, Auckland Harbour Board), Captain R.H. Carter (Harbourmaster, Auckland), Mr. J.V.M. Kean (Managing Director, Maritime Services Ltd.) and Mr. D.N. Morgan (Deputy General Manager, Auckland Harbour Board).**



**Foreshortened by telescopic lens looking across part of the stacking area to the harbour beyond, this May 5 shot is a pictorial record of the first time two container ships were worked simultaneously at the Auckland, N.Z., terminal. ACT 2 is in the foreground and Columbus Canada, first full container vessel in regular West Coast North America/New Zealand service, is on the harbour end of Fergusson Wharf.**

(Continued from Page 65)

cater to the needs of ANL ships for the next few years, and if the throughput volume of cargo continues to rise as it has done since 1959, then it can be assumed that it will not be long before this very important area of the Port of Melbourne will be handling three million tons of cargo annually.

Preliminary designs for the new berth have been completed and investigatory work has been carried out of the foundation conditions over the whole of the proposed development area.

A contract has been granted by the Commissioners of the Trust to Southern Plant Hire Co. Pty. Ltd., for the supply and delivery of 250,000 tons of quarry waste to Webb Dock.

In addition the works associated with the fourth berth which will be carried out by the Trust will consist of:

- Wharf apron and concrete ramp approach.
- 16 pile mooring dolphin and walkway.
- Stern loading ramp 29 ft. wide between kerbs.
- Reclamation to subgrade level of a 16-acre terminal area at the rear of the berth.
- Dredging Webb Dock channel.
- Deepening the river channel between Webb Dock swinging basin and Nelson Pier.
- New substation and power supply to wharf.
- Access roadway to the new terminal area from Williamstown road.

The wharf apron will be 100 ft. in width, while the swinging basin will be enlarged to 1,200 ft. diameter to enable the new 732 ft. long ships to be turned around in safety.

In addition to the work done by the Trust, the Australian National Line will develop the terminal facilities on the land reclaimed by the Trust at the rear of the new berth.

The construction of No. 4 Webb Dock is undoubtedly the Trust's largest engineering project for the year. However, the Commissioners realize that this work is necessary to cope with the continued increase in

## *Can a Beach Resort Be Kept Next to a Growing Port?*

The Bay of Plenty Harbour Board  
Mount Maunganui, N. Z.

(This was extracted from a letter to IAPH of July 10, 1973 from Mr. I. W. Hamlin, Finance and Port Promotion Officer, of The Bay of Plenty Harbour Board.)

It is particularly pleasing to learn that IAPH has moved very positively in this matter and that IMCO similarly is making every endeavour to have international regulations brought down as soon as possible to control Shipboard discharge of effluent into harbour waters.

We thought it opportune therefore to write briefly to you about that problems we have in the Port of Tauranga at Mount Maunganui. For a long period of years Mt. Maunganui, as a holiday resort area, has attracted thousands of visitors in the summer months to enjoy the warm swimming waters of the small boat anchorage and beach in Pilot Bay only 400-500 m north of the wharf complex, and the nearby heavier surfing waters of the Pacific and Ocean Beach on the other side of the isthmus.

Established in 1956 the new Port Tauranga (the former small coastal seaport had been operating since the 1830's) has since become New Zealand's largest export outlet for logs, timber and processed forest products to Japan, and tonnage wise is also the Country's major export port for dairy produce.

