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12ft (3.66m) **Slew pathway diam** 12ft (3.66m)

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HARBORS

Editor: Yoshio Hayashi

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PORTS and HARBORS

IAPH Head Office Announcements: Page 7~15

Dr. Chujiro Haraguchi Passes Away



The Late Dr. C. Haraguchi

Dr. Chujiro Haraguchi, 7th President and an Honorary Founder Member of our Association, passed away on March 22, 1976 at the Central Municipal Hospital of Kobe, Japan. He was 86 years old.

The news was immediately telexed to President Howe and the members of the Executive Committee, while all Association members were informed of by airmail.

The funeral service of Dr. Chujiro Haraguchi was conducted solemnly on March 26, 1976, at the Kaizoji Temple, Kobe with a thousand of mourners attending, representing various fields of the country, governmental, political, as well as private, with which he had contacts in his life-time.

Representing IAPH, Dr. Hajime Sato, Secretary General, and Mr. Toru Akiyama, Secretary General Emeritus, attended the funeral service and dedicated their prayers to the "Father of IAPH" and their personal teacher and good friend.

The City of Kobe will hold a formal Municipality Funeral Service for the former Mayor on April 6, 1976, enabling all citizens to dedicate their personal mournings to the greatest leader that the City has ever had.

The condolences reached here by the end of March from members of the Association, besides one from Secretary General Dr. Sato, follow: (TKD)

Lament Over the Death of Dr. Haraguchi

By Dr. Hajime Sato Secretary-General of IAPH

Dr. Haraguchi, former President and Honorary Member of this Association, closed his 86-year eventful life of cerebral infarction on March 22nd, this year, at the Central Municipal Hospital of Kobe City. To those who had looked him up with love and respect for his lofty idealism this sad news came as a heart-breaking shock. I offer my deepest condolences, herewith, to his bereaved relations.

Dr. Haraguchi served the people of the Port City of Kobe as Mayor for 20 years on end, from 1949 through 1969, and the city people, in turn, placed a total faith in him and his administration, as if their father.

It was in 1949 and during his tenure of office that the International Port and Harbor Conference was hosted by this city and that the first thought of establishing the International Association of Ports and Harbors developed therefrom in the form of a resolution introduced by Port of Oakland (represented by Mr. D.W. Frost). Dr. Haraguchi, therefore, could duly be called the parent of IAPH who provided for the birth of the permanent international organization.

Dr. Haraguchi did actually maintain inceasant concern with the growth of IAPH all along, and had missed none of the conferences to participate actively, except the last one at Singapore in 1975 at which he was prevented from attending for his deteriorated health.

At the London Conference in 1965, Dr. Haraguchi took the rostrum himself to speak on "Development of Region to Bring Prosperity to Ports", and broke the news to the world of his great plan for creating a "Port Island" of 400 ha off the Port of Kobe and right in the middle of the deep bay.

Following the heated questions and answers exchanged across the rostrum over the exciting subject, I recall, a nickname "King Mayor" was offered to him from an anonymous on the floor for his bold and amazing decisions. He at that moment appeared to be an almighty being.

All the participants in the Tokyo Conference in 1967 were invited to Kyoto City of historical fame and monuments and Kobe City which was under the jurisdiction of Dr. Haraguchi himself, on their post-conference tour. While they enjoyed Dr. Haraguchi's warm hospitality one evening at Arima Spa of Kobe City, full of the Japanese traditions, they also had the opportunity of taking a direct look at the "Port Island" in the making with their own two eyes. The hillside to the north of the city was cut through and a great quantity of earth was being moved down to the seaside by miles of belt-conveyers passing in parallel through tunnels and on lifted bridges to be filled into a train of awaiting push-barges at the end the belts to be carried away and thrown in the sea of the projected spot, the top of the man-made island just emerging above the surface. The observers of this gigantic enterprise expressed their spotimpression of it as "moving a mountain into the sea" operation.

In 10 years after the London Conference, the Port Island constructed by Dr. Haraguchi is now busily functioning as the Container Port in the Greater Kobe Port Area, the total tonnage of the container cargoes handled here annually, since 1974, exceeding 11,000,000 Ton level. It has grown, in its true sense of the world, to be No. 1 container-cargohandling port in the world. Nobody today would hesitate to acknowledge the greatness of the great scheme of thought Dr. Haraguchi had harbored, and his overwhelming power to execute what he once schemed of to a dot, not betraying the name of "King Mayor".

The far-sighted pioneer in the port-administrative world with such a unique caliber of visions now disappeared abruptly from our sight. I might not be the only individual who feels as if a great void suddenly created before the eyes.

Pondering over the great services he accomplished in his life-time, I pray now, his soul may rest in peace.

Messages of Condolence

1. from Mr. Howe Yoon Chong Chairman/General Manager Port of Singapore Authority President of IAPH

I am indeed sad to learn of the death of Dr. Chujiro Haraguchi, a Founder Member and the 7th IAPH President. His association with the IAPH had been a long one and for many, many years, he was a pillar of strength to the Association. I am sure his many friends in various ports want to join me in expressing our sincere condolences.

2. from Mr. Robert L.M. Vleugels Director General, Port of Antwerp Immediate Past President of IAPH

I sincerely participate in the sorrow of the relatives and friends of Dr. Chujiro Haraguchi.

He was a great man, a friendly person. He achieved great projects for his people, for his city and for the IAPH.

He shall remain in respectful memory for ever.

3. from Mr. R.W. Carr Chairman, Auckland Harbour Board Executive Member of IAPH

Deeply regret passing of our good friend Haraguchi. Haraguchi has contributed greatly to port understanding

8 PORTS and HARBORS - MAY 1976

and co-operation throughout the world and his name will be remembered in posterity. Please convey our sympathy to his family.

4. from Mr. Charles H. Dicky Delaware River Port Authority

Would you please pass our condolences to his family on the passing of Dr. Chujiro Haraguchi. He was a great leader of our organization and he will be missed greatly.

5. from Mr. T.J. Thorley General Manager, Port of Long Beach

The Port of Long Beach joins the rest of the maritime world in mourning the passing of a good friend, Dr. Chujiro Haraguchi. His innovative idea for the forming of the International Association of Ports and Harbors introduced a new way for ports of the world to better themselves and their service to mankind. His counsel and guidance will be missed.

6. from Mr. A.S. Mayne

Chairman, Melbourne Harbor Trust Commissioners

The passing of Dr. Chujiro Haraguchi has been received here in Melbourne with the deepest regret.

Dr. Haraguchi earned the deepest respect of all who knew him and his achievements for the port and city of Kobe and for IAPH will be a lasting memorial to him.

Would you kindly convey our condolences to all concerned.

7. from Mr. E.S. Reed Port Director and Commissioners of the Port of New Orleans

The Board of Commissioners of the Port of New Orleans shares with you in the loss of Dr. Chujiro Haraguchi. His passing away removes one of the guiding lights of the International Association of Ports and Harbors, an Association made great through the efforts of such men as Dr. Haraguchi.

Please accept our condolences.

8. from Burma Ports Corporation

Burma Ports Corporation record with deep regret the death of Dr. Chujiro Haraguchi, IAPH Past President and desire to tender their sincere sympathy to Mrs. Haraguchi and family in their bereavement.

9. from Port Authority of Trinidad and Tobago

Please convey to relatives of Dr. Chujiro Haraguchi our condolences at his passing.

10. From Mr. Stanley Johnson, Director British Transport Docks Board 2nd Vice-President

Deeply grieved to learn of Dr. Haraguchi's passing. His great work for IAPH will long be remembered and he will be sadly missed by all members who were honoured to be his friends.

(The condolences arriving the Head Office later than April 1st, will be published in the next issue of this journal)

2 Committee Chairmen Retiring

As announced in the December 1975 edition of "Ports and Harbors", Mr. John Lunch retired as Director General of Port of London Authority on 31st March 1976. Due to the retirement, he also relinquished his IAPH appointments as Chairman of the International Port Development Committee and Liaison Officer with UNCTAD.

Mr. John Lunch served on the Committee since 1971 following the resolution at the 7th Conference held in Montreal to activate this Special Committee which had been dormant since 1969.

Mr. John Lunch was appointed as Liaison Officer with UNCTAD in December, 1973, and since then he has been very active in his new assignment.

Prior to his official retirement from PLA, Mr. Lunch sent a letter to President Howe Yoon Chong and his Committee members, a part of which is introduced hereunder.

Mr. Sven Ullman, General Manager of Port of Gothenburg, was appointed by President Howe in February, 1976, to take over both the Chairmanship of the Special Committee and the liaisonship with UNCTAD. His message of inauguration will be introduced in a future issue of the Association journal.

Incidentally, Mr. D.E. Taylor, Chairman of the National Harbours Board, Canada, retired from his office at the end of last year. Mr. Taylor has been a member of the Executive Committee and also served as Chairman of the Constitution and By-Laws Special Review Committee since January, 1974, succeeding the late A. Lyle King, who was the First Chairman of the Committee which has been established at the 8th Conference in Amsterdam.

For his successor as the Chairman of the Special Committee and as a member of the Executive Committee, Mr. J.H.W. Cavey, Officer, Ministry of Transport, Canada is to be nominated. Upon official appointment, the Head Office will publish his debut message in this journal.

Mr. Taylor's letter addressed to the Secretary General, as follows (TKD);

From Mr. Lunch to President Howe

Jan. 26, 1976

In writing this letter I am "signing off" as I formally retire on 31st March 1976. I have greatly enjoyed working with and for IAPH. It has been very rewarding and perhaps I have been able to help a little.

In particular, my wife and I have so greatly valued the wonderful friendships that we have made through IAPH-it is a great world of brotherhood.

For health reasons I can only undertake part-time business activities and I will be doing this as a management consultant from 1st April, particularly in the international ports field.

I am particularly sad that my involvement with the International Port Development Committee must now come to an end. I have greatly valued all the help I have received from members of the Committee in carrying out this very worthwhile work and I believe that the Committee has made a major contribution to the role of IAPH in international port affairs. I know that under Sven Ullman and with your continued support the Committee will continue to play an important part in helping ports in developing countries and I would like to take this opportunity of wishing you every success in the future.

I do hope that I may, in some way, be permitted to keep up my association with IAPH as an individual after I leave PLA.

> Very best wishes, Yours ever, John

From Mr. Taylor to Dr. Sato

Feb. 10, 1976

Dear Dr. Sato:

This will acknowledge receipt of your letter dated January 14, 1976, which was waiting for me on my return to my office. Your kind thoughts and expressions of good wishes in connection with my new responsibilities for the Government of Canada on the Tax Review Board are very much appreciated by me.

It has been a great opportunity and pleasure for me to serve Canada in the matter of port administration, and to meet so many dedicated and friendly colleagues throughout the world, who because of mutual interest in marine transportation are brought together in the International Association of Ports and Harbors. Further, it was my good fortune to be accepted as part of the Board of Directors and the Executive Committee of I.A.P.H., and to benefit greatly from the accumulated experience and wisdom of those people representing the different Countries and Regions of the World as they discussed common problems, goals and objectives. The cohesive and organizational role filled by the Secretary General Emeritus, Mr. Toru Akiyama, yourself as Secretary General and all the fine members of the Head Office staff is an essential element in such a complex, and widely dispersed association. The fact that this difficult role has been carried out with dignity, and respect for the views and the aspirations of all the Members of I.A.P.H., is indeed a credit to all of you.

Since the last convention in Singapore I have had an opportunity to discuss most of my views on future policy and programs of I.A.P.H. with some of the members of the Special Review Committee, and in particular with the First Vice President, Mr. George Altvater. I do hope these discussions will prove helpful to the Committee in its further deliberations, and if there is any way in which I can be of assistance to the new Chairman of the Committee, who will be appointed, I shall be pleased to do so.

On behalf of my wife Doreen, and myself, I wish all of our friends in I.A.P.H. the very best and we shall look forward to continued meetings with many of you when the opportunity arises.

> Yours sincerely, Del. Taylor

On Legal Protection of Ports and Navigable Waterways

On the subject of Legal Protection of Ports and Navigable Waterways, interesting views have been exchanged recently by correspondence between Mr. Brokenshire, Secretary of Australian Port and Marine Authority and Mr. Andre Pages, via Head Office. With the permission of both parties, we introduce the two letters hereunder.

Members will see all the essential problems in this regards presented in this correspondence. (DSG)

From Mr. Brokenshire to Dr. Sato Jan. 29

Dear Dr. Sato,

The Association of Australian Port and Marine Authorities has considered IAPH Resolution No. 6 (March 1975), in particular sub-section (1) which makes the point that there should be full economic responsibility by the vessel its owners and agents for any and all damage, subject however to the availability of insurance which shall be not less than equivalent of the full insurable value of the vessel. 2. The foregoing has identified and determined policies for the traditional parties. However, another influence is now being experienced, particularly with airlines; that of damage arising from sabotage and terrorism. It is quite possible that acts of sabotage or terrorism could spread and be directed against a vessel, causing very serious damage to a port installation, or vice-versa should the act occur on a wharf and affect a vessel berthed there. The risk of injury to third party persons is very real and could conceivably result in heavy claims being lodged against the Port Authority for alleged negligence and failing to properly screen persons allowed on the wharf.

3. Accordingly, this Association seeks information on whether the category of risk indemnity referred to in paragraph 2 above is within the previous IAPH considerations for ship owners full economic responsibility, (as expressed in IAPH Resolution No. 6, March 1975)

4. I am sending a copy of this letter to the Chairman, Special Committee on Legal Protection of Navigable Waterways (Mr. Andre Pages) and also to the IAPH Liaison Officer with IMCO (Mr. A.J. Smith). Comment at your convenience on the above query by the Association of Australian Port and Marine Authorities would be appreciated.

Yours sincerely

From Mr. Pages to Mr. Brokenshire Mar. 3.

Dear Mr. Brokenshire,

Thank you for the letter of the 29th. January, addressed to Dr. Sato of the I.A.P.H. and the copy sent to me for my perusal.

We very much appreciate the A.A.P.M.A. pointing out the risks which menace ports regarding acts of sabotage or terrorism, that might be carried out on board a vessel moving through or berthed in their waters.

This is a danger which has become, in fact, very real-even if, thank goodness, it has not yet happened in a

maritime port as it has, alas, in airports.

