

IAPH Conference Singapore March 1975

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PORTS and HARBORS

IAPH Head Office Announcements: Pages 7~12

Mr. Gaku Matsumoto Passes Away in Tokyo at the Age of 87

Mr. Gaku Matsumoto, former Secretary General (November 1955 —May 1967), an Honorary and Founder Honorary Member of our Association, passed away on March 27th, 1974, of congestive heart failure at the age of 87 at the Kitazato Hospital, Tokyo, Japan. Bereaved were his four sons while his wife had died 8 years before.

On the morning of this day an off-season snow surprise-attacked the Tokyo area and continued falling in a whirl all day long, as if to purify the ground preparing for the ascension of his soul to Heaven.

The news was immediately telexed to President Vleugels, members of the Executive Committee and the Secretary General attending the Committee meeting in session at Auckland, New Zealand.

The Executive Committee, after offering one-minute silence prayer ordered by the President, passed a resolution of condolence on the sudden death of Mr. Gaku Matsumoto, on March 28th, 1974, and sent it to the bereaved of Mr. Matsumoto. The text of the message of condolence follows:

"Members of Executive Committee of the International Association of Ports and Harbors while assembled at Auckland, New Zealand, greatly saddened to learn of the passing of our beloved friend and Honorary Founder Member Gaku Matsumoto. His inspired leadership in the founding and growth of the Association will long be remembered. Our sincere condolence are extended to the bereaved



family."

The Executive Committee also instructed the Head Office to inform all the Association's Regular Members of the passing away of Mr. Gaku Matsumoto with a replica of "Ten Years' Wake of IAPH" which was written by himself in 1965. The instructions were followed on April 1st, 1974.

The funeral service of Mr. Gaku Matsumoto was conducted on April 8th, 1974 at the Gokokuji Temple, Tokyo, Japan, under the joint names of the World Trade Center of Japan, the Japan Port and Harbour Association, the Kasen Kyokai (the Japan River Authorities' Association), the Japan Keirin Association, the International Association of Ports and Harbors and the World Trade Center Building Company.

On the morning of this day a cold rain drizzled all day, signifying as solumnly believed by local Buddhist followers, the deepest mercy of Buddha.

Mouners to the funeral service of Mr. Gaku Matsumoto formed a long queue along the stone-paved

President Vleugels' Message of Condolence

Read by Mr. E. de Guchteneere at Gokokuji Temple

On behalf of the International Association of Ports and Harbors, of its membership spread over sixty one nations, of its Board of Director, of its Executive Committee and in my own name, I express the most sincere sorrow at the passing of our beloved friend Gaku Matsumoto, Esq., Founder Member and past Secretary General of our worldwide association.

Having played a decisive role in the creation of IAPH Gaku Matsumoto, Esq., has served and promoted the activities of this Association with competence and energy but above all with the high value of its personality.

He indeed was and will remain highly respected by innumerable friend all over the Globe.

Having accomplished extremely valuable tasks, he now will stay in our respectful and devout memory for ever.

Robert L. M. Vleugels President, the International Association of Ports and Harbors

approach of the Gokokuji Temple, one of the most renowned Buddhist temples in Tokyo.

The Government of Japan announced on April 5th that the First Class Order of the Rising Sun was awarded to Mr. Gaku Matsumoto for his distinguished contributions to the development of the postwar Japan in various fields, and the decoration was displayed at the funeral service.

Among the flowers presented to the alter were wreaths dedicated by the H.I.H. Prince Nobuhito Takamatsu, Prime Minister Kakuei Tanaka, Minister of Foreign Affairs Masayoshi Ohira, Minister of International Trade and Industry Yasuhiro Nakasone and others from the government agencies and private enterprises, including I.A.P.H., with which the late Mr. Gaku Matsumoto had contacts throughout his life-time in and out of the government.

On behalf of our Association, Mr. E. de Guchteneere, Tokyo Representative of the Port of Antwerp, read the message of condolence prepared by President Vleugels. (See page 8). Also, a message of condolence by Mr. G. F. Tozzoli, President of the World Trade Cen-

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ter Association was dedicated by his Tokyo Representative Mr. W. C. Gibson, following the messages by Mr. Yasuhiro Nakasone of the Ministry of International Trade and Industry, Mr. Taizo Ishizaka, President of Japan Federation of Economic Organizations. Mr. Shigeo Nagano, Chairman of the Board of Directors of Nippon Steel Corporation, who acted as the Chairman of the Funeral Committee, thanked all the mouners for attending the service.

Representing our Association, Mr. Gengo Tsuboi, a member of the Executive Committee, Dr. Hajime Sato, Secretary General and Mr. Toru Akiyama, Secretary General Emeritus, besides the afore said Mr. E. de Guchteneere, attended the service.

In the next issue of this journal, Mr. Akiyama's speech on the late Mr. Gaku Matsumoto delivered at the Auckland Executive Meeting upon request of the President, will be publicized. (R. Kondoh)

Profile of the late Mr. Gaku Matsumoto

• Born in Okayama Prefecture in 1886

- Graduated from the Law School, Tokyo Imperial University in 1911
- Entered the Ministry of Home Affairs in 1911
- Manager, Ports and Harbors, Road, River Departments, Civil Engineering Bureau in 1920 to 1924
- Director-General, Shrine Bureau of the Ministry of Home Affairs in 1925
- Governor, Shizuoka, Kagoshima and Fukuoka Prefectures in 1926 to 1931
- Director-General, Social Affairs Bureau of the Ministry of Home Affairs in 1931
- Director-General, Police Bureau of the Ministry of Home Affairs in 1932 to 1934
- Imperial Nominee to the House of Peers in 1934 to 1947
- President, Ports and Harbors Administration Council in 1955 to 1961
- Initiator, Trustee, Executive Director, Vice-President and President of Japan Ports and Harbors Association since its establishment in 1922 to 1963
- Honorary President, Japan Ports and Harbors Association in 1963 to date
- President, Japan River Association in 1948 to date
- Member, River Administration Council in 1957 to date
- Initiator, Secretary-General, The International Association of Ports and Harbors in 1955 to 1967
- Honorary Member and Honorary Life Director, The International Association of Ports and Harbors in 1967 to date
- Councilor, Overseas Technical Cooperation Agency in 1963 to date
- President, The World Trade Center of Japan in 1964 to date

Honorary Distributions:

- Second Class Honor of the Rising Sun (April, 1940)
- Award for outstanding contribution to Transportation Administration (November, 1957)
- Medal of Honor with Blue Ribbon (November, 1959)

Messages of Condolence

From Rt. Hon. Viscount Simon, Former IAPH President

"The news of the death of my old friend and counsellor, Gaku Matsumoto, will have brought to many besides myself both sadness and a host of rewarding memories. I did not meet him until he had already completed the unique contribution which he made to the establishment of our Association. He had seen it grow under his wise guidance from infancy to manhood and he still watched over it like a devoted father. His inspiration as well as practical help was a constant encouragement to successive Presidents.

That the Association stands today in such high repute and continues to attract members from all over the world is a tribute to this great man who has now joined the Immortals."

More Condolences:

From Sir Leslie Ford, Former General Manager of the Port of London Authority

I was grieved to learn of the death of Mr. Gaku Matsumoto.

Long before the Port of London Authority became members of I.A.P.H. I had heard from friends associated with American ports--especially the late John Davis and the late Dudley Frost-of Gaku Matsumoto's ideals for the creation of an international organisation embracing ports all over the world which to quote the words of a former President. Viscount Simon, 'should also provide a meeting place for the promotion of better understanding and friendship between nations on a personal rather than Governmental basis'.

The Third I.A.P.H. Conference held in New Orleans in 1963 enabled the PLA—who had earlier become members—to evaluate the real potentialities of this relatively new international body and at the conclusion of the Conference the Authority had no hesitation in offering to sponsor the 1965 Conference in London—an invitation that was warmly welcomed and accepted by those attending.



Mr. E. de Guchtneere, Representative of the Port of Antwerp in Japan, reading the message of condolence sent from President Vleugels in front of the altar, while thousands of mouners gather in and around the inner temple from all fields of Japanese society standing listening to it. (Miss Kimiko Takeda)



Dr. Hajime Sato, Secretary General (left) and Mr. Toru Akiyama, Secretary General Emeritus (right) dedicating their silent prayers to the "Father of IAPH" and their life-time teacher and good friend, hurrying to the scene cutting short of their trip in the South-East Asia. (Miss Kimiko Takeda)

I had some close association with the 1965 Conference and to assist me in the many arrangements I was most fortunate in being able to visit Tokyo during the previous vear and there to meet Gaku Matsumoto in his capacity of Secretary General. One was immediately impressed by the stature of the manhis personal charm-gentleness of behaviour and warm hospitality. But above all his unswerving dedication to his ideals of international friendship and understanding. His work for the Japan Port and Harbour Association had already clearly marked him out as a man of outstanding ability and energy-qualities that he again displayed in his enthusiasm as President the World Trade Center of Japan.

Having met Gaku Matsumoto in Tokyo made it an added pleasure therefore to welcome him to London for the 1965 Conference which he told at the closing sessions he regarded as a landmark and very real step forward towards to the fulfillment of his ideals. One outstanding memory of that Conference was the reception to delegates given by the Corporation of the City of London. The pagentry of that occasion and the personal approach to Gaku by the Lord Mayor left a very deep impression.

His death is a great loss but the foundations he built are so strong and his friends and admirers so many that his work will go on and in this way his memory will not fade.

From Mr. Bernard J. Caughlin, Former General Manager of the Port of Los Angeles

Both I.A.P.H. and Japan have suffered a great loss with the passing of our good friend Gaku Matsumoto.

Being a religious man of great integrity he made a valuable contribution to the improvement of relations not only between Japan and the United States but to the entire world, as well. His foresight in the forming of the I.A.P.H. so that all ports of the world could exchange ideas and discuss problems has been of great value to all.

Having been so closely associated with Mr. Matsumoto for so many years I have been one of his many

Mr. A. J. Tozzoli Appointed as Liaison Officer with ECOSOC

President's Announcement

I have the pleasure to announce that I appointed

Mr. Anthony J. Tozzoli Director of Marine Terminals of the Port Authority of New York & New Jersey as Liaison Officer with ECO-SOC (The Economic and Social Council of the United Nations), for IAPH.

I like to thank Mr. Anthony J.

Tozzoli for the services he is prepared to render to our Association.

I pl. blengel,

Robert L. M. Vleugels President IAPH (Refer to "Ports and Harbors", April 1974 issue, page 7–8.)

Message from Mr. A. J. Tozzoli

Director, Marine Terminals Department Port Authority of New York & New Jersey on his appointment as liaison officer between IAPH and ECOSOC

I am especially pleased and honored to have the opportunity to represent the International Association of Ports and Harbors as its Liaison Officer to the Economic and Social Council of the United Nations.

My predecessors from the Port Authority in that role, Mr. Austin J. Tobin—IAPH's first representative to ECOSOC and Mr. A. Lyle King were both personally gratified to provide whatever assistance they could in furthering the bonds of international understanding through the medium of our Association's Consultative Status with the United Nations. I sincerely hope my tenure

admirers.

I would appreciate it if you would extend my condolences and sincere sympathy to his family for me.



Mr. Anthony J. Tozzoli

as Liaison Officer will be marked in the outstanding tradition established by my distinguished former colleagues.

Anthony J. Tozzoli

Message from Mr. B. J. Caughlin

Retired Chairman of The Ways and Means Committee

(Refer to "Ports and Harbors", March, 1974, page 8.)

"It was with considerable regret that I found it necessary to resign as Chairman-Ways and Means Committee of I.A.P.H. due to my retirement as General Manager of the Port of Los Angeles on January 2, 1974.

It has been an extreme pleasure for me to have been associated with I.A.P.H. and its excellent officers and headquarters staff throughout the years. The Association has been extremely fortunate in having such a fine man as Toru Akiyama to guide it thru its many critical years.

As a Founder member of I.A.P.H. I sincerely hope that an equitable dues structure can be agreed upon by the membership so that the Association can carry on its valuable assistance to all the Ports of the



Mr. Bernard J. Caughlin

World and especially the ports in the developing countries." Bernard J. Caughlin

UN Conference on a Code of Conduct for Liner Conferences

Mr. John Lunch, IAPH Liaison Officer with UNCTAD, informed us in his letter to the Secretary General that the UN Conference of Plenipotentiaries on a Code of Conduct for Lincer Conferences met in a resumed session in Geneve from March 11th 1974 was observed by his representative, Mr. F. N. Reece, a principle officer of the Port of London Authority.

In his letter Mr. Lunch informed us that he has instructed Mr. Reece to make the following reports on behalf of IAPH:—

- 1) Shipping Conference must not preclude reasonable freedom of choice of points:
- 2) Ports must have the same rights as other bodies concerning consultation by Shipping Conferences.

Mr. Lunch has assured us that he will prepare a full report on the Conference in due course for publication in "Ports and Harbors". (**RIN**)

Visitors

Mr. A. J. Tozzoli, Director of Marine Terminals of the Port Authority of New York and New Jersey, visited Tokyo on his business trip to the Orient during the latter part of March. Unfortunately, Secretary General and Deputy Secretary General were out of Japan attending the Association's Executive Committee meeting at Auckland, New Zealand, he only called up the Head Office deferring his intended courtesy call to the office of the Secretary General.

Mr. G. N. MacDonald, Chief En-

gineer, Melbourne Harbor Trust Commissioners, visited the Head Office on March 29th, 1974 with his wife, during their vacation trip to Japan, and was met by Mr. Yoshio Hayashi, Editor of "Ports and Harbors" and other staff.

On April 1st, they visited the Port of Yokohama where they were received by Mr. Masao Kusube, Director of Engineering Department and Mr. Kosei Miyazawa, Chief of Planning Division. They, after exchanging technical information about the port planning, took a port inspection tour by boat.

Mr. and Mrs. MacDonald were scheduled to proceed to Toba, Kyoto, Nara and Kyushu and to visit ports of Osaka and Kobe before their leaving Japan on April 13th for Hongkong. (TKD)

Mr. Lunch Appeals to Members for Cooperation

Mr. John Lunch, Chairman of the Committee on International Port Development, strongly requested, through this column, of the members who did not respond to his questionnaire so far to turn in their replies "as quickly as possible".

In reference to the Survey on the Training Facilities being conducted by his committee, details of which had been reported in this column of the March issue (page 8—10), Mr. Lunch recently wrote to Secretary General Dr. Hajime Sato that "only about one-third of the IAPH members replied to the questionnaire" and that "frankly this was somewhat disappointing".