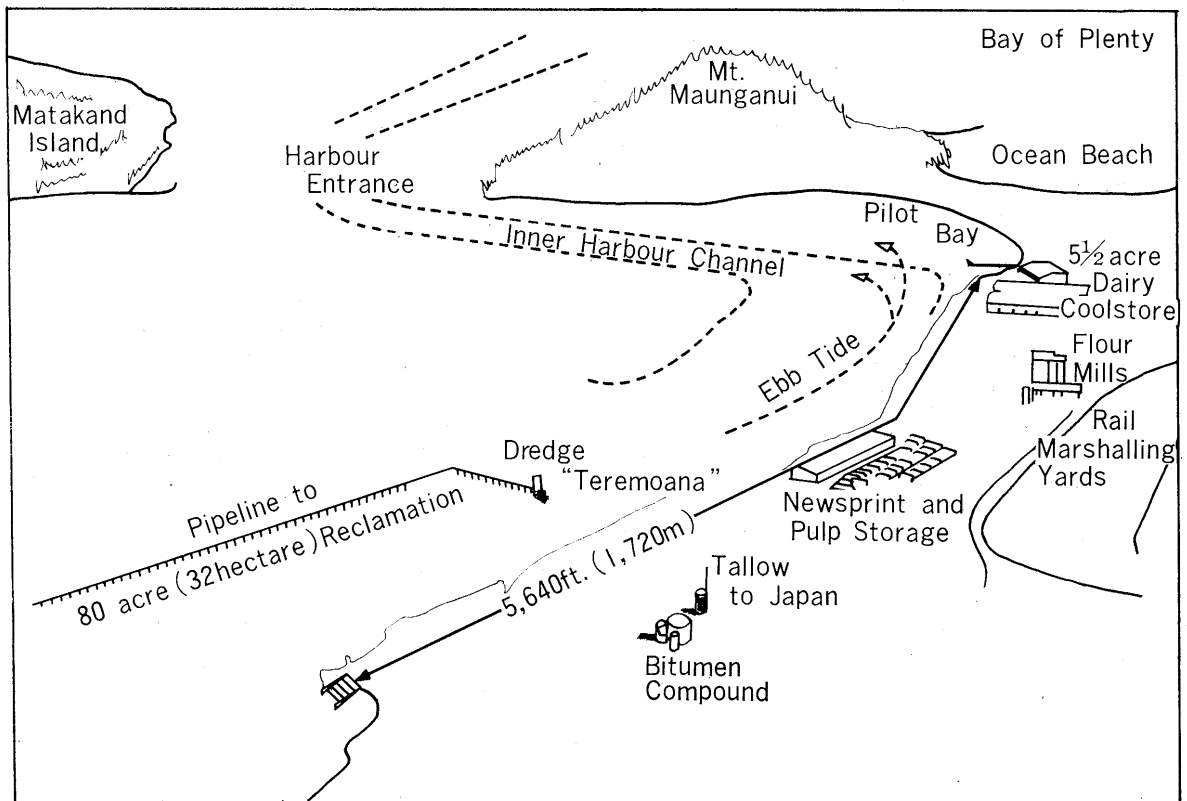
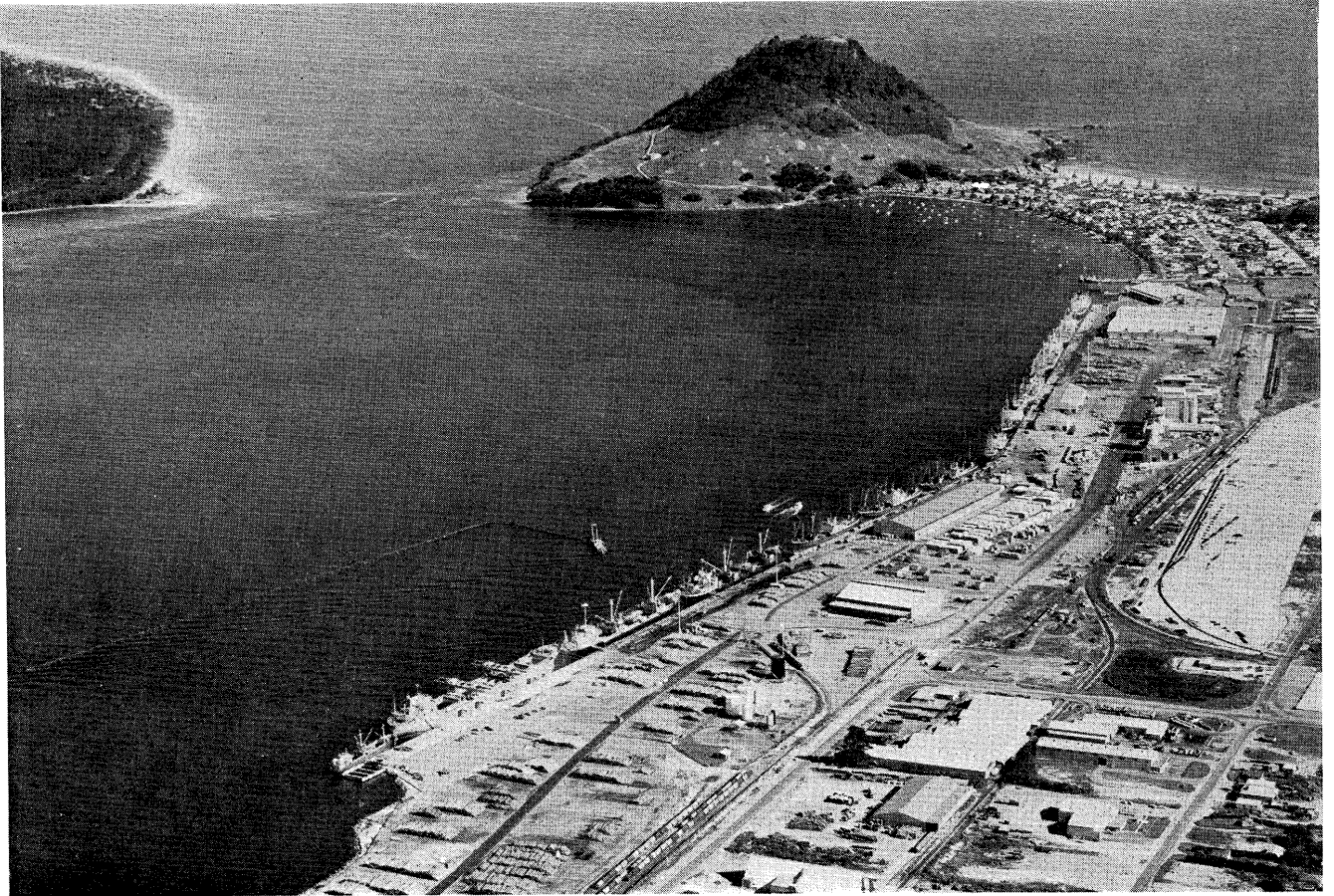
Because of the tremendous expansion of the port, ways and means of preventing pollution of the pretty little Pilot Bay waters have been ex-