The resolutions adopted by the I.A.P.H. at Amsterdam, (1973) and Singapore, (1975), do not envisage more than damage which might be caused to port installations through a shipping accident, where the ship is liable.

The questions raised by the A.A.P.M.A. fall into a different category and a very important one:

a) To what extent would an act of sabotage on board a vessel exonerate the owner from his liability vis-à-vis the third parties involved (passengers, cargo owners, port authorities)?

b) To what extent could a port authority be liable for lack of surveillance against terrorist action?

It seem difficult to reply to these question, without studying them in much greater depth, which is probably well outside the scope of the 1957 Convention on the Limitation of Liability for the Owners of Sea-going Vessels.

Other International Conventions, relating to State liability for the security of persons and property, are probably more concerned, as well as numerous national laws.

Yours faithfully

Mr. Bastard introduces "Worldwide Tanker Casualty Returns 1975" by Mr. A. Mckenzie of Tanker Advisory Center of New York

During the IAPH Conference in Singapore, the Special Committee on Large Ships (COLS) presented a report. The majority of this report was consecrated to the study of the problems linked to the safety of very large ships in ports. Recommendations were made and the importance of some of them led us to ask the IAPH to transmit the affair to IMCO in order that international rules be edited to prevent accidents due to the presence of very large ships in ports.

The importance of the subject led the COLS to study it for the 10th IAPH Conference by focusing its action on the port authorities liabilities and the operations of very large ships in ports. An enquiry was made in the main world ports in order that the information necessary to make up a report be collected.

The study made by the Tanker Advisory Center of New York shows that, in the field of oil tankers alone, the number of accidents and consequences reached a total of 22 complete losses of tankers and 90 deaths. This loss is much too heavy. We are certain that simple measures could considerably reduce the risks. The strict application of safety measures, operation rules, experience having proved their validity, the training of men with responsible jobs which become more and more complicated each day, make up elements linked to the optimal safety of very large ships' operations.

The port authorities have a fundamental role to play and we hope that the modest efforts of the Special Committee on Large Ships' members will try and enforce a safety reflex which should prevail over every economic consideration. (See next page.)

TANKER ADVISORY CENTER

ARTHUR MCKENZIE, DIRECTOR

WORLDWIDE TANKER CASUALTY RETURNS 1975

February 18, 1976

Tanker total losses rose to record heights in 1975. There were 22 tankers of 815,000 deadweight tons reported as actual or constructive total loss. The corresponding loss ratios are 0.25% of deadweight tons and 0.51% of number of tankers. Strandings, fires and explosions were the cause of 14 of the 22 losses. Tankers constructed during the period 1951-1955 suffered loss ratios significantly higher than tankers built in earlier and later periods, continuing a ten year trend of high loss ratios for this class of tankers.

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21	1	1		3	1,660	'74	COLLISIONS	77	2	15	8	10	2,930
22				1	50	'73		71	1	14	43	6	2,350
52		—	—	2	47	'75		273	2	36	3	14	1,887
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21	1	23	33			'74	FIRES & EXPLOSIONS	76	6	76	54		
25	2	8	7	—	Name of Street o	'73		91	4	28	48		
45	1		-	_	_	'75	DAMAGE TO MACHINERY,	228	1	_		_	_
87	2	2			_	'74	SHAFTS, PROPELLERS,	401	2	2	—		_
101			1		_	'73	ETC.	365		2	7	_	_
37	1	2	1	4	2	'75		156	2	37	1	16	58,913
32		_		3	2,599	'74	OTHER CASUALTIES	178		1		22	3,615
58		2	2	1	·	. '73		220		6	9	12	1,220
188	4	5	3	9	3,050	1975		906	22	90	14	45	188,041
267	5	26	33	9	4,879	1974	TOTALS	1,168	14	94	62	48	67,115
340	4	13	11	6	2,250	1973		1,273	12	70	159	36	84,458

*Includes Actual and Constructive Total Losses

The number of reported tanker casualties is declining. This is probably due to the practice of including deductibles ranging from \$10,000 to \$60,000 in tanker hull & machinery insurance policies becoming more wide spread. The slow-down of nearly all tankers and tie-up of over 500 surplus tankers are also contributing factors.

All the casualty data was obtained from Lloyd's List published by Lloyd's of London. Tankers, ore/oil carriers and bulk/oil vessels of 6,000 deadweight tons and over were included in the statistics. And liquid gas carriers of 6,000 deadweight tons and over were included if their liquid gas capacities were less than 80% of their total cargo capacity.

Copies of the report in Lloyd's List on any casualty can be obtained from the Tanker Advisory Center. There is a charge for this service.

The following table shows the growth of the worldwide tanker fleet and the total losses suffered during the past 12

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years. The loss ratios as a percent of deadweight tons and of number of tankers are shown graphically, with a breakdown between actual and constructive total loss ratios.

					TANKER TOTAL I (6,000 dwt & ov	.OSSES ver)				
						DWT =				
MID	YEAR	(ATI	L+CTL)		% LOST	<i>‡</i> F ,,,				
TANKI	ER FLEET	È LO	SSES		.10	.20	.30	.40	.50	
<i>‡</i> ‡	DWT millions	<i>‡</i> ‡	DWT '000s		,	,	,	,	,	
3027	79.6	9	195	1964		,,,,, ,				
3108	87.7	11	294	1965			· · · · · · · · · · · · ·	. ,		
3170	96.9	14	332	1966		,,,,, ,	, , , , , , , , , , , , , , , , , , , ,		,	
3226	107.4	11	285	1967		,,,,,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,,,,,	,		
3314	120.2	16	312	1968		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		, , , , , , , , , , , , , , , , , , ,		
3387	135.7	14	645	1969			ATL		<u>CTL</u>	
3476	155.7	16	449	1970				, , , , , , , , , , , , , , , , , , , ,	, ,	
3609	180.0	19	736	1971			,,,,,,,,,,,		, , , , , , , ,	
3717	205.8	21	787	1972				,,,,,, ,,,,	, , , , , , , , , , , , , , , , , , , ,	
3839	236.2	12	682	1973		,,,,,	,,,,, ,,			
4034	274.9	14	537	1974		,, , , , , ,	, , , , , , , , , , , , , , , , , , , ,	,		
4268	317.5	22	815	1975		,, ,,,, ,,,,		, , , , , , , , , , , , , , , , , , , ,	, , , , , , , ,	

The next table compares the loss ratios for tankers constructed during different periods of time. Tankers built during the years 1951 to 1955 have the highest loss ratios. There were 830 of these tankers constructed and about 450 are still in service.

TOTAL LOSS RATIOS BY TANKER CONSTRUCTION PERIODS

.

	195	0&									197	1 &
	Ear	lier	1951-	1955	1956-	1960	1961-	1965	1966-	1970	La	ter
	Ratio ≇	% of dwt	Ratio ≇	% of dwt	Ratio ∦	% of dwt	Ratio ∦⊧	% of dwt	Ratio ∦	% of dwt	Ratio ∦⊧	% of dwt
1975 1974 1973	.35 .31 .00	.26 .32 .00	1.48 1.13 .70	1.38 1.00 .47	.84 .31 .41	.78 .27 .32	.57 .00 .14	.56 .00 .20	.12 .37 .25	.11 .22 .39	.10 .15 .26	.08 .14 .24
1972 1971 1970	.75 .23 .66	1.01 .53 .63	1.56 1.07 1.31	1.53 1.04 1.15	.30 .61 .00	.28 .71 .00	.28 .42 .42	.30 .43 .13	.25 .25 .16	.28 .21 .14	.53	.28
1969 1968 1967	.60 .93 .52	.83 .64 .42	.68 1.20 .78	.59 1.22 .61	.30 .20 .20	.23 .19 .48	.00 .00 .00	.00 .00 .00	.65 .00 .00	1.11 .00 .00		
1966 1965 1964	.90 .56 .63	.99 .52 .66	.75 .24 .36	.98 .17 .33	.10 .20 .10	.05 .23 .06	.14 .55 .26	.11 .52 .29				

The statistics on total number and tonnage of tankers for the various years shown in the tables was obtained from The Tanker Register published by H. Clarkson & Company of London.

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Mr. Pages Introduces 2 Interventions at 28th IMCO Session, London

Mr. A. Pages, Chairman of the Special Committee on Legal Protection of Navigable Waterways, recently reported on the two interventions he made at the 28th Session of IMCO convened in London from November 24th to December 5th on behalf of the IAPH.

The subjects he discussed on are (1) "Validity of the research for reasonable premiums in order to reduce the cost of maritime transport" and (2) "Admittance for the owner of a vessel to participate in his own limitation fund".

On the proceedings of the 28th Session of IMCO's Legal Committee held in the same period, Mr. A.J. Smith reported for the April issue of "Ports and Harbors".

Thanks to our two active representatives, the Association is posted well informed of main currents of activity by the world inter-governmental organization.

Mr. Pages' report follows. (DSG)

Subject:

Validity of the research for reasonable premiums in order to reduce the cost of maritime transport.

I-It would be too much to expect to make a definite saving for everyone concerned by:

- very strictly calculating the limits of liability for the ship-owners,
- locking the doors which lead to a ship-owner forfeiting his right to limit liability,
- reducing, to the lowest possible level, the insurance costs affecting the operation of a vessel.

In fact, damage caused by the operation of a vessel would neither be reduced or irradicated by the above. But, were damage only partially compensated by the liable ship-owner and his insurers, the costs would than fall upon: - all the other parties concerned,

- the ports, who often find themselves in a distressing situation, (as much technically as financially), when their access channels, their docks or their guays are
- their access channels, their docks or their quays are blocked or encumbered by the wrecks of vessels abandoned by their owners, when their locks or swing bridges are damaged, when their waters are polluted . . . and the liability for such very serious damage, may fall upon a vessel of relatively modest dimensions.

- The situation of the port concerned may be even more difficult when the port is one in a developing country, where financially, technically, administratively and legally, they are insufficiently equipped ... for meeting the situation.-

- other vessels, apart from the one responsible for the damage in a port, who could find their entry or exit blocked or be affected by pollution, fire or explosion ...
- the whole economy of a country, of which the port is the vital link with the outside world, some of which seriously suffer already from over congestion (and these ports are not only confined to the developing countries).
- II-Is it fair to uphold that the splitting of costs between the

multiple parties concerned is immaterial, since such accidents are inevitable every day, here and there throughout the world, in any activity as thriving as that of shipping?

- From the most general view-point and in any sphere of activity, it is immoral to leave others with any part of the costs of damage for which one is responsible. We are concerned here with a clandestine but very real increase in the remuneration which maritime transporters demand of their contractual partners, (shippers, passengers). It is an authoritarian taxation, on all the other parties involved, on the users, badly compensated for transport damage, on the country's taxpayers, where public installations are damaged, on private people, who are only involved through mere chance.

- Can one from a pragmatic and somewhat cynical point of view, claim that, on a world-wide plain, it doesn't matter very much in the end how the costs for damage are divided, since the damage is inevitable anyway? But fundamentally, this is surely false reasoning:

Partial exoneration of the consequences of one's own faults and the damage caused to others has never incited care and attention. And who, in any sphere of activity, has the means to reduce to their own level the incidents that happen and the consequences which result therefrom, if not the participants?

This consideration is particularly valid, where maritime transport is concerned, at a time when the development of larger and larger vessels and more and more sophisticated equipment comes into greater and greater contrast with the crisis in the recruitment and formation of crews and when the human element is playing a greater and greater part in the ocurrence of incidents and accidents/

III—The capacity of the Insurance Industry, when fixing limitations of liability for ship-owners, is certainly a consideration of great practical value. In fact, a liability, can only be brought into play, if the person liable is solvent and this solvency, generally, is dependent upon the cover accorded by the insurers.

Certain information, however, supplied on the capacity of this industry is astonishing, if the following points are considered:

- If since 1957, the gold index clause, which the authors of the Brussels Convention introduced, had been freely applied, the ceilings of the limitations of liability at that time, would already have been multiplied by a coefficient in the region of 4 and come what may, the ship-owners and the insurers would have had to follow suit.

- It could be asked why, they cannot, today, all things being equal, fulfil a function, which did not at all seem insurmountable to them in 1957, when the global tonnage of the world fleet, was only a fraction of what it is today.

- Besides which, the ship-owners, who also call on the insurance industry to cover their own possessions, (hull insurance, insurance for engine failure . . .), did not forget to readjust the amounts for which they insured, proportionally to the value of the goods they were protecting. Thus, the amounts for which they insure, to cover their own interests, often exceed (and by a long way) the amounts for

which they have to insure to cover their third party liability as per the 1957 Convention, which is abnormal to say the least.

The International Association of Ports and Harbors (I.A.P.H.) can in consequence only:

- recall the resolution which it has already submitted to the I.M.C.O., proposing a minimum revaluation of the limitation of liability of the 1957 Brussels Convention by a coefficient of 5;

- insist upon the need to bring out new numerical values using suitable means of re-evaluation, in order to compensate the monetary erosion, which will certainly continue to affect any new monetary unit likely to be introduced into the new Convention.

SUBJECT — Admittance for the Owner of a vessel to participate in his own limitation fund.

The aim of the text under discussion is to provide for the owner of a sea-going vessel to be allowed a share in his own limitation fund to compensate him for the measures he might have taken in order to prevent damage likely to have been caused to a third party or to reduce it, if this could not be totally avoided.

This clause appears to be highly debatable.

In a very general way, it is elementary that it is the duty of any person, who, at any given time might cause damage to a third party, to do all he can to avoid this damage and if unavoidable, to limit the amount.

This consideration applies in particular to the owners of sea-going vessels, who following a navigational incident or accident, could become liable for damage inflicted on several parties, (passengers, cargo owners, the port of call, the environment...)

Together with the obligation for a ship-owner to do all he can to avoid or limit damage caused to others, goes, not only, following his judgement, his responsibility and his duty, but also, his own interests, without adding the incentive of an eventual participation in his own limitation fund: the objective of saving his own property (the ship) coincides, more often than not, with that of protecting others against multiple damage. And, even when the owner of a vessel has estimated that he no longer has the chance of saving his own material property, it still rest with him to protect his moral and commercial interests.