"I honestly pray" said Dr. Sato, "that our journal will deliver his urgent message without failure to the right person in each of the two-thirds port members." (TKD)

ILO Dock Labour Seminar for E. Africa Slated for September at Mombasa

Mr. Pavel E. Astapenko, Assistant Director-General of International Labour Office (ILO) informed this Head Office in his letter of March 1, 1974, that the ILO, in collaboration with the Swedish International Development Au-(Continued on Next Page Bottom)

UNCTAD 6th Shipping Committee Meet in July-August

Mr. John Lunch, our Liaison Officer with UNCTAD, informed us that the Sixth Session of the Committee on Shipping will be held in Geneve from 29th July to 9th August, 1974, in preparation for the meeting, has compiled a Note setting out the main agreements embodied in various resolutions and decisions adopted by the Conference and the Committee on Shipping since the establishment of UNCTAD. The following is the reproduction of the Note supplied by Mr. Lunch.

thority (SIDA) and the Government of Kenya, is organizing a Dock Labour Seminar for East Africa at Mombasa from 2 to 14 September, 1974.

According to his letter, the Seminar is to be attended by some 30 participants representing government departments responsible for dock labour questions, port authorities, port employers and dock workers union from East Africa. The proceedings will be conducted in English and French, and the programme of the meeting will include such questions as regulation of employment and earnings, organisation of work in ports, social repercussions of the introduction of new methods of handling cargo, training of port personnel, welfare of dock labour, labour-management relations in docks, safety and health in dock work, and the maritime and port activities of International the Labour Organisation.

Mr. Astapenko, on behalf of Director-General, extended to IAPH an invitation to send an observer to the Seminar.

The designation of IAPH observer to the Seminar will be discussed and determined at the Executive Committee meeting of IAPH at Auckland, New Zealand, in March 1974. (RIN)

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(Refer to the July-August issue and the October 1973 issue of this journal). (RIN)

UNCTAD

A Review of the Resolutions and Decisions on Shipping and port questions adopted by the Conference and by the Committee on Shipping

I. Development of Merchant Marines

1. Developing countries have the right to establish or to expand their national and/or multinational merchant marines/Developing countries should have an increasing and substantial participation in the carriage of maritime cargoes, especially those generated by their own foreign trade.

2. Developing countries should be enabled to expand their national and multinational merchant marines through the adoption of such measures as may be appropriate to permit their shipowners to compete in the international freight market and thus contribute to a sound development of shipping.

3. Developed countries, either directly or through international institutions, and the international institutions themselves, should consider extending financial and technical assistance to developing countries to establish and expand their national and multinational merchant marines.

4. Developed countries and international institutions should consider granting financial and technical assistance for the development and expansion of the shipbuilding and shiprepairing industry in developing countries.

5. Developed countries should accept, where appropriate, the guarantees given by the national financial institutions of the developing countries as adequate cover for the deferred portion of payments for vessels, both new and secondhand, purchased by developing countries.

6. Governments of those developed countries, which have established arrangements for the financing of ship exports, should ensure that, where feasible, buyers' credits as well as suppliers' credits are made available.

7. Developed countries signatories to the OECD Understanding on Export Credits for Ships should consider as far as possible and on a case-by-case basis improvements in the terms and conditions under which they finance the acquisition of new ships by developing countries.

II. Conference Practices

1. This was adopted at the Third Session of UNCTAD and IAPH members will know that the resumed UN Conference of Plenipotentiaries on a Code of Conduct for Liner Conferences is now meeting in Geneva to consider the formulation of a Code.

2. Shipping lines of developing countries should be admitted as full members of liner conferences operating in their national maritime trades.

3. Liner conferences should consider favourably, fairly, and on equal terms applications of the shipping lines of developing countries for admission as full members of wayport trades related to these countries' own foreign trade.

III. Consultation Machinery

1. Liner conferences should consult shippers, shippers' organizations and other interested parties including, where appropriate, public authorities on questions pertaining to freight rates, conference practices, adequacy of shipping services and other matters of common interest.

2. Shippers' councils or other suitable bodies, should be constituted on a national or regional basis as part of the establishment of effective consultation machinery.

3. Liner conferences should cooperate in the establishment and effective functioning of appropriate consultation machinery. To this end, they should recognize shippers' councils or equivalent bodies, make suitable arrangements for authoritative representation at the local and regional level, include in their constitution or working arrangements provisions for holding consultations, and make tariffs and other relevant notices available on request freely to all interested parties.

4. Governments of States members of UNCTAD and international institutions should assist in the formation of shippers' councils or similar organizations at the national and regional level.

5. Liner conferences should give notice to and consult shippers, shippers' councils and other interested parties including, where appropriate, public authorities well in advance before publicly announcing changes in freight rates.

IV. Freight Rates

1. Liner conferences should consider reviewing and adjusting, if necessary, freight rates which developing countries consider to be high or discriminatory, bearing in mind the need for freight rates for exports of developing countries to be fixed at as low a level as is commercially feasible.

2. Liner conferences should consider providing promotional freight rates for non-traditional exports of developing countries whenever commercially feasible.

The Conference also resolved that member States should urge liner conferences to "constitute effective procedures to provide for consultation with shippers, shippers' organizations and equivalent organizations of developing countries on the subject of promotional freight rates;" to "take into consideration as far as possible the views expressed by shipper interests of developing countries on matters promotional regarding freight rates when making their decision;" and to "review at regular internals the special rates of freight established to decide the extent of continuation or amendment which is commercially possible after taking into account the effectiveness of the promotional rate for the products concerned."

3. Liner conferences should avoid conference practices and the setting of freight rates at levels

A Nuclear Catamaran for Unitized Cargoes Projected in Germany

Information on a nuclear vessel as well as unitization may be a great concern to ports. Thanks to the good offices of the Ports of Bremen and Bremenhaven, we got some information regarding the subject

Aktien-Gesellschaft "Weser" Presse Information

Development of a marine transport system for unitized cargoes up to the final design stage on the basis of a largesize nuclear catamaran type vehicle for all known kinds of "Unitized Cargo" (containers, barges, floating pallets) matter through Mr. S. Tsuyama, the twin Ports' representative in Japan. The following is a full text of the information, which we believe will be of a significant reference to members. (K.Y.)

Under the title NTOE 65 the Bundesministerium für Forschung und Technologie (BMFT) sponsors the research and development project to be carried out in the Market-System (devision ME) at an amount of 3.02 million DM (50% of the total cost)

(Continued on Next Page Bottom)

which will have the effect of frustrating the export of a product from a developing country while encouraging the export of the same product from another country served by the same conference.

4. Liner conferences should ensure as far as possible that cost savings accruing to shipping lines from port improvemenets are duly reflected in freight rates by way of appropriate adjustments therein.

5. Shipping lines, when considering any freight rate increases, should ensure that to the fullest extent possible the effect of increases on commodities of importance to developing countries is taken into consideration.

6. Liner conferences should provide reasons which, in their opinion, justify a proposed general increase in freight rates, together with an aggregated analysis of the data regarding their cost and revenues prepared by independent accountants as a basis for discussion.

7. Liner conferences should endeavour to maintain as long as possible a period of stability in freight rates consistent with the needs of shippers and the need to provide conference lines with a reasonable return on capital.

V. Development of Ports

1. A concerted national and international effort should be evolved to promote the development and improvement of ports in developing countries.

2. Developed countries, directly or through international institutions, and the international institutions themselves, should give financial and technical assistance for the development and improvement of ports in developing countries.

3. Shipping lines and liner conferences should co-operate closely with port authorities so as to make effective use of port improvements and investments, especially in developing countries, and particularly in connexion with technological changes in maritime transport.

4. Government of States members of UNCTAD should take special measures in favour of landlocked developing countries when developing or improving ports serving those countries and should also take into account in their port development the special needs of all land-locked countries.



Technical and economic importance of the project

Bremen, January 4:—Optimization of marine transport systems, in particular completion of the transport fleet with new units with improved technical and economic factors, is the most important national and economic task to be solved by the shipbuilding industry.

"Unitized Cargo" transport is the trade of the future. Therefore, the essential aspects of shipbuilding The design/construction of are: more efficient and faster ships which can be easily loaded and which are suitable for the new transport containers. In doing so, it was found that at the change to-economically-desirable rates of speed exceeding 30 kn very high and, therefore, uneconomical costs of propulsion occur with the traditional hull forms. The application of such high performances to a relatively restricted number of propulsion elements is a further problem connected with the traditional solutions in shipbuilding. Particularly in the way of high rates of speed, however, the catamaran affords favourable resistance conditions and natural possibilities of arranging a greater number of propulsion elements. This can especially be explained by the fact that the shape of the separate bodies deviate from the traditional design.

A further increase in economy is possible by use of nuclear propulsion without the expenditure for collision protection which has been necessary so far.

The reactor can be accommodated between the two floating bodies of the catamaran so that it is protected against collision in a natural way.

The traditional "Unitized Cargo" ships of the last generation for the present have performances of up to 120,000 HP installed for reaching an economic speed. This makes it necessary that suitably large quantities of fuel oil, e.g. 2,500 t of fuel oil for the Hamburg - New York passage, be taken on board. Considering a container weight of 12 t each, the weight of the fuel oil corresponds to that of 208 containers. This means an annual loss of cargo of 10,000 containers. Use of a nuclear powered catamaran avoids part of this loss.

From an economic point of view, the catamaran is also of interest because, due to its stability, it offers solutions to the accommodation of cargo which provide an essentially improved handling of cargo and, at the same time, satisfactory protection of the cargo from the sea during transit so that taking large quantities of dead and uneconomical ballast on board can be waived. Also, this may result in advantages in admeasurement.

Besides that, the short design requires a shorter pier length than traditional ships of identical loading capacity and same speed.

The advantages inherent in the catamaran as transport means — particularly in regard to unitized cargo—are evident. Nevertheless, considerable pre-design work has to be done to provide an answer to the questions of strength connected with the design of the catamaran deck.

A by-product of the research project applied for is the utilization of the know-how for other purposes of the marine technique such as working platforms, floating berths or as a transport means for heavy and bulky goods. Thus, the catamaran is of a fundamental importance to the whole field of marine technique.

Concerning the general economic significance of the unitized cargo trade, it should be noted that contrary to the prognoses made by some sources at the introduction of the container trade, the present development clearly proves that due to system advantages the unitized cargo trade does not only yield the Owners substantial investment returns but that, providing systematical treatment of the problems, it is also of an indisputable future importance. This fact is described in the international literature in detail and confirmed by a large number of investigations. The trend for a high transport performance (quantity and speed) continues even after delivery of the Sea-Land ships built at our yard.

To sum up, the nuclear powered catamaran has the following features:

- 1. Large loading capacity and optimum stowage as compared with "conventional" container ships.
- 2. Favourable resistance and propulsion properties.
- 3. Easy application of very high engine performances as required for container ships today.

(Continued on Next Page Bottom)

Balkan Canal Promises Europe Trade Shortcut

Reprinted from "Pre-Investment News" January 1974 Published by The U.N. Development Programme

An ancient land route through the Central Balkan Peninsula could become a navigable waterway linking Belgrade to the Mediterranean Sea in the not too distant future.

Yugoslavia and Greece are currently studying a proposal for a 650kilometre waterway which would reduce by 1,200 kms the present navigation route between Belgrade and the Mediterranean seaports.

The waterway would also provide a direct link between the Mediterranean Sea and the waterways of Europe.

A recent United Nations study, carried out at the request of Yugoslavia and financed by UNDP, concluded that the projects is technically feasible and would substantially benefit not only Yugoslavia and Greece but their trading partners in Europe and elsewhere as well.

The proposed waterway would form the backbone of a system of canals, river improvements, reservoirs and power plants which would fully

- 4. Favourable stability properties.
- 5. Satisfactory behaviour in seaway, optimum manoeuvrability and high safety against accidents (good floating capacity, also in damaged condition; practically no danger of casing, optimum protection of cargo).
- 6. Particularly favourable conditions for installation of a reactor; especially advantageous in respect of the necessary protection.
- 7. Complete avoidance of taking real "dead weight" (ballast) on board to increase or obtain the necessary stability.
- 8. Full utilization of the loading capacity for paying cargo (negligible weight of fuel oil for main propulsion unit).

develop the water and hydroenergetic resources of the Morava River, a major tributary of the Danube in Yugoslavia, and the Vardar/Axios River which flows from southern Yugoslavia to the southeast into Greece and the Aegean Sea near Thessalonica.

In addition to the ports of Belgrade and Thessalonica, the UN study envisages the construction of at least seven new ports along the waterway close to urbanized and industrial areas.

Studies by the four-member UN team show that traffic using the waterway instead of taking the present route—down the Danube and through the Black Sea—could expect significant savings in operating costs. It would also save about three days' time on each trip.

Average costs on the waterway are likely to be considerably less than the corresponding costs of rail and road.

Preliminary Studies

Preliminary studies by various Yugoslav research institutes, as well as the findings of the UN team, are conclusive enough to warrant a detailed study on the implications of the waterway project, according to Zdenek Lastovka, Chief of the Transport Section of the UN's Resources and Transport Division. Mr. Lastovka headed the UN team.

The detailed study should cover engineering, economic, financial, institutional and legal aspects of the proposed waterway.

Besides Mr. Lastovka, a transport economist, other members of the team were: Jacov Z. Bradanovic, a water transport specialist, and André Bouchardeau, an hydraulic engineer, both of the United Nations Resources and Transport Division; and Robin R. Reynolds, a water re-



The proposed waterway from Belgrade to Thessalonica.

sources engineer, from Sacramento, California, United States.

The team also consulted UN experts working on three UNDPsupported projects relating to the (Continued on Next Page Bottom)

New Oil Recovery System

recovers spilled oil on the sea under different conditions

by: Kuninori Aramaki, Masao Suzuki & Hiroshi Kawakami

Development Group Bridgestone Tire Co., Ltd.

In consideration of the many accidents in which oil has been spilled while being loaded and unloaded at piers, we have researched and developed the "Floating-and Submerging oil fence," and now have put them on the market. This submersible oil fence, the

Title Picture



Morava and the Vardar/Axios rivers.

Conceived to provide a shortcut route for international water traffic, the waterway would open a large portion of the Balkan peninsula to low-cost water transportation.

Also, the completion of the entire multipurpose scheme for the two rivers would provide much needed flood and sediment control and would make large supplies of regulated water available for use by farms, cities and communities.

The waterway plan calls for channel improvements beginning at the point where the Morava River discharges into the Danube, and separate lateral canals in the 350 kilometre-long valley of the Morava River. About 40 locks would be constructed to raise and lower the waterway traffic about 380 metres from the Danube to the watershed

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divide between the two rivers. Additional channel improvements, separate lateral canals and about 25 more locks would be required on the Vardar/Axios River between the watershed divide and the Aegean Sea.

The dimensions of the waterway would be the same as those of the Rhine-Main-Danube Canal in order to fully accommodate international traffic including barges of the barge carrier systems such as LASH (Lighter on Board Ship) and Seabee.

The UN team has recommended that Yugoslavia and Greece should begin discussions for preparing an agreement that would set forth the relationship between the two countries to carry out the project. They should also create organizations to work jointly on the waterway project. first in Japan and probably in the world for actual use in ports, is winning high praise for its performance in Kiire, the crude oil terminal of the Nippon Oil Company, a terminal of the largest scale in the world, as well as for its outstanding performance in other places where pollution of the sea by oil is being combatted.

