

# PORTS *and* HARBORS

SEPTEMBER 1964

Vol. 9 No. 3



THE PORT OF PORTLAND

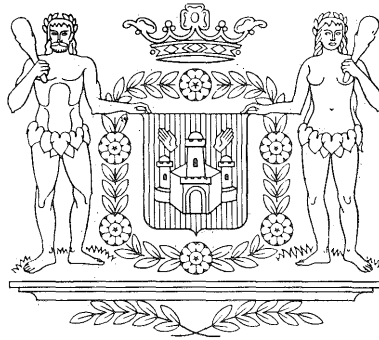
**THE INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS**

# *Introducing The Crests of Ports*

---

(Each Issue One Port)

## **THE PORT OF ANTWERP**



**View on the roads**



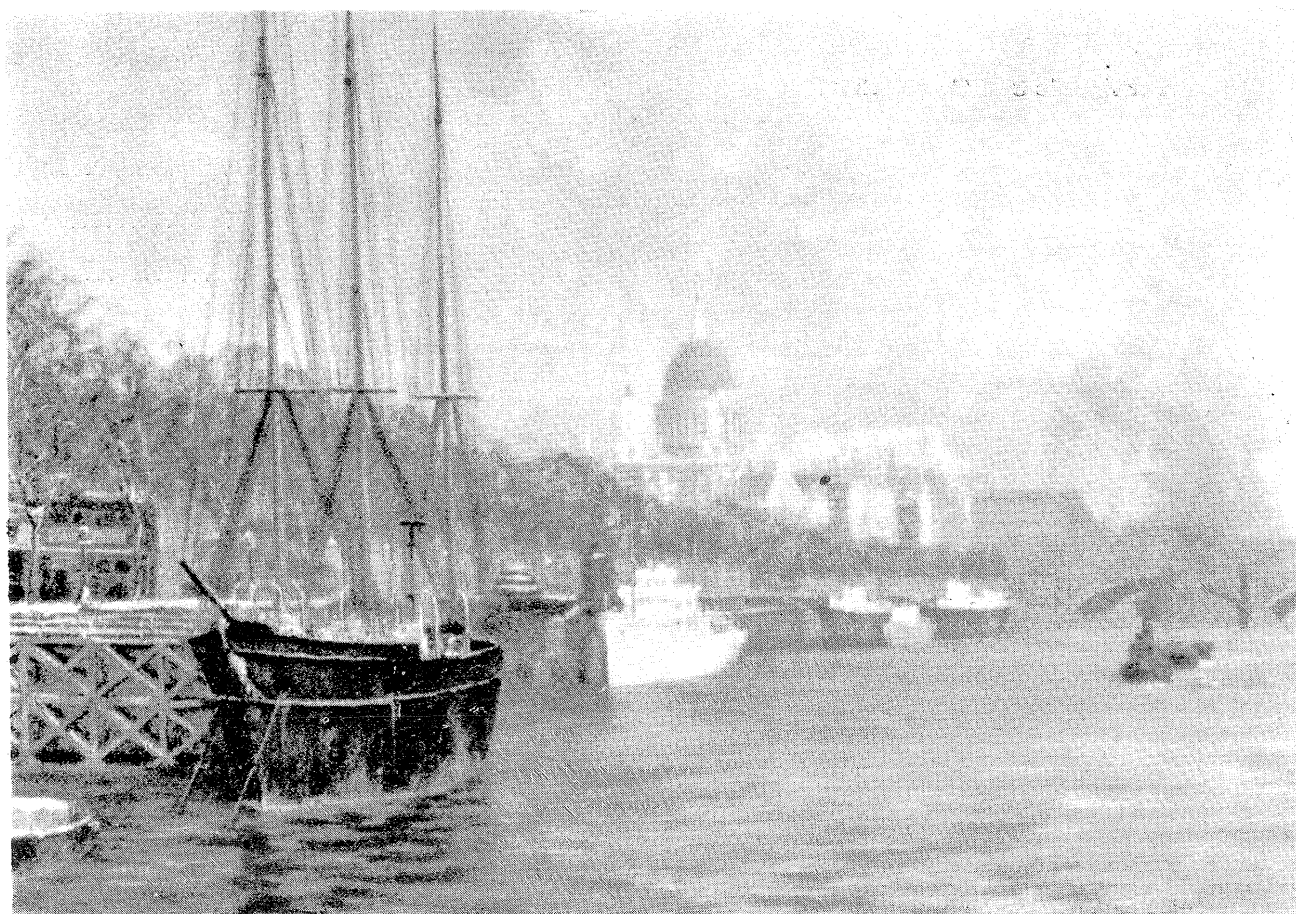
# INTERPORTS '65

## *The 4th Conference of the International Association of Ports and Harbors*

May 10th . . . . 14th, 1965

Cafe Royal near Piccadilly Circus,  
London

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



*London's River*

*By David Shepherd*

---

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

# THE INTERNATIONAL ASSOCIATION OF PORT AND HARBORS

## OBJECTS AND PURPOSES

### (Per Article 3 of Constitution)

The objects and purposes of this Association shall be:

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

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

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

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

## UNDERTAKINGS

### (Per Article 3 of Constitution)

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

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

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

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

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

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

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

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

# PORTS and HARBORS

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

## CONTENTS SEPTEMBER 1964

### Vol. 9 No. 3

From the Central Secretariat .....	Page 3
A message from the President .....	3
A message from the Conference Chairman ....	3
A message from the Organising Chairman .....	4
Forum on Ports Problems, by W. J. Amoss ....	6
The Port of Antwerp .....	9
The Port of Portland .....	19

## THE INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS

### President

John P. Davis

Commissioner

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

### Chief of the Central Secretariat

Gaku Matsumoto

Editor: Kenzo Matsuo

Published by

The Central Secretariat of the International  
Association of Ports and Harbors

Rm. 715-A, N.Y.K. Bldg.,

20, Marunouchi 2, Chiyoda-ku, Tokyo, Japan

# From The Central Secretariat

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

## **The Meeting by Correspondence of the Board of Directors**

The meeting by correspondence of the Board of Directors was called on July 27, 1964, to approve the two bills in connection with the amendments of the By-Laws prepared by our Joint Legal Counsel and the tentative budget submitted by the Central Secretariat.

## **The Meeting by Correspondence of Regular Members**

The meeting by correspondence of Regular Members was convened on September 14 to approve

two bills in connection with the amendments of the By-Laws prepared by our Joint Legal Counsel.

## **INTERPORTS '65 4TH CONFERENCE IN LONDON**

Immense progress in many fields has been made for preparation for forthcoming London Conference. Thanks to the efforts by Lord Simon, Conference Chairman and Chairman of Port of London Authority, Sir Leslie Ford, Chairman of the Organising Committee, Mr. Dudley Perkins, Vice-

President of IAPH, Chairman of Committee and General Manager of the Port of London Authority and other officers.

We quote hereunder the messages from Mr. John P. Davis, the President of the International Association of Ports and Harbors, and Viscount Simon, the Conference Chairman, and Sir Leslie Ford, the Organising Chairman.

\* \* \*

We sincerely hope that members can attend the Conference as many as possible, notifying London their attendance as early as possible, because the accommodation is limited to 400/500.

### **A message from the President**

I cannot urge too strenuously that each member whether regular, corporate or individual give serious consideration to attending the forthcoming Conference in London May 10 to 14th, 1965.

Preparations are already going forward that will make this conference the largest gathering of world wide port and shipping people ever held any where. The Port of London Authority is already devoting much time and effort towards this end. Top flight speakers of international reputation will address you. Many papers on vital subjects will be submitted and reviewed by leading authorities.

There will be no language barrier. Simultaneous translations into English-French-German-Spanish and Japanese will be arranged. Prior to the conference many papers will be distributed into five languages to better enable the delegates to take part in general discussions.

The International Association of Ports and Harbors has made great progress since its first conference in Kobe Japan in 1952. From those humble beginnings we can now boast of 150 members scattered all over the world. We have become a truly world wide organization.

Aside from the knowledge to be gained at this conference, the opportunity to listen to outstanding speakers. The opportunity to visit one of the great ports of the world. To be the recipients of English hospitality. There is the all important privilege of meeting your counterparts from ports all over the world.

H.R.H. Prince Phillip has given the Conference his sponsorship. Viscount Simon, Chairman of the Port of London Authority will be Conference Chairman.

A delightful program is being formulated for the ladies.

When you get your invitation please give it your earnest consideration. We can only accommodate from four to five hundred delegates, and your prompt acceptance will be greatly appreciated.

JOHN P. DAVIS  
PRESIDENT

### **A message from Conference Chairman**

I am sure you will have seen both from the Proceedings of the Third International Conference held in New Orleans in May of last year and the notice appearing on the inside cover of the March issue of the Associations quarterly magazine that the Fourth

International Conference will be held in London from May 10th to 14th in 1965.

H.R.H. The Prince Philip, Duke of Edinburgh has been graciously pleased to give the Conference his patronage. I am happy to accept the invitation to be Conference Chairman and the Port of London Authority will be your host.

A small Conference Committee are already hard at work and we hope to send you some time during the month of July full details for registration, hotel reservations and general travel arrangements, together with the programme of Speakers at the various sessions and visits to places of interest. A programme of social events is being arranged, which will include a Reception by the Lord Mayor of London in the historic Guildhall. A separate programme for the ladies will also be arranged.

The Conference itself will take place in a suite of rooms at the famous Cafe Royal situated immediately adjacent to Piccadilly Circus. There will be simultaneous interpretations into five languages—English, French, German, Spanish, Japanese. Prior to the Conference it is hoped to distribute the various prepared papers translated into these five languages, so that those attending will be ready to take part in the ensuing discussions.

We are most anxious that this first Conference to be held in London shall be a great success and firmly consolidate throughout the world the fundamental objects and purposes of the Association.

I do therefore most sincerely hope that the greatest number will find it possible to attend and that when the membership is in the name of a major organisation they will be able to send more than delegate.

The Registration Fee will be \$100 (or £35). Ladies who accompany delegates will be included in the single fee.

If at this stage and prior to the receipt of the full programme you could give some indication of the probability of your attendance (and in the case of large organisations how many) it could be a material help to the organising committee in the many details that have to be arranged.

Please make a very special effort to be in London from May 10th to 14th, 1965.

For those of you who are members or interested in the International Cargo Handling Co-ordinating Association, I would mention that their Conference for 1965 is being held in Paris from May 16th-21st.

Yours sincerely,  
Simon,  
Conference Chairman

### **A message from Organising Chairman**

I expect you have heard of the International Association of Ports and Harbours, but if not, may I remind you of a few outstanding facts about this organisation. It was founded in 1952 and the First Conference was held that year in Kobe, Japan, when some 17 maritime nations were represented.

Further Conferences were held in Los Angeles (1958), Mexico City (1959) and New Orleans (1963). Today the Association has over 125 members representing 25 countries.

The Constitution of the Association provides that the objects and purposes shall be:—

- (a) To associate its members from all countries together in the common cause of mutual international friendship and understanding.
- (b) To exchange information relative to port and harbour organisation, administration, management, development, operation and promotion.
- (c) To encourage, develop and promote waterborne commerce to and from all world ports and harbours; and
- (d) To encourage the standardization and simplification of procedure governing imports and export and the clearance of vessels in international trade.

In the early days of the Association the main support came from Japan and the Pacific Coast of America. During recent years, membership has spread throughout America and the major ports of that country are now members. Canada and Australia are also closely associated with the Association's activities.

More recently, membership has spread to Europe and today most of the major ports of Great Britain are members, together with leading representatives from France, Belgium, Holland, Denmark, Germany, Norway and Sweden.