What is more, if the clause in question were adopted, all salvage operations for a vessel in difficulties and conduct in the initial and first interest of her owner could benefit from being imputed to the limitation fund concurrently with all other claims.

In fact, the owner of the vessel could always maintain that the efforts he made to save his vessel were simultaneously in the interests of multiple third parties; the passengers and their baggage, the cargo, which were all endangered with the ship, the country's coastline and the port, which was threatened by a ship sinking and disintergrating into a wreck... and equally any other vessel in the area, since traffic could be blocked, endangered or hammpered by the presence of the wreck.

In this respect, I should like to cite two classic examples:

When a vessel finds herself in difficulty at sea, (fire or leaking), salvage efforts tend to lead her to the nearest port,

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even if it is not one of her normal ports of call. For humanitarian reasons, the port rarely refuses shelter for such visits, even if, as often happens, it is badly recompensed.

Often, the vessel is already condemned and sinks in the basins or channels of the port which harbours her. Often after tentative attempts to refloat her, she is abandoned as a wreck.

I wonder, if in future and with the new clause under discussion, the limitation fund will find itself already broken into by the costs of salvaging and of all the attempts to refloat, which follow the sinking of a ship, or if one should consider the whole as two successive events, (firstly from the high sea to the port of shelter and then the second within the port's waters) and therefore, consider two successive limitation funds. Even in the second instance, the second limitation fund would find itself broken into by the unsuccessful attempts to refloat the vessel.

Another case, which is also, unfortunately, fairly frequent, is that of a navigational accident which happens in a port or in its navigational channel and terminates in the sinking of a vessel.

Experience has shown, that the success of refloating, depends largely on the speed and the effort of the measures taken, above all if the vessel is exposed to the action of swells, tides or currents. It has also shown, that the intervention of the ship-owner, is often slow and hesitant, to the point, where the condition of the ship deteriorates to such an extent that it becomes an irrecoverable wreck and is abandoned.

The port is then landed with a very difficult technical situation.

Is this situation to be made just as difficult financially, by the fruitless efforts to refloat the vessel having the right to claim on the fund?

The wording of the clause being discussed, also contains an ambiguity with the taking into account of only the expenses "reasonably" incurred by the ship-owner, for preventative or limitative measures taken to avoid or reduce damage to a third party, as well as the losses or personal sacrifices he made on his own assets.

Is one to understand by this, expenses of a reasonable amount:

- compared to the global sum of the interests to be protected,
- or compared to the strength of the measures put in hand?
 - Should one understand that the measures taken:
- should have been taken in the interests of the third party rather than in the direct interests of the owner of a sea-going vessel?
- should have been judicious in the conception and application?

Should one understand that the taking of such measures by the ship-owner and in the interests of others:

- is left to his decision alone?
- or constitutes on his part an obligation, the nonfulfilment of which, would be for him a personal error, liable to cause him to forfeit his right to limit.

IAPH replies to IMCO on Standard Navigational Vocabulary

As reported in the June 1974 issue of the journal, IAPH was asked to comment on the draft of the Standard Navigational Vocabulary, full text of which was reproduced in the afore-said issue, prepared by IMCO Maritime Safety Committee.

Mr. A.J. Smith, IAPH Liaison Officer with IMCO, reported that the above draft will be adopted by the Committee at its coming session and asked for the IAPH comment on the draft. President Howe, after being consulted by Secretary-General, advised that the draft text be adopted as it was for there had been no special comments expressed by the members. (rin)

1976 Calendar of ESCAP Group Activities on Shipping and Ports

Mr. Jan Sesselaar, Regional Port Adviser of ESCAP and Member of IAPH, kindly supplied the Head Office with the information on the group activities of United Nation Economic and Social Commission for Asia and the Pacific, Staff Service for Shipping and Ports.

Hereunder is the reproduction of the calendar for the members' attention and reference. (rin)

		1976	
	Activity	Date	Venue
1.	Workshop on Shippers' Cooperation: Economic Statistics of Shipping (Regional) NORAD-OGA	24-28 May	Bangkok/ Singapore
2.	Expert Group on Port Information Systems	5-9 July*	Bangkok
3.	Workshop on Shippers' Cooperation: Calculation of Ocean Transport Costs	2-13 August	Manila
4.	Seminar on Port Planning for Unit Loads and Containerization	1-15 September*	Bangkok/ Hongkong
5.	Workshop on Centralized Ship Chartering	20 September– 1 October	USSR
6.	Workshop on Shippers' Cooperation: Development of National Trainers (Regional) NORAD-OGA	4-22 October	Hong Kong
7.	Seminar on Port Handling Systems	11 November*– 23 December	France

* These dates are not yet definitive.

Information on details can be obtained from:-UN-ESCAP Staff Service for Shipping and Ports Sala Santitham Bangkok 2, Thailand.

Besides this there will be: "The fifth UNCTAD/SIDA 19 July— Kuala Lumpur Port Management Training 17 September Singapore Course" in the ESCAP region For information on this course:-UNCTAD Port Section Shipping Division Palais des Nations, CH-1211 Geneva 10, Switzerland

Note: NORAD stands for: Norwegian Agency for International Development. OGA stands for : Other Group Activities. SIDA stands for : Swedish International Develop-

ment Agency, Stockholm.

Membership Notes

New Members

Regular Member

Office National des Port 2, Rue D'Angkor B.P. 830, Alger Office Phone: 62.57.48/51 Telex Number: 52.738 Alger Algeria (Mr. M. Harrati, Director General)

Associate Member

Mr. Yoshio Fujino (Class E) 2-13-10, Kamiochiai, Shinjuku-ku, Tokyo 161, Japan (TKD)

Man-Made Port ``Kashima'' Converts Vast Barren Land Into Large Scaled Industrial Area

Yuzo AKATSUKA, Dr.

Director, Yokohama Investigation and Design Office The Second District Port Construction Bureau Ministry of Transport

Background and Concept

The Kashima area is one of the districts in Ibaragi Prefecture left behind in development, and it is very poor in agricultural productivity due to the long stretched dunes. Under such circumstances, it has long been looked at as an area for some kind of positive development.

The idea of industrialization of the area was first conceived by the prefectural government and then submitted to the central government for technical and financial assistance to become one of the most ambitious and successful industrial development plans in Japan. All the relevant agencies in the central government as Economic Planning Agency, Ministry of Transport, Ministry of Construction, Ministry of Trade and Industry, Ministry of Agriculture and Forestry and Ministry of Finance participated in preparation of the detailed development plan, although the substantial portion of the plan was prepared by the prefectural government in full cooperation of the Ministry of Transport.

In 1960, the "Pan-Japan Comprehensive Development Program" was established, and then, the "Special Zones for Industrial Development Program" were designated and authorized by the central government. In these programs, the distribution and relocation of the heavy and chemical industries, which were regarded as the essential elements for fostering the high-level economic growth at that time, was to be made as even as possible throughout the nation for the aim of income distribution and of alleviating development imbalance among the districts. The Kashima area, therefore, was designated as one of the Special Zones for Industrial Development to assist the development policy of the prefectural government. Once designated as the Special Zone, the city governments in the Zone are exempted from the development expenses otherwise to be born. The industries located in the Zone, with certain qualifications, are also exempted for three years from the taxes levied by the local governments, to which the central government is authorized to give financial assistance under the Development Programs.

The Kashima area is located within 80 kilo-meters of the Tokyo megalopolis and it has the ideal geographical and geological conditions of a sound foundation for various structures of the heavy chemical industry. There is the abundant supply of fresh water as the Kasumigaura Lake is nearby. This area, however, has some disadvantages which hindered it from early development of most of its area until quite recently. First, there is its 70 kilometer long coastline



Dr. Yuzo Akatsuka

dominated with dunes. Second, there is the Tone River separating it from Tokyo, as shown in Fig. 1.

Figs. 2 and 3 show the trends of employment and industrial production for export from Kashima area, in comparison with those of the whole Ibaragi Prefecture, since 1960.

For the development of the Kashima area, several policies to be mentioned in the following were taken up for the purposes of: (a) Avoiding as best as possible the acute change of the life of villagers living there for many generations already, and (b) Ensuring a safe living environment for the local inhabitant even after the development of the area into a new type of community.

Agriculture-Industry Joint Development Plan and 60-40 Land Policy

The goal of development of the Kashima area was not only to reclaim land there for industrialization, but also to raise the living standard of the farmers there and to improve their living environment through modernization of agriculture and increasing employment, thus saving the villages from collapsing. With all these as the primary objectives, the final goal was to advance the construction of the seashore industrial zone. To attain this goal, a unique policy was applied in the purchase of land from the farmers. Only 40% of their sterile land was bought for the project use, and the government guaranteed them the equivalent space of 60% of their land at a location near the project site. In case they wanted to maintain farming, the land was improved for higher productivity at the prefectural government expense.

City Plan for A Population of 300,000

The development of the Kashima district has in it two

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Photo 1. Port of Kashima at the time when the construction began



Fig. 1. Location of Port of Kashima

purposes. One is to stop the ever-accelerating collapse of the local communities as well as to reverse the trend of population decrease. The other is to build a modern city of 300,000 population provided with the suitable living environment.

Unpolluted Industrial Complex

The third aim is to build an unpolluted industrial complex. This means that from the commencement of the project plan, the anti-nuisance policy has already been taken into consideration, even when the issue of public nuisance (Kogai) was not yet tackled as a sorious social problem.

Social Changes with Project Development

Since the beginning of the development 12 years ago, priority has been given to the importance of a huge seashore industrial zone with the Kashima industrial port as



Fig. 2. Trend of employment structure (%)



Fig. 3. Trend of industrial product of Kashima area

its center. As a result, there have occurred some social changes in various places in the district due to the rapid industrialization which has quickly urbanized and modernized the local communities.

The first of such social changes emerged in the structure of employment and the population as shown in Figs. 2 and 4.

Concerning the structure of employment, the percentages of both the secondary and tertiary industries rose annualy. For the primary, secondary and tertiary industries, the percentages were 36, 34 and 30% in 1970, in contrast with 72, 10 and 18% in 1960, respectively. This trend continued without any direct relation to the increase or decrease of the population. According to the estimation, employment for the primary industry will further comparatively decrease from now on.

In agriculture, both the number of farm workers and the area of their farmland have rapidly decreased. This phenomena also reflect the nation-wide trend of agriculture in Japan during this period. The pattern of agriculture has also changed. Much farmland has been converted into residential lots. Now, pimento is one of the main agricultural produces as it usually brings in a good profit. Farming has been changed into the single-crop cultivation, such as the growth

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Fig. 4. Trend of population growth in Development zone

of pimento, for the Tokyo market.

In the field of industries, the traditional production has been changed in quality. The conventional industry of Kashima was to produce starch from the local agricultural produce such as sweet potato. The fishery industry has been replaced by the heavy chemical industry which is the essence of the complex. At the present, a large-scaled development of the seashore industrial zone is under way. Concentrated in the area are some of the private enterprises of Japan, which are the giant corporations in the country. Table 1 shows the structure.

In regards to the living pattern of the local inhabitants, it is also changed considerably. The purchasing power of the local consumers has been strengthened tremendously in line with the progress of development. The most remarkable increase was made in social expenses which was followed by food, then house-hold commodities, taxes and clothing. In education and social welfare, the capacity of nursery schools has significantly enlarged and the number of students in both primary and junior high schools has rapidly increased.

Kashima Port Project

The success of this ambitious development plan was entirely dependent on the technical feasibility of the construction of Kashima Port, which was to be located on the long stretched sandy coastline without any natural shelter from the most severe wave conditions in the Japan. The Second District Port Construction Bureau, Ministry of Transport, took the charge of the investigation, planning, design and execution of the port construction. After two years of the comprehensive field investigation, experimental studies and design works, the construction of the Kashima Port was commenced in Spring, 1963. In the plan, this port is to become the base of the Kashima Industrial Zone, and this industrial zone was projected to be the largest in Japan to contain a large-scaled heavy chemical complex.

Since the start, the original plan has been modified twice in the past 12 years. With each amendment, the scale of the project has been enlarged in compliance with the economic growth of Japan, and the most advanced engineering techniques have been utilized for the construction work, thus substantiating greatly to the making of the Kashima Port a top industrial one with all the modern facilities. The first phase of the project (1963-1975) has now finished scheduled.

As already mentioned, the goal of development of the Kashima district was to create a large-scaled seashore industrial zone on the dunes facing the Pacific Ocean, which so far had existed as a piece of wasteland subject to the whims of the sea. Therefore, the standing of the Kashima Port in the whole development project is very important as described in the master plant in below.

Nature

As shown in Table 1, Kashima serves as an industrial port of a large-scaled industrial complex which contains iron and steel works, oil refineries, petro-chemical industries and power plants.

Territory

The width from east to west is 15 kilometers inland and the length from south to north is approximately 60 kilometers along the shoreline. Hence, the total area is 750 square kilometers. The population in this area in 1975 is estimated at 600,000.

After the completion of the project, the annual industrial productivity of this area is estimated at the value of approximately US\$5.3 billion. The tonnage of cargo handled was 54 million tons in 1974.

Layout of Breakwaters

The design of breakwaters was made on the conditions that the prevailing wind direction should be NNE, the wave direction at the time of a storm should be E and the sand drift from south to north is prevailing. The breakwaters should enable the entry to the harbour to the 200,000 DWT class tankers.

	Table 1Structure of Private Enterprises in Kashima Area									
Area	Number	Space	Money invested	Gross product	Number of employee	Type of business				
Takamatsu	3	×10 ³ m ² 6,610	billion yen 3,426	billion yen 341.4	men 11,040	Iron and steel				
East Konoike	20	8,540	7,718	882.5	8,825	Oil refinery, Petro-chemical, Electricity, Pottery industry				
West Konoike	8	3,980	1,882	712.5	7,125	Iron and steel, Petro-chemical, Machinery, Foods, Feed mill, Pottery, Nonferrous metals				
Hasaki	3	1,070	304	345.6	3,456	Iron and steel, Petro-chemical, Machinery				
Total	34	20,200	13,330	1,551.7	30,446					

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Fig. 5. Plan of Kashima Port project

Channels and Anchorage

As said above, all the works of the channels and anchorage should be planned to accommodate the 200,000 DWT tankers, such as the harbour mouth, width of channels and anchorage with depths of 22 to 24 meters. The inner harbour was planned for vessels of the 150,000 DWT class carriers, for which the channel width of 600 meters was provided with the depth of 19 meters.