Through our experiences in developing this oil fence, we were unable to find any practical device for physically recovering spilled oil on the sea. The existing oil recovery devices generally performed well in a test tank with a thick layer of oil, but actual performance in spots where thick and thin oil were spilled and mixed together, and where the sea was windy and rough, was quite poor.

Cognizant of this lack of a truly efficient oil recovery device, we decided to research and develop an oil recovery device which would meet our needs. Fortunately the aim of our research and development was approved by the Ministry of Transportation in Japan, and was given a subsidy in 1972.

In this report, we describe:

- 1) The purpose for developing the device.
- 2) Brief introduction of its construction and efficiencies.
- 3) Use of the device under different conditions .

The test on the sea was performed with the kind cooperation of the Nippon Oil Group, especially of the technical staff of the Tokyo Tanker Marine Service Co., at the Kiire Terminal.

The opinions of the authorities concerned in Japan and private companies as those in the petroleum industry, who have a great interest in this field, and our own experiences have led us to the conclusion that an oil recovery device should have the following efficiencies:

- 1. Easily mobile in power.
- 2. Move freely in relatively strong winds or waves.
- 3. Able to recover oil when moving or at rest.
- 4. Can recover not only thick oil but also very thin oil.

In any case, the following efficiencies were requested:

1. The recovery device should



skim almost all the oil off the water.

- 2. The recovery device should take very little water with the oil when skimming.
- 3. The amount of oil skimmed per hour should be as large as possible without lowering efficiency.
- 4. Efficiency should not be affected by wind or waves.

Skimming should not be affected by the viscosity of the oil.

To sum up the above, we have been aiming to develop a device with high efficiency at recovery of the oil and, at the same time, will not be too susceptible to the environment.

The construction and the performance of each section of the recovery device are shown in the Fig. 1. The characteristics of spilled oil on the sea were carefully considered when the device was being developed. In other words:

Spilled oil often scatters into thin oil layers (under 1 mm), and must be gathered by a wide recovery device. The guide boom is attached at the bow for this purpose enabling the device to skim over a wide range.

Spilled oil turns into oil drops when the surface of the sea is disturbed by waves and they easily scatter and sink.

The oil leading plate and floating guide belt are, therefore, attached to lead the oil layer on the surface into the recovery device with a minimum of disturbance to the oil layer.

The oil leading plate leans at 45 degrees, and in skimming oil while moving, is set rising upward like the actual line and downward like the dotted line while remaining firm against wind and waves.

The floating guide belt adheres oil to its surface, then draws it underwater.

The oil skimmed by the scraper below, is then led into the closed centrifugal tank.

This belt with a smaller gravity than water (enables the belt to float on the sea surface), flexibility (which adapts its shape to the shape of the waves) and slacking, can contact floating oil carefully with a minimum of disturbance to the oil layer.

However, with disturbance of waves, some of the oil layer turning into oil drops seems unavoidable. Therefore, a filter is attached to the underside to catch and roughly granulate oil-drops, and let them re-surface. The last processing is done inside the closed centrifugal tank. When the propeller installed inside the tank turns, the oil gathered upward by its own buoyancy is separated by centrifugal force, and then, is absorbed by the absorption device (vacuum tank).

The oil detector is installed to absorb, only when a certain amount of oil is gathered in the cenrifugal tank, because oil is not usually spilled uniformly on the sea. The detector helps absorb only the oil and not the water.

The Oil Skimmer thus constructed is designed to be placed on a twin-hulled boat (catamaran), so that it may be lifted up out of the water when out of service. This will enable the boat to pick up speed when it is needed for rushing to the scene of an accident. (See Fig. 1) With this in mind the test boat, "Seikaimaru," was built. (See the specifications Fig. 2) Using the "Seikaimaru," different types of testing were repeated in the harbour at the Kiire Terminal in Kagoshima Prefecture for about a year from March, 1973. The testing was performed using actual oil inside the breakwater. Outside of it, however, we substituted polyethylene pellets with a gravity of 0.92 and diameter



of 3 mm., taking pollution of the sea by oil into consideration. The polyethylene pellets easily submerge like oil drops when disturbed by waves, and well simulate the properties of oil transformed into drops.

Different methods for recovering oil spilled on the sea

1) Recovering Oil by the Skimmer without the Guide Boom.

As this is the most fundamental method, the tests were performed using actual oil, (Fig. 3), and with waves at a height of 10 to 50 cm, results were as follows: 95% to 99% of the oil poured off the bow (mainly heavy oil A, approximately 80 liters) was recovered. Almost all the oil is assumed to have been recovered, as it is considered that oil stuck inside the device. Therefore, only a very thin film of oil

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could be perceived after the skimmer passed.

The amount of water recovered with the skimmed oil was 5 to

10% approximately. The above mentioned efficiency obtained, generally at a speed of 0.7 to 2 knots and with a layer of oil at a thick-





ness of 0.4 mm approximately, was 4.6 tons per hour. This value is considered to be rather smaller than the absorption capacity of 30 tons of the vacuum pump. However, intermittent absorption should be taken into consideration because of the thin oil layer. We therefore assume that almost the same amount of oil as that for the capacity of the vacuum pump can be skimmed subject to the thickness of the layer of oil.

2) Recovering Oil by the Skimmer with the Guide Boom at the Bow.

As shown in the Fig. 4, with the guide boom at the bow, a tugboat pulling the fence and thus widening the skimming range, we recovered oil. The guide boom may be attached easily to both sides (as shown in the title picture), but is mobile and may be attached to one side in a narrow area of the sea. 15 to 30 meters are an adequate length for the guide fence, and when the boat speed is 1.5 knots, the guide fence should lean at 15 to 20 degrees in the running direction of the boat. In this way, approximately 97% of the polyethylene pellets were recovered. Recovery with waves in a favourable direction is, generally, easier than against the waves.

3) Recovery of Oil by Wind and Waves with the Boat Stationary.

The picture to the right (Fig. 5) shows the third pier of the Kiire crude petroleum terminal of Nippon Oil Co., Ltd. If the oil fence is arranged like this beforehand, the range, in which the spilled oil is scattered is limited, and the spilled oil is expected to gather in a certain spot within the oil fence depending the on wind and tide at that time. In this way, it is possible to recover oil inside the oil fence. But this method often disturbs the oil layer letting it escape outside the fence. Using the fence from outside, drawing and recovering oil with the boat stationary is also a practical method. The picture to the right (Fig. 6) shows an example of such exercises using polyethylene pellets. In this example, the oil skimmer was located to receive a wave height of



Fig. 5







0.5 to 1 meter and wind of 7 to 8 meters per second. The stationary oil fence was a floating and submerging type, and the center of the guide fences on both sides were submerged with six weights of 30 Inside the guide kilogrammes. fence set in a V-shape under the submerged part, the polyethylene pellets to be recovered floated at a speed of 3% of the wind velocity towards the skimmer and were recovered. If speedy recovery is urgent it is possible to sail another small boat inside the stationary oil fence and to use its screw at a low speed to create a stream in the direction of the skimmer. However, by this method, it is difficult avoid a little escape of oil outside the fence.

4) Recovery of Oil Pushed into a Narrow Space Using Remote Control.

Some ports have too shallow a depth of water or are too narrow for the skimmer to enter. The spilled oil gathers by wind and other ways even in these places. The picture (Fig. 7) shows how to deal with such problem. The small buoy which pulls the top of the oil fence has a propeller on the underside of it, and is remotecontrolled from the oil skimmer. With a wave height of 20 to 30 cm and winds of 4 to 5 meters per second, the buoy, though small, can pull the oil fence 20 meters, and can

Fig. 7



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Hong Kong's Container Revolution

by Peter H. Iliffe-Moon Released by Hong Kong Government Information Services

(See front cover also)

Hong Kong harbour is one of the busiest in the world. In it's northwest corner dredgers are working

draw near to the polyethylene pellets at a speed of 0.5 knots approximately without letting them escape.

Judging from the testing carried out as above, a device with the efficiencies demanded when first planned is considered to have been produced. However, the usual steps to meet with different conditions at the scene of accidents are most important.

Acknowledgement

In this report, we want to express our deep appreciation to the staff of the Tokyo Tanker Marine Service for their strong and constant interest and their kind guidance shown to us in the development of the Oil Skimmer.

fast and furious on a development which will make it even busier by turning it into one of the world's major container terminals.

Reclamation is well advanced to link the projected Kwai Chung container complex with the adjoining industrial town of Tsuen Wan, on the southern coastline of the New Territories. Soon flyovers and highways will carry containers door-todoor—direct to nearby factories or across the few miles to Kowloon and it's peripheral industrial estates.

Three million cubic yards of seabed material must be dredged to make way for approach channels and for the reclamation of the site itself. Work started last year, almost immediately following official acceptance of three out of four original tenders by the Hong Kong Government.

The four lots offered totalled 125 acres with a 4,000 foot seafrontage. First of the successful bidders was Modern Terminals Ltd—a British consortium of Overseas Containers Ltd., Associated Containers Transportation and Butterfield Swire (HK) Ltd. Next came Kowloon Container Warehouse Co—an all-Japanese group comprising Oyama, NYK, Japan and K Lines. The last was Sea-Land Orient, a subsidiary of the well-known Sea-Land of the U.S.A.

The three companies are responsible for reclaiming, surfacing and equipping the berths, the first of which should be ready some time next year, with the two remaining berths due for completion in 1973.

The need for a purpose-built container facility for the colony prompted the government to appoint a Container Committee in 1966. This committee was to conduct a feasibility study on the setting up of a container terminal. In 1968 an engineering feasibility study was begun by the Public Works Department, which in mid-1969 recommended that the 95-acre site at Kwai Chung be set aside for this purpose.

During early 1970 tenders were offered for the leases of Crown land, foreshore and seabed at Kwai Chung, and by August the successful developers were announced. Berth 1, comprising about 25-acres, went to MTL; Berth 2, of the same area, was awarded to KCWC; and the 32-acre Berth 3 was taken up by Sea-Land. Only one tender was received for the 43-acre Berth 4, but this was subsequently withdrawn because it was thought that the original siting of Berth 4 was too large and the seabed too steep. Although no decision has yet been taken it is expected that this berth will be resited.

Initial work on the HK\$500 million (£34.6 million; US\$83 million) terminal is now making rapid headway following signing of construction contracts. In January 1971 KCWC and Sea-Land signed a joint contract with Nishimatsu Construction Co of Japan worth some HK\$110 million (£7.5 million; US\$18 million). In April MTL signed a HK\$48 (£3.33 million; US\$8 million) contract for the dredging and construction of Berth 1 with Societe Francais d'Enterprises de Dragages et de Travaux Publics.

MTL's facility will include 190,-000 square feet of freight sheds, a maintenance building to service handling equipment and a fourstorey office block. It will also have two 35-ton container cranes, 12 straddle-carriers to stack 40 foot containers three high and 58 diesel and electric fork-lift trucks—all this adding up to a capacity for handling more than 126,000 tons of cargo a month.

All three berths will eventually be able to accommodate vessels drawing 40 foot upwards and 950 foot in length.

It will be at least a year or so before full container ships can dock at Kwai Chung, but this does not mean that Hong Kong is not already handling containers. Far



A 35-ton Butters Crane handling United States Lines' containers at North Point Wharves on Hong Kong Island.

from it. The private dock and wharf companies also realised in the early nineteen-sixties that future cargo would be palletised and containerised.

Back in 1966 the Hong Kong & Kowloon Wharf & Godown Co Ltd (HKKWGC) began discussions on revamping its dockyards for the container revolution that was being increasingly predicted. In the following year the Container Committee suggested that HKKWGC goahead with it's plans for a minicontainer terminal near the Ocean Terminal in Kowloon.

But, as with other dockyards, there was some hesitation in going ahead without firm committments that shippers and shipowners would back up their decision. Nearly all were promising to switch to containers in the future—but always in the future.

Shippers and owners could make the change far quicker than the dockyards and irreversible, specialised and expensive container facilities were a heavy price with which to expect the wharves to gamble.

However HKKWGC set up temporary container facilities to handle the colony's first fully containerised scheduled service introduced by Sea-Land in July 1969. It had converted a tarnsit shed into a freight station and was operating a berth with 63,000 square feet of marshalling land reserved for Sea-Land, equipped with prime-movers, fifth wheel tractors and a massive Transtainer with a span of 74 feet, a capacity of 30 long tons and able to stack containers four high.

In that same year HKKWGC decided to go-ahead with a HK\$72 million (£5 million; US\$12 million) container complex on 4.3acres of land and seabed earmarked for it in 1967. On this land leased from the Hong Kong Government along with another 10-acres of reallocated space, the company has now established the colony's largest container station so far.

Situated just north of the company's Ocean Terminal premises, this complex was completed this year and comprises two piers with four berths to accommodate selfsustained vessels up to 800 feet long drawing 30 feet. One berth serves cellular ships with a piermounted Portainer crane. Another six berths at the company's Ocean Terminal deal with selfsustained vessels, including combination ships of unitised/break bulk and container capacity.



Under the massive lifting-gear of a self-sustained container vessel, a straddle-carrier loads a single container. These self-sustained vessels are handled by several wharf and dockyard operators in the colony.

Freight is now handled in two sheds, each of 26,000 square feet, and another of 5,000 square feet. These are coupled to eight-acres of marshalling area and a three-acre parking lot. An additional 230,000 square foot transit area is available for the containers. All this adds up to a yearly capacity of more than 40,000 units equivalent to an annual throughput of 1.5 million revenue tons. Apart from Sea-Land, some of the other lines using the HKKWGC container facilities are American President, American Mail, States Steamship, Barber Knutsen, Pacific Far East and Maersk Lines.

Another major cargo handling operator is North Point Wharves Ltd, which has also invested in full container handling facilities. This follows the acquisition in 1969 of 466,000 square feet of land with a direct sea approach over an 800 foot seawall.

By the end of 1970 a container terminal had been constructed, along with an associated container freight station across the harbour in the industrial township of Kwun Tong. The latter facility was completed in May this year and has a container freight shed 125 feet by 560 feet, believed to be the largest in Southeast Asia. Containers are conveyed by a fleet of six special lighters to and from Kowloon to the company's main premises at North Point on Hong Kong Island. These lighters can carry 18 containers of standard 20 foot size or six of the large 40 foot boxes.

United States Lines (USL) inaugurated it's Tri-Continental Container Service to Hong Kong in November last when it began using North Point Wharves as its terminus in the region. USL describes it's service as a "total concept" container system, whereby shipping and even delivery becomes part of manufacturing, thus eliminating expensive packing, pier and often wharfage charges too. One of the advantages cited by USL is the fact that the weight and size of containers is not charged (unlike the crates of old), with costs consequently reduced and delivery speeded up.

As added proof that the colony is now backing containers all the way and that the gamble is paying off handsomely, is that container traffic now extends to nearly all the colony's dockyards, despite stiff competition betwen them. Another company to set up container facilities last year was the Hong Kong & Whampoa Dock Company, which now handles container ships of the American Export Isbrandtsen Line and Orient Overseas.