In view of the truly international membership that has been achieved, the Port of London Authority offered to be hosts for the Fourth International Conference. This invi-

tation was accepted and the Conference will be held in London from May 10th-14th, 1965.

H.R.H. the Prince Philip, Duke of Edinburgh, K.G. has graciously given the Conference his patronage and Viscount Simon, Chairman of the Port of London Authority, will be Conference Chairman.

A most attractive and, it is hoped, outstanding programme is being arranged to include prominent speakers from all parts of the world presenting papers relating to port affairs in general which should be of international interest. These will be simultaneous interpretation in English, French, German and Spanish.

Primarily the Conference is being arranged for members of the Association. There are two classes—Regular and Supporting. The fees are as follows:—

Regular Members	250 per annum
Supporting Members—	
Corporate	50 per annum
Individual	15 per annum

The fee for the Conference will be £35 to include all the various activities shown on the programme, i.e. talks; lunches; receptions; organised tours. A lady accompanying a member delegate will be covered by the single fee.

London wants to be the venue in 1965 for the greatest gathering ever convened of those whose business is associated with the ports of the world—a gathering that could provide the forum for a meeting of colleagues within this great industry, and pooling of a vast store of knowledge, experience and forward thinking for the benefit of mankind throughout the world.

Will you kindly let me know if I may send you an application form for one of the various classes of membership? Alternatively, are you interested in attending the Conference with a view to subsequently joining the Association? If so, I will be happy to send you a copy of the Conference Programme. In any case, will you kindly let me have a reply—however short!

Yours sincerely,  
LESLIE FORD,  
Organising Chairman

---

#### **Tentative Schedule**

May 10	PLA Reception
May 11	PLA Port Tour
May 12	Lord Mayor and City Corporation Reception at Guildhall
May 13	Inspection Thames Navigation Service at Gravesend (buffet lunch) Reception and banquet at Savoy Hotel

(Business sessions not decided yet)

# FORUM ON PORTS PROBLEMS

## Promoting New Orleans World Trade a Symbol and a Show Place

By

W. J. Amoss

*Director of the Port,  
Board of Commissioners of the Port of New Orleans*

Special to Mr. Gaku Ma'sumoto:

In the 246 years since la Nouvelle Orleans in the new world was founded by Jean Baptiste le Moyne, Sieur de Bienville, and claimed by him in the name of France, the city has been situated as though at the small end of a funnel, serving the vast inland empire of the Mississippi Valley as gatekeeper at the mouth of the great river which, with its tributaries, drains and serves the enormous plain that lies between the Appalachian and Rocky mountain ranges.

During this period New Orleans, always first and foremost a trading city, has seen its commerce increase until, in 1963, it handled over 79 million tons of waterborne commerce of all types, and its foreign waterborne trade of over 20 million tons was valued at more than \$1.8 billion.

To gain such a position, a port must be able to offer advantages to its users, and New Orleans, with its low-cost water transportation, excellent inland land connections by rail, highway and air, year round operating climate, Foreign Trade Zone, 15 miles of wharves, sheds and terminals for handling all types of cargo, excellent labor relations, and over 200 years of experience in port operations does this satisfactorily as the record proves.

A port must also be able to bring together buyers and sellers, so that they can get to know not only each other's products, but

each other as well.

In this respect, New Orleans has been most fortunate in having, through the efforts of far-sighted businessmen, not one, but two, organizations which devote themselves to promoting international goodwill and understanding between businessmen of all nations while promoting increasing trade.

These organizations are International House, founded in 1943, and the International Trade Mart, built in 1948.

It would be hard to imagine a more versatile, many-faceted organizations than International House, an agency which offers information and convenience for the importer or exporter.

Perhaps no greater compliment has been paid to this unique organization, and the port it serves, than that by former President Dwight D. Eisenhower, during a campaign address on October 13, 1952, when he said, "If there exists a city in the United States which has grasped the significance of world trade, that city is New Orleans. International House is a majestic and tangible symbol of your understanding. In the seven years since its founding, it has become known all over this country and abroad as a successful clearing house for healthy two-way international trade. To me, it has even greater symbolism," he continued. "It represents community action without Government money—community action arising



Mr. W. J. Amoss

out of private thinking and local planning."

But what, exactly, is International House? Of course, it's a building—10 stories tall, on Gravier at Camp Street in New Orleans, containing within it the offices, library, assembly rooms and other machinery needed to carry out its work.

It's also an association . . . a grouping together of 2500 business and civic leaders of New Orleans, of Louisiana, of the United States and other nations of the world, working jointly to carry out the ideals to which International House is dedicated . . .

And, to . . .

It's a symbol, a living symbol, of our desire to be good neigh-



bors and good trading partners with all the world . . .

But, basically . . .

International House is an idea, an institution in its third decade of carrying out the ideal to which it was dedicated by its founders—"The promotion of world peace, trade and understanding."

It is rather appropriate that International House should have been founded in New Orleans, with its French and Spanish overtones, its trading spirit from early American boatmen, its Mardi Gras customs, excellent cuisine, innate graciousness, and above all, its burgeoning world trade.

New Orleans boomed during the First World War, then declined until the Second World War, when it boomed again. To prevent the boom-bust cycle from repeating itself, a group of New Orleanians developed the idea of a common meeting place for all segments of world trade. Most notable among this group was Rudolf Hecht, who envisioned this project as a focal point for all persons interested in the business of the port, an institution which would serve as a clearinghouse for questions having to do with foreign trade, and which would seek in all possible ways to stimulate that trade. Others who had the same vision included A. B. Paterson, utility president, W. G. Zetzman, a soft-drink bottler, E. O. Jewell, then general manager of the Port of New Orleans, and Charles Nutter, who later became managing director of IH, as it is locally referred to.

In April, 1943, Wm. Zetzman, sent out letters to sixty-three businessmen in New Orleans, inviting them to a meeting to discuss the idea, and warning them that they would also have to come willing to loosen up their purse strings.

Zetzman and Hecht agreed that if they collected \$50,000 at the meeting, it would be considered a success. They actually received \$250,000, and within one year this grew to \$600,000. Zetzman was made IH's first president, and he and his associates bought a 10-story building in the heart of the business district. They were able to get priorities on materials from Washington for its remodeling, on the legitimate ground that the or-

ganization was vital to the furtherance military shipments through the Port of New Orleans.

It is particularly important that from the start the founders of International House sought no Federal funds, depending on local contributions from individuals and corporations. In this way, the organization was, from its inception, a venture by forward-looking citizens on a nonprofit basis.

Supporting the activities of International House are more than 2500 members throughout the world. A cross section of the New Orleans business and professional community is reflected in its 100-man board of directors. A full-time, salaried managing director works closely with the executive committee of 30 members in planning and guiding activities of the organization.

The International House headquarters houses its four principal departments—World Trade Development, International Relations, Publicity and the Thomas F. Cun-

ningham Library, as well as classrooms for the teaching of foreign languages, meeting rooms, a main and private dining rooms and other facilities for the entertainment of business guests and members.

The International Relations Department has the task of planning and directing trade and travel missions—to Latin America, Europe, The Far East, and in some cases, behind the Iron Curtain—which have proved most informative and useful to business and professional participants. At present, the department is planning the 50th International House mission, an around-the-world tour by New Orleans area businessmen. A legal mission and a medical mission have recently been successfully completed. An annual Inter-American press seminar is an important part of its activities.

The department also conducts students and teacher exchanges with foreign countries which each year places overseas students in



colleges and universities all over the United States and assists U.S. students to study in foreign centers of learning.

The department also has charge of popular and diverse foreign language courses and, at times, has handled requests for bi-lingual chauffeurs, baby sitters, and even dancing teachers, among the more unusual aspects of this particular program.

The World Trade Development Department has established tens of thousands of contacts between businessmen in America and those abroad. Through its comprehensive files of trade information, the department brings together the man in Ecuador with 20,000 straw hats for sale and the man in Kan-akee, Illinois, with a chain of hat stores—to their mutual advantage. Emphasis is placed equally on imports and exports.

This department works in many ways to facilitate the transactions of visiting businessmen, and to assist them in handling difficulties posed by language differences, unfamiliar weight and measurement systems and other problems they may encounter.

The Cunningham Library is one of the finest trade reference libraries in the South, with a staff especially trained to serve the specific needs of businessmen. It is open to the public, and services information requests received by telephone, letter or in person. It has nearly 10,000 volumes of reference materials, offering such widely diverse information as the schedule of weekly radio broadcasts in Brazil, market quotations on commodities, import and export statistics by country or products, and cable addresses of firms all over the globe. Other libraries frequently refer questions in the specialized fields it covers to this library.

The Publicity Department assists journalists and writers of all nations in gathering information about international trade and relations. Its monthly news bulletin "Trade Winds" has a world-wide mailing list.

A feature of the publication is its Trading Post column, which lists hundreds of commodities be-

ing offered for import and export, such as "Company in Hong Kong wants to market in this country articles made of rattan . . . Film in Bombay, India, is interested in obtaining U.S. sources of supply for fire-fighting equipment . . . Company in Berchem-Antwerp, Belgium, is seeking U.S. sources of supply for juke boxes."

In addition, the department also publishes a Spanish newsletter, "Noticias," which is sent to Latin American newspapers.

All of these activities serve to keep the rest of the world informed about international operations and trade opportunities in and through New Orleans and the advantages these offer to international businessmen.

New Orleans has, in addition to International House, a vital second international trade and relations organization, the International Trade Mart. Although the two organizations are separate, they were founded by the same individuals, and their boards of directors include many of the same people.

New Orleans International Trade Mart is unique in that it enables manufacturers to sell in both domestic and foreign markets, the only American trade center that does so. The original Mart on Camp and Common Streets, built in 1948, cost \$1.5 million to construct. It, too, operates as a non-profit enterprise.

A highly-specialized merchandising center, its five floors were carefully designed for both import-export and domestic distribution, allowing manufacturers to sell to developing world markets and to growing American markets as well. A showcase of thousands of feet of plate glass showrooms, it offers some 800 lines of merchandise from more than 100 domestic and foreign exhibitors.

Because of New Orleans' expanding world trade, one of the most ambitious projects ever undertaken in New Orleans reached its climax on March 11, 1964, when New Orleans Mayor Victor H. Schiro sat at the controls of a piledriver at a site adjacent to Eads Plaza, at the foot of Canal Street and the Mississippi River,

and hammered the first of over 600 piles into the river bank, signaling the start of construction of a new International Trade Mart, and a new trade complex. The new Mart, will be built at a cost of approximately \$20 million, and will include a 33-story office tower and an adjacent garage. Nearby, one of the largest international exhibition facilities in the United States is under construction by the Board of Commissioners of the Port of New Orleans at a cost of over \$10 million. This complex will provide an impressive show-place for world trade goods in New Orleans, and will serve as a focal point for all phases of international trade and its development.

The Trade Mart, serves as the clearinghouse for exports and, imports as well. Of course, exporting is a multi-billion dollar business vital to the U.S. economy, and the Trade Mart is a center for New Orleans' busy export operations.

New Orleans serves as the cheapest and most efficient outlet for goods produced in the mid-continent area of North America, and it would be hard to find a wider cross-section of America's Trade Mart roof. From bowling productivity than exists under the balls to bulldozers, the best in American manufacturing is available to the foreign buyer. For overseas businessmen, especially, the Mart has become an established buying and selling center due to its convenience, and, by meeting the required conditions for buying and selling abroad, the Mart has enabled American and foreign traders to operate more effectively.

To continue selling abroad, America must reciprocate by buying the products of other nations, and the Mart's policy of reciprocal trade, combined with its position at the gateway to the Mississippi Valley, has made it the busiest import center in mid-America. It has gained for New Orleans recognition as a distribution point for consumer goods—both foreign and domestic.