Mooring Facilities

The facilities in the outer harbour must accommodate tankers of the 200,000 DWT class with two sea berths of the dolphine type at the side of the south breakwater. In the inner harbour, the mooring facilities were planned to accommodate the vessels of the 150,000 DWT class in maximum. For handling cargoes which may emerge following the progress of the industrial development in the hinterland, public wharves for accommodating the vessels of the 15,000 DWT class in maximum were planned to be constructed at the innermost ends of the south and north routes.

Land Reclamation

According to the plan, an industrial zone and a utility area for urban development were to be reclaimed in the southern seashores. Fig. 5 shows the projects' plan based on the mentioned conditions.

Construction Finance

Dredging of channels and construction of port structures, highways and railways were carried out as public works. The prefectural government took the charge of construction of water supply and sewerage, land reclamation for industrial use, land improvement for agricultural use, construction of parks etc. The total cost of these civil engineering works other than those done by the private firms amounted to' approximately US\$660 million, of which about 35% was shared by the central government. The prefectural government shared the rest which was later allocated to the firms located in the Kashima area in the form of land price sold to them. The wharf structures located directly in front of the private firms were constructed for their exclusive use by their own expenses. The port related facilities completed as public works belong to the central government but are rent to the prefectural government, which is the port management body of the Kashima Port, free of charge for port operation. The maintenance and repair costs are usually subsidized by the central government.

Experience and Solutions

Discussed in below are the experience which has been gained in the construction of the Kashima Port and the solutions to various problems which have emerged during construction.

The field investigation for the construction of the Kashima Port was initiated in 1961 and the construction was commenced in 1963. Since that time, the annual project expenditure has been enlarged each year, and it amounted to approximately US\$42 million in 1972. The progress of construction has since achieved as planned.

During construction, various problems emerged, which called for solutions as described below.

1. Wave Forecast

Since the Kashima Port is located in the middle of a flat and streteched out dune coast, facing the Pacific Ocean, there is no natural shelter to prevent swells and wind waves which attack the port frequently causing the construction



Fig. 6. Construction of on-line real-time system for atmospheric and marine phenomena observations

works on the sea difficult and inefficient. In order to facilitate efficient works and to prevent unforeseen accidents and damages during construction, the weather and wave forecast was introduced on not only the conventional daily basis but also on the long-term ones as on weekly, monthly and seasonal bases. For this purpose the on-line real time system as illustrated in Fig. 6 was devised for the observation, data-processing and recording of the weather, wave, current and tidal conditions, fully automated.

The forecast was conducted on the 24-hour, 48-hour, weekly, monthly and seasonal basis, and the forecast of wind, waves and weather was made according to the flow shown in Fig. 7. Regarding typhoons and the seasonal depressions in winter and spring particular attention was paid to their course and development, since serious damages were usually caused by them when hit.

At the meetings held once every month, the data obtained from the forecast and observation were presented with sufficient explanation to all contractors in concern to facilitate them to make schedules of works at the construction site. In addition, these contractors were informed of the short-period forecast from time to time or at some other short intervals. In this way, they could maintain a safe and efficient construction pace. As a matter of fact, the information of forecasts has been highly appreciated by the contractors who have utilized it appropriately.

2. Construction of Breakwaters

As mentioned above, the Kashima Port has no natural shelter and first, therefore, construction of the basin for



Photo 2. Port of Kashima with its completion in sight

working craft was accomplished in 1963. Then, construction of the south breakwater was commenced in 1964 followed by the north breakwater. Fig. 8 show the lay-out, year of construction and structural schemes of breakwaters. In Fig. 9 a typical cross section of the south breakwater in rather shallow water is illustrated, which is of a caisson type composite breakwater. The design conditions are, for example, as follows:

Wave Height	Period	Water Depth	Tide Level
7.3 meters	12 sec	-21.0 meters	+1.4 meter



Fig. 7. Flow of atmospheric and marine phenomena forecast

Crown Elevation +5.0 meter

3. Construction of Caissons

The caissons for use in the body of the breakwater were built in the dry dock, which is 40 meters in width, 65 meters in length and 6.0 meters in depth. It took approximately 45 days in average to construct 6 to 8 caissons in one cycle. Therefore, 30 to 60 caissons were built in a year, with the placing work of the caisson concentrated on the particular period from June to August, when the sea was comparatively calm. In 1967, the caissons were also constructed on the sand bed which was later on dredged to have the caissons launched, because it was found that the dry dock was inadequate to produce the needed number of caissons for use in the year. By these methods a total of 205 caissons were produced for the south breakwater only.

The dry dock is unique in being constructed on the sandy foundation of high permeability in 10 months. First, the steel sheet piles were driven to form dock walls and then the inside was dredged for driving the H-shaped anchor piles into the bed sand layer. Next, the reinforced concrete bottom slab, resting on the anchor piles, was placed by prepacked concrete method under water. The slab is subject to the full design load when the dock is dried up.

4. Rubble-Mound Construction and Placement of Caissons

As shown in Fig. 9, the entire bed was preliminarily covered with a canvas, so as to minimize the sinking of the base rubble-stones into the bed. To prevent the scoring of the rubble-mound, a vinyle mat was further used at the foot.

In 1967, 67 caissons (51 for the south breakwater and 16 for the north breakwater) were placed in a season to form the 1,000 meter long breakwaters in total. Considering the severe wave conditions at the outer harbour and the time allowable for the work only in the June-August period, the result was more than satisfactory. To achieve this result, a new method of placing caisson was developed as shown in Fig. 10. It is well-suited to the rough sea



Fig. 8. Plan for structural schemes of breakwaters at Kashima Port



Fig. 9. One of typical sections of the South Breakwater

conditions, although the accuracy of positioning of caisson is not so good as the conventional method.

5. Filling-in, Cover Concrete and Concrete Cap

To prevent the damage due to wave actions, it is quite important to fill the caisson with sand immediately after it is placed on the rubble-mound and then concrete is placed to make the cover as soon as possible. At Kashima, a vinyle mat was spread on top of the filled-in sand and then 0.7 meter thick concrete was placed by means of a floating concrete plant. As the crown height of the caissons at the time of placement is +3.0 meter, it is apt to be affected by the waves. Therefore, it is necessary to protect the concrete cover with a 2-meter thick concrete cap. The cap was placed in two layers. The lower layer, 0.8-meter thick, was applied for the purpose of elongating the construction period as long as possible. Then, the upper layer of 1.2-meter thick was placed next year, after the due settlement of the caisson having taken place.

6. Dredging Work of Deep Channels in Outer Harbour

As the total volume of dredged soil amounted to approximately 120 million cubic meters, a very careful consideration was given to the method of transporting it in the most efficient way from the excavation and dredging sites. Offshore damping of dredged soil was avoided from the environmental view point and the soil was transported to the specifically designated area surrounded by the sea-walls. Further, to prevent water pollution, flocculating



Fig. 10. Caisson settlement method

chemicals were applied in the soil in the suction dredger, so as to expedite sedimentation of the suspended fine particles.

The most difficult part was the dredging of the very deep channels (-22 to -24 meters) in the outer harbour. For the inner portion of the channel, dredging was carried out along with the progress of the south breakwater which served as a shelter. The suction dredgers of 4,000 to 6,000 PS were used to dredge this area and the dredged soil was transferred to reclaim both the north and south shores. The dredged soil was mostly fine sand but in some areas it included gravel. At the outer portion of the channel, although sheltered by the breakwater, the large suction dredgers of 8,000 to 10,000 PS were used as the effect of waves became stronger.

For the channels situated outside the shelter from the breakwater, which is an area subject to the most severe wave actions, the trailing hopper suction dredger was used because of its higher wave-proof capacity as well as for navigational and economic reasons. The dredger, with hopper capacity of 4,000 cubic meters, was capable of dredging to a depth of -27 meter at maximum and was operational at the wave height of $H'_{2}=2.0$ meters or less. It handled 4,000 cubic meters per hour at the optimum conditions.

For the hard soil and fine sand bed where the N value of standard penetration test exceeds 50, large grab dredgers with 10 to 12 cubic meter bucket were employed.

7. Avoidance of Variation of Ground Water Level

During dredging and excavation of the inner harbour and reclamation, there was possibility of changing of ground water level in the adjacent residential area and farms that might cause some excitement and inconvenience to the residents. To avoid this, the variation was calculated beforehand and the necessary counter-measures were taken up, which included the construction of drainage system and application of well points to regulate the ground water.

8. Long-Distance, Mass-Transport of Soil by Belt Conyeyors

For certain areas of the reclaimed land, it was impossible to transport the dredged soil directly by the suction dredgers because of the long distance. Therefore, the soil was temporarily stored to be later on moved to the reclaimed land on the south shore by the use of bucket wheel excavators and belt conveyors. Then, it was finally dumped into the area of 700 meters in width and 3,750 meters in length, by means of the beach conveyors and spreaders. This transport of dredged soil was carried out in three years and the total volume amounted to 105 million cubic meters.

In this kind of work program, the coordination among discharging, excavating and loading of the dredged soil must be well adjusted. Otherwise, the imbalance would cause a dislocation in the whole transport program and schedule. Therefore, a very carefully planned system of operation must be worked out to keep smoothness and normalcy.

On the complaint over noise by local residents along the conveyor's route for soil transport, the operation was stopped at nights while the noise-proof wall made of glass fiber was built to serve as a noise absorber. Also, for the entire length of the conveyors, wind proof cover was provided to prevent flying sand. For the temporary stacking of dredged soil, the asphalt emulsion was applied to prevent the sands from being blown by the wind to the residential areas.

Epilogue

The first phase of the industrial project for the construction of the Kashima Port was commenced in 1963 and also completed in 1975 as scheduled. During the 12 years, public work expenses for the construction of ports and harbours amounted to approximately US\$660 million. Many good results have already been obtained as expected. Although some air and water pollution was observed during the initial stage of operation of factories newly introduced, it is now under control. The living level of residents have been remarkably improved. In construction techniques, a remarkable advancement has also been achieved.

The Kashima Port has been steadily expanded in its activities since its opening in 1969. The volume of cargoes handled at it is expected to total more than 60 million tons. This port is unique industrial one. Most of its waterline is allocated to quays of the well established private Japanese enterprises for their exclusive use. Accordingly, the port is provided with the special facilities, and modern ideas are incorporated in it for carrying out its operation.

Construction of the Kashima Port has been completed in accordance with the original plan. Nevertheless, for betterment of the present achievement, a newer and large-scaled improvement plan is being contemplated for it in the near future.

Port Workers: Specialisation through Technicalisation

Hamburg's Specialist Port Workers School provides new job opportunities

Hafen Hamburg Press Service

Hamburg, February 4th, 1976:-On 2nd February the St. Pauli Grammar School in Hamburg opened its doors for 100 "port pupils," the first group to make use of the new possibility of obtaining the Skilled Port Worker's Certificate. The object of the advanced training programme, which is concluded after two years with an examination at the Hamburg Chamber of Commerce, is specifically to improve the security of workplaces and enhance the social and legal position of the port worker. At the same time these measures will lead to a further increase in the efficiency and competitiveness of the Port of Hamburg.

The Port of Hamburg is a gigantic industrial working site with a wide variety of activities, jobs and undertakings with a carefully attuned system of .cooperation and concurrent operations. That this working area has acquired the reputation over the past decades of being an absolutely reliable and fast-moving port is due, not last of all, to the merits of the port worker.

Some 12,600 of them are active day by day with transshipment, storage and distribution of goods of every kind, right around the clock: stevedores, quayside workers, crane drivers, forklift operators and gantry drivers, depot workers, tallymen, warehouse staff, barge and lightermen and many others.

Some of these vocations have a long tradition. Others developed only in the recent past—from the gantry lift operator to the computer expert. They reflect technical changes in the port to modern handling methods, for instance in roll-on/roll-off or in container traffic. The signs are already apparent: the muscular port worker with his sack and trolley are a thing of the past. In many fields he has been replaced by multi-specialists who have to use their brains and are able expertly to operate the mainly expensive appliances—a container bridge for instance costs over six million marks.

Uniformity of advanced training guaranteed

It is evident that the port worker of today has to be more prepared for his special tasks than ever before. Numerous firms in the Port of Hamburg have long since accepted this position, and for years have been educating their operatives in company-run training courses. In some cases the workers can even acquire certificates, such as for operating surface transport vehicles and lifting apparatus. Other courses provide training up to foreman-ganger, loading foreman etc. Although the quality of these training courses is extremely high, there has so far been no uniformity and proper mutual and public recognition. Exceptions to this are the state recognised trained profes-



Changes in the structure of the dock worker's vocation can perhaps best be seen in container handling. The highly technical handling equipment calls for specially trained experts, who also help to make the Hamburg Container Centre one of the world's most modern and fastest turn-round terminal. (Hafen Hamburg)

sions of lighterman and port vessel master, as well as cargo controller, in which the traditional trained jobs of warehouseman, tally man and goods checker were incorporated and which indicates a new vocational development in the port.

In this connection those mainly affected were staff employed in the sectors "quay", "storage" and "stowage" (vessel), a group which last year numbered some 7,600 port workers, in other words more than half the total of port operatives. In order to provide some assistance in this respect, the ÖTV (Union of Public, Transport and Traffic Workers), the Association of Hamburg Port Businesses, the Department of Schools, Youth and Vocational Training, as well as the Department for Economics, Transport and Agriculture, worked out together an advanced training programme offering every port worker the possibility of acquiring his "specialist worker's certificate." This will not only enhance the safety of workplaces, but in particular will improve the social and legal status of the worker. Naturally, at the same time, a rise in the quality of services provided by the port companies is closely bound up with this.

Purposeful combination of theory and practice

Theoretical instruction began in the classrooms of the St. Pauli grammar school on 2nd February, with a hundred port workers sitting down at the school desks to acquire what is needed to become a specialist. Next year there will be 200 pupils. The advanced educational programme is roughly on the following lines:

Following a three-day introductory of informatory (Continued on next page bottom)

Water Management Challenges Growing

Rule Curve Being Changed

The Panama Canal Spillway January 9, 1976

Rising fuel prices and declining transit revenues are imposing new challenges on the people who manage the Canal's water resources.