No newcomer to containers is Pacific Container & Godown Co Ltd, which was handling over 400 containers a month from Japan well over a year ago. It has since built a HK\$3.6 million (\pounds 0.25 million; US\$0.6 million) complex at Yautong Bay, to the east of Kowloon near Kwun Tong. It includes a five-storey godown occupying an area of 10,000 square feet and has a 10,000 square feet storage area to hold 180 containers of 20 foot by 8 foot by 8 foot.

By the end of 1971 a further company, New-Tech Services Inc (HK) Ltd. will have set up a HK\$10 million (£0.69 million; US\$1.66 million) container terminal at Yautong Bay. It will consist of 30,000 square feet, with a 250 foot seawall and equipped with a bridge crane, transit storage sheds for cargo and open storage for containers. New-Tech also operates a modern pallet manufacturing plant and container repair facility.

Pacific Containers also operates a repair plant for containers on Tsing Yi, an island which overlooks the site for the Kwai Chung complex and is itself destined to become a centre of container activity.

Located on the island is the giant container manufacturing complex of International Containers Ltd (ICL). Established last year it is a ioint venture between HK Chiap Hua Manufactory Co and two Australian companies, Comalco Industries and Freighter Industries. Production is expected to reach almost 4,000 units a year with a target of 8,000 by 1973. Already ICL has received orders for 1,200 units worth HK\$10.2 million (£0.7 million; US \$1.7 million) from Ben Line (Containers) Ltd which would seem to well justify this production target.

These are just some of the facilities set to make Hong Kong one of the most advanced container handling centres in the world. An increasing amount of the total cargo handled in Hong Kong harbour (which was up 7.2 per cent to a total of 13.7 million tons handled (Continued on Next Page Bottom)

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U.K. Iron Ore Imports up to 1980 Port facilities will be adequate says report

The possibility that technological changes in the handling of iron ore at ports will render existing equipment obsolete is discounted for at least the next ten years in the report of a survey carried out for the Department of Trade and Industry by the Warren Spring Laboratory. A summary of the report is published today by the National Ports Council in the latest issue of the **NPC Bulletin*.**

The laboratory was asked to estimate the likely level and form of ferrous imports into the UK by 1980, and to investigate the effects of any changes on handling equipment required at ports.

Particular attention was paid to the possible development of slurry handling of iron ore. The report states that iron ore is unlikely to be

during the year ending 31st March 1971) is arriving in, or going out in containers—speedily and without damage or pilferage.

It is part of a revolution that began 130 years ago when sailingships first carried goods to and from the Crown Colony, then just established as an entrepot. Now containers are playing their role in this ever continuing tale of prosperity concerning this fast growing industrial power of Asia.

In early 1969 the monthly average of containers handled was a mere 1,000 odd. A year later it shot up to 4,000 and is now in excess of 5,500 a month. For this reason Kwai Chung promises to be a landmark in both maritime development and economic prosperity, two actors which by tradition have always gone hand in hand in this remarkable history of Hong Kong. discharged as a slurry on any scale in the UK until at least the 1980's. At present the use of slurry discharging could restrict the steelworkers to one shipper and one mining company, and they would be unable to take advantage of price fluctuations.

In the long term the cost of slurry discharging might be reduced as technological improvements are made and more slurry ships are available. Slurry discharging would be most economic for discharging fine ores off-shore at sites where throughputs are relatively low and dredging costs high. Any savings in discharging would have to be set against the high cost of providing specialized ships.

The laboratory also decided that self-discharging ships, bucket wheel dischargers and pneumatic pipelines were unlikely to be used on any scale for discharging iron ore in the UK.

Existing and planned ore discharging facilities at UK ports are considered adequate for the next ten years. Ore imports will be concentrated at Port Talbot, Immingham, Redcar and eventually Hunterston on the Clyde. The development of these deep-water terminals will permit the use of larger ore carriers, and it is expected that by 1980 most ore will be carried in ships larger than 100,000 dwt and some ships will be of up to 250,000 dwt.

The report assesses the potential of the four ore terminals as follows:

Port Talbot will supply all South Wales blast furnaces and has a capacity of 13 million tons a year. This will be sufficient for the planned expansion of South Wales steelmaking capacity up to 1980 though there is room for a second berth which could handle 150,000 dwt ships. Alternatively 250,000 dwt ships could be part discharged at Hunterston, then brought round to Port Talbot where the existing capacity is limited to 100-120,000 dwt ships. Immingham (maximum ship size 65-70,000 dwt). All the ore handled here (five million tons a year) will be transported by rail to Scunthorpe. The terminal has a total capacity of 10 million tons a year (including coal for export) but can be expanded.

Redcar. By 1980 about 12 million tons of ore will be imported for the steelworks on the Tees. The Redcar terminal will be able to handle this ore but could be expanded to 20 million tons if there were any further increase in steelmaking capacity in the 1980's. Present capacity limits are for ships of 120-150,000 dwt; a further £4 million would be needed to deepe the channel to take 200,000 dwt ships.

Hunterston. Construction of the new terminal is not expected to start before 1976. The total capacity of Scottish steelworks in 1980 is unlikely to exceed 4.5 million tons, and a terminal with a capacity of 8 million tons a year is expected to be adequate.

On the basis of the BSC's development plan to give a total UK production of 36 million tons by 1980, iron ore imports at that date will total about 30 million tons. The survey forecasts that within this total the proportion of lump ore will be reduced, with a corresponding increase in sinter fines with some pellet fines. Major suppliers will be West Africa, Canada, Scandinavia, and South America. Reduced transport costs consequent upon the use of bigger ships will tend to favour more distant sources of ore.

 ^{*} National Ports Council Bulletin No.
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Singapore Beckons You for the Ninth IAPH Conference in March, 1975

Ladies' Programme

Ladies attending the 9th IAPH Conference in Singapore will find each day's programme laid out for them exciting, interesting and educational.

Whilst the ladies enjoy and relax in the sunny tropical climate, their menfolk with serious port matters for deliberation at the Conference are not entirely forgotten. There are also carefully planned outings for both the delegates and their ladies.

Anyway, to make up, the ladies will have an opportunity to learn Chinese cooking and select the ingredients for their Chinese dishes. The PSA—as host port—has in mind a Chinese cooking demonstration. Try your hand at cooking the real Chop Suey, Chow Mein and Sweet Sour Pork. And remember: the best way to a man's heart is through his stomach!! The always busy port chairman or executive certainly deserves to be well-fed !

Singapore being a shoppers' paradise, it is only natural that shopping will be one of the attractions. And in the Republic, shopping means buying quality goods at very competitive prices.

The varieties of goods are exciting to behold—jade, pewter, jewellery, antique furniture, porcelain—in fact, you name it, the shops have it. For example, typically Asian textiles available

House of Jade, a popular tourist attraction

— Here's Singapore **Conference** Logo

include batik cloth, Khersonese and Siamese silk, Chinese brocade, Indian silks, the whole exotic range for the well-dressed woman.

Shopping aside, ladies to the Conference will be treated to a local fashion show, where the accent will be on Singapore fashion and styles.

Another treat in store for the ladies will be the sightseeing tours, which will take in Singapore's Jade House and the Botanic Gardens, as well as a visit to a pewter factory to see how the world-renowned products are produced. To top it all, there will be an arts and crafts exhibition. Highlights will include Chinese calligraphy, Batik printing, finger painting, flower arrangements and vegetable decoration-these are irresistable !

So ladies-a special welcome awaits you in Singapore at the 9th IAPH Conference in March 1975. Make sure that you are not left behind! (Port of Singapore Authority)

A Chinese cooking demonstration

Batik printing demonstration

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by Bohdan Nagorski

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ANNOUNCING !!

Bohdan Nagorski's "Port Problems in Developing Countries" is also available from the following distribution centers.

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Orbiter Probe

Topics

ICHCA Calls for Understanding and Co-operation in Cargo Handling Systems

London, 7th March (ICHCA Press Information):—A call for better understanding between all interests in the cargo handling and transportation industry has been made by Jhr H. L. van Suchtelen, Secretary General of ICHCA (International Cargo Handling Co-Ordination Association).

Speaking to members of the P.D.M. Centre of the British Institute of Management at their University Distribution Workshop, he stressed the importance of the "coordination" function of ICHCA to the industry.

ICHCA provided a means whereby such an understanding may be achieved through dialogue between its members who hailed from a very wide range of interests. He said the Association is unique in this respect in that its members are not particularly aligned to any one particular mode of transport.

The Secretary General cited the increased need for co-operation between all interested parties in cargo handling and transport, in view of the development of modern intermodal and transmodal systems.

In his address he outlined, in practical terms, the methods used by ICHCA to achieve such an understanding. The Association did not dictate to its members, rather it highlighted situations where the need for communication existed, he said.

He believed that the fostering of such dialogue had been instrumental in solving problems in the past, and would contribute to do so in the future. This, he felt, was ICHCA's valuable contribution to the international cargo handling and transportation industry.

Seaway Notice No. 1 of 1974-Opening Dates

Cornwall, Ontario, February 22, 1974 (The St. Lawrence Seaway Authority): — Subject to changes appropriate to weather and ice conditions and to vessel traffic demand, the Seaway system will open for navigation at 0800 hours E.S.T. on the following dates:

AREA OPENING DATE Montreal-Lake Ontario

Section	April	1,	1974
Welland Canal	April	1,	1974
Sault Ste. Marie			

(Canadian) April 4, 1974 The Lakes Control for Lake Ontario and Seaway Long Point in Lake Erie will resume operation on March 30, 1974 at 0800 hours E.S.T. The new Lakes Control station (American) located at 78°00'00" called Seaway Sodus will replace Seaway Picton. Operational details will be found in the revised 1974 Seaway Regulations.

In the Montreal-Lake Ontario section daylight navigation only will be permitted from the opening date until floating aids sufficient to permit night navigation have been installed.

Information on ice conditions will be issued to the users as in previous years on a weekly basis starting March 1, 1974.

Prospects Attractive and Challenging

Toronto, February 25 (The Port of Toronto Liaison Committee Press Release):—Despite the drop in overseas tonnage experienced last year, prospects for the Port of Toronto during the forthcoming 1974 shipping season appear to be both attractive and challenging, according to the independent Port of Toronto Liaison Committee.

The Committee consists of repre-

sentatives from the Canadian Great Lakes Deep Sea Committee, The Toronto Harbour Commissioners, Canadian Importers Association, Industrial Cartage Association, Port of Toronto Stevedores, Toronto Marine Loss Group of Insurance Companies, The Automotive Transport Association of Ontario.

The Port which serves central Canada remains the best operated marine terminal facility in North America and has much to offer foreign steamship lines concerned with shipments to and from Canada's principal industrial and commercial area.

The Port of Toronto is well supported by a cooperative and extremely productive labour force. The Port also provides competitive as well as attractive access for both foreign and North American shippers to the valuable U.S. mid West market.

The Committee says that the Port of Toronto remains the best defence of Canadian exporters and importers against accelerated rail cost increases and continues to warrant the fullest support by Canadian exporters and importers in the season ahead.

New "Front Door"

Toronto, Ontario, March 1 (Toronto Harbour Comission):—The Port of Toronto expects to open its new "front door" to ships sometime this fall.

Because more than half the work in the \$10 million dredging program to create a new harbour entrance has already been completed, the entire contract is expected to be finished ahead of schedule.

The first overseas ships should sail through the Eastern Channel (also called the Eastern Gap) in late fall. Both salties and lakes ships have used the Western Channel to enter port in the past.

The Eastern Channel is being widened from 400 to 600 feet for ships of Seaway depth plus an additional 100 feet for small boats. The new entrance will shorten the distance for ships entering the port by up to six miles and will allow the integration of the new port area with the established sector.

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The Americas

McNamara Marine, the dredging contractor, has been using the giant 1,400-ton dredge "Canadian" during operations. Sand dredged from the Outer Harbour and Eastern Gap areas during 1973 was placed in position at the end of the East Headland to form the partial land base for Aquatic Park which will cover 188-acres when completed.

Dredging, which began in May 1973 and ceased early last December, will resume sometime during March.

Trade Trip Postponed to '75

Toronto, Ontario, March 4 (John Jursa, Chairman, Promotion and Public Relations Committee, International Association of Great Lakes Ports):—An International Association of Great Lakes Ports trade mission to the Mediterranean and Northern Europe, planned for the fall of 1974, has been postponed to 1975.

Members of the Association, meeting recently in Chicago, voted to discuss tentative dates for the mission during the annual meeting to be held at the Hyatt Regency Hotel in Toronto, June 24-26.

Dundalk Marine Terminal Sets Cargo Record in 1973

Baltimore, Md., March 13 (News from Maryland Port Administration):—Dundalk Marine Terminal set a new record for cargo handling by a single facility in the port of Baltimore during 1973.

The 550-acre facility, largest general cargo terminal in the port, handled a total of 3.054,200 tons of cargo last year. This betters by 675,301 the old record of almost 2.38 million tons established by Dundalk in 1972.

The total tonnage for 1973 brings the overall amount of freight handled at Dundalk since its first year of operation in 1960 to 17,186,529 tons, making it one of the busiest marine cargo terminals in the U.S. over the past 13 years. Dundalk is owned and operated by the Maryland Port Administration, an agency of the Maryland Department of Transportation.

The largest single type of cargo

handled at Dundalk during the past year was container freight, which hit a new record of 163,663 boxes and 1,910,013 tons.

This broke the old mark of 106,-085 boxes and almost 1.23 million tons set by the terminal in 1972 and also accounted for 72.3 per cent of the port of Baltimore's overall estimated container and trailer freight of approximately 2.64 million tons for 1973.

In the six years since Dundalk began handling significant amounts of container traffic, the facility has registered a total 414,227 boxes and 5,013,316 tons of containerized cargo.

In addition to containers, other leading commodities handled at Dundalk during 1973 included import automobiles, which hit 242,-775 units or 265,956 tons; lumber, which registered 230,134 tons; and molasses, with a tonnage of 68,381. Breakbulk freight (uncontainerized general cargo) at the terminal totaled 581,136 tons for 1973.

The present site of Dundalk Marine Terminal was once a municipal airport known as Harbor Field. The then-365-acre area was purchased by the MPA from the city of Baltimore in 1959 and was planned as a facility for conventional breakbulk cargoes and ships. It was the port's first major terminal employing marginal berths.

In the mid-1960s, plans for the terminal were expanded by the MPA to include facilities to handle an anticipated burgeoning container trade. Development in this area over the years has transformed Dundalk into the port's center for container activity, with accommodations that include seven 40-ton container cranes in operation at six berths; three consolidation sheds totaling 192,500 square feet of space; over 120 acres of heavy duty paved open storage; five container straddle carriers; and trailer-on-flattcar/ container-on-flatcar (TOFC/COFC) facilities.

2 million Autos imported

Baltimore, Md., March 20 (New from Maryland Port Administration):—The port of Baltimore completed its 10th consecutive year of having 100,000 or more foreign automobiles imported through its marine terminals during 1973, continuing its reputation as the world's leading car import center.