Growing market potentials both foreign and domestic have stimulated two way distribution, so that in many of the Mart's showrooms,

goods of U.S. producers are displayed attractively alongside those from overseas countries.

International Trade Mart's reputation as a global trading center and a focal point for international commerce, is due in large part to the commercial centers maintained there by several foreign countries. These offices operate efficiently within the New Orleans hinterland, and their presence in the Mart is a tribute to the city's advantages as a regional distribution center.

The most effective method employed by other countries to earn

dollars, the foreign exhibits are staffed by trained commercial personnel. Comparable to new style diplomats, the commercial representatives must be capable of talking authoritatively on the many sample lines of merchandise exhibited in their showrooms.

Although of primary interest to importers, distributors and larger retail buyers, the foreign center has a strong appeal as well for the casual visitor, and the Mart's global shopping district attracts hundreds of visitors each day from all parts of America.

Organizations such as Interna-

tional House and the International Trade Mart play a vital role in providing the contacts so necessary for a port city in maintaining and increasing world trade, and in this particular instance, New Orleans has lead the way.

International House and International Trade Mart, vital organs of New Orleans' trade, are now more than an idea, promoting international trade and understanding—they are bustling facts, the legacy of this port, a major contribution to the United States of America's place in the vital field of world trade.

---

## THE PORT OF ANTWERP

Contribution by:

STAD ANTWERPEN

Thanks to its geographical position, the port of Antwerp—situated on the River Scheldt at about 45 nautical miles upriver from the North Sea—is both the natural inlet and outlet to the Belgian-Luxemburg Economic Union, the North and East of France as well as of prominent sectors of Western Germany such as the Ruhr District and the regions along the left bank of the Rhine. In addition, districts situated farther inland, such as Switzerland and the countries of Central Europe come within the sphere of influence of the port. These regions, which lie within a radius of some 125 to 200 statute miles, include the main centres of the European industry. Moreover, they constitute the most densely populated part of Western Europe. This means that the hinterland of the port is one where industrial production is on a high level, whereas it is also a prominent centre of consumption. For the port itself, this situation results in a great diversity of the commodities which are

being handled and is illustrated by the volume of the in and outgoing traffics. Needles to emphasize that the expansion of this hinterland is at the basis of the steady growth of the port.

Already in the 16th century Antwerp enjoyed a period of prosperity, both as town and as commercial centre, traces of which may still be found in a number of historical buildings in the old the end of the 16th century unfortunately led to the River Scheldt being closed to sea-going traffic so that port and commercial activities came to a standstill. It was not until after 1800, under the reign of Napoleon, that the port enjoyed a revival. The end of the 19th century had however, to be awaited for a normal development, based on the rapid industrial growth of the southern part of Belgium, though this development was still twice interrupted by the World Wars and the big crisis of the 30s.

Antwerp is not only the chief port of Belgium, as over 90 per

cent of the sea-going traffic of the Belgian-Luxemburg Economic Union actually passes through Antwerp. It is one of the principal allround ports in Europe and the world.

### Description of the port

The port area of Antwerp constitutes a homogeneous whole stretching mainly north of the city and covering some 10,000 ha (25,000 acres). Only a few minor docks for river and canal-craft are located outside this territory. Owing to the fact that the river is subject to a tidal difference, twice a day, of 4.5 m (about 15 feet), the greater part of the port consists of a set of docks, separate from the river, from which vessels get access to the docks via 6 locks. The smaller part of the port, offering 5.5 km (about 3 nautical miles) of quay-length, is along open water on the right bank of the river. This river section was laid out as from the year 1880 and still renders good services to sea-navigation. The first two docks were dug in 1813; they communicate with the river via Bonaparte lock and are still in operation though chiefly used by inland craft. Subsequently, new non-tidal docks were systematically added, new locks were built to cope with the growing requirements of traffic such as the steady increase in the size of ships. The main extensions all came after 1900, when a grand extension

scheme was being worked out, comprising the digging of a so-called "canal-dock," being a kind of inland river some 10 km (5.5 nautical miles) long, leading to several harbour-docks. Also within this scheme, a new locks for sea-going vessels were built in 1908 and 1928, in which years they became available for the traffic. Shortly after World War II, viz. in 1950, a petroleum-dock was added and in 1955, another lock for sea-going traffic, viz. the Boudewijn-lock, was put into operation. It is the largest lock in use at the present time, measuring as it does 360 m (say 1,200 feet) in length and a width of 45 m (150 feet). As from 1956 a fresh scheme for extension is being executed and will practically lead to the capacity of the port becoming double that of the period till then.

The magnitude of this scheme may be further evidenced by the fact that it calls for investments on the part of the public sector of some 5.5 "milliards" Belgian francs, i.e. 40 million pounds

sterling or 110 million USA \$. A fifth harbour-dock has already been made available for traffic, as well as a berthing-pier for super-tankers; a sixth harbour-dock approaches completion and will be open for traffic in 1964; special quay for the transshipment of ores and coals are being extended. At present, another sea-going lock is building, the entrance of which will be some 9 km (about 5 nautical miles) down-river from Boudewijn-lock. Same will connect with the existing docks by means of a new canal-dock which is likewise being laid out already now. The dimensions of this new lock are: length 500 m (1640 feet), width 57 m (187 feet), depth on high tide 18.48 m (60 feet).

As in the meantime it became evident that the planned extension would be unable to cope with the rapidly increasing traffic and the application for industrial sites, it was decided that a 7th harbour-dock, north of the 6th harbour-dock (now in the way of execution), should be provided, and the digging of same has meanwhile

received a start.

The total water-area of the docks now amounts to some 672.6 ha (1,600 acres); the length of quay-walls is at present 71.2 km (44 statute miles), and this length will promptly reach over 80 km (50 statute miles).

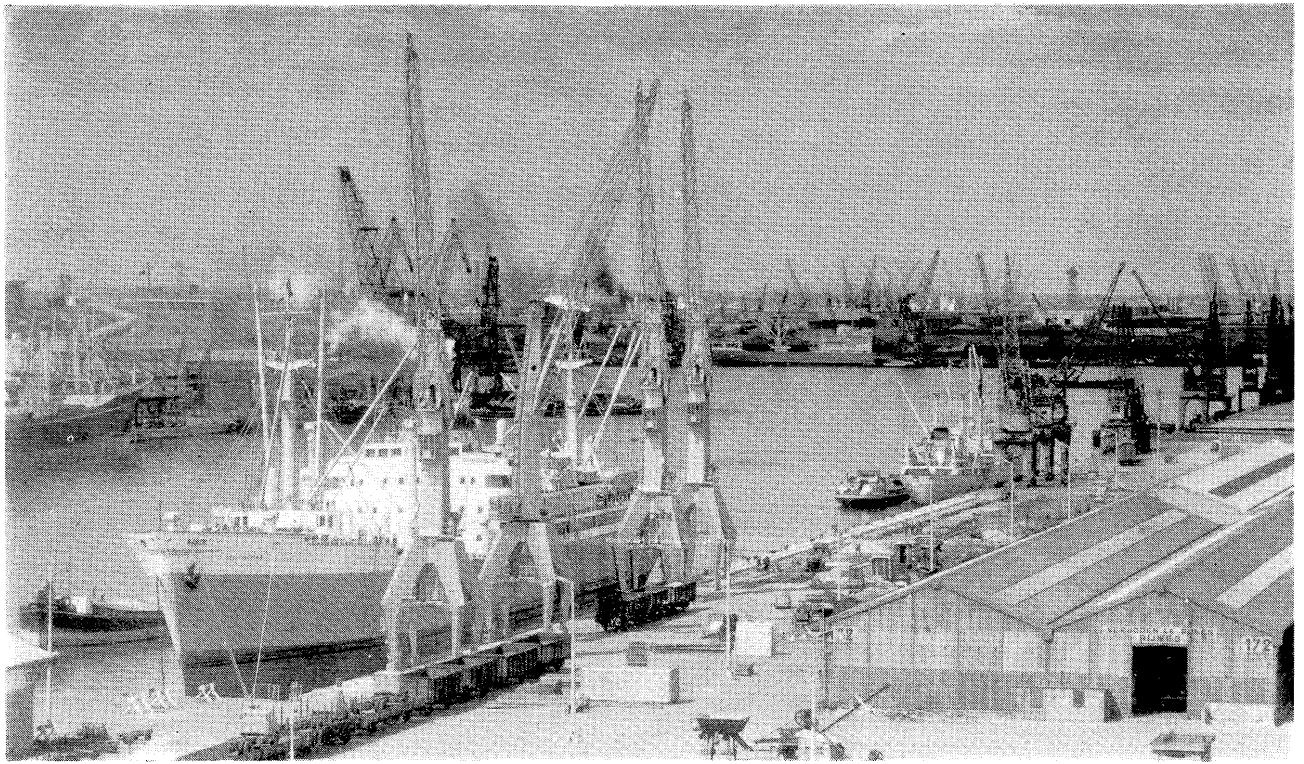
### Management and Administration

As is the case with most North Sea ports, the port of Antwerp is owned by the local public authorities who are also attending to the management and administration. Practically all grounds in the port area, the docks and quay-walls and, up to World War II, nearly the full equipment of quays, cranes and sheds, are the property of the City of Antwerp. The latter plays an important part in the management and operation of the port. The City itself is being managed by a City Council, the daily management being in the hands of the College of Burgomaster and Aldermen, the latter arrangement also applying to the management of the port, which



Albert Dock with 1st, 2nd and entry to 3rd harbour dock.





3rd Harbour Dock



General view on the 4th & Harbour Dock, Hana Dock and Leopold Dock.

takes place on the lines of a city enterprise with separate book-keeping, though remaining part and parcel of the city administration.

The City services themselves do not undertake any loading or discharging operations, nor the storage of goods, which are all left to private firms. Also the representation of shipping companies as well as the forwarding of goods are attended to by private initiative. The City Authorities restrict their role to the letting out or the granting on lease of its plants and grounds. Still, a large number of functions inside the port are the task of the city services, such as the maintenance and operation of of such appliances as are the property of the City, the operation of the towage services inside the docks and of the floating cranes and grain elevators, the drafting and control of new works, the granting of berthing accommodation for inland craft, collection of harbour-dues, the letting out of storage space, police control, re-

gulating certain activities, etc.

The harbour work proper is thus carried out by private firms, most of which being limited companies, and which come under a few main groups.

**Stevedoring Contractors:** They discharge the goods from ship to quay or into inland craft coming alongside, or load the goods from quay or from inland craft into the sea-going vessel, where they look after the stevedoring proper. Save for grain laden vessels in some cases, vessels calling at Antwerp always berth alongside quay; inland craft may then come alongside on one side for direct transhipment.