At this time of the year, both Gatun and Madden lakes, the Canal's two water reservoirs, are filled to the brim, a happy situation for the Meteorological and Hydrographic Branch of the Engineering Division. This condition does pose one type of problem, that of getting rid of the water fast enough to defuse flood threats caused by sudden influxes of rain water from rivers and streams that lead to the lakes.

But it is the dry season that presents the more complex—and more extended—demands on Met. and Hyd. By employing historical data, probability projection, and detailed knowledge of existing meteorological and hydrological conditions, Met. and Hyd. personnel forecast how much water can be spared at Gatun Dam to generate

course, operatives who have never before worked in the port start practical training in a port firm lasting 14 months. This enables the participants to get acquainted in a practical manner with all aspects of port activities.

Then there is a basic course lasting four weeks dealing with such subjects as working equipment, first aid, types of vessels, port infrastructure, tasks of the individual service sectors, techniques of data flow etc.

Subsequent to this there is again practical activity in the port lasting eight months. In the 24th month the "pupils" divided according to the sectors quay/storage and vessel have the still outstanding problems of their ultimate activities explained to them, e.g., in connection with the various transport carriers, special questions of loading and discharging on the quay, handling containers, stowing and discharging on board, technical calculations and other matters. After this, when exactly two years have passed, the participants take their final examinations at the Hamburg Chamber of Commerce.

It goes without saying that those who have already worked for several years in the port do not have to go through with the entire further training programme. In individual cases the decision on this is taken by the Advanced Training Centre Port of Hamburg Association, which informs and provides advice at all time to the interested parties.

During the entire duration of the advanced training the worker has a permanent working relationship either with the Gesamthafenbetriebs-Gesellschaft (Overall Portoperating Company), which incidentally is responsible for regulating work in the port, or with one of the individual port firms. After passing his examinations he is entitled to a wage which is about 6.5% above the basic wage of 70.20 Marks for the first working day shift (8 hours), if he should not be receiving a higher, function-related wage. hydroelectric power. These estimates are passed on to the Electrical Division's power dispatchers, who determine, within one-week periods, the proper time to use the water.

Due to the skyrocketing cost of fuel, it is essential to make the most effective use of relatively cheap hydro power instead of expensive steam and gas-turbine electricity normally generated to meet power requirements.

However, Gatun Lake must be maintained at a reasonable depth for transiting vessels, whose operators receive notices of forth-coming changes in maximum draft allowance. Draft allowances limit the amount of cargo vessels can carry and, hence, restrict their revenue-earning capacity the most at the end of the dry season when Gatun Lake has fallen to its minimum. During the heavy rainfall months of September, October, and November, there is normally sufficient water to generate hydroelectric power and still maintain a deep draft allowance.

So with the start of the new year, water becomes a more precious commodity that must be carefully managed, conserved, and budgeted to last through the lean dry months. There are some months so dry that they register negative inflow of water to Gatun Lake. This results when evaporation exceeds the inflow from the runoff area. Evaporation climbs in dry season because of increases in winds, compounding the problem of stretching the water supply.

A previously announced selective dredging program, consisting of a three-phased plan to deepen the channels in Gatun Lake by a total of 3 feet by 1979, has enormous fringe benefits until future increased shipping requires more lockage water. The first foot of deepening, to be accomplished by March, will be available for the generation of hydroelectric power at Gatun Dam. This will save approximately \$319,000 in fuel bills next year.

An additional third of a million dollars will be saved next year by using water obtained in drawing the lake level down a second foot. This results in a minimum draft allowance of 37 feet, dictated by the present economic crisis, during the end of dry season and into the transition to rainy season. In 1975, the lowest draft allowance was 37'6'' and in 1974 the minimum draft was 38 feet. But in 1973, it dropped to 36'6'', and in 1972 and 1971, it went to 37 and 36'6'', respectively.

In any event, boaters and residents who lease Gatun Lake recreational sites can expect to see more exposed stumps next May and June than they have in recent years. On the other hand, the 2-foot drawdown is not expected to have any adverse effect on fishing. Also, collectors of bottles and other antiquities are likely to find easy pickings above or close to the edge of the lake.

Water management experts are basing their strategy for the coming dry season on a decision to revise a tool referred to as a rule curve.

The rule curve is a line graph plotted on a 12-month basis to indicate the desired level of Gatun Lake to provide maximum efficiency in using the anticipated available water. More important, it is a guide which Met. and Hyd. attempts to follow as closely as the whims of Mother

(Continued on next page bottom)

San Diego: New Chairman Sworn In

The first meeting in 1976 for the board of port commissioners of the Unified Port District January 6, 1976 featured installation of new officers by Superior Court Judge Eli Levenson.

Sworn in as chairman was Walter Vestal, Coronado; vice-chairman Lorenz H. Ruehle, National City; and, as secretary, Alois E. Smith, San Diego.

Outgoing chairman Frank L. Hope, Jr., San Diego, made brief comments reviewing developments during 1975.

Vestal reviewd progress he's seen since his last chairmanship in 1970, referring to this last year as "the most innovative yet in terms of ideas presented to this commission."

Noting that this year is the nation's 200th anniversary, he said: "I'm hopeful that it will also mark a period of building and improvement for the Port District; a continuation of the harbor dredging project; the Embarcadero plan; and the Shelter Island project. Certainly I hope to see a beginning of the addition which is so critically needed to the terminal building at Lindbergh Field International Airport."

He added that months have been devoted now to planning, and what's needed now is "to roll up our sleeves and get started doing things."

Coastal legislation stemming from Proposition 20 was also touched on by the new chairman. "We'll be watching this legislation with great interest, along with all the other ports in California. A balanced approach to coastal management is required, and one which neglects neither the economic requirements of the people—the jobs and commerce created by ports—nor the important environmental consideration."

Chairman Vestal concluded that, "with the help of the member cities and public support, 1976-the district's 14th year-will be productive and progressive."

Outgoing chairman Hope noted that "As I step down from the chairmanship of the Commission I can not help but look forward to the challenges and opportunities that await all of us this year—but also I think it is appropriate to reflect on the accomplishments of the District this past year.

Nature will permit.

Beginning in January and continuing through the year, the rule curve resembles the shape of the letter "U". The new rule curve follows the same general form as the one used in past years, beginning with a high lake level in January, sagging in the middle months, and climbing sharply at the height of the rainy season.

But there is a difference. The new rule curve shows a lake level 1 foot lower than the old one at the start and at the finish of the year. This gap widens from may through July to 2 feet-1 foot attributable to the dredging program and the second resulting in the 37-foot minimum draft allowance.

By the skillful handling of the uncontrollable variables related to water supply and demand, plus sound weather forecasting, in managing the revised rule curve, officials expect to reach a new high standard in water management. "It is important to remember that few if any actions have a short enough time frame to start and finish in one year—most of our efforts stretch over much longer periods of time and our job is to see that they move along at the proper pace until they are accomplished—thus our efforts are continuous in nature rather than oriented to the yearly change in the chairman and other officers.

"In this respect, we completed the basic Embarcadero planning studies this year that were begun in 1974. Hopefully, we will obtain required approvals in 1976 and start some construction either this year or early next. Action on this project can be expected to stretch out over many years and so can the monumental problems associated with so large an undertaking.

"We made progress this year toward cleaning out the Chula Vista Boat Basin but as always, the frustrations of bureaucratic approvals have delayed this project for another year and escalated the costs again—I hope it can be accomplished in 1976 but there is surely no guarantee that it will be.

"On the other hand, the beginning of the large dredging project happened in 1975-after 10 or more years of continuous effort-some critical efforts still are to be made in respect to this project-not the least of which is the problem of keeping the money flowing from the Federal Government so the project does not end before it is completed. This project will aid Imperial Beach by replenishing the eroded beaches.

"Marketing of our maritime facilities has been a continuous effort with a checkered record of accomplishment. We did some new things this year . . .

Added a Washington, D.C. representative to aid us in our efforts to secure governmental cargo and in our relationship with the many agencies with which we must deal

Participated in the American Fortnight Program in Hong Kong to expand the understanding and interest in metropolitan San Diego, its port and its industries

Expanded our marketing horizons to probe Malaysia, Singapore and the Philippines through exploratory trips and meetings. Our hope is to complete formal arrangements for Philippine representation in 1976 and continue to monitor the other areas of potential interest.

"We will, through negotiations completed in 1975 become in 1976 a major grain shipping port. Not long ago, this would have been considered impossible but now it will happen in a big way. Grain and other bulk cargoes are a bright spot in our shipping picture.

"I think another big opportunity lies in trade with Australia and New Zealand. We are hopeful of interesting a new shipping company that is about to enter this trade route in using our container facilities. The fact that our new cannery at Tenth Avenue will open this year enhances this prospect and opens new trade possibilities in frozen fish and other perishables.

"We have a great challenge in this activity. I am not satisfied with our efforts and I will continue to push for better results. We must find a way to utilize the excellent container facilities at the National City terminal and secure (Continued on next page bottom)

California Coastal Plan vs. Ports

Los Angeles, Calif., February 3 (Port of Los Angeles News):-The Coastal Plan, prepared by the California Coastal Zone Commission for presentation to the State Legislature, does not protect California ports as resources promoting the public welfare, Fred B. Crawford, general manager of the Los Angeles Harbor Department, asserted today (Tuesday, February 3).

Crawford, commenting on the Plan as chairman of the Governmental Liaison Committee of the California Association of Port Authorities, said that "while the Coastal Plan recognizes the importance of protecting the multi-million dollar tourist and fishing industries, it does not include a similar and appropriate philosophy of protecting California ports, which also are coastal resources and the basis of not a multi-million, but a multi-billion dollar coastal industry.

"Furthermore," he added, "this same protection of our ports was mandated by Proposition 20."

CAPA, an organization of California ports and marine terminals operating under the authority of the Federal Maritime Commission, is completing an appraisal of the Coastal Plan in anticipation of proposed legislation implementing its provisions into law.

Crawford pointed out there is serious concern about the restrictions that Coastal Plan legislation could place on the development of all California ports.

"Many of the findings are inaccurate and do not really reflect the nature of port operations," he said.

Pointing out that such restrictions would prevent ports from meeting the constantly changing demands of shipping,

regular steamship service—we must be aggressive and creative in this respect; there are many problems but there still are a few good opportunities.

"The airport is still with us and will continue to be one of our largest problems. I think the board has acted responsibly in respect to airport operation and regulation—I regret to say that I can not make the same statement about all of our tenants at Lindbergh Field or about those residents who have filed claims and lawsuits against the District. This whole situation will continue to require a lot of our time and will cost a lot of the peoples' money to resolve—money that could be productively used, by the way, for other projects. Just today, we heard from Dr. McLucas, the new F.A.A. Administrator in Washington. Port representatives will be meeting with him very soon to discuss our airport problems.

"There are many other things happening—Shelter Island, the commercial basin, Spanish Landing Park, Navy Field reacquisition, the Rowing Club, industrial development in San Diego and National City, Chula Vista planning and re-development, Coronado planning and park development to mention a few.

"The Port is a complex operation that affects almost everyone who lives in this community—to operate it properly takes a dedicated, hard working staff and an interested and probing Commission. I hope to help Walter Vestal and my fellow Commissioners to advance our cause this year and accomplish as much as we can for the benefit of the people." Crawford explained that the demands on ports, such as Los Angeles, for specialized handling facilities to accommodate these advances require new land from dredging and other land-based changes. Many of the Coastal Plan policies which require maximum use of existing facilities are simply unrealistic, he said.

The CAPA position is that existing port facilities for new vessels are now at maximum capacity, while older facilities are under-utilized because the ships and cargo they were designed to handle have almost disappeared, forcing extensive modification in order to accommodate the new demands.

Crawford also said that operational and investment costs for shipping companies are so great that many of them are struggling to maintain even marginal levels.

"They simply cannot pay for inefficient facilities," he said.

Unreasonable and unrealistic constraint by local and state authorities, under the Coastal Plan, also would completely frustrate the national policy and jeopardize the national interest, the CAPA spokesman asserted.

In support of this position, he explained that ports are necessary accommodations to ships of the U.S. Merchant Marine, which are in turn a critical national defense requirement. In recognition of the role of the United States flag vessels in national defense, and because the Federal government considers the maritime industry essential to the nation's economy, the Federal government subsidizes both the construction and operations of such ships. This places a compelling demand on ports to expand and alter by dredging deeper channels when necessary and constructing new or expanded facilities on filled or new land within the port district boundaries to accommodate the larger and deeper draft vessels which are being constructed and operated in the national interest.

"Representatives of the California Association of Port Authorities, as well as from the Port of Los Angeles, are anxious to assist members of the State Legislature in preparing legislation which will make it possible for the ports to operate in a reasonable fashion for the benefit of all the people in California and in the nation. When this is accomplished, the state and its resources will be protected for all future generations," Crawford said.



Karachi's Biggest Ever Project Launched

K.P.T. News Bulletin

Karachi, Pakistan, November 1st 1975:-The biggest expansion programme ever undertaken, in the history of Karachi Port, was launched here on Oct. 30th, with the inauguration of the "Third Development Project" at Chinna Creek.

Mr. Abdul Sattar Gabol, Minister of State for Labour, performed the inauguration ceremony in the absence of Federal Communications Minister, Mr. Mumtaz Ali Bhutto, who could not reach here in time from Islamabad.

The project, scheduled for completion in mid-1977, comprises construction of four new shipping berths at Juna Bunder construction of a new bridge to replace the Old Napier Mole Bridge linking the mainland with Keamari and the construction and remodelling of the railway and storage facilities at West Wharf.

The inaugural speech of the Federal Communications Minister was read out by Mr. Gabol on the occasion.

Full text of Mr. Mumtaz Ali Bhutto's address is as follows:

Chairman, Excellencies, Trustees, Officers and the Staff of the Karachi Port Trust and Distinguished Guests.

I am glad to be here this afternoon to inaugurate the third project of Karachi Port. The port capacity in the country is severely limited and the need to expand it is urgent. This can be done not only through liberalizing the hitherto shy investment but also by evolving processes of implementation free from the usual procedural pitfalls and destructive networks of red tape. The effect on the national economy of good or bad port facilities is obvious and need not be emphasised.