Last year's portwide total of 242,985 import vehicles brought Baltimore's total for the past decade to 2,069,029, according to the Maryland Port Administration, an agency of the Maryland Department of Transportation. The first 100,000-plus auto import year for the port occurred in 1964, with 106,889 vehicles recorded.

Of the overall total for the past 10 years, over 98 per cent or 2,034,-458 vehicles were discharged at Baltimore's auto import center, Dundalk Marine Terminal. Other facilities in the port which have handled significant volumes of import cars during this period include the Canton, Locust Point and Port Covington marine terminals.

In general, automobile imports for the U.S. have decreased over the past two years, due to the tremendous upsurge in the manufacture and sale of U.S.-made compacts, as well as the worldwide economic effects of two dollar devaluations. Accordingly, the port of Baltimore's total number of foreign auto imports, while still impressive, has decreased almost 23 per cent since 1971, when a record 315,150 vehicles were registered.

Baltimore has a long history of handling automobile imports. What has been just a trickle of foreignmade cars moving through the port became a significant figure for the first time in 1957, when 23,937 vehicles, mostly German-made, were recorded.

Total auto imports fluctuated over the next several years, as the operation of the new St. Lawrence Seaway during its navigable season had the effect of diverting from Baltimore some foreign cars destined for the U.S. Midwest.

However, the opening of the MPA's Dundalk terminal in 1960 signaled further prominence for Baltimore as an import-car center. Dundalk's abilities to handle the vehicles grew, as it recorded its first 100,000 year in 1965, handling 107,918 imported compacts.

Over the past five years alone, the terminal's yearly import totals have always fallen between 219,000 and 315,000 automobiles.

Unlike Baltimore's embryonic days of car handling, when nearly all of the vehicles came from one foreign nation, the countries of lading in recent years have included Belgium, France, Germany, Italy, Japan, the Netherlands, Sweden and the United Kingdom, primarily.

Improvements on Passenger Facilities

Hollywood-Fort Lauderdale, Florida, 2/20/74 (Port Everglades News):—Approximately two-thirds of every dollar spent last year by the Port Everglades Authority on capital improvements went for additions and modifications to cruise passenger facilities.

Port Director Paul D. deMariano said that \$547,939 out of total disbursements of \$847,542 in 1973 were expended for improved facilities. Three alternate terminals were air conditioned and twin terminals on the main passenger pier remodeled into a single larger facility. The combined terminal, to be completed about April 1, will cost an additional \$417,000.

Total expenditures over a twoyear period for improved passenger facilities will be in excess of \$1 million, deMariano pointed out.

Western Sales Manager

Houston, Texas, 2/25/74 (Port of Houston News Release): — W. R. "Bill" Cook has been named Western Sales Manager for the Port of Houston Authority, succeeding C. A. Rousser Jr. who was promoted to General Sales Manager.

Cook, who began work at the Port on February 18, will be responsible for sales promotion and customer relations in an area covering 14 western states and portions of Kansas and Tennessee.

A native of Chicago, Cook attended Northern Illinois University and worked for five years with the Burlington Railroad in Chicago and Memphis before joined Rock Island Lines. He was transferred to Dallas in 1965 and stayed there three years before moving to Houston six years ago.

Cook was district manager of the foreign commerce sales department for Rock Island at the time he left to join the Port Authority.

He is married and has three children.

Ship Movements Analyzed

However, there were some radical changes in the number of vessels from different countries and for the first time ships bearing the flag of Liberia outnumbered flag ships of Norway. It should be explained that many nations sail ships under Liberian registry for economic reasons.

The greatest increase was in British flag vessels, up from 284 in 1972 to 406 last year, of which 114 were tankers. The next greatest increase was in Greek ships, with a total of 382 ships, 343 of them dry cargo vessels, for an increase of more than a third over last year.

West German registry vessels declined sharply from 201 ships to 173, and Dutch frequency also dropped significantly from 118 vessels to 83. Some of this can be attributed to the huge LASH ships of the Combi Line, a combination of Hapag Lloyd AG and the Holland-America Line with single ships capable of carrying five times the load of conventional cargo ships.

American flag ships, totalling 1,-180, were the most numerous arrivals at the Port, but in this case tankers far outnumbered dry cargo ships, 732 to 448. Houston sends more than 25 million tons of petroleum coastwise in American tankers from Ship Channel refineries to the East Coast.

Ships of Panamanian registry also were numerous with 203 vessels, but as in the case of Liberia, many of these are owned by other nations and operated under the Panamanian flag for economic reasons. They

•

were followed by Japanese flag vessels with 181, only eight of which were tankers.

Because of the Soviet grain shipments and Houston's role as exporter for more than 78 percent of that cargo, there were 63 Russian ships calling at the Port of Houston in 1973 compared to 11 a year ago.

New General Manager

Los Angeles, Calif., March 20 Port of Los Angeles): — Fred B. Crawford, former assistant general manager of the Los Angeles Harbor Department, was named general manager of the Los Angeles Harbour Department, was named general manager today (Mar. 20) by the Board of Harbor Commissioners.

Crawford fills a vacancy created by the retirement of Bernard J. Caughlin on January 1.

Donald A. Walsh, the Harbor's director of planning and research and temporary general manager during the interim, will continue to direct Harbor activities until Crawford assumes his duties on April 1, pending routine medical examination.

The new general manager first joined the Los Angeles Harbor Department in December, 1968. He resigned that position last June to enter a family business near Seattle, Washington.

Crawford was born in Seattle on November 6, 1928. He attended public schools and graduated from the University of Washington with a BA degree in Business Administration. His specialty is real estate and finance.

As an assistant general manager for the Los Angeles Harbor Department, Crawford supervised the property management, planning and research and public relations divisions.

He previously had been an assistant general manager with the Port of Seattle for four years, with responsibility for waterfront and airport operations and industrial development. He had an additional three years as the manager of properties and industrial development for the Port of Seattle.

Fred B. Crawford and his wife,

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Sally, have three daughters and a son.

Steamship Services Directory

New York, March, 1974 (News from The Port Authority of New York and New Jersey):—The 1974 edition of the Port of New York Steamship Services Directory has been issued by the Port Authority to meet the needs of exporters, importers, freight forwarders, and other business organizations and government agencies moving cargo via the New York-New Jersey Port.

The 46-page Directory, published annually since 1955, lists the names addresses, telephone numbers and pier locations for 183 steamship lines and agents offering regularly scheduled cargo, passenger, and cruise services from the Port of New York on international, intercoastal, and coastwise routes. The steamship lines providing passenger and cruise services are separately identified. It also contains a listing of active steamship piers, together with the lines, terminal operators and railroads serving them.

An alphabetical cross index of over 350 ports enables users of the Directory to determine which steamship lines provide services between the bi-state New York-New Jersey Port and specific overseas ports.

Copies of the Directory may be obtained without charge from the nine Port of New York Regional Trade Development Offices in key cities of the world.

Total Vessel Arrivals

New York, February 1974:---Continuing a leadership that has endured for many years, the Port of New York was the port of call for more ocean-going vessels in 1973 than any other United States port.

An analysis of the activity at the eleven major continental United States ports shows that the total vessel arrivals amounted to 48,129, an increase of 1,270 over the calendar yrear 1972. The Port of New York accounted for 9,093 of these, almost 19% of the total. Of the Port of New York arrivals, 451 were

Conferences on Business Opportunities in Eastern Block Nations

News from The Port Authority of N.Y. & N.J.

New York, Feb. 22—Opportunities for increased business between the United States and seven Eastern bloc nations, as well as Yugoslavia a total maket of more than 400,000,-000 people—will be explored in two major conferences at the World Trade Institute from March 11 to March 14.

1974 Business Opportunities in the COMECON Countries, a fourday meeting, will examine in detail trade possibilities between the United States and Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Rumania and the Soviet Union, which together bought more than \$1.5 billion worth of goods from the United States in 1973. The conference begins at 8:30 A.M. on Monday, March 11, and will run through Thursday, March 14. It is a follow-up to the East-West Trade Consultation conference held at the Institute in November 1972.

Trade with Yugoslavia, a two-day conference, will explore in depth the current and increasing importance of trade between that country and the United States, which now runs at a yearly rate of some \$313

passenger liners, 2,993 were tankers, and the remainder were containerships and bulk and general cargo vessels. The Port of New York arrivals had a net tonnage of 80 million.

Vessels of the Japanese Merchant Marine Fleet were once again prominent among the leaders in the ship activity at the Port of New York during 1973 when 125 vessels arrived flying the flag of Japan. million. The meeting will begin at 1:00 P.M. Wednesday, March 13 and continue on Thursday, March 14.

Both conferences will be held in the World Trade Institute on the 55th floor of One World Trade Center (entrance on Church and Dey Streets).

Speakers Include Top Government Officials and Corporate Executives

Representatives of the COME-CON countries and Yugoslavia as well as United States Government officials and businessmen, all with firsthand experience in East-West trade, will participate in the conference.

Heading the list of Eastern European representatives at the COMECON conference will be Janos Szita, Deputy Minister and Head of the Secretariat of the Council of International Economic Relations to the Council of Ministers of Hungary; George Shukin, Chairman of the Kama Purchasing Commission, which has placed orders for over \$250 million worth of goods with 72 American manufacturers; and Vladim D. Volkov, Senior Engineer of Licensintorg, Moscow, the state enterprise which licenses Soviet technology in the United States.

Among the speakers from the United States will be Dr. Betsy Ancker-Johnson, Assistant Secretary of Commerce for Science and Technology, who will discuss the United States mission to the Soviet Union on patent and licensing exchange; Lewis W. Bowden, Acting Deputy Assistant Secretary of Commerce, who heads the Bureau of East-West Trade; and Howard F. Casey, Deputy Assistant Secretary of Commerce for Maritime Affairs, who has helped negotiate the latest shipping arrangements with the Soviet Union. Senior officers of American corporations will discuss case histories in the areas of licensing, cooperation agreements and export-import trade. A special finance seminar will be chaired by William G. Blake, Senior Vice President of Manufacturers Hanover Trust Company. Other seminars will deal with joint ventures and "turnkey" projects.

Prominent speakers at the Trade with Yugoslavia conference will include Bogdan Crnobrnja, former Yugoslav Ambassador to the United States, who is now Deputy Chairman of the Yugoslav Parliament's Public Affairs Commission and President of a major investment firm in Belgrade; Dr. Milan Bulajic, Consul General of Yugoslavia in New York, and Emerik Blum, General Manager of Energoinvest, a conglomerate enterprise in Belgrade. Also participating will be Russell O. Prickett, Assistant Chief of the General Commercial Policy Division in the State Department's Bureau of Economic and Business Affairs, who has served as United Commercial States Attaché in Yugoslavia.

Both conferences will include plenary sessions and orientation seminars to discuss case histories, trade opportunities and specific projects and products for export and import. In addition, there will be time set aside for private consultation for those companies wishing to confer with the trade experts.

Automobiles Directly from Japan

Philadelphia, Pa., February 22 (Delaware River Port Authority News Release):—For the first time, the Port of Philadelphia received a shipment of Subaru automobiles directly from Japan, according to Mr. Glen Flinn, National Sales and Distribution Administrator of Subaru of America, Inc.

The 210 unit shipment of 1974 Subaru models arrived at Lavino's Packer Avenue terminal aboard

San Francisco, Calif., 3/8/74 (Marine Exchange of the San Francisco Bay Region):—As you can see, it was all hands on deck when the M/V HOEGH ORRIS called upon the Port of San Francisco on her maiden voyage to these waters. To officially welcome Captain Asbjorn Eikeland, master of the vessel, were (left to right) Ted Rausch (Marine Exchange), George Collins (Port of San Francisco), lovely Miss Leslie Valstad (Miss Maritime), Finn Koren (Consul General, Norway), and Tom Flynn (Marine Committee of the S.F. Junior Chamber of Commerce). Commemorative plaques were presented as a token of our friendship. The ORRIS is owned by Leif Hoegh & Co. Transpacific Transportation is the local agent. The vessel, which will be calling in our area as part of its regular service, was bound for the Far East.

the Japan Line's "Ocean Happiness," which sailed from Tokyo, where the front-wheel drive automobiles are manufactured by Fuji Heavy Industries, Ltd. R.G. Hobelmann & Co., Inc., Philadelphia customhouse broker, handled the entries.

The Philadelphia port was used to facilitate delivery of this shipment to the distributor in this area, Penn-Jersey Subaru, which will distribute the cars to dealers throughout Pennsylvania, Delaware and New Jersey. The importation of both cars and containers of parts are expected via Ameriport on a regular basis in the future.

Subaru of America, Inc., is a publicly owned U.S. corporation, headquartered in Pennsauken, N.J., and the exclusive U.S. importer of the Subaru line.

New VADE-MECUM on Antwerp

Antwerp: — Providing the port customers at home and abroad a general introduction into the various customs, rules and regulations governing port activities in Antwerp and to make them acquainted with the various branches of activity, their professional associations and enterprises active in the port, this is the aim of the new quadrilingual Vade-mecum of the Port of Antwerp which just came out.

This publication, realized under the patronage of the General Management of the Port of Antwerp and of the Port of Antwerp Promotion Association (ASSIPORT) is made up of two chapters.

Chapter I is designed to be a "Who's who" in Antwerp, subdivided into 5 sections, viz. Antwerp Port Authorities—Public and semipublic services—Associations, Chembers, Committees and Councils — Private companies—Regular Sailings from Antwerp.

 emanate (City—State—Private sector). In order to facilitate the looking up of a specific regulation, thus still increasing the usefulness of the publication in the four languages of the Vade-mecum (Dutch— French—German and English) an index has been added.

Apart from complete data in Dutch and French, for the first time port regulations are published unabridged in English and/or German, by which this publication may be considered as unique of its kind.

(Vade-mecum 1973/74 — 220 pages—bound—BF 250/ex.—Publishers: PUBLITRA, 33 Brouwersvliet, B-2000 Antwerp).

The Belgian Flag on the Far Eastern Route

Antwerp, 14/1/1974 (Port of Antwerp Promotion Association Press Release):—The two groups of Belgian shipping companies, viz. Ahlers Lines-Bocimar (Boel-group) and the Compagnie Maritime Belge have decided to set up a joint entity in order to operate a service to and from the Far East.

The decision of these two groups, belonging to the top level of Antwerp maritime enterprises, will result into the strengthening of the position of the Belgian shipping companies towards the "Far Eastern Freight Conference and allied Conference," with whom an official demand for participation by Belgian vessels in this traffic—this in function of the port of Antwerp — has been lodged.

Both partners intend to initially operate a regular maritime conventional conference service, which after a certain development, might be converted to containerization. This initiative is the logic outcome of the evolution the position of the port of Antwerp has been experiencing over the last years with regard to the maritime traffic between Europe and the Far East. The cargo volume being real and considerable in both directions, thereby considering the growing Belgian share, it seems quite normal that the Belgian flag, and consequently the Belgian economy would profit from this situations.