**"Nations" (also called "Corporations") or Cargo Handling Contractors:** They take the goods from ex shed or warehouse on to the quay or vice-versa, they weigh, measure, sample cargoes, look after storage, discharge and load trucks and railway waggons. Most of these contractors have their own warehouses inside the port area and which are often erected

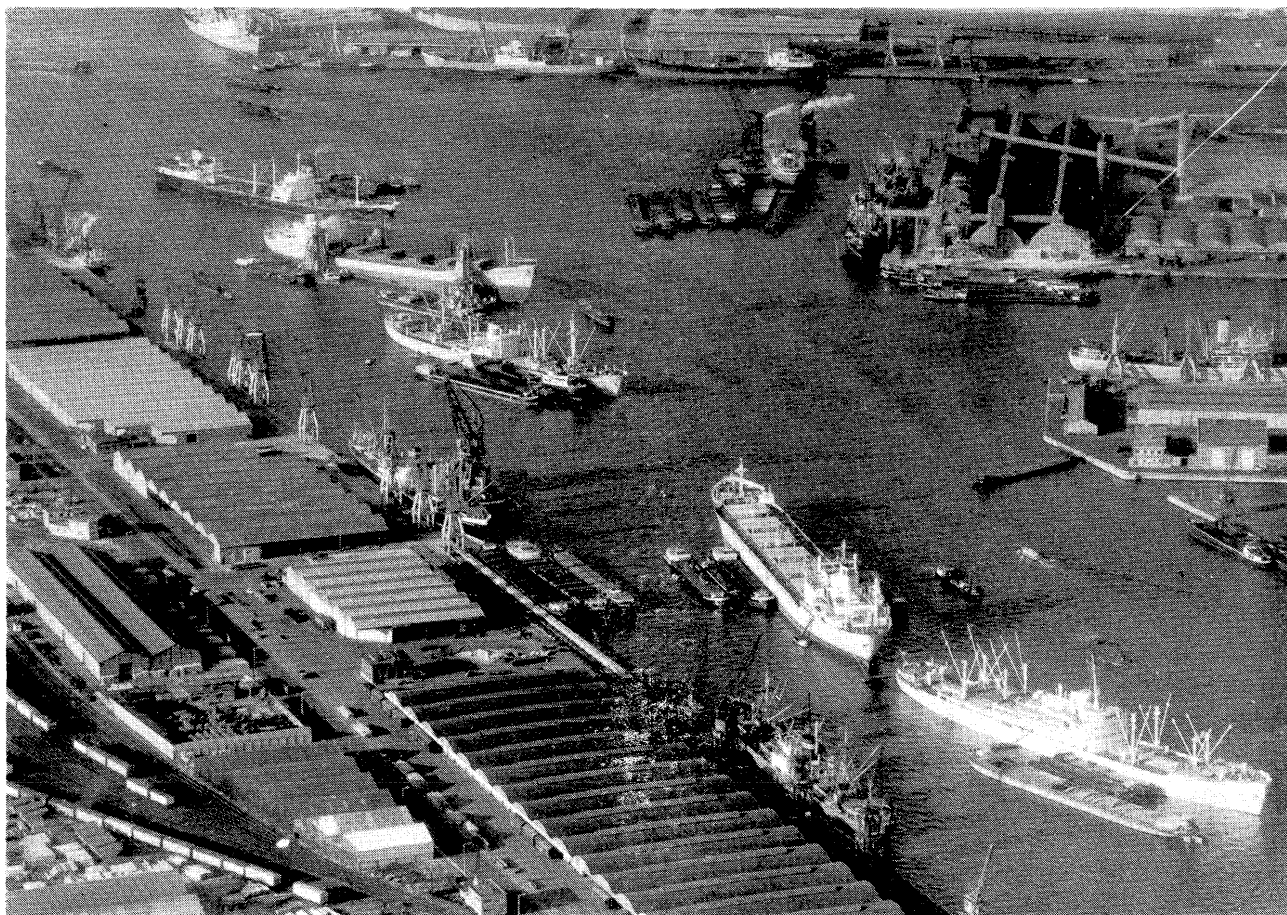
on sites taken on 'long lease' terms from the City.

**Shipbrokers:** These represent the steamship companies in the port and attend to everything in connection with the running of the vessel, the drawing up of ship's documents, etc.

**Forwarding Agents:** They look after the timely forwarding of outward-bound goods from places in the interior and shipment of same for their oversea destination. All work connected with the forwarding of goods, such as customs clearances, etc. belongs to their task.

Further, there is a number of contractors carrying out activities which are closely connected with port work in general, such as shipchandlery, watching services, etc. Shiprepairers should be specially mentioned at this juncture, occupying as they do some 5,000 persons.

Prior to World War II the 4 main sectors of port activity were rather neatly apart from one another. After that war however a



Albert dock and Potash warehouses.

kind of evolution made itself felt whereby constant cooperation and amalgamation of firms, concentration of work arose, so that some port contractors now attended to the full handling of goods both on quays and in ships; on the other hand, more than one shipbroking firm has now also a Forwarding Department.

It is largely these major contractors which are now taking on lease terms are newly erected quays, and they themselves look after the erection of sheds and the equipment of quays with cranes.

### Technical Equipment of the Port

All quays are provided with roads and railway-tracks. The quays consist of an open front-quay having a width of 30 to 60 m (100 to 200 feet) and have a hardened road-covering so as to make them fit for traffic with motor-trucks, motor-cranes and fork-lift trucks. All quays are further provided with sheds which are open in the older parts of the ports, but walled-in in the newer sections as well as on the modernized quays. Front-quays have several railway-tracks, which in places even pass under the sheds, so that all over the port goods may be transhipped direct from wagons or trucks into the outgoing vessels. Shorecranes are to be found on every quay, most of them being equipped for general cargo handling. Several quays however are occupied by specialized plants such as cold stores, grain and wine storage, plants for the handling and storage of bananas and other fruit, for the mechanical handling of manures and chemicals, tanks for the storage of vegetable and animal oils, molasses, mineral oils and gases, etc.

The following table is intended to give a general view of the magnitude and equipment of the port installations:

Number of drydocks	16
Storage surface of sheds and warehouses	
(a) Quay-sheds city-owned or on sites given on lease by the city	788,206 m <sup>2</sup> (945,000 sq.yds.)
(b) city-warehouses	152,058 m <sup>2</sup> (182,000 sq.yds.)
(c) timber-sheds	360,151 m <sup>2</sup> (432,000 sq.yds.)
(d) special warehouses and plants:	
out of which: grainstores	60,000 t
potash-warehouses	150,000 m <sup>3</sup> (200,000 cu.yds.)
cold stores	114,300 m <sup>3</sup> (150,000 cu.yds.)
Tanking capacity	3,880,480 m <sup>3</sup> (5,000,000 cu.yds.)
Refining capacity of crude-oil plants (in tons of crude oil per year)	13,034,550 t
Technical equipment:	
(a) quay cranes: city-owned	484
privately-owned	66
(b) private motor-cranes	304
(c) loading bridges: city-owned	6
privately-owned	3
(d) floating cranes and shears: city-owned	17
privately-owned (for transshipment)	9
(e) floating grain elevators (city-owned)	21
(f) grain elevators on shore (privately-owned)	5
(g) tugs (city-owned)	38

### Ships movement and Goods traffic

In the course of recent years the number of incoming sea-vessels booked substantial progress. As from 1950, which we regard as

the first normal post-war year, the register-tonnage of arrivals rose by 121 per cent, whereas the number of ships grew from 9,687 to 17,966 in 1962, as appears from the following summary:

#### Sea-going Vessels (arrivals)

Year	Number	NRT (x)	Average NRT	Number of Vessels over 15,000 NRT
1950	9,687	22,604	2,333	—
1955	13,731	33,957	2,473	2
1960	16,570	45,291	2,735	120
1961	16,945	46,156	2,724	169
1962	17,966	50,009	2,784	154
1963	17,856	52,276	2,928	285

(x) NRT: figures shown are as per Belgian measurement

The last column provides figures which show to what extent larger-sized vessels visited our port more and more, which is so much the more encouraging as the maximum depth of water is still restricted to 39 feet. The increasing number of "big" visitors made itself also felt in the corresponding improvement of the average tonnage.

Ships proceeding to Antwerp belong to more than 50 different countries, among which Western Germany and England are promi-

nent. The share of each one flag however does not exceed 20 per cent of the grand total, so that the shipping traffic of Antwerp is actually very international. Another feature of our traffic is the predominance of regular liner services. Even when taking into account the rigid rules whereby reduced harbour-dues are collected from regular lines (minimum one sailing per 30 days in the 'foreign' trade or one per fortnight in the 'coasting' trade), there are

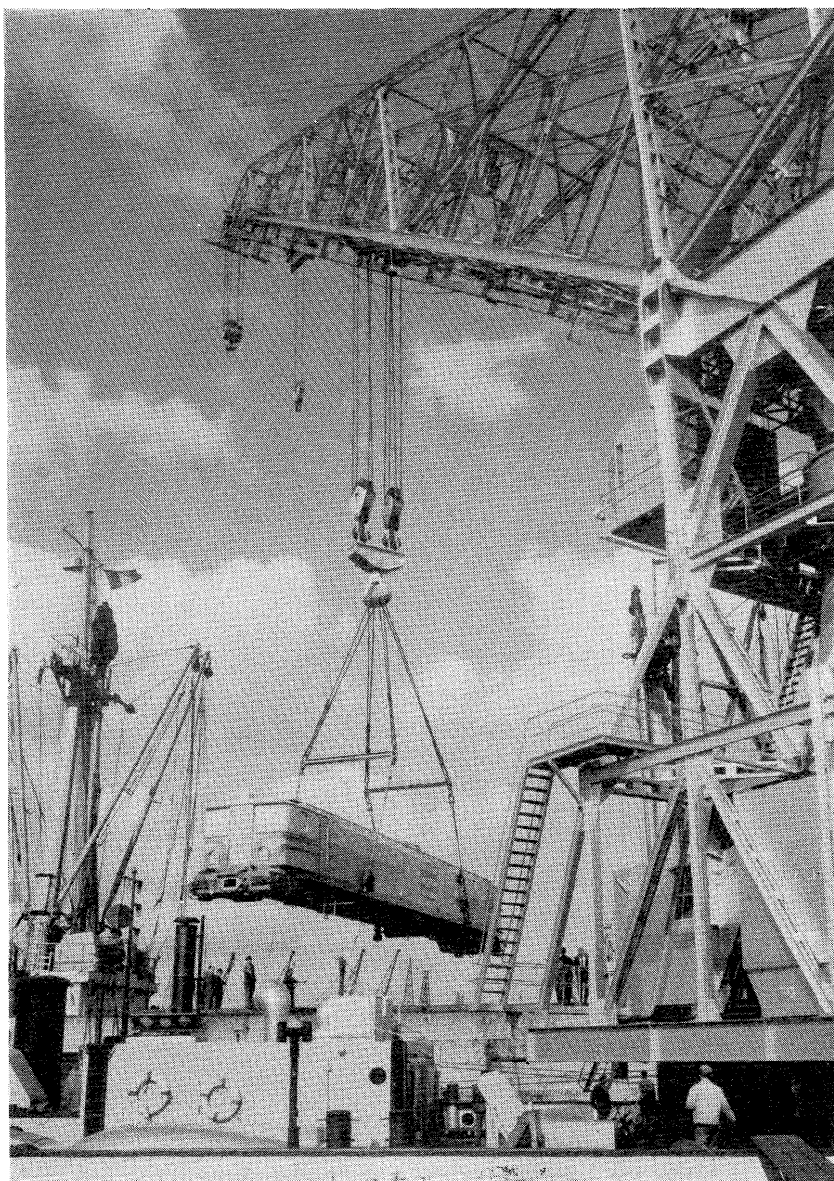


still about 13,000 regular sailings every year now.

Furthermore, many voyages are still being undertaken according to a fixed sailing program which however does not provide sufficient intensity to be recognized as 'regular.' The overall picture shows that some 300 actually 'regular' liner services are being provided from Antwerp.

In the course of the same period, the goods traffic made considerable progress, although with lesser magnitude and less regularity than the movement of ships. The evolution further showed a striking discrepancy between the incoming and outgoing sea-traffics of goods. Incoming figures namely progressed to a more considerable extent the those of the outgoing traffic, the latter showing only an extremely slow progress. In this respect the following table may speak for itself:

This summary clearly illustrates the difference in growth between inward and outward traffic. In 1962, the total traffic had progressed by 93 per cent in comparison with 1950, but inward advance was 124 per cent, whereas the outward figures lagged behind with only 44 per cent more. Out



Floating crane of 150 ton capacity.