ercising the port authority, local government bodies and the general public alike for a considerable time. With the larger numbers of ships using the Port there is a greater tendency, particularly on the ebb tide of ship's effluent being carried into the Bay, and both the Port and health authorities are constantly alert sampling and testing the waters to ensure maintenance of highest purity levels.

In this day and age of enlightened thinking it is necessary that every conceivable effort be made at international levels to speedily conclude agreements by which Port and Harbour Authorities can effectively restrict the discharge of raw effluent into waters such as are under our control. The Bay of Plenty Harbour Board is keenly aware of the efforts being made by IAPH in this sphere of its activities and with other N.Z. Harbour Boards is meantime actively seeking Governmental support for tighter control over discharges from N.Z. registered vessels most of which are now being constructed with holding tanks.

(See the Photograph of the Port of Tauranga and its explanatory drawing on the opposite page.)

trade through the Port of Melbourne.





## Two Records

Melbourne Harbor Trust Port Gazette, June:—The container ship ACT 2 on its last northbound trip to the United Kingdom spent exactly 49 hours berthed at the No. 3 East Swanson Dock in Melbourne and in that time Trans-Ocean Terminals handled 1,229 equivalent 20 ft. containers on and off the vessel.

The ship was worked for a gross period of 40.2 hours averaging 30.1 containers an hour. The net rate of handling, after deducting miscellaneous lost time for rest breaks, etc., was 31.5 containers an hour.

This is the best result achieved by Trans-Ocean Terminals at No. 2 East Swanson Dock since the start of the ACTA/ANL independent service nearly eight months ago.

Trans-Ocean Terminals attributed the high throughput to the availability of the second crane at the dock during the time the ship was alongside. In fact the rate of handling has been gradually improving with almost every ship worked, at either of the two common user berths located on the East side of Swanson Dock.

The ACT 2 berthed at 8.12 a.m. on April 21 and in the first shift which included time taken to tie up, unlash containers, etc., 114 containers were exchanged. In the second shift, with two cranes available, 299 were handled, while the third shift that day with one crane available exchanged 163 containers.