The two partners of this joint

company having a most considerable own potential they will be able to start operating their service to and from the Far East within a near future.

Belgian Port Policy

Ghent, Belgium (Port of Ghent Information periodical, 5-73):— The Ghent chamber of commerce and industry had invited Mr. H. Fayat, secretary of state for port policy, on occasion of its monthly business drink, on October 2nd, 1973, to hold a lecture on the future of the Belgian ports.

Mr. P. De Landsheer, chairman, introduced the minister. He emphasized the concern in the local economic circles where it is hoped that the rise of the Ghent port will not be checked.

In his speech the minister stressed the exceptional position of the Belgian ports. They are very favourably located, in the vicing of the North Sea, that may be considered as a growing point of international trade. Traffic within the European community keeps on growing and still offers large prospects owing to its recent expansion. Great Britain does guarantee further development of sea-borne trade although the tunnel under the canal may become a serious competitor in the future.

Transit possibilities of our ports will need special attention. According to the secretary of state, the fact that before long the road system in and around the Belgian ports will be one of the best in Europe, is very hopeful. In the same line are the efforts made for a constant improvement and deepening of the fairways to the seaports.

Referring to the problems proper to Ghent, the secretary of state announced that a study will be commenced shortly pertaining to the radar stations which are indispensable between Flessingue and Terneuzen.

As to the Hansweert-Wemeldinge canal, as part of the Ghent-Rhine connection for interior navigation, Mr. Fayat informed the audience that the Netherlands are considering a new lock on that canal. This would allow pushing technique without necessitating the uncoupling of the convoys.

Regarding the 125,000-ton lock which Ghent demands, Mr. Fayat asked whether the Netherlands would be prepared to discuss this matter if the quality of the canalwater does not improve. What matters in the first place is the perfection of the accessibility of the 60,000-ton lock and the putting into use again of the "Middensluis" for 10,000-tonners.

New West Africa Terminal at Tilbury Docks

London, 7th March (PLA News): —The new $\pounds 4^{1/2}$ m West Africa Terminal at the P.L.A. Tilbury Docks will start operating on Monday, 18th March. The go-ahead came following the successful conclusion of negotiations with the terminal work force. John Lunch, P.L.A. Director-General, said today: "I am delighted with the outcome of those negotiations, which are the result of a great deal of hard work and goodwill by unions and management. We must now give the service for which this great new Terminal was planned and built."

The 39-acre Terminal is a joint investment by the P.L.A. and United Kingdom West Africa Lines Joint Service. The intensely mechanized operation will handle conventional general cargo and timber by the most modern methods and is designed to speed the flow of goods and ships in the U.K.-West Africa trade.

The Terminal was built by the P.L.A. for U.K.W.A.L. and it will be operated by the P.L.A. stevedoring subsidiary P.L.A. (Metropolitan Terminals) Limited on behalf of West Africa Terminal Limited.

Need for Navigational Aids

London, 13th March (PLA News):—The Port of London Authority's Director General John Lunch has asked the PLA's Director of Marine Services, Captain G.R. Rees, to conduct an immediate inquiry into the incident at Canvey Island when the empty cargo ship m.v. "Katharine Mitchell" 177 tons GRT ran aground. John Lunch stated this morning

"If all concerned had agreed to the PLA's proposal that in poor visibility all ships over 50 tons GRT should not move in the Port of London unless fitted with both operational VHF radio and radar, on present information this incident could have been avoided."

Ship-owners' representatives agreed that VHF radio should be installed on all ships over 50 tons GRT but considered that it was sufficient for the radar limit to be 1600 tons GRT in line with IMCO recommendations.

PLA's latest information is that the vessel did not have operational radar at the time she ran aground.

John Lunch continued: "The PLA have a good record of safety on the River Thames and act as marine consultants to ports across the world. PLA will press on with all the power at our disposal to maintain the safety reputation of the Thames."

Record at Tilbury Grain Terminal

London, 15th March (PLA News):—PLA's Tilbury Grain Terminal has again broken its record for speedy ship discharge unloading 21,051 tons in a normal working day. This is believed to be yet another European grain record set by PLA at Tilbury.

The scene of this achievement was the m.v. "Rossetti," a new British bulk carrier owned by the Bolton Steam-ship Company Limited which arrived at Tilbury last week with 26,711 tons of Canadian wheat. The high work rate of the PLA team at the Grain Terminal meant that the ship unloaded her full cargo in less than two days.

Tilbury Grain Terminal is one of the most intensive grain handling installations in the world and with this high rate of discharge through bucket elevators—the first in Europe — backed up by suction pipes it has steadily improved its performance since its opening in 1969, so justifying the investment by PLA and the choice of this particular equipment.

Congratulating the Tilbury Grain

Terminal team on this new European record the PLA's Director-General John Lunch said: "Continental competition is stiff. We are pressing ahead with plans to increase the capacity of the Terminal including an extension of the jetty to meet the increasing demands for coaster and short-sea traffic."

Timber Import Boom in South Wales

London, 21 February (B.T.D.B.): —Timber imports through the South Wales ports are running at levels 50 per cent above those of 1973, the British Transport Docks Board has revealed.

The arrival of three large timber carriers at Newport and Cardiff this weekend to discharge 21,000 tonnes, and of a fourth ship, on Thursday, (28th February), will bring total timber imports through the two ports during the last week in February to over 45,000 tonnes continuing January's upward trend when timber imports at the South Wales ports reached 64,540 tonnes, 21,000 tonnes more than in the same month last year.

A spokesman for the Docks Board said that there was no sign of any slackening in the timber boom, which had already given the South Wales ports their highest ever sawn timber imports in 1973-a total of 624,431 tonnes. "The terminal MacMillanoperators, Bloedel Meyer at Newport and Fletchers Wharves at Cardiff, are jointly despatching about 200 road vehicles a day to destinations all over the country, a clear indication of the increasingly important role being played by the South Wales ports in the timber industry," he said.

The vessels due at the weekend are, at Cardiff, the 'Ikaros' with 8,000 tonnes of Canadian lumber, and at Newport, the 'World Achilles' from British Columbia with nearly 7,000 tonnes of lumber, and the 'Mairoula' from Malaysia with 4,500 tonnes of plywood and 1,500 tonnes of hardwood. The 'Pacific Insurer' arrived at Cardiff earlier in the week with 18,500 tonnes of Canadian lumber, and the 'Anna Prestus I' is due on Thursday from Eastern Canada with nearly 6,000 tonnes.

The Manchester Ship Canal Company Statement to The Shareholders by the Chairman D. K. Redford

February 1974

Like many other business organisations we have had to operate during 1973 within the constraints of the Government's counter-inflation policy. The fact that we have done so with relative freedom from industrial troubles illustrates the underlying strength and resourcefulness of everyone who forms part of the company. I pay sincere tribute to all the efforts which have been put into every aspect of the company's activities.

As a result of the Special National Severance Scheme for dockworkers, 330 men had left the company by the early part of the year and in consequence on many days since the end of February we were not able to meet fully the requirements of shipowners. The question of future recruitment is one which is being considered nationally.

The total volume of cargo brought to and taken from the port as a whole at 16.7 million tonnes was some 400,000 tonnes greater than in 1972. The facility at Ellesmere Port for specialist car carrying vessels was brought into use in July and improvements are being made both to the container terminal at Manchester Docks and to our oil handling facilities at Stanlow. We also have in hand a heavy replacement programme for vessels in the tug fleet which is operated by our subsidiary, Manchester Ship Canal Services Ltd.

When Phase I of the Government's counterinflation policy came to an end all salary and pay scales were reviewed and the settlements negotiated were within the limits of Phase II. More recently arrangements have been made for increases in the pay of our engineering group within Phase III.

Pensions today are an important part of conditions of service. We have, therefore, brought in a good pension scheme with benefits geared to final rates of pay for all our employees who are not already in either the staff scheme or the dockworkers' national scheme. The new scheme will cost the company and the members a lot of money but it will be money well spent. It should pass the Social Security Act's recognition tests comfortably.

As regards the staff scheme, we have made from our revenue of the year two special payments; one forms part of administrative and other general expenditure and the other is shown as expenditure relating to earlier years. Both these payments relate to the funding of the cost of increases in pensions to retired staff which are made out of the retirement benefits fund.

The operating surplus before depreciation at £4,628,555 showed an increase of £865,450 over 1972. From that surplus £804,156 has been provided for depreciation, an increase of £31,214 and £520,000 has been allocated to the major maintenance equalisation account.

The surplus after meeting interest charges of £669,950 but before taxation and transfer to the sinking fund for the redemption of loan capital is £3,359,370, which is £933,614 up on 1972.

Our net surplus after providing for taxation of £1,391,935 and the transfer of £60,029 to the sinking fund is £1,907,406 compared with £1,288,088 in 1972.

The dividends which it is proposed to pay take $\pounds 554,363$ and the balance of $\pounds 1,353,043$ has been

transferred to general reserve.

In view of the advent of the new imputation tax system there is a change in the presentation of the dividend proposals. The dividend on preference shares is reduced to 7/10ths of their former amount with a related tax credit and it is in this way that the figure of 3.5%, which represents the maximum of 5% previously paid, has been arrived at. As regards the dividend on the ordinary shares the counterinflation legislation restricts the maximum payment to 11.025% and it is that figure which is proposed. A dividend of 11.025% on the results for 1973 is equivalent to a gross dividend of 15.75%.

Our main charges, ship dues and canal tolls, were increased by varying amounts up to 5% towards the end of May and charges for cargo handling by 5% in the previous month. I need hardly stress the difficulties of atttempting to contain operating, maintenance and dredging expenditure as a whole, of which dredging forms the single largest item. An increased quantity of material was dredged from the immediate approaches to Eastham Locks and from Oueen Elizabeth II Dock but we had less work to carry out at the seaward end of the Eastham Approach Channel.

Your Board have continued their policy of attempting to put to better use those assets which do not form part of the port undertaking. Any proposals which involve what might be described as a shifting of course necessarily take time to fructify. Many ideas are being examined but what has been accomplished so far may be summarised as follows:

1. BRIDGEWATER DEPART-MENT

What we have previously known as the Bridgwater Department has now ceased to exists as such.

During the year our road transport business, with its associated warehousing activities, was reorganised and at the end of October these operations became a separate division of the company under the name of Bridgewater Trans-(Continued or Base 20)

(Continued on Page 36)

Boom with us?

Container cranes supplied to the Port of Portland, U.S.A.

Five container cranes load and unload quickly at the Port of Yokohama, Japan. A pair of diesel-electric cranes hoist for the Port of Seattle, U.S.A.

Profits go up. Costs go down. In Portland, Seattle and Yokohama. And in Boston, Honolulu, Singapore and other Japanese ports, too. Worldwide. Via over 15,000 Hitachi cranes. Container and otherwise. And a word to the wise. Check out our patented "semi-rope" trolley gantry cranes. They eliminate shock and sway of cargo.

We have also developed high speed container cranes which employ our most recent control technology. Put both in your port and see for yourself. You will be busy . . . but happy.

(Continued from Page 34)

port Services. A development scheme for what will be a new base for this part of our business has been put in hand at an estimated cost of over $\pounds 200,000$ under which three old warehouses will be replaced by a new building and a new vehicle maintenance workshop together with offices, improved access, servicing and parking facilities for the growing fleet of articulated units will be constructed. It is hoped that the new facilities will be in use about the end of the present year.

The Bridgewater Canal was reopened to navigation at Lymm last September after we had spent nearly £200,000 on repairing the breach which occurred in August 1971 and γ nearby aqueduct. We hope that the local authorities on the banks of the Bridgewater Canal will during the present year join with us in a new trust which will help to carry the responsibility for running this famous old canal in the future.

2. PROPERTY DIVISION

You will see reference in the Accounts to the professional valuation of our land which was made as at October 1, 1973. As you would expect it shows a large increase over the 1969 valuation. Your Board have considered it prudent not to write this increase into our balance sheet in view of the many uncertainties which at the present time affect the value of property. It is also, of course, important to bear in mind that our land as a whole cannot be brought fully into use in the short term.

The property division has continued to pursue actively our policy of developing our land assets. At Ellesmere Port where we hold some 250 acres under a fifty fifty partnership with the British Waterways Board we have now agreed with that Board terms giving us a free hand to develop this land as we think best. This area includes, in addition to the Ellesmere Port Docks and Railways, some 40 acres of good industrial land on which we are now spending about £150,000 in providing roads and drains.

We have also formed a new company, Lyman Ltd, in partnership

Construction in progress at Port of Le Havre, Antifer.

with Lyjon Company Ltd, a successful private construction company operating in the Ellesmere Port area. We intend to build industrial units on our land there and perhaps elsewhere and we hope to make a start on the first stage of development in the near future.

Alongside the Bridgewater Canal at Preston Brook we are building a marina on land which we are leasing from the Runcorn Development Corporation. This marina will eventually hold over 400 craft and in partnership with Whelmar Ltd, part of the Christian Salvesen Group, we are proposing to build up to one hundred houses in the form of an attractive waterside village on our land opposite the marina.

In total during 1973 we have completed or made good progress with disposals of a capital value of about £1 million. These disposals are on top of the transactions which I mentioned in my last statement to you, most of which have now been completed or soon will be.

Amid the uncertainties of the energy situation and of national economic circumstances with their particular affect on imports and exports and on the movement of vessels, I cannot make any forecast as to what 1974 will hold for us. We shall however, be presenting in mid-August an unaudited statement of the results of the first six months of the year.

Our port business continues to rank as a major one in the United Kingdom. We have achieved this position by fighting in fair competition for the traffic which we get and having won it we continue to fight to keep it. As far as I am concerned there will be no slackening of this predominant endeavour.

In this company our most important source is people and one of our fundamental concerns is the quality of their life. To improve that quality it is necessary to have complete understanding, trust and co-operation within our closely interwoven organization. The aim of unity for which we continue to strive necessarily involves everyone being well informed so that separation and divisions do not exist and demands a high degree of competence and earnestness at every level of management.

Antifer more Needed than Ever

Le Havre (Port of Le Havre Flashes, February 1974):—There can be little doubt that the current energy crisis provides yet further

(Continued on Page 38)

New Scandia Terminal In Suezhaven, Amsterdam

Amsterdam, 6/3/'74 (Press-Release from Verenigd Cargadoorskantoor bv, Amsterdam):—The two large ferry-vessels now under construction for the Tor Line will be handled by Verenigd Cargadoorskantoor, Amsterdam, at the entirely new SCANDIA TERMINAL to be built in the western port-area of Amsterdam. (See map.) VCK is at present making definite arrangements for the construction of a new ferry-terminal of some 10 to 11 acres in connection with the Tor

(Continued from Page 36)

confirmation of the need for bigger and bigger ships for the carriage of crude oil, this being the best way of reducing the effect of transport costs on price levels. Replacing 100,000 dwt tankers by 250,000 tonners resulted in a saving of between 6 and 7 francs a ton on the Persian Gulf/Havre run, while the introduction of 500,000 tonnes will mean a further saving of almost 5 francs. Indeed, if all France's oil requirements for 1980 could be carried exclusively in mammoths, the annual saving would be about a thousand million francs, compared with the cost of transporting the same quantity of oil on 250,000 ton "dwarfs."