Total sea-going traffic of goods (in 1,000 t)			
Year	Incoming	Outgoing	Total
1950	10,661	10,846	21,507
1955	17,519	14,822	32,341
1960	21,081	15,543	37,525
1961	23,227	15,415	38,642
1962	25,909	15,602	41,511

of this grew a systematic lack of equilibrium as from 1950 between the inward and outward movements. The rapid increase of inward traffic is due to a large extent to the never-ceasing growth of crude oil imports, which now reach about 10 million t. a year. The lesser growth of the outgoing traffic finds its source in the new trends of European commercial currents, chiefly as from 1958, in consequence of the economical ex-

pansion in Western Europe, which attracted the lion's share of industrial production. As an example, 36 per cent of Belgian exports still passed through Antwerp in 1958, which percentage share now sunk to 39.6 per cent although during the same period the volume of goods increased by nearly 1 million t.

When further analyzing the composition of the goods traffic we come to the finding that though

bulk cargoes represent the main element, general cargo traffic still constitutes the major portion of exports, viz. 68.5 per cent, which confirms the position of the port of Antwerp as a principal port for the loading of general cargo, which position is in close conjunction with its place as a liner port.

Among the principal commodities imported, we may mention mineral oils, ores, grains and coals, which together constitute over 75 per cent of the total arrivals; the balance chiefly consists of all sorts of generals, machinery and basic products for industry.

The outgoing oversea traffic is made up for nearly 40 per cent i.e. 6 to 7 million t, of iron and steel products or more than half



of the total overseas exports of the European Coal and Steel Community. The other products chiefly comprise artificial manures and chemical products as well as a list of finished industrial products, machinery, vehicles, etc.

The all-round character of the port does not appear from the volume and diversity of the goods traffic; it also appears from the spreading of the countries of origin and destination.

Sea-going traffic. Distribution of inward and outward traffics according to origin and destination during 1962 (in 1,000 t)

	Inwards	%	Outwards	%	Total	%
Europe	8,494	32.8	6,186	43.—	14,680	36.5
Africa	3,557	13.7	1,255	8.7	4,812	11.9
North America	4,115	15.9	2,955	20.6	7,070	17.5
Central "	229	0.9	461	3.2	690	1.7
South "	2,619	10.1	1,283	8.9	3,902	9.7
Asia	6,657	25.7	2,091	14.5	8,748	21.7
Oceania	238	0.9	158	1.1	396	1.—
TOTALS:	25,909	100.—	14,389	100.—	40,298	100.—



General view of the 4th Harbour dock, Leopold dock and Albert dock.

These figures confirm that Europe is the main region of origin and destination, which is due, amongst other causes, to an important flow of traffic with Great-Britain and the Scandinavian countries. Still, over 60 per cent of the traffic originates from countries outside Europe, which once more corroborates the fact that Antwerp is a "world port."

#### **Communications with the Inland**

The crude mineral oils which

are constantly reaching the port are being processed in 5 petroleum refineries situated within the port area and whose total refining capacity now exceeds 13 million t. The petroleum products subsequently proceed to inland destinations, by rail, tanker-barge or motor-truck.

Goods for export likewise reach the port of Antwerp by the same means of transport. Although the motor-truck has much grown in importance since the termination

of World War II, traffic in the port is still widely featured by railway traffic and inland barges both of which have remained the main inland carriers. Exact proportions between these various ways of transport cannot be given as statistical data are lacking regarding the volume of the inland road traffic. Yet, basing ourselves on the available figures, it appears that out of a total of 15.7 million t which arrived in the port area, 69.9 per cent came per in-

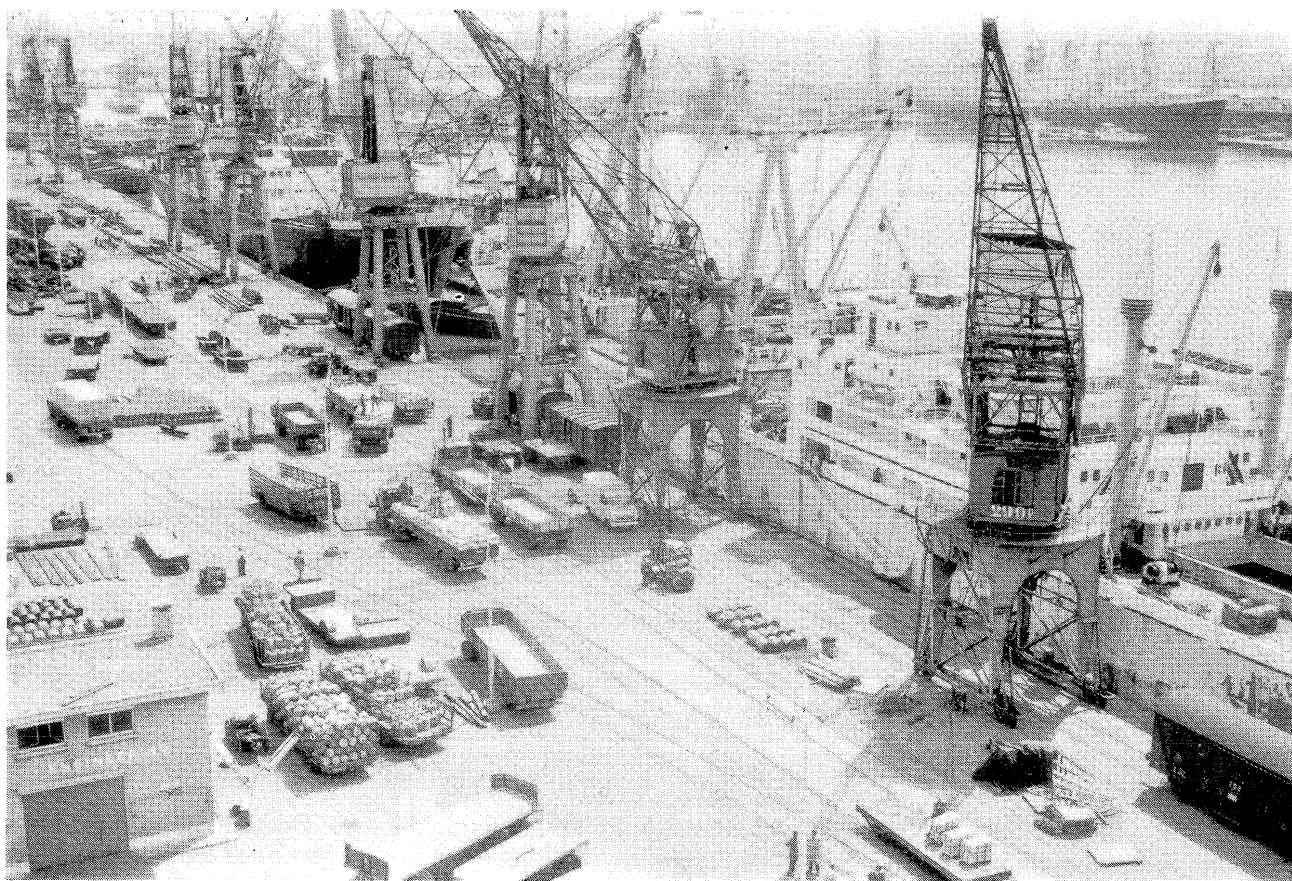
land craft, 28.6 per cent per railway and 1.5 per cent by motor-truck (the latter percentage only refers to traffic from beyond the frontier). Reforwarding to inland destination, totalling 29.9 million t, took place for 76 per cent per inland craft, 22.8 per cent per railway and 1.2 per cent by motor-truck (the latter percentage equally referring only to traffic beyond the frontier). The actual share of the motor-truck must therefore lie substantially higher, but a proper figure cannot be worked out.

In connection with the traffic along the interior waterways, it may be emphasized that 20 to 25 per cent of same, equalling some 6 to 7 million t, consists of Rhine traffic. The growth of this traffic is not satisfactory nowadays, the cause of which is partly attributable to obsolescence of the existing way of communication. In May 1963, an agreement was reached between The Netherlands and Belgium on the laying out of a new such way between Antwerp and the Rhine district. This new itinerary will consist of a direct

canalized connection from the docks to the Rhine, and will be some 40 km (about 25 statute miles) shorter than the present one. Also the network of motor-ing roads crossing Belgium will become adapted to present day needs. The motoring road to Liege - Aix-la-Chapelle is being completed in 1964. In the meantime, a start is being made with the laying-out of a new motoring road to the North of France, which in Antwerp will run under the River Scheldt, for which purpose a new tunnel will be built. The latter road is the main link of the E-3 motoring road on Belgian territory. Another section of this E-3 motoring road, viz. from Antwerp to Eindhoven-Oberhausen, will be laid out later. These roads will highly contribute to improving the road communications with the hinterland.

Likewise, the way of access for sea-going vessels is being consistently adapted to the requirements of modern navigation. Our port is accessible at present for vessels having a draft of 39 feet, which should correspond with deadweight

tonnages ranging from 50 to 60,000 t. Although in this respect considerable progress was achieved as compared to the position a few years back, further improvements are on the agenda. A first problem, viz. a shoal in front of the Belgian coast, is solved now by dredging a fresh passage across the "Scheur." The putting into operation of the new lock will mean a further improvement as a few "thresholds" in the river may be avoided thereby. Finally, studies are being made to normalize the navigable channel near Bath, which for super-size vessels forms the most difficult sector on the way from Antwerp to the North Sea. By so doing, it is expected that the port will be made accessible ere long for vessels having from 70 to 80,000 t. deadweight. It is manifest from all this that Antwerp is preparing definite schemes, and in fact is carrying them into practice, in order to extend and modernize the port equipment and plants, to improve the accessibility from the sea and also the means of communication with the hinterland.



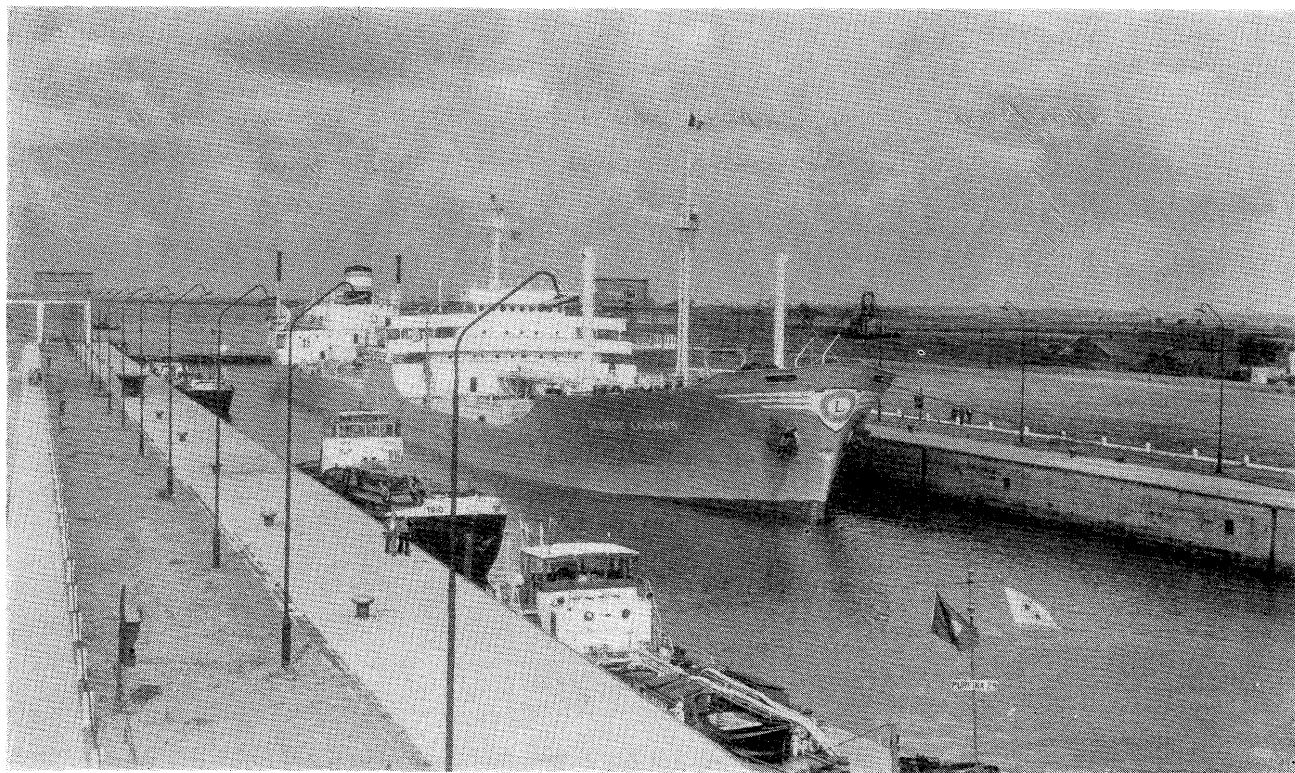
Unloading of general cargo on the North quay of Leopold Dock.