There has been a significant growth in the over-all trade of the country since the People's Government came to power. The Karachi Port with its 25 berths is at present handling 15-20% above its designed capacity of five million tons of dry cargo. The urgency of construction of four new shipping berths thus becomes all too obvious as this will give to the port an additional capacity of one million tons.

There is also an urgent need for increasing the storage capacity. During the last two years, the Port's plinths and sheds have been continuously congested. Better storage facilities must be accompanied by a rapid clearance process otherwise improvements will not be effective and the problem will continue, outpacing the relief. I am glad that provision has been made for handling about 1,000 railway wagons per day in the West Wharf area which should go a long way in easing the situation. But all this will be reduced to an exercise in futility if the importers, both public and private do not play their part. On their failure to do so till now, the Government is considering the imposition of a penal rate on storage of goods which remain uncleared after a reasonable period has been allowed. The practice to use the storage sheds as warehouses must at all events be checked.

The third project also includes construction of a new heavy duty bridge at Chinna Creek in replacement of the old Napier Mole Bridge, which was constructed in 1864. A modern bridge has been designed with adequate navigational head room to enable transit of small craft with a view to enabling Chinna Creek backwaters to be developed for port activities for which it has vast potential.

According to the present projections, by 1982, the total dry cargo traffic to be handled at local ports is expected to be about 16.2 million tons, which is a substantial increase from what we are handling today. All bulk cargoes including Steel Mill requirements, are expected to be handled at the Port Qasim when it comes into operation. Karachi Port will be handling only general cargo which is expected to grow to about 7.5 million tons by 1982. Therefore, even after completion of the four berths at Juna Bunder, it is essential that this additional capacity must be created.

There is also no proper container facility in the country although this service has been operating most successfully with make-shift arrangements for the last two years. This of-course cannot be accepted as a permanent state and we have accordingly planned to include this facility in a completely new complex of berths in the fifth project to be constructed in the Western Backwater area of the port. The commencement of this project, according to the present plans, is expected to commence in 1977. I am glad that the World Bank has already accepted its necessity and made a commitment for providing the foreign exchange component.

The present oil capacity in the port of about five million tons will soon become hopelessly inadequate. Last year the port handled 4.3 million tons of petroleum products and this figure is expected to go up to about 10 million tons by 1980. It has, therefore, become necessary to expedite the construction of a new oil pier in the fourth project to meet the increased requirements.

All these three projects require the very heavy investment of about Rs. 150 crores foreign exchange component of which is being provided by the World Bank and the rupee component from the KPT's own resources. This presents the biggest expansion programme ever undertaken in the history of Karachi Port. I would like to compliment the Chairman, Board of Trustees and the officers concerned for undertaking this gigantic task with enthusiasm.

Together with physical developments, it is equally important that other aspects of the port, such as its organisation, financial management, maintenance of plant and equipment as well optimizing use of various facilities should be brought upto modern international standards. We are moving ahead in this direction and the Government is studying steps of a revolutionary and fundamental nature for rapid implementation of these measures.

In the development and modernization of the port, the KPT employees and dock workers are a vital link. The Government has at all times been conscious of its obligations to the workers and accordingly the old system of working of ships whereby the stevedores employed casual labour with its attendant insecurity of employment and other abuses was abolished and dock labour decasualised.

A Dock Labour Board has been set up in which the workers are fully represented and ever since its formation, the interests of the dock workers have been protected. Nonetheless even this well-intentioned schemes was not free of teething trouble and immediately after de-casualisation, there was serious decline in productivity and discipline necessitating various steps to overcome this. It is heartening that these measures have proved effective registering considerable improvement. The incentive schemes have worked satisfactorily and I am happy to learn that in certain cases, increase in productivity upto, as much as 300% is not uncommon.

There is, however, still considerable scope for improvement and the Dock Labour Board is considering important measures for this purpose. The most important thing to bear in mind here is that whereas the Government is all the time aware of the need to keep on improving the lot of the workers, this cannot be achieved without corresponding increase in effort and consequent production. One simply has to work harder to earn more. Short cuts lead to dead-ends.

I took over my present portfolio in October, last year, soon after the September strike by the KPT employees. I am happy that the labour-management relationship, which had received a serious setback, has vastly improved and continues to be healthy. I congratulate the labour leaders on their sense of duty and realisation of responsibility.

I cannot end without thanking the World Bank and its member countries for generously supporting the KPT projects. The fact that M/s. National Construction Company in joint venture with M/s. Christiane and Neilson of Denmark, has entered this important field augurs well for public sponsored organisations. Besides providing very good avenues for employment of local engineers, this will go a long way in developing technical know-how in the field of heavy civil engineering and construction in the country. And last but not least. I would congratulate all those who have been associated with this project; the Chairman and Trustees the officers, consultants, contractors and other staff of the Karachi Port Trust. I am sure that they will continue to do their work with dedication and zeal.

It now gives me great pleasure to inaugurate this project.

Earlier, Rear Admiral (Retd.) S. Zahid Hasnain, Chairman of Karachi Port Trust, in his welcome address, said:

Mr. Minister, Excellencies and Distinguished Guests.

It is a matter of great pleasure and pride for the Trustees, Officers and Staff of the Karachi Port Trust and particularly for myself, to welcome you here this evening. I would specially like to thank our Chief Guest, Mr. Mumtaz Ali Bhutto, the Federal Minister of Communications, who has taken the trouble of coming down from Islamabad for this historic occasion.

Sir, as is well known, Karachi Port Trust has been working under severe pressure for the past few years due to increase in our foreign trade and with the further expected expansion of the national economy, it became essential for us in the Karachi Port Trust to accelerate our various development projects.

(Continued on page 30)



Tideland MaxLumina marine lanterns flash in unison to protect a group of three gigantic underwater petroleum storage structures shaped like "inverted funnels" in the Fateh field off the coast of Dubai. "Bridges" connect the above-surface portions of the storage units, and the synchronized flashing presents the installation as a 'single structure'' to avoid invasion by ships navigating in the vicinity at night.



Tideland MaxLumina lanterns and AudioBeam® fog signals have been selected by a major oil producer to

The well-known Ekofisk storage tank and surrounding

production structures are another multi-million-dollar

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they flash in unison, each MaxLumina lantern is inde-

pendent. They are equipped with Syncrostat® flasher/

lampchangers. Should any one or more fail, all remain-

ing lanterns continue the precise flash code in

BL-125

Tideland RL-125 MaxLumina

range lights can be synchronized to flash in unison for maximum visi

bility by marine pilots in navigating to mid-channel alignment. These lights also can be pro-

grammed to flash any preselected imple or complex code. Tideland

has designed the RL-125 so that one person can focus it or

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protect a series of tall, reinforced concrete production platforms like this in the Norwegian North Sea. The high standards of design and the required levels of performance for navigation aids-as required by various national regulatory authorities-narrowed the choice to Tideland.



Tideland's new SonicSync controls navigation lights.

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(Continued from page 28)

The development of Karachi Port since 1947 has been carried out in phases. The first project comprising the reconstruction and remodelling of 13 East Wharf berths was completed in 1964; the second project consisting of construction of four new berths at West Wharf, reconstruction of four berths at East Wharf, one oil pier and the widening and deepening of the navigable channel, is now reaching the completion stage. Meanwhile we are to-day launching the third project.

The existing handling capacity of the port for dry cargo is only 5 million tons whereas the import and export trade is 15-20% above this. Further economic growth will obviously lead to increase in the country's overseas trade. The development of the port thus assumes great importance and urgency.

Occasional congestion in port has been, by and large, kept under control and not allowed to assume undue proportions. In 1973, we requested the Government to remove the embargo on further development of Karachi Port and I am very glad this was accepted. The Prime Minister was pleased to direct that both Karachi Port and Port Mohammad Bin Oasim should be developed rapidly and speedy measures adopted to cut down the time-scale for development. This was further emphasized by you immediately after taking over your present ministerial responsibilities. Today's ceremony marks a major step forward towards the implementation of these directives.

The third development project of Karachi Port comprises construction of four new shipping berths at Juna Bunder; construction of a new bridge to replace over a century old Napier Mole Bridge linking the mainland with Keamari and the construction and remodelling of the railway and storage facilities at West Wharf.

We are very glad the National Construction Company of Pakistan in joint venture with Christiene and Neilson of Denmark have won the contracts for the shipping berths and the bridge. This will go a long way to developing know-how and experience in the field of heavy civil engineering construction within the country. The railway yard and storage facilities at West Wharf will be constructed departmentally by the KPT; materials for these have already been ordered.

The four new shipping berths are scheduled for operation by March 1977. The total cost of the berths and the two storage sheds will be Rs. 13.00 crores.

Juna Bunder is the oldest part of Karachi harbour and the Chinna Creek, where we are sitting this evening, used to be the main navigation channel for entry into the port from the Clifton side. Since 1954, the layout of the port has under gone major changes and the navigation channel is now along Manora.

The four new Juna Bunder Berths will be 2,100 ft. long and will increase the capacity of the port by another one million tons.

The new Chinna Creek road bridge will be dual carriage way 6 lane 96 ft. wide and will provide navigational head room of 20 ft. for small crafts. This will enable the Chinna Creek area to be developed in future for any port oriented activities. The bridge has been designed for rapid transit traffic and the layout has been integrated with the future transportation network under the greater Karachi plan. This bridge is scheduled for completion by early 1978 at a total cost of Rs. 12 crores.

The railway and storage facilities at West Wharf area have designed to increase the overall storage and triple the wagon handling capacity at the West wharf. Adequate provision is also being made for clearance of goods by road. The total cost of these facilities will be Rs. 12.00 crores and is scheduled for completion by 1978.

The next phase of port expansion, the fourth development project, designed to double the present oil handling capacity from five to ten million tons, is also well in hand. This comprises the construction of a new oil pier capable of accommodating oil tankers of upto 75,000 tons; deepening of the entrance channel to 40 ft. and acquisition of a new modern sea-going dredger. Contract for the oil pier is expected to be awarded next month and for the other items, by March 1976. The project is scheduled for completion in mid 1977 at an estimated cost of about Rs. 35.00 crores.

We are also working on the fifth development project comprising 6-8 high throughput dry cargo berths including full-fledged container facilities. This project is well advanced and according to present programme, the construction of these berths should commence by 1977 and completed by 1979-80; the reclamation of the spur to accommodate these berths is expected to commence next year.

Development of Karachi Port facilities is being financed by the Trust itself with foreign exchange component from the World Bank. For the third and fourth projects, the International Development Agency of the World Bank group has provided interest-free foreign exchange credits amounting to \$18.00 millions and \$16.00 millions respectively. We are most grateful to the World Bank for these credits. An assurance has also been given by the World Bank to provide foreign exchange credit for the fifth project and an appraisal mission is expected to visit Karachi in the near future.

Together with development plans, other aspects of the port are also receiving attention. As a result of a study carried out by our Consultants, major changes are being made in the present orthodox accounting and management accounting systems are being established. Another study has been carried out to streamline and reorganise the administrative structure of the Trust. Further studies for improvement of port management system in different fields are also in the offing. The Trust at present is governed by the KPT Act of 1886. Government is considering making amendments to this Act. These are major developments of a fundamental nature in the affairs of the Trust and have been made possible due to the keen personal interest and guidance provided by you, Sir, ever since your assumption of office.

Before I conclude, I would particularly like to thank the World Bank authorities for their continued help and assistance to the development projects of the KPT. I would also like to express gratitude to the trustees of the KPT who devote so much of their valuable time to the affairs of the Trust; and last but not least, to the officers and staff of the KPT for their loyalty and devotion which has made these development schemes possible.

I now request you, Sir, kindly to say a few words and perform the ceremony.

Port of Rouen Authority

Rouen, France (November 4th 1975, "Rouen Port, International Issue", Information Bulletin of the Port Authority of Rouen):-The Port of Rouen plays a special rôle in the movement of heavy special load-units, thanks to her privileged geographical position being near to the Paris area (thus eliminating those long journeys by exceptional convoys overland) and thanks to the important industries which border the Seine. During the course of 1974, an average year in this particular line, Rouen loaded or unloaded 389 units of over 15 tons, not counting containers (their weight reaches this figure and sometimes exceeds it) adding up to a total tonnage of 19,753 tons. This month, \langle (Rouen Port) \rangle is leaning very much towards this side her very special activity.

Everything for export-almost

Imports represented actually only 28 heavy units totalling 731 tons. The Port Authority was the one mostly concerned with the four units that totalled 211 tons that the PIETER WINSEMIUS brought in from Le Havre on the 15th November; this concerned our third crane for containers, with a lift of 25 tons, now in service at the Rouen-Quevilly Quay. The remainder of the cargoes was made up mostly of material for public works. These included, notably, seven engines from Leith and Grangemouth on board the Dutch coaster BEREND-N of the Gibson-Rankine Line; there were also eight Swedish 15-ton lorries brought in by the Trans-Nordic or the Hara-Linie, as well as a 33-ton vehicle eighteen metres in length carried from Gotenberg by the SIBELIUS.

The lion's share: off-shore trade

Of the 361 units loaded at Rouen totalling 19,022 tons, nearly half this tonnage was intended for different branches of the off-shore oil rigs. The chief provider of these heavy units was the Union Industrielle et d'Entreprises at Saint-Wandrille (a leading constructor of giant «jackets»), the Compagnie Française d'Entreprises Métalliques at Rouen (which specialises more in the construction of platform sections) and Socomet, based at Le Trait, which produces a «stringer» for the pipe-laying operation at sea. The record for the year was captured by the Dutch barge TAK-10 which left Saint-Wandrille on the 13th April with just two units totalling 2,700 tons.

Twenty ships full up

The cargoes for the twenty ships which called specially to take on heavy units reached 115 in number with a total of 5,725 tons. The main trips were mainly the following:

- parts for a generating station bound fort Tripoli (two calls by the Danish TITAN SCAN and one by the catamaran GLORIA SIDERUM).

- engines and allied material bound for the Canadian shipyards at Sorel for the construction of Chargeurs Delmas-Vieljeux ships.