Work on the Antifer terminal is therefore continuing space, more justified than ever by the world situation. On January 1st the main breakwater had reached a length of just over 1,000 ft ((310 m). It will eventually stretch to 11,550 ft (3250 m). The first tanker is expected in June 1975.

With Antifer so near to becoming operational, it has finally been decided not to go ahead with the construction of a new oil berth in Le Havre itself (see Port and Harbors, April, 1974, Page 45.), especially in view of the many technical and pilotage problems involved.

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Line "jumbo ferries" to be expected in 1975 and 1976 respectively. (See drawing.) Tor Line have been operating freight/passenger services since 1966 between Amsterdam, Gothenburg (Sweden) and Immingham (England).

About the middle of 1973 VCK submitted to the shipowners at Gothenburg proposals for the construction of a new terminal, as the new ferries appeared to be too big

Scandia Terminal, Suezhaven

Ferry Terminal, Coenhaven

to handle at the existing ferry-terminal of VCK at the Coenharbour. In the search for a suitable location the availability of a large arterial road in the direct vicinity was held to be a prerequisite. The choice fell on a plot of ground at the Suez harbour, in the western port area, facing the estate which—just as the one at the Coenharbour—is managed by VCK Havenbedrijf and where the Norwegian cargo-vessels are handled.

"Scandia-terminal," as it will be named, has been designed on the ground of the experience gained over the past 7 years with the rollon/roll-off freight and passengertraffic. The construction will make it possible to handle roll-on/roll-off cargo via the 18-metre wide roll-on ramp of the jumbo-ferry (as wide as a 6-lane road), while at the same time passengers drive their cars on board via two special car-ramps on starboard side.

Adjoining the ferry-berth, a building has been projected for ample accommodation of departing and arriving passengers, including a bar, restaurant and play-room for children. It will also house the new office-rooms to which the Tor Line passenger department will be moved. This office will be equiped with a central computer booking system. Some progressive novelties have been taken up in the design. The check-points for instance, where the passengers have to show their tickets, passports and other documents, can be moved elsewhere, ensuring an efficient reception of passengers and cars both in the quieter off season and in the summer rush. This arrangement has been made on the ground of the maximum a ferry can convey (1,200 passengers and 300 cars) which numbers will have to get dispatched twice within a couple of hours: arriving and departing passengers.

For transport by taxi and bus a circuit station will be constructed in the direct vicinity of the departurehall. A rolling carpet will take the passengers from the hall on board the ship, reducing the carriage of luggage to a minimum.

As cargo shipped by Tor Line has

Future Fruit Terminal In the Port of Lisbon

by Joaquim L. Ferreira Cardoso Engineer, Administracao-Geral do Porto de Lisboa

(This is reprint of a summary in English accompanying a longer article in Portuguese language in "Boletim do Porto De Lisboa, April/May/June 1973")

The author of this article deals with the subject of the installation of a future fruit terminal in the port of Lisbon.

He begins to make a reference to the sound increase remarked in the last few years in the traffic of banana in Lisbon, and expects that, in a short delay, that traffic may attain 100,000 t per year.

On the other hand, the fruit terminal may have, in the first phase of settlement, an annual traffic of 150,000 t of fruit, without counting with the attraction of a part of the export traffic which the Spanish province of Estremadura is intending to realize in the future and which, on the author's point of view, may be carried out, with advantage, by the port of Lisbon.

increased considerably over the past few years, a large part of the total area (about 2/3) will be destined for storing inward and outward cargo. The lay-out of the site has been conveniently arranged so as to allow also an efficient dispatch of cargo.

Trailers, trucks, containers and flats will be parked in the open, and general cargo will be stored in a shed of 2,000 m². A small building will serve for attending to freight-administration, equipmentcontrol and also shipping-matters.

The actual construction and further investment will involve about 12 million guiders and VCK experts to be able to inaugurate the new establishment in the spring of 1975. After making some considerations on the maritime transportation of banana coming from Madeira Island and the Portuguese Overseas Provinces of Cape Vert, Angola and Mozambique, the author foresees, in the near future, the utilization of specialized ships able to carry some 3,500 t of fruit. Such vessels will need mooring berths with water depths of—9 m.

As for the existing facilities in the port for fruit traffic, he says that a shed is available at Poço do Bispo, operating since January 1971, where the throughput is of about 60 t per hour, thus permitting the turnaround of a 1,400 t ship in 20 to 25 hours work and the clearance of all the shipment on the very day of arrival or the next day.

Afterwards, the author analises the advantages of the settlement in the port of adequate facilities where, by modern methods, one may come to the quick vessel turnaround, goods wearhousing and land expedition.

The Port of Lisbon Authority aware of their responsibility and having in mind the advantages of such a facility, have already defined the preliminary settlement of the maritime work and promoted, in March 1970, the geological soundings for the said purpose. According to the results obtained the necessary corrections have been made on planning and, in 1971, the preliminary project of the maritime works has been drawn and is now under study.

The fruit terminal, as it is now planned, will dispose, in the first phase of construction, of a 150 m long quay, with water depths of— (Continued on Next Page Bottom)

HELSINGBORG— The RoRo-Port of Sweden

Port of Helsingborg Press Release

Helsingborg, Sweden:-The rapid growth of traffic at the Port of Helsingborg tells clearly that the investments made over the last 10 years have been well justified. According to the preliminary annual report for 1973 the cargo turnover has increased to 7.5 million tons. Hereby the ports position as the second largest port of Sweden has been confirmed again. The success in the roll-on field is striking. Containers, trailers and other units dominate the cargo traffic in the North Harbour as well as in the South Harbour.

The movements of shipping show new records. The number of arriving and departing vessels came up to 147,576 for the fiscal year compared with 135,606 for 1972. This corresponds to 74,025,751 net register tons (61,611,948), an increase of more than 20 pct over the previous year.

It is no doubt the RoRo-traffic that is growing quickest at Helsingborg. Of the total cargo turnover of 7,475,246 tons (7,094,813) the roll-on portion accounts for just over 4 million tons. Of this 2,248,-554 tons (2,081,581) are railway cargo, while the truck cargo accounts for 1,779,842 (1,606,133) a gain of 8 and 10 pct respectively.

The number of units is considerable — 337,587 containers, flats, trailers, in 20ft equivalents and lor-

PORT OF HELSINGBORG: The greater part of the cargoes shipped via Helsingborg is unitized. Here containers are handled at the Skane Terminal.

10 m and a paved ground of 23,500 sq. m.; in the second phase, the quay will be added to 350 m and the ground extended to 53,500 sq.m.

It is foreseen that port operations will be carried out by specialized equipment, without the use of conventional cranes, thus permitting the ship's clearance in 8 hours time for 1,500 t of fruit.

As for investment one estimates for the terminal, whose construction is expected to begin very soon, a sum of 200 million escudos, 130 million pertainning to the maritime work and the remaining 70 million escudos for land facilities. ries were handled altogether. Out of the total 306,581 were RoRo- and 31,006 LoLo-units. No other port in Scandinavia has reached figures on a level with this. In addition the port shipped 228,702 railway cars (210,569).

Traditionally Helsingborg holds the strongest position in Northern Europe as to the international passenger traffic. Close to 15 million travellers and 1.1 million motor vehicles passed through the port in 1973. Thus it would be no overstatement to call Helsingborg "The gateway to Europe."

Wood and paper are most considerable export items being shipped from Helsingborg. Over 2 million cu.m was the volume of wood products alone that left the port in 1973, comprising 22 pct of the total wood export of Sweden. In the import field petroleum products had a share of 0.9 million tons. Other essential import items were food, metals, chemicals and cotton.

The container port of Helsingborg, the Skane Terminal, has been extended during the year—partly by land reclamation—and is now covering an area of 151,000 sq.m. In the first range the extension has been made in order to improve the service to the ever increasing unit traffic.

Last January the port started the construction of a completely new RoRo-harbour west of the Ocean Terminal. The enterprise will cost some 18 million Sw.Crs. when completed. The new "Sound Terminal" will have a total area of 30,000 sq.m and will be equipped with 2 ferry berths for large vessels. Furthermore a service-building for freight and passengers will be constructed, and ample marshalling areas for vehicles of all kinds such as terminal waggons, trailers, lorries and private cars will be arranged for. Not only road transports will benefit by the new venture. Also railway cargo will be promoted efficiently, because double tracks in the terminal area will be directly connected with the Goods Station of Helsingborg. The Sound Terminal will be opened for operations by autumn 1975.

Port Gdynia, Poland:-Port's view at night.

Under Investigation

Melbourne (Melbourne Harbor Trust Port Gazette, Feb. 1974): — Waste and sewage discharged from ships is a world-wide problem and not one confined to the Port of Melbourne alone.

This problem is currently being investigated locally by the Association of Australian Port and Marine Authorities and on a worldwide level by the International Governmental Maritime Consultative Organization with the view to recommending international uniform standards requiring ships to either provide for the retention or treatment on board of all ship's waste, or alternatively, arrange ship's plumbing to enable wastes to be pumped ashore from a central point on the vessel.

The Trust considers that it is impracticable to prohibit discharge of sewage from vessels using the Port until shipowners have been notified of the required facilities to be provided in the vessel which, of course, would be in accordance with the world-wide marine standards.

However, it is pointed out that there has in recent years been a considerable lessening of waste and discharge from ships calling in the Port of Melbourne, the main contributing factors being:

° New shipping concepts have in-

creased cargo tonnage capacities per vessel and have brought about a fall of $6\frac{1}{2}\%$ in the total number of vessels visiting the Port per year.

- ^o More sophisticated methods of cargo handling and navigation equipment permit vessels to be crewed in much smaller numbers.
- ° Virtually all new vessels are being fitted with holding tanks and /or chemical treatment systems.
- ° Older vessels, while not being adapted to hold or treat sewage on board, are making less visits to the Port.
- [°] Vessels now stay in the Port for a much shorter period than they did five years ago.
- ^o The number of passenger vessels berthing at Station Pier, Port Melbourne, has been reduced by three-quarters over the last five years and a recent survey showed that at least 60% of these vessels were fitted with holding tanks.

It is appreciated that it is not practicable to ban vessels which are not adapted to control sewage discharge from entering the Port and the major structural alternations cannot be done whilst the vessel is in Port, but only during a refitting period in her home dockyard. Furthermore, facts taken from the Environmental study of Port Phillip Bay, Phase One, 1968–1971, shows hat sewage disposal from vessels using Port Phillip is of such minimal proportions to other sources that it is not included in the survey. The report also state that Port Phillip is of such minimal proportions to other sources that it is not included in the survey. The report also states that Port Phillip Bay is a relatively unpolluted area.

Cargo Handling Basin

Hong Kong, 21 March (The Week in Hong Kong): — Hong Kong's first specially built cargo handling area for small craft at the Wanchai Reclamation is nearing completion with the construction of two building blocks. These blocks will be use by Marine Department staff who will manage the facilities.

Work is expected to start later this month and soon after its completion in two months, the cargo handling basin will be ready for operation. The Wanchai basin is the first of 10 other similar facilities being planned or under construction.

Kinjo Pier—the Heart of Nagoya Port

Nagoya (Nagoya Port News, 1974 No. 2):-Kinjo pier, soon to be the center of port of Nagoya, is now in the final stages of construction. With ninety percent of the project completed, crews are already beginning to put on the finish touches. Liner berths will all be centralized here, and the new pier also promises to be the nerve center for Nagoya port administration. Covering 1.9 million square meters and equipped with docks for ocean liners of 50,000 gross tons (12 meter depth), there are the foreign trade pier with two berths for 35,-000-DWT ships (12 meter depth), and twenty-three berths for 15,000-DWT ships (10 meter depth), and the domestic pier, equipped with nine berths for 5,000-DWT vessels. In all, the Kinjo Pier cargo totals will climb to 6.6 million tons per year. Already in operation are eleven foreign trade berths, including two container berths, and nine domestic trade berths.

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Port of Aden—Ships Come and Go

"Whether they look odd or ugly or huge, the Port of Aden deals with them as normal ships. Being near the rich oil fields of the Arabian Gulf and the Red Sea, the Port of Aden is getting used to the sight of Super Tankers as well as the "odd Visitors"". —Port of Aden Authority

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HONG KONG—WORLD WAREHOUSE

More than 22,000 tons of cargo come to the British Crown Colony of Hong Kong each day, making it one of the most important trading ports in the Far east. Although Hong Kong is strongly Westernised in its industrial and commercial ways of life, the waterfront remains for ever a part of the true Orient. This is especially so of a mile-long stretch at the Western tip of Hong Kong Island called the Western Praya. The Praya—it is a Portuguese word meaning quayside—is peopled by Chinese waterfront workers who have made their own way of life and are determined to stick to it. There are men, their muscled arms sinewed and knotted, who can hoist a 200 pound crate on their shoulders as if it were an empty box. And there are men who, when the day's work is done, will willingly gamble their day's wages on the fall of a mahjong card.

PICTURED: Part of the bustling Western Praya waterfront in Hong Kong. Seen on the right are some of the 300 floating warehouses which operate there.

Development of Container Handling Facilities

Penang (Publication of the Penang Port Commission, January, 1974):—The Penang Port Commission is developing improved container handling facilities at Butterworth Wharves to cater for the gradual increases in container traffic in the Port of Penang.

The facilities to be provided are geared to service feeder container vessels and conventional vessels transporting containers. Draft restrictions prevent the use of Port of Penang for large cellular container vessels. These include:—

- * A marshalling yard of 16.5 acres with storage space of 1270 containers.
- * A container freight station of 42,000 sq. ft.
- * 20 power points for refrigerated containers.
- * 1 unit 40 tons prime mover, 1 unit 20 tons prime-mover, 2 units 40' trailers and 2 units 20' trailers.

In 1971, the Commission provided some basic container handling equipment to handle small numbers of 20' containers. Recently there has been considerable interest shown by Shipping Lines for regular container service through the Port of Penang. This interest is linked with

* 2 units straddle carriers.

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The new pier facility also has an urban function. It boasts a fine international trade terminal, green grounds and gardened parks for visitors, an exhibition hall, a citylike cluster of public and port related offices, and a number of welfare facilities for workers.

Plan call for Ring Road No. 2 pass through the pier, effectively linking the South and West Seafront Industrial Zones on either side, and making kinjo Pier the central, as well as very accessible, port location.

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TOWNSVILLE Harbour Board Report

Port of Townsville Queensland, Australia

(Extracts from "Townsville Harbour Board Report, 1st July 1970-30th June 1973" are introduced below. The report is a major publication marking the triennium of the Harbour Board, and as such the presentation is unique in many respects. In the format of 182×336 mm., two books, a 32-page multi-colored, profusely illustrated report section and the bluepapered 16-page "Statistics 1973" section are bound separately in two places in a huge 336 (vertical) and 728 (horizontal) mm. cardboard cover which folds into said format covering each book on either side. The center-fold of the cover presents a 364×336 mm. multi-color "General Plan of Harbour".)