No doubt, the latter is an urgent requirement, chiefly at a time when Western Europe enjoys an undreamt of economical expansion. It is true that this expansion has so far mainly stimulated inter-European intercourse, but it

is nevertheless manifest that over a longer period also the intercourse with the young overseas countries will develop. With this future in view, the port of Antwerp is being shaped not merely as a centre of trade and trans-

port, but also as a place of settlement for new industries which must be able to rely on the fluency with which overseas cargoes reach them and can be put on the outward routes as well.



Incoming tanker in the Bandouin lock.



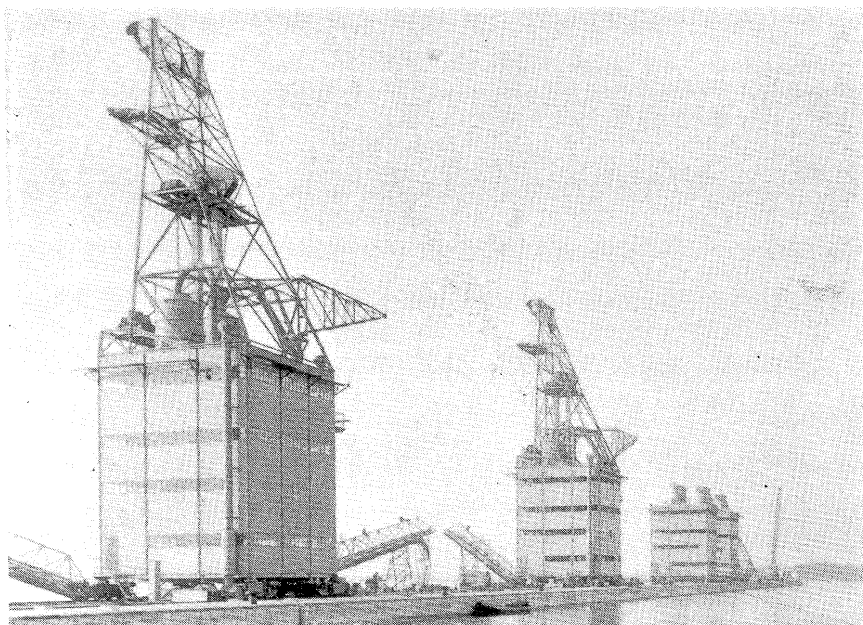
Special terminal for the unloading of bananas.



**Belgian Bunkering & Stevedoring  
3rd Harbour Dock.**



**Cargo handling in a warehouse on  
the North quay of the Leopold  
Dock.**



**6th Harbour Dock—construction  
of grain elevators.**



# THE PORT OF PORTLAND

Contribution by

David B. Porter

Asst. Public Relation Director

The growth of Portland's harbor from a pioneer inland village to a world seaport is closely linked with the development of navigation on the Columbia River.

This famous "River of the West," as it was known to early explorers, was only discovered and partially explored in 1792 by Captain Gray. Yet settlement of the Oregon country followed so closely upon this discovery that before 1850, the Columbia River had already become the main artery of commerce for a vast and amazingly productive hinterland.

The settlements adjacent to the Hudson Bay station at Port Vancouver were at that early date producing an exportable surplus of those very commodities that still make up a large portion of the exports of Portland; namely, grain and lumber.

Soon clipper ships were voyaging around the Horn to carry the produce of the Oregon country to the markets of the world. By 1846 shipping had become of such importance that the Oregon territorial legislature authorized the pointment of the first pilot board. Portland's first commercial wharf, the Waymire Dock, was built in 1846 at the foot of S. W. Washington Street, by John Waymire for Francis Pettygrove. The dock handled various cargoes, inbound and outbound, and Waymire established an express company, Portland's first, to transfer cargo by wagon and small boat from Portland to Oregon City. The dock, including 640 acres of land, was sold about two years later for \$5000 in tanned leather.

Steam had already made its advent on the Columbia almost simultaneously with its introduction on the Atlantic Coast, and by the year 1850 the first two steamers in Oregon were maintaining

service—one between Portland and Astoria; the other between Portland and San Francisco.

In the meantime, the village of Portland has outstripped its older rivals, and by 1851, the year of its incorporation, it was beginning to take on the airs of a seaport and was exporting a large volume of grain by ocean carrier to the markets of California. Of greatest importance to Portland and its maritime commerce was the formation in 1860 of the famed Oregon Steam Navigation Company, which possessed a splendid fleet of both river and deepsea vessels and gave new impetus to shipping from Portland both cargo and passenger.

In 1868, the "Helen Angier" cleared the port with grain for the United Kingdom, being the pioneer in this trade which later proved so remunerative to the port. In a few years ships of the seven seas were calling at Portland, a great many in regular service.

It soon became apparent that improvements to navigation were needed if trade was to be held and further developed. In 1878 the first government project for the improvement of the Columbia River was adopted, which consisted of the construction of a diversion dike near Portland. Initial steps toward elimination of the bar at the entrance to the Columbia—a problem to navigators from earliest times—followed shortly thereafter with completion of a 2,500 foot breakwater in 1885. This was followed by the adoption of the 20 foot channel in 1892, the 25 foot project in 1902, and the 30 foot project in 1912. At present the existing project depth of the Columbia River channel is maintained at 40 feet from Astoria to the Portland harbor, a distance

of about 100 miles. In 1956 the channel entrance from the Pacific Ocean into the Columbia River was deepened to 49 feet, thus insuring safe navigation by deep-draft vessels at all times.

In 1891 the Port of Portland Commission was created by an act of the Oregon legislature. It was the first port established in the Pacific Northwest.

Portland as a port grew proportionately with each improvement in navigation. The intercoastal trade, developed in the days of the clipper ships, became of primary importance, and with the opening of the Panama Canal in 1914, final impetus to all Pacific Coast shipping was given, opening up new and shorter trade routes to European and Eastern markets.

With the increasing importance of shipping during the 90's, and with improved channel and navigating conditions, the need for modern terminal facilities to provide for the newer types of carriers became clearly apparent, so in 1910 there was created The Commission of Public Docks, by city charter amendment, to better handle the port's growing commerce, provide public terminals, and promote trade and commerce.

In looking over old records of commerce through the port, it is interesting to note that the first full cargo of wheat dispatched from the Columbia River was sent to Australia in 1868. The first cargo of flour went to New York the same year. The first cargo of lumber went to Hong Kong in 1870.

Portland provides an incomparable asset to importers and exporters involved with the transshipment of goods between inland points and the sea—the only water grade route available for hundreds of miles to the north or south that passes through the ruggedly beautiful Cascade Mountain range separating the coastal areas from the expansive lands of the interior Pacific Northwest.

Portland is the natural market place for a vast hinterland, including the eastern parts of the states of Oregon, Washington, all of Idaho, and portions of Montana, Wyoming, and Nevada. The growth of Portland as an assem-



**Mr. Thomas P. Guerin, General Manager, Commission of Public Docks, Portland, Oregon and President, American Association of Port Authorities.**

bling plant for the products of the Inland Empire started during the year 1920, when the now famous Portland rate case was settled in Portland's favor. The Interstate Commerce Commission joined with those making the complaint that existing schedules unduly favored Puget Sound cities and deprived Portland of the benefits of her location in that the same rates were applied on hauls over the Cascade Mountains as were applied for distances via the Columbia River watergrade route. In the judgment of the ICC, there should be a differential of ten per cent in the rates between Portland and Puget Sound cities for the haul from points in the territory south of the Snake River. The differential of ten per cent was made effective in rates between Portland and Puget Sound.

This all-important decision restored to Portland her natural advantage of which she had formerly been deprived. It added to Portland's trade area 4,200 square miles of fertile wheat lands, and it had a marked effect on Portland as a giant seaport.

Today Portland's harbor is served by over fifty steamship lines serving every nation of the free world with daily sailings. As mentioned before, the first line was the famous Oregon Steam Navigation Company. By 1919 there were only three lines making regular calls here, but the following year, 1920, was open season for new lines. In that year 14 steamship lines established offices in Portland and several more became actively interested in the trade possibilities here. War-torn Europe was demanding supplies;



Terminal No. 1, Portland, offers six general cargo berths. storage area, with possible future addition of new general 7, and 8, all newly provided since 1955. Willamette Iron vessels undergoing modification above Berth 8. Terminal

Area at bottom has recently been razed to provide open cargo facilities. Center section of photo shows Berths 6, and Steel Company, ship repair firm, is shown with three No. 2 is seen at top, center.

food, machinery, clothing, raw materials and other items available in this area, and the Japanese demand for products, which had remained unsatisfied during the war, awaited. Intercoastal service was resumed, and by the end of 1920 there were eight lines operating in this service alone.

The increase in the number of steamship lines was accompanied in 1920 by a great influ of foreign freight forwarders, custom house brokers, stevedoring companies, and other firms affiliated with the industry. Since that year, a steady growth in the shipping industry has taken place until Portland is now one of the great river ports of the world. Since 1956, Portland has been the leading dry cargo import-export harbor in the U.S. Pacific Coast. Dry cargo includes any cargo not carried in tanker vessels, such as petroleum.

During World War II, the shipyards at Portland made an outstanding contribution to the winning of the war, with nearly 1,200 oceangoing vessels built and load-

ed here. In addition to this shipbuilding record, Portland also made several other war records, among them a war shipping record. In the words of Admiral W. W. Smith, former chairman of the U.S. Maritime Commission, "Portland was given the toughest assignment of any port in the United States", namely, the handling of a major portion of the Russian lend-lease movement. In addition, many thousands of cars of export were unloaded in Portland for shipment to our troops and allies overseas.