- factory material for constructing pipelines in Scotland (four shiploads with thirty machines, mostly Caterpillars).

The Port of Rouen Authority has published a brochure ((ROUEN, PORT DES COLIS LOURDS. ROUEN, THE PORT FOR HEAVY LOADS)) which gives all the details of all the equipment that can be used at Rouen, such as the areas for the assembling of these heavy units. The brochure may be obtained on request from the Service des Relations Extérieures.

Moreover, the Port of Rouen Authority has emphasised the importance it attaches to this feature of its activities by including among the projects planned for the VIIth Plan the acquisition of new handling equipment for loads in the order of 4 to 500 tons.

- parts of a supertanker berth, bound for Cap Lopez in Gabon (on the Panamanian barge GEM-114).

In addition, a 160-ton transformer for the Netherlands was loaded, factory parts for Poland, trailers for U.S.S.R., a 90-ton tank and a pile-driver of 167 tons for Sweden, tanks for Italy and Portugal, a 217-ton transformer for Greece and crane units for a Bulgarian shipyard.

Stocking up the shipping

Ships belonging to various regular shipping lines calling at Rouen have certainly availed themselves of the flow of heavy units converging on Rouen. They took on 195 totalling 4,658 tons. What did this assortment consist of?

We found the following:

-44 hydraulic scoops (923 tons) mostly bound for Sweden (18), Finland (6), Denmark (6) and Norway (5). Most of these were loaded by the roll-on roll-off berths.

- 41 machines for public works (894 tons) mainly for Madagascar (8), the Ivory Coast (6), Gabon, Dahomey and Morocco (5).

-8 presses (185 tons) four of which were for Sweden.

-28 cranes (761 tons) principally bound for Finland (6) and numerous African countries.

- 12 bogies (210 tons) all for Portugal.
- 3 ships' screws all for Denmark.
- -2 alternators for Reunion.

-5 transformers (161 tons) two for Greece and 3 for Congo. Besides this list of typical loads, there was a further total of 52 units totalling 1,418 tons.

Who's doing the carrying?

Finally, it is interesting to point out that six flags are responsible alone for shipping three quarters of the 225 units for export of a total tonnage of 14,196 tons. In their order, they are:

- Dutch: 57 units (5,738 tons) mainly the two WINSEMIUS ships and the barge TAK.

- French: 77 units (2,592 tons) thanks to liner ships.

- German: 33 units (2,244 tons) mainly through the services of the barge FAIRALP I (three units amounting to 1,485 tons in all for Ekofisk).

- Danish: 29 units (1,348 tons) mainly through the services of the TITAN SCAN.

- Panamanian: 12 units (1,220 tons on the barge GEM 114).

- Liberian: 17 units (1,054 tons) on the catamaran (Continued on page 33 bottom)

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Orbiter Probe

"Portos e Navios" November '75

Rio de Janeiro, Brazil (Selected titles from the November 1975 issue of "Portos e Navios"):-

Ports and Waterways

- Interview of Engineer Orlando Correa Neto of Siemens do Brasil S.A.
- Portobrás shall be in full activity in 1976.
- Speech of the Director-President of CDG at the I Pienninco, in Nova Friburgo.
- The Port Center of Rio de Janeiro shall be built shortly.
- Sepetiba: Over 300 million cruzeiros for dredging.
- Administration of the Port of Manaus organizes Port Training Course.
- Port in Saudi Arabia to be built by Dutch firm.
- Dutch artificial islands at the Canadian coast.

Opening Dates: 1976 Navigation Season

Cornwall, Ontario, March 18, 1976 (Seaway Notice No. 3 of 1976, The St. Lawrence Seaway Authority):-Seaway Notice No. 1 dated February 4, 1976 stated that the Seaway system is scheduled to open at 0800 hours EST on the following dates:

AREA	OPENING DATE
Montreal-Lake Ontario Section	April 1, 1976
Welland Canal	April 1, 1976
Sault Ste. Marie (Canadian)	April 5, 1976

All lock and vessel traffic control facilities will be ready to operate on April 1.

The Welland Canal will open for navigation on April 1, but due to ice conditions in the eastern end of Lake Erie, navigation may be limited to high-powered vessels. Icebreaker assistance will be available.

In the Montreal-Lake Ontario section current ice conditions and weather forecasts now make it evident that the April 1 date is questionable as a firm opening date for navigation. The break-up forecast for the St. Lawrence

(Continued from page 31)

GLORIA SIDERUM.

Trade in units increasingly heavy and in ever-changing strange shapes pre-supposes the greatest ingenuity on the part of all those concerned in their movement (transport auxiliaries, port workers, shipowners, etc.). It is this that makes it so interesting. By sending off practically one a day in 1974, the port of Rouen, with its team of professionals, has accumulated a wealth of experience which asks only to be of service to every industry. Seaway issued March 14 indicates that the ice break-up will be much later than the past few years. The Seaway entities will continue to monitor the situation on a daily basis and will issue a further notice on March 26th, at which time it is hoped that the opening date can be made firm.

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

We will continue to issue information on ice conditions on a weekly basis, and this service will be continued as long as deemed necessary by the Seaway entities.

If there is a requirement for navigation upbound from Prescott or other upper St. Lawrence River ports prior to the actual opening date for navigation and if ice conditions permit, the Seaway entities will make every effort to accommodate such a requirement.

The Canadian lock at Sault Ste. Marie will open as scheduled on April 5.

A.M. Luce Director of Operations

Winter berthing at Hamilton

Hamilton, Ontario, Canada (Information Release from Port of Hamilton):-The St. Lawrence Seaway may be closed for the winter, but activity at the Port of Hamilton is far from standing still.

There are 45 vessels in winter berthing in the harbour-4 have been busy breaking up ice in the Bay.

The Cargo Master, a heavy lift barge from Evans McKeil Work Boats Limited, has been on charter with Bermingham Construction on Wellington Street, installing a sewer outlet for the new Skyway Pollution Control Centre.

There are five small Lakers loaded with soybean, being discharged at Canadian Vegetable Oil Processing Limited on Victoria Avenue North. Ten 730 ft. Lakers carrying grain are also wintering in the Port. They were loaded at the Lakehead and were headed for the lower section of the St. Lawrence Seaway, but were unable to navigate the waters before the Seaway's closing, December 18th.

The remaining vessels are classified as "light" ships—or those without cargo. They will be ordered to various other Ports for loading when the shipping season resumes. Harbour Master, M.K. "Mort" Helseth, says many of those vessels will return to Hamilton loaded with coal or ore for the Steel Companies. Stelco and Dofasco's huge Gantry Cranes are idle at the present time, awaiting new shipments of cargo.

The winter berthing facilities at the Port of Hamilton are excellent ones, featuring a landlocked port, electrical facilities and police protection. The Harbour Commissioners are security conscious providing regular patrols of the area by the Harbour Police and fenced off terminal areas.

Mr. Helseth says the Port Maintainance Department

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authorities help to hook the vessels up to the electrical facilities and most of the ships shut down their generators completely. The majority of the crew goes home for the winter, leaving behind a lonely shipkeeper to watch over the vessel.

The vessels' boilers, diesel engines and other machinery are overhauled during the lay-up. However, most of the repairs are complete as the new shipping season is about to get underway.

Annual fireworks at Hamilton

Hamilton, Ontario, Canada (Information Release from Port of Hamilton):-Spectacular star-like sequins will rocket 1500 feet above Hamilton Harbour this Victoria Day.

For the first time The Sertoma Club will host its annual May 24th fireworks display from a barge located off Hamilton Harbour. Previous exhibitions have been held in Hamilton Parks, most recently at Ivor Wynne Stadium. But the fireworks only reached the allowable height of 150 feet, which limited viewing capacity.

The Hamilton Habour Commissioners will supply a 30×60 foot barge—the "Lake Geneva" which will be anchored approximately 2-1/2 miles between The Royal Hamilton Yacht Club and Burlington's La Salle Park.

The Sertoma Club will receive assistance from two Harbour Police boats which will patrol the area during the display. No boats of any kind will be allowed within 300 feet of the area.

The Commissioners will also notify Mariners to avoid the area between 9 and 10 p.m. Victoria Day.

The display, which is electronically-timed will last 28 minutes. It is scheduled to begin between 9 and 9:15 p.m.

The Harbour provides a distinct advantage for Sertoma's display. Previous exhibitions totalled 3/4 of a million in candle power but because the fireworks will be set off from the water, candle power will reach the 4 million mark!

The Sertoma Club and the Commissioners suggest the best vantage points would be on the Mountain Brow and from La Salle Park in Burlington, as well as scattered parklands along the Bay's shore.

In the event of a severe rain storm, the display will be held May 25th.

New container terminal

Montreal, Quebec, Canada (Port of Montreal Bulletin, Vol. 1, No. 1, Winter 1975/76):-A fourth major container terminal in the Port of Montreal is nearing completion and is expected to be in operation in the fall of 1976. Montreal, which pioneered the construction of Canada's first container terminal back in 1968, is eagerly looking forward to this most modern and efficient terminal. This container facility to be known as the Jacques Cartier Terminal will occupy over 30 acres and include the added facilities of 200,000 square feet of modern shed space. Mr. J.-M. Chabot, Chairman, Montreal Port Authority, pointed out recently that "this container terminal, when operational, will continue to keep Montreal in the forefront of container facilities. We are complementing our already existing three terminals by providing the port with a fully public container terminal. The port has come a long way in seven short years when Manchester began operation of the first terminal and shortly afterwards, two other terminals opened in 1970, one leased and operated by Cast and the other by S.A.A.B. In 1974, a total of 124,362 containers was handled through the port."

This new modern facility will have a total of three berths. The two container berths will be equipped each with a 40-ton gantry crane. A feature of one of these berths will be a ramp for handling roll-on/roll-off vessels, while the third berth will be capable of handling general cargo.

As a public container terminal, the Jacques Cartier terminal will be operated under the supervision and control of the Port Authority. Strategically located, it will have direct accessibility to both rail and trucking connection and the terminal handling capacity will be in excess of 50,000 units per year.

New ports policy discussed

Nanaimo, B.C., Canada, February 1976 (Nanaimo Harbour News):-Chairman of the Nanaimo Harbour Commission, Doug Greer, was in Ottawa recently for meetings on the proposed new federal ports policy.

"At our meeting there were the chairmen of all the harbour commissions in Canada," said Mr. Greer. "The task force has already made some main recommendations and we discussed them. Now the harbour commissions have further proposals to make to the task force."

In discussing the new ports policy at the annual meeting of the Canadian Port and Harbour Association towards the end of last year, Transport Minister Jean Marchand said the policy would be designed to give a more adequate national ports system for the future and also to recognize the practicalities of today. He said three things were needed:

"Firstly, it is essential we have one administrative structure for all federal ports and harbours.

"Secondly, there is no way that we can avoid having municipal and provincial participation in the affairs of our larger ports.

"Finally, I am convinced that we must improve the overall planning for our national port activity."

Money into Nanaimo economy

Nanaimo, B.C., Canada, March 1976 (Nanaimo Harbour News):—Although the tonnage of export cargoes through the Nanaimo Assembly Wharf dropped by nearly one-third in 1975, the Harbour Commission was able to maintain income levels, and, as a result, an estimated \$1,350,000 went into the local economy.

Chairman of the Nanaimo Harbour Commission, Doug Greet, in the annual report for 1975, comments that: "Salaries and wages paid through the Commission office on behalf of staff and longshoremen employed at the Nanaimo Assembly Wharf working on behalf of the Commission exceeded \$850,000 in 1975. Of the \$550,000 spent by the Commission on all operating, maintenance and administrative items during 1975, it is estimated that 90 percent was spent in the Greater Nanaimo area.

"This means that \$1,350,000 was put into the economy of this area by way of salaries, wages and purchases of goods and services directly by the Nanaimo Harbour Commission."

The report points out that due to "industrial unrest"

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Charleston, S.C. (Trade News from South Carolina State Ports Authority):-TIRELESS TOILER-The Port of Charleston's 400-ton derrick, affectionately known as "The Monster" because of its tremendous power, performed flawlessly through three major series of heavy-lift assignments within a recent four-week period. The special heavy-lift projects included, from left, two 350-ton steamelectric generators from Westinghouse Corp. bound for Bonsal, N.C.; a 125-ton Westinghouse nuclear reactor rotor

going to Spain, and a 94-foot-long, 15-foot-high "I" beam weighing 118 tons. The latter structure, built by Mosher Steel Co. of Houston, Texas, for Foster-Wheeler Energy Corp. of Livingston, N.J., was transported via ocean barge to a nuclear power generating plant in Maine. The South Carolina State Ports Authority's shear-leg derrick is the largest crane of its type in the U.S. and is believed to be the largest in the Western Hemisphere. "The Monster" has a 100-percent performance reliability record.

and a downward trend in forest product exports, there were 141 days during the year when there was not a deep-sea vessel either alongside a berth or at anchor.

As a result the total tonnage of export cargoes dropped from over 900,000 tons in 1974 to 608,000 tons in 1975. (The top export years were 1971, 1,037,600 tons and 1973, 1,012,974 tons).

During 1975, 141 vessels entered the Port to load or discharge cargo, to enter or clear Customs or to anchor awaiting berths in other Ports.

- 78 vessels to the Assembly Wharf.
- 30 vessels to the Harmac Pulp Wharf.
- 8 vessels to the Harmac Lumber Wharf.
- 25 vessels to anchor.

Vessel arrivals dropped 55 during the year from the 1974 total, due to the decline in forest product exports. The trend to larger vessels is definitely established for the carriage of lumber and pulp, although the majority of the newsprint vessels are smaller in size and conventional in build.

Vessels sailing under 20 different flags entered the port to load cargoes, the most frequent flags seen being those of Norway, Liberia, Great Britain and Russia, and the more unusual being Chinese, Finnish, Yugoslavian and Brazilian. Pleasure craft traffic through the Commercial Inlet Basin declined slightly in 1975 when compared to the previous year. During the months of July, August and September some 3,494 different vessels registered in the Boat Basin and it is noticeable that the average size of these vessels is increasing from year to year.

The new section of floats installed in the winter of 1974 was well used during 1975, both by commercial and pleasure vessels and many new permanent occupants were registered. Approximately 130 vessels now winter in Nanaimo on a regular basis.