The next two shifts, using two cranes, moved 222 containers and 279 containers respectively, leaving the final shift only 34 containers to move to complete the operation. The ship sailed at 9.12 a.m. on April 23.

When there is only one container ship at East Swanson Dock it can call on the second crane for loading operations. But, when a second vessel is alongside the dock, it has priority on one of the cranes. The second crane is normally used when available for two shifts out of three.

Last month, on the West Side of Swanson Dock, Seatainer Terminals Ltd., handled their 500,000th container since commencing opera-

tions in 1966.

The container carrying malt for Osaka, was loaded on board the cellular vessel "Australia Maru."

Seatainer Terminals Ltd., have first call rights to Nos. 1 and 2 West Swanson Dock, and on approximately 30 acres of land leased from the Commissioners of the Trust, the company have constructed terminal facilities.

## Safe Boating During the Holiday Season

Sydney, 17th April:—Maritime Services Board officers will be fully engaged during the Holiday period in policing regulations relating to boating on the waterways of the State.

In making this announcement to-day, the President of the Maritime Services Board, Mr. W. H. Brotherson, said that, in addition to the observance of the Board's rules and regulations which are basic requirements for safe boating, people in boats should be considerate of the pleasure of others by refraining from throwing trash and litter into the waterways. He suggested that disposable bags be carried in the boat and that any refuse be brought ashore.

He said that the Board's officers would be keeping a close watch for noisy boats and he asked that boat owners make certain that the noise level does not extend above the standards laid down by the Board of 85 decibels (A scale) at a distance of 30 metres.

Mr. Brotherson said that the observance of the Rules of the Road, together with the application of normal common sense and courtesy would assist greatly in the enjoyment of safe boating during the holiday season. (The Maritime Services Board of N.S.W.)

## Oil-Fighting Launch Sought

Hong Kong, June 20 (The Week in Hong Kong):—Finance Committee approval will soon be sought to provide the Marine Department with a specially-designed launch to combat oil spillage. The Financial Secretary, Mr. C. P. Haddon-Cave, told the Legislative Council today that the 70-foot launch would enable the department's Pollution

Control Unit to meet the potential emergency of large oil spillages and to enforce anti-pollution legislation more effectively. He said that although Hong Kong had never experienced any serious oil pollution, careful consideration was being given to recommendations made by a special sub-committee of the Port Executive Committee. The group was formed last year to consider the introduction of suitable legislation and codes of practice, and to examine the adequacy of facilities and equipment for combating oil pollution. At present, the Pollution Control Unit consisted of seven tug boats, seven twincrew lighters for logistical support, and three fast personnel carriers to transport men and equipment.

## Second 477,000-DWT Tanker Launched

Tokyo, IHI Bulletin, July:—The 477,000-DWT "Globtik London," the sister ship of the "Globtik Tokyo," the world's largest tanker now in service, was launched on June 22 at IHI Kure Shipyard. The construction of the ship ordered by Globtik Tankers Ltd., the U.K., was started on Jan. 27 this year at the shipyard's 800,000-ton building dock. Completion is scheduled for October this year.

## Viscount Simon on Visit

Kelang, Malaysia, Berita Pelabohan, Lembaga Pelabohan Kelang:—Viscount Simon, a former Chairman of the Port of London Authority, visited Port Kelang on 21st December last year. He was accompanied by Tan Sri A. J. Wood, the President of the Malaysian International Chamber of Commerce and a senior director of Inchcape Berhad, and Encik H. E. Spillman, the technical director of Champion Motors (M) Sdn. Bhd.

They called on the Director General of the Port Authority Encik Mohd. Zain bin Ahmad. Viscount Simon was presented with a pewter tray with the port's crest engraved in it. They were later entertained to lunch.

Viscount Simon was previously the Managing Director and Deputy Chairman of the P & O



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Steam Navigation Co. He was the Chairman of the Port of London Authority from 1958 to 1971. He has been active in the International Association of Ports and Harbours and was president of the Association from 1965 to 1967.