Port of Townsville

Centrally situated along the Queensland coastline on Cleveland Bay, the limits of the port extend

the recent completion of the container terminal at Port Klang and the general growth of container traffic in this part of the world.

The whole scheme is expected to be completed by 1975. At full utilisation, the facilities will have the capacity to handle 23,000 containers a year.

At this stage it is not planned to provide container cranes (portainers) to handle containers between ship and wharf and vessels calling at the wharves are expected to use their own lifting gears.

The development of these container handling facilities will enable the Port of Penang to provide full container 'facilities to feeder vessels and conventional vessels carrying containers. from Cape Cleveland to Cape Pallarenda, by a line embracing the seaward side of Magnetic Island.

The City supports a population of 74,000 and is well serviced by local industries. Major undertakings which have been established include a copper refinery, a cement works, two export meatworks, a University and Army and Air Force bases. A nickel ore treatment is currently under construction.

The port is administered by the Townsville Harbour Board, consisting of ten members, two of whom are appointed by the Queensland Government and the remaining eight by the City and Shire Councils of the Board's district which takes in the rich farmlands of the Burdekin delta and extends westwards through the pastoral and mineral areas as far as the Northern Territory border.

Facilities exist within the port for the accommodation of nine major vessels and shore based equipment is available to efficiently handle the many and varied types of cargo which pass through the port at a rate in excess of $1\frac{1}{2}$ million tonnes annually. Bulk handling of oil products, mineral concentrates, raw sugar and molasses is a feature of the port's trade and constitutes 75% of the total cargo handled. Containerised, unitised and rollon roll-off traffic is well catered for and facilities for this type of operation will be further expanded in the near future.

A contract has been let to deepen, widen and extend the approach channel and to improve berth depths. This will enable ships of 65,000 d.w. tons to navigate the port.

Ample areas of land adjacent

to the port are available for leasing to industries associated with port activity.

The Townsville Harbour Board has, by its foresight, ensured that facilities required for present day needs are the most efficient available and that those required for future development are expertly planned.

Trade and Shipping

The Port of Townsville by reason of its geographical location plays an important part in the continued development of North Queensland. Because of continued planning and development of the port and cargo handling facilities, the volume of cargoes handled at the port have continued to increase steadily. Modern conveyor and pipeline systems, and roll-on roll-off berths provide ships with a fast turnround. This makes the port attractive for ships handling the increasing volumes of sugar, minerals, oil and general products.

During the five years ended 30th. June 1973, the trade of the port has increased from 1,320,476 tonnes to 1,595,659 tonnes. This increase of 275,183 tonnes (representing a 20% increase) reflects the development taking place in the Port's region.

The products of the Mineral Industry (495.280 tonnes) — zinc concentrates 234,430 tonnes, crude lead 120,151 tonnes, refined copper 115,641 tonnes, sundry 25,058 gained the place as the prime exports for the year ended 30th June 1973, followed by the Sugar Industry (425,162 tonnes)—sugar 362,-742 tonnes, Molasses 62,419 tonnes.

The imports of oil and oil protonnes) ducts (449,078 constitute the main import for the year ended 30th June 1973, followed by general cargo (84,835 tonnes). General cargo imports have shown a marked increase of 16% in the last 2 years. This has been brought about largely by the advent of the Australian National Line Searoad Service to North Oueensland Ports. This service is now on a weekly basis.

Later in the report statistics show the various products handled

through the port as well as their ports of origin and destination. In addition there is a five year comparison of various import and export cargoes.

The gross registered tonnage of shipping using the port has increased over the past 5 years by about 9%, whereas the increase in the tonnages of cargo handled for the same period has been 20%.

The advent of the new sternangled ramp roll-on roll-off vessels in October 1972 (M.V. Tricolor) and the provision of a new concrete platform for use by these vessels has reduced the loading time for various cargoes substantially. This service is now loading cargoes on a monthly basis.

The following table shows the shipping movements during the past 5 years.

- /		
	No. of	Gross Reg.
	Vessels	Tonnage
1969	419	2,410,261
1970	522	2,517,174
1971	448	2,417,361
1972	455	2,727,068
1973	420	2,632,532

Record shipping statistics are:

Largest Import Cargo

16.6.1968 M.V. P. J. Adams discharged 31,707 tonnes bulk oil.

Export

19.8.1970 M.V. Mandarin loaded 33,078 tonnes of raw sugar.

Deepest draft vessel to date 19.8.1970 M.V. Mandarin 10.6 metres.

Longest vessel

13.4.1973 M.V. Texaco Greenwich 232.19 metres (761 ft. 10 ins.)

Imports

Total imports during the 10 years from 1964 to 1973 have increased from 343,499 tonnes to 600,909 tonnes; an increase of 75%.

The most significant increase has been in oil imports which have more than doubled from 211,123 tonnes in 1964 to 449,078 tonnes in 1973; an increase of 113%. General cargo imports showed very little change until the A.N.L. Searoad Service became fully effective. From 1964 to 1971 General Cargo in-

Meeting the Challenge of 1974

by Fumio Kohmura **Executive Vice President Nagoya Port Authority**

proach.

Nagoya (Nagoya Port News, 1974 No. 2):-The Arabian oil cut-Come what may, the task of upbacks of late last year dealt the dating port facilities interms of the Japanese economy an unprecedented ongoing transport revolution simply shock, and the discussion attending has to go on. Our cargo handling them has carried over into this year. volume at Port of Nagoya will soon The government policy for this year put us in a class with the ports of will obviously be drastic, aiming at Rotterdam, New York and Marcontrolling the overall demand. The seilles, and we thoroughly intend to ramifications for ports resulting keep moving up in the ranking. from this very different economic

One thing I think should be emphasized is our efforts to obtain the greater understanding of the people in our region. Their good and ours are closely entwined. Perhaps this seems odd to say, especially when it is common knowledge that the Japanese Port & Harbour Law states that the ideal is to put port administration precisely at the local

creased from only 45,881 tonnes to 53,367 tonnes or 16%. From 1971 to 1973 the increase has been from 53,367 tonnes to 84,835 tonnes or almost 59%.

picture are bound to be great, and

we are now bracing ourselves for

what lies ahead. Naturally, as port

administrators, we will have to

come up with concrete measures for

our particular port situation as

emerges, but I would like to set

down here at least one line of ap-

policy

gradually

Exports

government

Total exports during the 10 years from 1964 to 1973 have increased from 595,302 tonnes to 994,750 tonnes; an increase of 67%.

The most significant increases have been in mineral and sugar industry exports. Mineral exports increased from 205,824 tonnes in 1964 to 495,280 tonnes in 1973, an increase of over 141%. Sugar and Molasses exports increased from 334,391 tonnes to 425,162 tonnes in 1973, an increase of 27%.

Summary of Statistics

1972-73 Trade and Shipping at a glance Tonnes

1 Onnes
994,750
600,909
164,730

Australian Imports	472,662
Overseas Exports	830,020
Overseas Imports	128,247
Largest Export—	,
Minerals	495.280
Largest Import—	
Oil Products	449.078
Exports sent to:	
19 Australian Ports	
59 Overseas Ports	
Imports received from:	
19 Australian Ports	
31 Overseas Ports	
Gross Registered toppage of	f vessels.
2 632 532	vessets.
Number of vessels: 420	
Australian State Taking	Highest
Exports:	inghtst
NSW 91459 toppes	
Oversees Country Taking	Highest
Europeta	righest
Lapan 202 190 tonner	
Japan 292,109 tonnes.	Uichaat
Australian State Providing	rignest
Imports:	
Queensland 365,144 tonn	es.
Overseas Country Providing	Highest
Imports:	
Singapore 80,618 tonnes.	
PORTS and HARBORS—MAY	1974 45

level; but if there is anything that is easier said than done, it is this matter of obtaining understanding, at least up to a certain level.

First, I think that we need to show people our mutual relationship with facts and figures. This will make it easier for them to understand how the port directly touches their lives. I felt this so keenly when I took over this post in 1968, that I started work on its right away. It took over five years (up to last year) to get together a report on this area. Put briefly, the results of the study come down to this: Port of Nagoya exerts approximately a 40 percent "external economy" benefit upon the Tokai district economy (the four surrounding prefectures of Aichi, Gifu, Shizuoka and Mie) as determined from the overall prefectural gross product. Thus, those of us in port administration should never let an opportunity pass to put this finding across to everyone and to clear up any misunderstandings that might exist.

Secondly, besides obtaining people's intellectual understanding, we also need to take further steps so that they will develop a genuine affection for the port. This will surely deepen understanding all the more. For this, the port has to be attractive. In this respect, so far we have drafted the "Outline For a Green Port of Nagoya" in 1969. And with the revised Port Plan of 1970, we put controls on heavy industrial siting and set up a Pollution Survey & Inspection Section. Then, in 1973, we established an Environmental Affairs Division in the Port Authority. Port water quality was at its worst in 1968 (C.O.D., 18 ppm), but by 1972, efforts brought it to under 4.7 ppm. (The National Standard to be achieved by 1975 is 8 ppm or below.) I might mention that one can easily catch Goby and other fish in port waters once again. Of course, we cannot expect to rescue the environment overnight, but let it be known that we plan to give it even more effort from now on.

I suppose what I have mentioned in these few remarks is nothing new, but it seems important to me for the days to come at our port.

Port Kelang

Kelang Port Authority Malaysia

1. Container Port

Port Kelang, formerly known as Port Swettenham, evolved from a railway terminal in 1900 to that of the premier port of Malaysia.

In August 1973, Port Kelang has joined the ranks of other advanced ports in accepting the revolutionary method of shipping—containerisation. Since the beginning of operations at the container terminal in August last year, a total of 10,000 containers were handled by the end of the year. 21,500 containers are expected to be handled this year (1974).

The trend in transportation is towards containerisation. Realising that the port would be the poorer for any delay in keeping up with this trend in the shipping world, the Authority had, as early as 1967, already planned for containerisation.

To prepare for the arrival of container ships the Authority embarked on a project aimed not only at catering for container ships but also at increasing and improving facilities for conventional traffic as well.

The first phase of the project called for the reclamation of about 62 acres of swampland on which on—shore facilities for the extension would be built.

Phase II of the project began in June 1970 with the construction of the 2,800 feet extension wharves. The project was completed by June 1973 and was officially declared open by the Prime Minister Tun Abdul Razak in November, 1973.

The project which cost over M\$86.5 million called for the construction of new wharves and other container and conventional facilities including the purchases of equipment to cope with the extension.

2,800 feet of new wharves were

built, out of which 2,100 feet are for berthing container ships and the remaining 700 feet for conventional. The superstructure of the wharf takes the form of a coffered slab deck, some 260 feet wide. This form of deck lend itself well to repetitive construction and is economical in cost, robust and capable of taking heavy loads.

The fendering system had to be able to absorb the berthing forces of the 60,000 tons container ships without damaging the wharf structure, yet sufficiently flexible to be able to accommodate the berthing forces of 8,000 tons and smaller general cargo ships without damaging the ships.

The fenders provided consisted of a steel framed structure with a timber facing. The units hang on two struts and bear against four rubber blocks approximately 3 feet long and 2 feet in diameter. Between the fenders and rubber blocks are expendable "load fuses" which are specially developed for the fendering system. The load fuses are basically 'safety valves' which progressively collapes in the case of heavy berthing, thereby minimising the risk of permanent damage to the wharf or serious damage to the ship.

Built on each of the wharf are 2 transit sheds, each 600 ft. long and 105 feet wide. The sheds are used for cargo discharged from general cargo ships. The area between the 2 sheds is used for stacking containers.

Access to the wharf is provided by 3 road bridges and one rail bridge, varying in length between 300 ft. and having a 24 ft. wide carriageway and 2 footpaths.

The shore facilities provided for handling containers include a paved container stacking area which will eventually cover 28 acres, 3 godowns each with a storage area of 50,000 sq. ft. and a container packing and unpacking shed 600 ft.

An aerial view of North Port, Port Kelang, Malaysia. In the froground is the 2,800 ft. extension wharves of which 2,100 ft. are for container vessels.

The container stacking yard. At present the yard is 18 acres. It will eventually cover 78 acres.

Taking a look around the container terminal after the official opening of the wharves, Tun Abdul Razak with the Kelang Port Authority's chairman Raja Azam on his right, and the Minister of Communications Tan Sri Sardon Jubir on his left.

long and 120 ft. wide, where up to 38 containers can be worked on at any one time. A weighbridge to weigh export containers has also been installed next to the terminal office.

2 container cranes costing M\$3.7 million each were purchased under the containerisation project. Each of the 160 ft. high cranes has a lifting capacity of 35 tons. Two more cranes will be added when the number of containers handled reaches 100,000. Two 2,700 h.p. tugs were also purchased for berthing of container ships.

Other container handling equipment include 8 straddle carriers each with a lifting capacity of 30 tons and 12 prime movers, nine 20 ft. and six 40 ft. trailers and 10 fork-

The Prime Minister Tun Abdul Razak unveiling the plaque at the official opening of the North Port Extension wharves in Port Kelang, Malaysia, on 28th November, 1973. Looking on, from left are The Deputy Prime Minister Datuk Hussein Onn, the Minister of Communication Tan Sri Sardon Jubir, the Port Authority's Chairman Raja Azam bin Raja Kamaralzaman.

lifts for stuffing and unstuffing of containers. Additional handling equipment to be purchased include 2 units straddle carriers, 8 units prime movers, 3 units 20 tons trailers and 4 units 40 tons trailers.

2. Conventional Facilities

The port of Port Kelang lies in 2 areas known as South Port the Original Port and North Port. These two areas are about $3\frac{1}{2}$ miles apart, both have good roads and rail l'nk-up.

For the purpose of co-ordinating the activities of both ports, the headquarters of the Kelang Port Authority is sited between the ports. South Port has 4 ocean wharves 2,190 feet long with 30 feet—34 feet of water alongside. Besides the ocean wharves there are 2 coastal shipping wharves of 650 feet with 20 feet of water alongside, 5 swinging buoys, 2 anchorage and 860 feet of lighterage wharves.

Covered storage area in South Port totals 447,825 sq. ft. and open storage area 120,000 sq. ft.

All transit and storage sheds are served by road and rail.

Bulk installation for the storage of palm oil, latex, coconut oil, petroleum and fuel oil have been erected in the port with pipeline connections to the wharves.

North Port, the entry point for most of the country's import, has 5 ocean wharves with a total length of 3,190 feet. The 2,100 feet of wharves for container ships can also be used by conventional ships when there are no container ships in port, thereby giving a total of 9 berths in North Port.

There are 6 transit sheds with a total area of 321,728 sq. ft. All the transit sheds are served by two railway tracks in the rear. In addition to the transit sheds, there are warehouses for the storage of cargo.

Paved open area in the North Port totals 385,432 sq. ft. several cranes and other modern equipment are provided to operate this area.

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