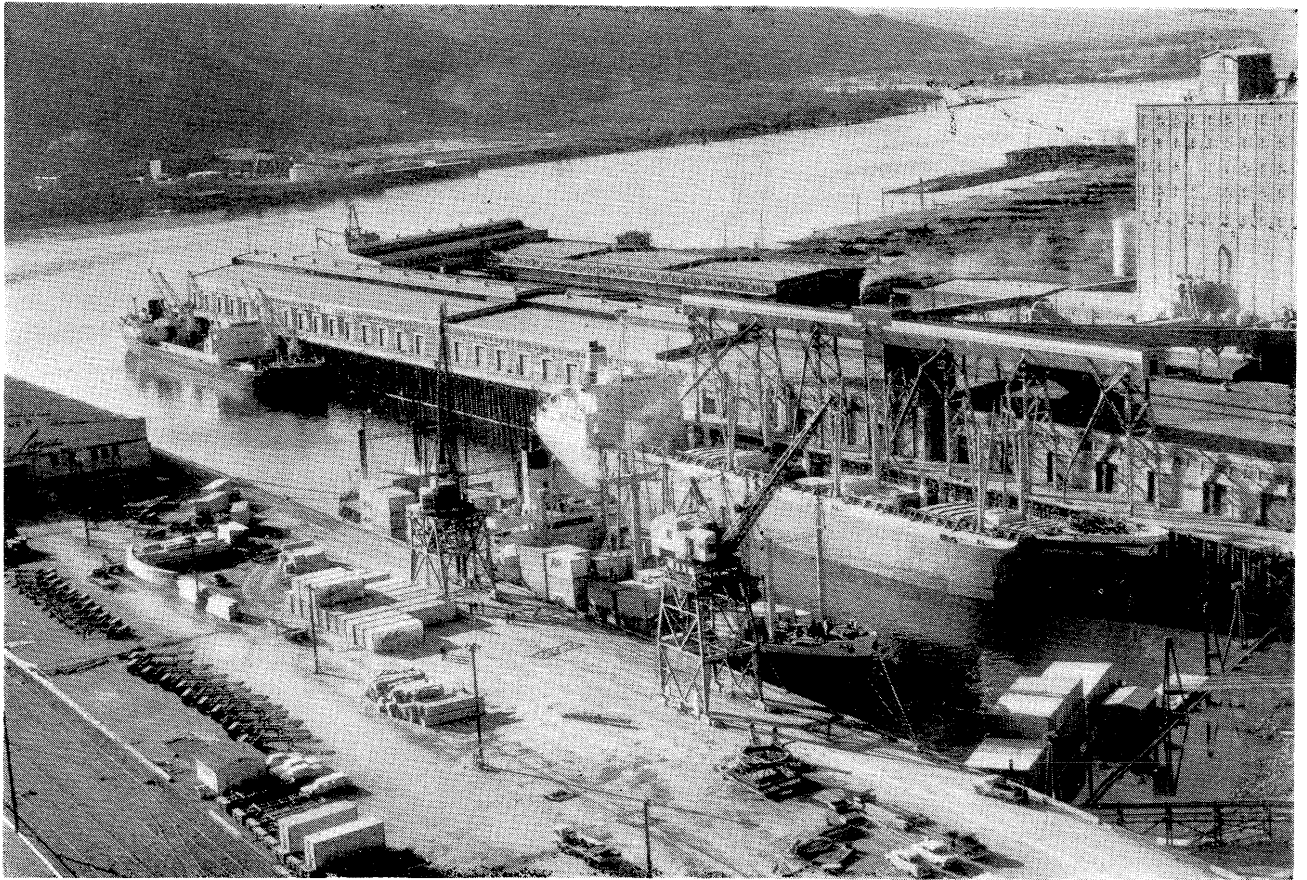
The war period also saw the expansion of terminal rail yards, the acquisition of much new cargo handling equipment, including stationary and floating cranes and the invaluable experience gained during wartime shipping by the stevedore companies, the longshoremen, and the dock operators of the area.

Portland today is a natural seaport city matching unsurpassed scenic beauty with booming industrial progress. The green hills



**Mr. Robert J. Rickett, Chairman,  
Commission of Public Docks.**

bordering Portland's business and industrial areas provide a natural boundary for the rolling residential areas and productive agricultural lands surrounding the port city. The years of progress and experience have built the harbor into a modern, versatile industrial complex at the strategic juncture of the Pacific Northwest's two mightiest rivers, the Columbia and



Versatility of Terminal No. 4, Portland, is shown in this photo of Matson ship loading containers (foreground), a grain ship (in center), and a ship loading general cargo at Berth 3, Pier 1.

the Willamette. Its inland location puts it in the center of the vast, fast growing agricultural area of more than 300,000 square miles and several million people, all dependent upon Portland as the source of supply for imported goods and the outlet for their export products.

In 1964, Portland handled the import and export of 4,419,905 tons of dry cargoes, and 425,022 tons of domestic and Hawaiian cargoes. This was carried aboard a total of 1720 vessels, representing 23 different flags. Hundreds of commodities, led by limestone rock, alumina, ores and concentrates, iron and steel products, chemical salts, coffee beans, and foreign autos were among imported items. Portland's leading export cargoes are grain, logs and lumber, scrap metal, paper and products, and agricultural products, such as fresh fruit, dried peas and beans, canned goods, and animal feed.

Top nations in Portland's foreign trade, on the export side, are Japan, India, and Korea. Leading import cargoes arrive from Canada, Japan, and Mexico. As of mid-1964, Portland's harbor tonnage showed a 12 per cent increase over the same period of the previous year, amounting to about 300,000 tons of cargo.

The continued farsighted building and improvement program in Portland's harbor has set the pace for other ports along the U.S. West Coast. Public and private facilities have been the investment of millions of dollars in new equipment, docks, and sheds in recent years, and a vast modernization and improvement program is currently under way for continued progress along the waterfront. Recent studies by noted engineering firms and consultants have pointed the need for new general cargo and containerized facilities, improvement to various bulk cargo and containerized facilities, improvement to various bulk cargo operations, and speedier, improved access routes for rail and truck operations.

Continued advancement of the interior trade area, generally referred to as the Inland Empire and Columbia Basin, points to a

growing potential for this region as a market and source of supply, and for Portland's progress as a port.

New dams along the Columbia River system, plus several currently under construction and planned for the immediate future mean the increase of industrial with the advent of greater hydroelectric power availability, improved navigation aids, irrigation of agricultural lands, and flood control. Present barge navigation service is provided 240 miles east of Portland, to the Tri-Cities complex of Pasco, Kennewick, and Richland. By about 1972, this waterway will extend another 100 miles east, to Lewiston, Idaho, in the center of a productive growing area of grain, peas, and lumber.

The Inland Empire contains one of the world's major lead and zinc fields, over 600 sawmills and lumber companies, and over 41,000 farms embracing 20 million acres of productive land, growing over 200 crops. With the new dams and improvements, Portland's harbor will deliver to world markets the fruits of an even greater producing area.

Present day facilities in the harbor range from typical general and bulk cargo facilities to cargo docks adapted to the handling of cargoes requiring specialized equipment. Air suction, rail car tipplers, giant unloading towers, and various other newly-developed methods are utilized in the most efficient, economical cargo handling operations.

The 54-year old Commission of Public Docks maintains three large terminals with a wide variety of uses. Terminals No. 1 and 2 are general cargo facilities. Terminal No. 1 provides for the berthing of six vessels with direct rail to ship transfer at all berths, and truck tailgate delivery and raised rail platform delivery areas available throughout. The same type of operation is maintained at the three-berth Terminal No. 2.

Terminal No. 4 is the port's largest, most versatile facility. This 155-acre terminal provides nine berths, three of which are for general cargo and six for bulks, ranging from liquid molasses to grain. Here is located the

largest tidewater grain elevator in the Western United States, having an 8,000,000 bushel capacity. It is capable of loading over 1500 long tons of grain an hour into ships' holds. Its receiving facilities include a double marine Airveyor, which sucks grain out of the holds of barges at 350 tons per hour, rail car tipplers, and a truck tipper. Large, specially-designed storage tanks provide ventilated storage for grain awaiting export, or transfer to the nearby flour mill.

Scrap metal and logs are shipped from this terminal increasing amounts with the help of two gantry cranes on Pier 2. These will soon be complemented with the addition of cranes of larger capacity, to speed the loading of these commodities and add to the unloading capacity of dry bulks, such as ores and concentrates. Three 65-ton capacity cranes are being installed, one on Pier 2 and two on Pier 4, to provide reaching capability from dock to log rafts or barges moored in the river, across the ship, and transferring to or from ship's hold.

Pier 4, Terminal No. 4, is the harbor's major ore handling facility, with an unloading tower capable of handling 900 tons per hour in free digging. It is largely responsible for Portland's rapid growth in the ore-handling business over recent years, as increasing amounts of lead, zinc, copper, and silver ores and concentrates move through Portland to inland smelters. The tower is equipped with weigh hoppers that release pre-determined amounts into trucks, rail cars, or barges. It is the only unloading facility of its kind on this coast.

The terminal loads dry bulks at Pier 5, where a conveyor system and car shake-out pit combine for speedy delivery of cargo from rail car to ship. A large open storage area is available on the concrete decked pier, and bunkers provide for storage of 10,000 tons of bulks.

A privately operated general cargo facility, Albina Dock, offers three berths in the central harbor area, with a 35-ton capacity crane. Numerous other privately owned docks serve the harbor in handling scrap metal, lumber grain, cement,



alumina, petroleum, chemicals, and limestone.

Ship repair and shipbuilding are growing industries in Portland. Several well known ship repair firms maintain yards for minor repair, overhaul, or complete conversion of any size ship. The luxury cruise vessels MARIPOSA and MONTEREY, and the container vessel, HAWAIIAN CITIZEN, all Matson Line vessels, were completely converted in Portland yards, and numerous other vessels have been converted for various government agencies. Tugs and barges of all sizes slide down the ways of Portland ship building firms with regularity.

The Port of Portland Commission's Swan Island Ship Repair Yard provides three floating dry docks and five repair and three layup berths, nine gantry cranes, and numerous power facilities. The yard handles more than 300 ships annually. Portland's seven ship repair firms use the drydocks and the yard's facilities in addition to their own private yards.

Harbor improvements planned for Portland docks include further additions to heavy lift equipment, as mentioned previously regarding new gantry cranes at Terminal No. 4, improvements to general cargo facilities at Terminals No. 2 and 4, and modernization and improvement at Terminal No. 4. Additional barge loading facilities will also be provided.

The Dock Commission is currently awaiting completion of a study that will determine the type and location of a facility needed for handling the growing general cargo movements. A new general cargo facility is expected to begin construction this year, with major facilities being made available for container cargoes.

Improved services to Portland have been seen within the last few months, including a container movement of cargo between Hawaii and Portland on a 12-day frequency, provided by Matson Line, and the initiation of Sea-Land's container service to the East Coast and Puerto Rico. Portland provides daily sailings to practically every port in the free world.

Portland's Dock Commission has long been active in the promo-

tion of new cargo handling methods and the initiation of new cargo movements by local manufacturers. Dock Commission general manager Thomas P. Guerin is a member of the President's Export Expansion Committee, charged with the responsibility of increasing the nation's export trade. The Commission, to increase imports and exports, issues a regular bulletin to manufacturers throughout Portland's trade area, informing them of trade opportunities for their products in foreign lands, and of foreign firms seeking trade outlets in this area. The Commission also works closely with the banking firms of this area to seek potential firms to engage in international trade. In line with this, Portland's Dock Commission was recently awarded the President's "E" Award for Export Expansion Activities, being the only port body on the West Coast to be so honored.

Mr. Guerin is also president of the American Association of Port Authorities, an association composed of representatives of all major public port bodies in the western hemisphere. This organization, with headquarters in Washington, D.C., met in Portland in September 1963, for its 52nd national convention, bringing together top port management and commission-level men to discuss port matters, legislative issues affecting port and harbors, and development of the nation's waterways. The association meets in New Orleans, Louisiana, in October, 1964.

Related services of the harbor include numerous freight forwarding and custom house brokerage firms, bonded warehouses, foreign banking departments, 22 foreign consulates, etc. The port is served by five transcontinental rail lines, eight transcontinental and international air lines, and over 30 interstate common carrier truck lines.

Portland's maritime industry is directly responsible for the employment of 7500 people, with an annual payroll of \$38,000,000, and the indirect, but port dependent, employment of 5600 people, warn-

ing 25,000,000 annually. The waterfront and Portland's international trade are the backbone of the area's economy, influencing people far removed from the actual waterfront of Portland.