#### Blyde Wharf in Use

New Plymouth, N.Z., Taranaki Harbours Board Port News, February 1973:—"Last year I expressed some disappointment that Blyde Wharf had not been completed, but I am pleased to record within this report that, at this stage, final completion is in sight," the Chairman of the Harbours Board. Sir Henry Blyde reported to the 1972 Annual Meeting of the Board.

He added that the M. V. Mirra-booka was the first overseas ship to use No. 1 berth of the wharf when it paid a brief visit last June to unload heavy machinery for the New Plymouth Power Project.

Since that time several other ships have used the wharf.

The second ship to use the inner berth at the wharf was the 12,639 ton Wellington Star (pictured), which came from the United Kingdom via Luatoka.

Her master, Captain P. W. Hunt, said that this was his first visit to New Plymouth since 1955 when he was second officer aboard the New Zealand Star.

"Blyde Wharf is an excellent wharf," he said. "It's wide, so there's plenty of room."

#### Unions Welcome

New Plymouth, N.Z., Taranaki Harbours Board Port News, February 1973:—"The Board Chairman, Sir Henry Blyde, told the Annual Meeting that he was particularly pleased that unions involved with port work had accepted the offer of representation on the cargo flow committee formed during the year.

"Union participation is essential to the well-being of a committee such as this," Sir Henry said.

#### "Bunder Qasim"

Karachi, March 15th (K.P.T. News Bulletin):—"The Second Port of Pakistan will be called Bunder Qasim after General Mohammad Bin Qasim, who brought Islam to this subcontinent and used this area for at least one of his landings from sea, stated a Ministry of Communication Press Note issued on 22nd February, 1973.

The Press Note added that the government has decided to proceed with the construction of a deep water commercial port in the Phitti-Kadero Gharo system of creeks. The site for the port complex has been selected near Pipri which is about 12 miles from Karachi. This future port has been given the name of Bunder Qasim after General Mohammad Bin Qasim.

It was further stated that the proposed steel mill near Karachi will also be located in the vicinity.

The Press Note added that the Government has also decided

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COCKTAIL LOUNGE .....		3rd floor



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to set up a Port Authority to develop and administer this port expeditiously. This Authority will be known as Bunder Qasim Authority. Detailed engineering studies for the construction of the Port complex are being taken up.

Besides the decision for Bunder Qasim, studies for a port on the Baluchistan coast area also continuing in detail for selected sites. Government has recently instituted a fresh prefeasibility study for five sites on the Mekran coast on an urgent basis. The result of this study, together with completion of detailed studies for Sonmiani and Western backwaters of Karachi will enable appraisal of the potential of the alternative on a more comparable basis, the press note said.

### Service Awards Distributed

Karachi, April 15th (K.P.T. News Bulletin): — In connection with the Celebration of Pakistan Day (23rd March, 1973), K.P.T.

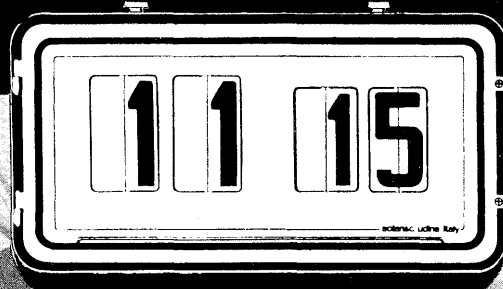
Administration held a Meritorious Service Awards Distribution Ceremony at 11.30 A.M. on 30th March, 1973, in the K.P.T. Head Office.

Rear-Admiral S. Zahid Hasnain, S. K., Chairman K.P.T. presided over the Ceremony and distributed the Awards in shape of cash grants, advance increments and Commendation Certificates to those K.P.T. employees who had rendered meritorious services during the preceding year.

The Function started at about 11.30 A.M. with the playing of National Anthem and hoisting of Pakistan Flag, followed by recitation from Holy Quran and translation thereof. Speaking on the occasion, the Chairman, K.P.T., lauded the performance in general of all the Officers and staff of K.P.T., and the dock labour during the preceding year, especially their outstanding achievement in clearing the backlog which had earned them commendation from

the Minister. The Chairman also explained to the gathering the unique position occupied by the Port of Karachi in the economy of the country. He outlined the problems and prospects of the Port and hoped that the K.P.T. Officers and staff will realize the important national work they were doing and keep up their efficiency to meet the national demand. After his speech, the Chairman distributed Merit Awards, Certificates of Commendation and cash prizes to Award winners.