Growth of Portland as a seaport is further enhanced by the availability of excellent waterside sites for industrial development. In the core area, within minutes of major warehousing, rail, and financial districts, the Port of Portland Commission is developing over 500 acres of land for light manufacturing and warehousing. Near Terminal No. 4, at the juncture of the Columbia and Willamette, 600 acres of waterside land are being developed by the Port Commission for heavy industry and manufacturing. Several additional sites are also available within the confines of Portland's harbor, each offering excellent river frontage, rail and highway access, and power supply. The State of Oregon offers industry the West Coast's finest tax climate for development, and an open door to growth in the field of international trade and marketing.

The Commission maintains a well-trained staff of experts on rate matters and all aspects of freight handling who can offer their services to the shipper or close contact with the harbor's importer. These men maintain customers throughout the trade area, and work closely with Portland-based steamship agencies, trucking and rail lines, freight handlers, etc.

Portland Public Docks offers the services of three additional offices to represent the port. These men, in Tokyo, New York, and Washington, D.C., can provide information and offer advice on traffic matters relating to West Coast shipments and Portland steamship services. They are in constant contact with the Commission.

### **Towage**

Towboats of all sizes are available for a variety of uses in Portland, ranging up to 3200 horsepower tugs in constant daily use on the Columbia and Willamette waterways. The Columbia River offers among the lowest rates in the nation for ship assistance services.

### **Barging**

Barging operation on the river system and in coastwise and offshore trade are plentiful. Special commodity barges for acids, chemicals, petroleum, paper, sawdust, grain, and lumber are constantly available.

### **Lightering**

Close to 100 lighters are constantly available in the harbor, providing up to 1200 tons capacity.

### **Working Hours**

Normal working hours for longshore force are between 8:00 a.m. and 5:00 p.m., week days. Workers are paid regular wages for six hours during this period, and overtime (time and a half) for additional time and holidays. Cargo handling is available around the clock.

### **Wharfage**

Charged per ton of 2000 lbs. or 40 cubic feet, as manifested by vessel.

#### **General Cargo**

Foreign, Offshore & Intercoastal .....	80¢
Coastwise .....	80¢
Inland Waterway .....	80¢

#### **Bulk Cargo**

Foreign, Offshore & Intercoastal .....	50¢
Coastwise .....	50¢
Inland Waterway .....	50¢

### **Freetime**

Allowed on the piers on inbound and outbound merchandise.

	Inbound	Outbound
Inland waterway & Coastwise	5 days	5 days
Intercoastal	5 days	10 days
Foreign & Offshore	10 days	10 days

### **Wharf Demurrage**

Charged on merchandise not removed from wharf area within free time (per ton):

Merchandise (unless otherwise charged for specific commodities):

1st 5 days	.50¢ per day
Each additional 5 days	.07¢ " "

### **Wharf Storage**

Merchandise may be placed on wharf storage if applied for to the terminal operator in advance of storage date and if space is available. Merchandise (unless otherwise charged for specific commodities) is charged on the basis of .60¢ per month, per ton of 2000 lb. or 40 cubic feet, whichever provides the greater revenue.

### **Dockage**

Specific information on port charges should be requested from the Commission of Public Docks, Traffic Department, 3070 N. W. Front Avenue, Portland, Oregon 97210.

### **Local Regulations**

Covered in Commission of Public Docks Terminal Tariff 3A.

### **Pilotage**

Pilotage across the Columbia Bar, at the entrance of the Columbia River, is provided by the Columbia River Bar Pilots, Ft. of 14th Street, Astoria, Oregon, FA 5-2641. Pilotage in the Columbia and Willamette Rivers is provided by the Columbia River Pilots Association, 3 N. W. Front Avenue, Portland, Oregon, CA 8-9325.

### **Cranes**

One 100-ton shear leg crane at Terminal No. 1, Berth, 1 with 80-foot reach.

One 35-ton A-frame crane on pivotal base, at Albina Dock, Berth 1.

One 900-ton per hour straight line unloader, 13-ton capacity bucket, with general cargo hook attachment for 25-ton lifts, at Terminal No. 4, Pier 4.

One 200-ton floating crane with 260-foot reach.

Two 75-ton floating cranes with 125-foot reach. 50-foot extension available.

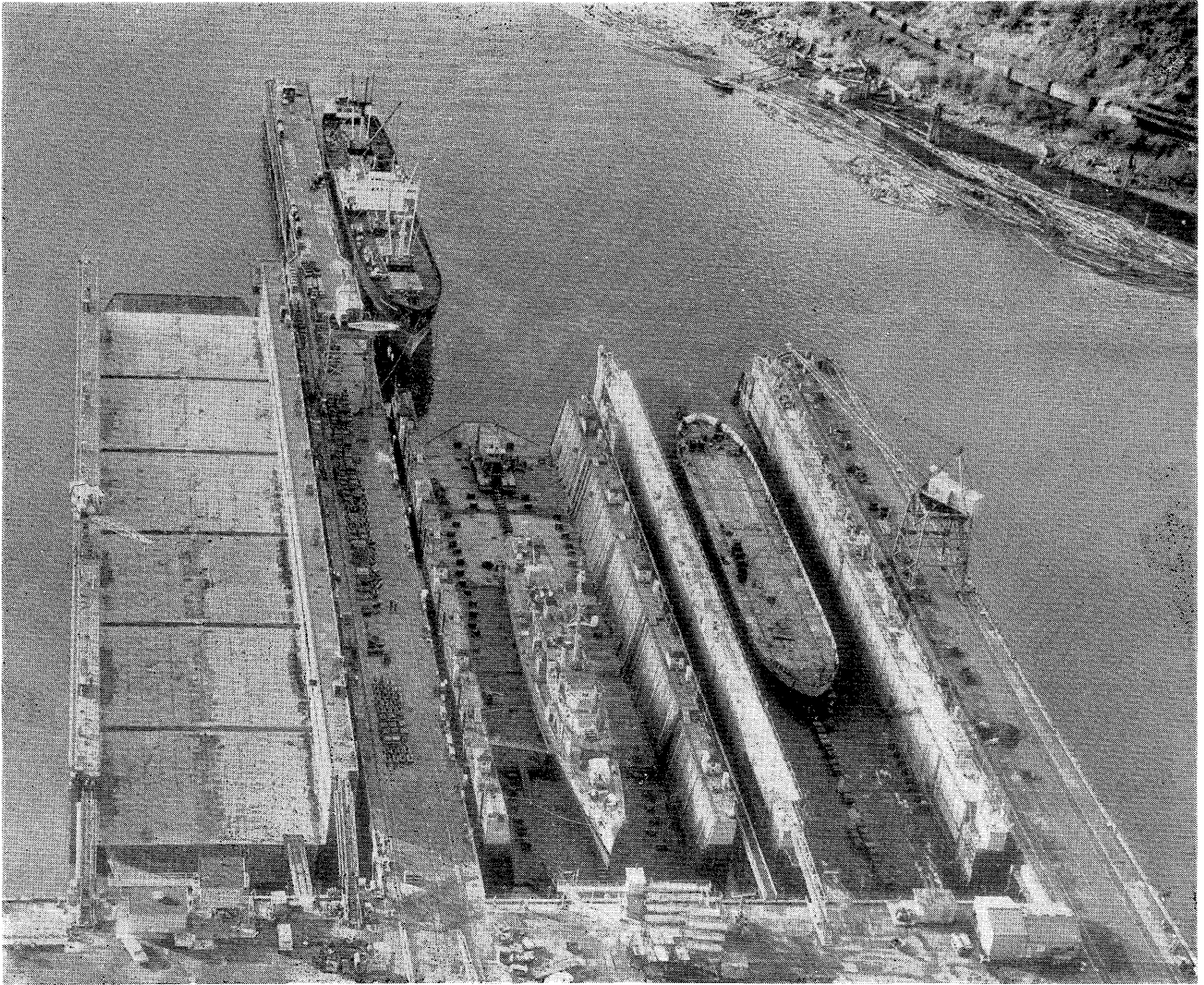
Five 50-ton floating cranes with 125-foot reach.

Four 35-ton floating cranes with up to 150-foot reach.

Six floating cranes between 18 and 45-ton capacity, up to 110-foot reach.

Gantry cranes between 50-65-ton capacity, reach up to 150 feet, on Piers 2 and 4, Terminal No. 4.

Numerous truck and locomotive cranes available up to 60-ton capacity, 140-foot reach.

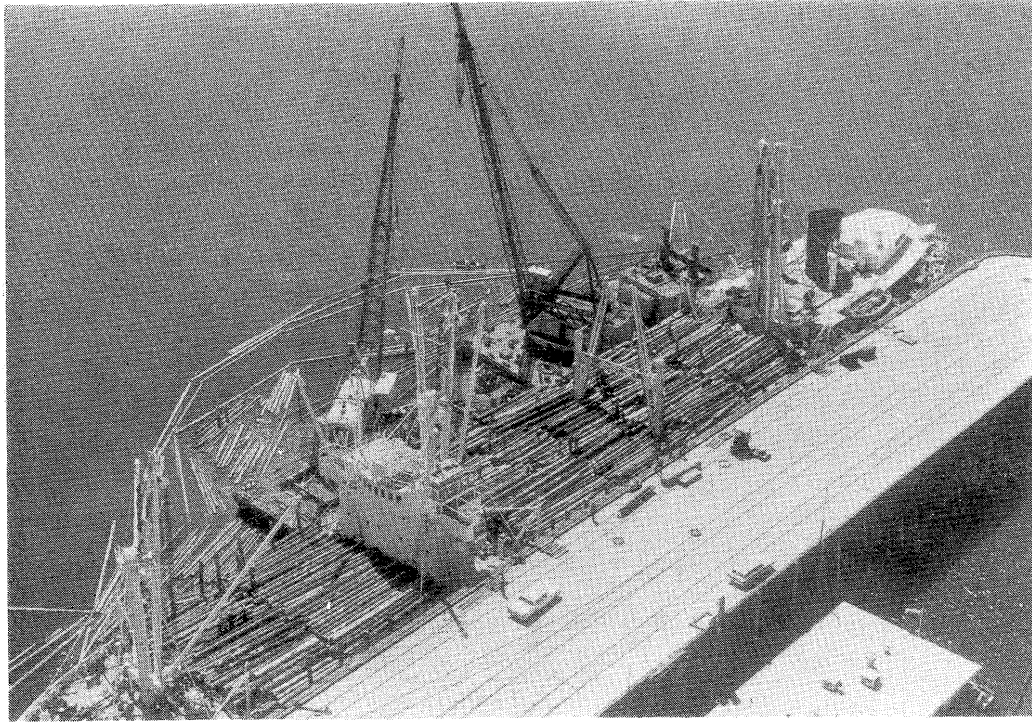


**AERIAL VIEW OF PORT OF PORTLAND'S THREE DRY DOCKS** located at Swan Island: The three docks, giving a combined lift-ton total capacity of 59,000 tons, and a monthly ton-days average of some 167,000.

The Port of Portland Dry Docks are a publicly operated utility. The Port of Portland does no work on vessels but local contractors are equipped to do all kinds of ship repairs. Competitive bids for repair work can readily be obtained from contractors at this Port.

Dry Dock No. 3 (left) has a lift-ton capacity of 27,000 tons, No. 2 (center) has a capacity of 14,000 lift-tons, and No. 3 (right) has a lift-ton capacity of 18,000.





Log ships destined for Japan are an increasingly common sight along Portland's waterfront as log exports have shown an increase of over 35,000 tons in the first six months of 1964, compared with the same period of 1963. Logs are loaded with floating water cranes and gantry cranes from rafts moored alongside the vessel and from rail cars on the dock.

Aerial view of Portland's central harbor, looking north. Public and private dock facilities for every type of cargo line the harbor's banks, with adjacent warehousing, trucking and rail facilities—all within a few minutes of the downtown business and financial district.

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

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