The Function concluded with cold drinks served to all.



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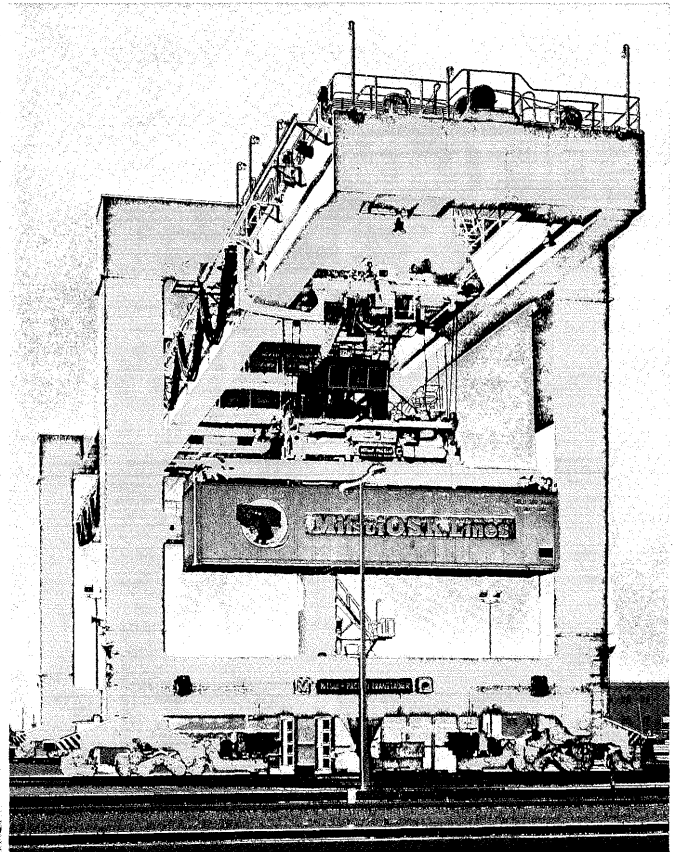
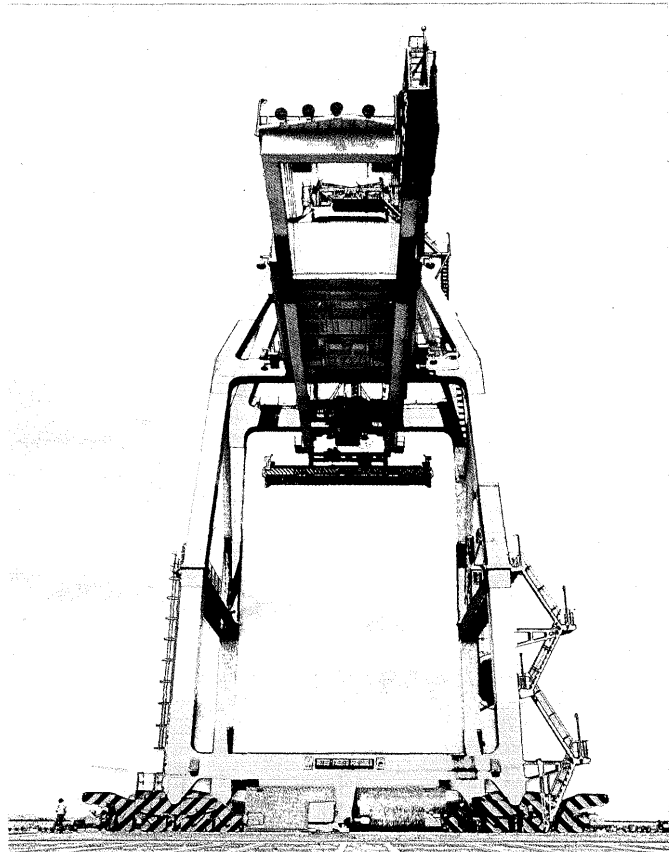
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