Crime suppressed at port

Toronto, Ontario, March 6 (Toronto Harbour Commission):—The absence of notable criminal activity in the Port of Toronto during the past number of years is a happy circumstance which did not occur spontaneously, according to Chief Robert Cornish of the Toronto Port and Harbour Police.

He stressed in his annual report that Toronto's clean waterfront was the result of the "determined policies of the port administration" and strong support for its police force.

Only three persons employed at port facilities operated



Long Beach, Calif., 31976 (Port of Long Beach News):-FULLY-CELLULAR SOVIET CONTAINER SHIP ON MAIDEN VOYAGE: Recent arrival on its maiden voyage of the MS Khudozhnik Saryan at Pacific Container Terminal in the Port of Long Beach marked the start of fully-cellular Mercur-class containership service to the Far East by the Soviet-flag Far Eastern Shipping Company. The new 21-knot 14,440 DWT vessels can accommodate 824 20-foot containers, including refrigerated boxes, and will replace the present multi-purpose ships on Fesco transpacific routes. Pictured at presentation ceremonies aboard are, from left, Salen Shipping Agencies vice president Robert McConnell, Harbor Commission president H.E. Ridings, Jr., Captain Semen Maslov and John A. Hyland, president of Crescent Wharf & Warehouse Co., which operates the terminal.



Long Beach, Calif., 31976 (Port of Long Beach News):-FIRST DIRECT SHIPMENT OF SOVIET PLYWOOD ARRIVES IN LONG BEACH: Fesco Line's MS Aleksandr Vermishev's recent arrival at Salen Shipping Agencies terminal on Pier A in the Port of Long Beach marked the first time that Baltic birch plywood was shipped directly from the Soviet Union to the West Coast. On hand to welcome the vessel were, from left, Gregory Frumkin, president of The GF Company, which imports wood products, Salen vice president Robert Mc Connell, Captain V. Voytovich and Loren T. Cornish, Director of Port Administration. The solid birch plywood is used in the manufacture of furniture and fixtures.

by the Toronto Harbour Commission were involved in criminal offences in 1975. The thefts were minor and the stolen property was recovered. In 1967, a peak year, 74 persons were arrested and 120 charges laid.

"Close attention is also being paid to the subject of illegal drug importation," he explained.

Chief Cornish pointed out that there has been no indication of this type of activity for the past two years and added: "We are aware that the large volume of shipping through the port carries with it potential problems of this kind and for this reason we continue to work with other authorities to improve preventive and detection measures."

Two years ago a large shipment of hashish was discovered in an automobile shipped from Antwerp.

Tonnage up

Toronto, Ontario, February 26 (Toronto Harbour Commission):—The amount of cargo handled at the Port of Toronto in 1975 increased in all categories, according to tonnage figures released by the Toronto Harbour Commissioners.

Overseas cargo shipped through the port last year totalled 1,020,685 tons compared with 900,016 tons in 1974, which represented an increase of 120,669 tons or

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11.8 per cent.

Domestic tonnage was also up, but only marginally. Last year's total was 1,991,884 tons compared with 1,969,701 tons in the previous year, a rise of 22,183 tons or 1.1 per cent.

Overall tonnage figures improved by 4.7 per cent from 2,869,717 tons in 1974 to 3,012,569 tons last year.

The number of containers handled by the port went up by 19 per cent from 12,651 boxes in 1974 to 15,051 (total equivalent units) in 1975.

PCAPA announcements

According to information received by Dr. Hajime Sato, Secretary General, from PCAPA (Pacific Coast Association of Port Authorities) (dated March 4, 1976), Mr. Robert L. Mason has been elected new Executive Vice President, and that the Association's new address is: P.O. Box 1537 Palo Alto, Calif. 94302. New telephone number is (415) 321-4567.



New York, February 5, 1976 (The Maritime Association of the Port of New York):-AIMU President Carl McDowell Retires: At a recent ceremony Carl E. McDowell, (center), retiring president of the American Institute of Marine Underwriters, receives a plaque, inscribed with a message of grateful appreciation for his lifetime of service to the maritime industry, from N. Nick Cretan, executive director of the Maritime Association of the Port of New York (John R. Walbridge, vice chairman of the Institute and a director of the Maritime Association, is at right). McDowell, a native San Franciscan, served at the New York organization, as executive vice president and then as president, for 24 years. Long a recognized authority on ships, shipping and insurance, he was an associate professor of Transportation and Foreign Trade in Stanford University's Graduate School of Business before he joined the Institute (priorly The Board of Underwriters of New York). He was a prime mover in the organization of the National Cargo Bureau and has represented the Institute in the United Nations and its agencies, the International Chamber of Commerce and the International Union of Marine Insurance. McDowell was succeeded as president of the Institute by Thomas A. Fain, formerly executive vice president.

Baltimore Trade Mission

Tokyo, Monday, March 15:-Representatives of the port of Baltimore arrived in Tokyo on Monday, March 15, to initiate a $2\frac{1}{2}$ -week trade solicitation tour of the Far East.

The representatives—Joseph J. Giancola and Gary E. Koecheler—hosted a reception at the Foreign Correspondents' Club including a slide presentation about the port of Baltimore for the shipping community of Tokyo. Both visitors are executives of the Maryland Port Administration. Mr. Giancola is Director of Trade Development while Mr. Koecheler is Director of Transportation.

The visit of the two Baltimore maritime officials gave Japanese shipping executives the opportunity to receive



New York, March 19, 1976 (The Maritime Association of the Port of New York):--PRESENTATION IS MADE TO FRENCH SHIP IN NY: Captain Pierre Lasbleiz, (center), Master of MEGA Lines' M/S VILLE de GENES, and Louis Malinka, sales manager of the carrier, listen attentively as N. Nick Cretan, executive director of the Maritime Association of the Port of New York, explains the historic significance of the Bennington Battle Flag, which the port organization presented to the vessel on its maiden arrival in the port recently. Susan Butler, Maritime Queen of the Port of New York, was among the group of officials greeting the vessel, one of Middle East Gulf Atlantic Lines break-bulk ships in service between Middle East and USA Atlantic and Gulf ports.

direct vital information regarding rates, tariffs and cargo and terminal operations in one of the major ports in the United States.

In addition to Tokyo, the port of Baltimore representatives will also visit Nagoya, Seoul, Taipei, Hong Kong and Manila during their tour of the Far East.

New staff appointments

Long Beach, Calif., 031176 (Port of Long Beach News):-Recent action by the Long Beach Board of Harbor Commissioners created two new administrative positions at the Port of Long Beach and resulted in the filling of four posts, all with present staff personnel.

Lee Sellers, who has been Director of Port Operations since 1970, has been named Director of Commerce, a new position. Reporting to him will be the Directors of Port Operations, Trade Development and Public Relations.

Sellers came to the Harbor Department after retiring from the U.S. Army as a Colonel following 30 years service. Among his military assignments were Director of Terminals, Military Traffic Management and Terminal Service in Washington, D.C. and Chief of Export Control for the Western United States, during which time he was instrumental in introducing the use of containers to move government supplies by ship.

He holds two Legion of Merit medals, the Bronze Star,



Oakland, Calif., February 3, 1976 (Port of Oakland):-"THE FASTEST PORT IN THE WEST"-That's the title of the Port of Oakland's latest trade promotion film, a colorful panorama of dockside and intermodal operations at the West Coast's leading container port. Produced by Robert Charlton, the film was recently lauded by the prestigious Council on International Non-Theatrical Events (CINE) with its Golden Eagle award. (The film also took top prize in competition sponsored by the American Association of Port Authorities.) Shown receiving the award certificate are, from left, Ben E. Nutter, Executive Director of the Port of Oakland, Charles Seifert, Port Public Relations Director, and Robert E. Mortensen, President of the Oakland Board of Port Commissioners.



Oakland, Calif., March 29, 1976 (Port of Oakland):-BAY WELCOME-San Francisco Bay Area shipping and port officials gathered at the Port of Oakland recently to welcome the newest Far Eastern Shipping Company (FESCO) containership, "Khudozhnik Saryan", to the west coast. Captain S. Mazlov, master of the 560-foot East German-built Soviet vessel, was flanked, from left, by Ted L. Rausch, representing the Marine Exchange of the San Francisco Bay Region; Richard H. Stevenson, representing the San Francisco Junior Chamber of Commerce; Alexander I. Zinchuk, Soviet Consul General; Robert E. Mortensen, President of the Oakland Board of Port Commissioners; Ben E. Nutter, Executive Director of the Port of Oakland; and Jack B. Williams, President of FESCO Agencies Inc.

Soldiers Medal for Valor, Meritorious Service and Army Commendation medals and 15 other citations.

Replacing Sellers as Director of Port Operations is Harvey H. Harnagel, who has served as Chief Wharfinger since 1971. A retired U.S. Navy Commander, he has been employed by the City of Long Beach for 15 years and in his most recent post, headed a large staff of wharfingers, security officers and other Operations employees.

David A. Elder, Administrative Assistant in charge of special assignments under Sellers, has been named to the newly-created post of Director of Special Projects. Among his most recent tasks with the Port was acting as Project Director for the Joint Economic Impact Study funded by the Port of Long Beach together with the Port of Los Angeles.

Min Kato, the new Chief Wharfinger, has been with the Long Beach Harbor Department since 1959 and has been Assistant Chief Wharfinger since 1972.

Representatives appointed

Long Beach, Calif. (Port of Long Beach News):-The Long Beach Board of Harbor Commissioners has approved the recent appointments of overseas representatives in Japan, Hong Kong, Singapore and Taiwan.

Japan Prad Co., Ltd., with John G. Hasegawa as its President, is the new Long Beach Trade Representative in Japan, with offices at Yamate Mansions, Suite 1002, 19-5 Udagawa-Cho, Shibuya-Ku, Tokyo. Mr. Hasegawa also represented Long Beach in 1963 through 1969.

Asia Transportation Limited, headed by Eddy Y.H. Chan, will represent the Port in Hong Kong, with offices at St. Georges Building, 18th Floor, Hong Kong.

Straits Transportation Pte. Limited, under direction of Sidney Chu, is the Singapore contact. The address is 2 Shenton Way, Singapore 1.

In Taipei, the Taiwan Maritime Company, Ltd., headed by Captain T. Hsia, is located at Chien Hsin Building (5th Fl.), 72, Nanking E. Road, Sec. 2, P.O. Box 1029, Taipei.

Trade Development Director Dean J. Petersen noted that with the four-country representation in the Far East, the Port of Long Beach expects to continue to increase the volume of transpacific trade which in recent years has established America's most modern port as the busiest of all U.S. West Coast harbors.



San Francisco, Calif., 3/5/76 (Marine Exchange of the San Francisco Bay Region):-COMPLIMENTS TO "THE MOST SOPHISTICATED CHEMICAL CARRIER EVER BUILT" were extended recently upon Golden Gate arrival of the M/T TORVANGER, just-delivered 28,000 parcel tanker, by William Wagstaffe, Marine Exchange director and traffic manager, Del Monte Corp., San Francisco. Honored was the unique vessel's master, Capt. L. Klette-although the ship is actually second of a twelve-vessel fleet, and follows the BOW FORTUNE (delivered last November) into service. Last of the series is scheduled for early 1978 delivery. Occasion was at the Port of Richmond's Dorward 4 terminal, at Point Molate on San Francisco Bay. Classified by Det norske Veritas, the specialized carrier incorporates latest safety devices and complies fully with all international and U.S. standards. With double bottom and "skin", the tanker has major components of stainless steel and boasts extensive remote control features. Overseas Shipping Co. are agency for the Odfjell Tankers' newest vessel, operated by A/S Minde Chartering, Bergen, Norway.

Financial climate rated A-1

Los Angels, Calif., March 8 (Port of Los Angeles News):-The financial climate of the Port of Los Angeles has improved significantly, according to Fred Heim, president of the Los Angeles Board of Harbor Commissioners, referring to a recent report from one of the country's foremost credit rating bureaus.

Moody Investors Service, Inc., which regularly reviews the financial structure of municipalities to determine their relative position for future bond sales, has just awarded an A-1 rate to Los Angeles Harbor. This increase over the Port's long-standing A rating reflects the strength of the facility's current development and expansion proposals.

On learning of the improved rating, Heim pointed to the Port's Capital Improvement Program, operating procedures and sound financial practices.

"For many years," Heim explained, "The Port has enjoyed an enviable A rating shared by a relatively few municipal agencies. Under the present administration, the



San Francisco, Calif., 3/5/76 (Marine Exchange of the San Francisco Bay Region):-CLEAR WEATHER FORECAST was prophesied by Paul A. O'Leary (left) in recent San Francisco World Trade Club ceremonies honoring John R. Page, president of General Steamship Corp., Ltd., presenting the veteran Pacific Coast shipping executive with engraved weather instruments. Page was commended for his leadership and service to the industry, and specifically, for duties as 1973-75 president of the Golden Gate maritime service and promotional agency. Participants included Exchange vice presidents Frank J. Ewers, Marcona Corporation and Fred J. Percy, United California Bank.

base which supported the A rating has been continually examined and, where feasible, improved."

Heim added that the higher rating will lower the Port's cost of selling its bonds by allowing the Port to pay lower interest rates. It will also create a wider market for bond sales by making the bonds more attractive to more potential investors. Finally, he said, the new rating will very likely enhance the value of bonds now held by investors.

Little Rock opens Foreign Trade Zone

New Orleans, La., December 1975 (New Orleans Port Record):—Foreign Trade Zone No. 14, at the Port of Little Rock, Arkansas was opened on December 1. Located at Navigation Mile 112.8 on the Arkansas river, it will provide direct service to towing companies operating on the inland waterways system.

Initial operation of FTZ 14 is in the Little Rock Port Authority transit warehouse located on the bank of the Arkansas river. Inland Rivers Terminal company operates 5,000 square feet of space for Zone purposes, which is located within their leased area.

It will be expanded by adding contiguous bays in the transit warehouse in accordance with the demand for additional space. The Port consists of a wharf 350 feet long; a pier for loading or reloading liquids; a bulk handling facility; a 30,000 square foot heated and sprinklered warehouse, and 150,000 square feet of surfaced outside storage area. These facilities are served by five railroad spur tracks.

A tract of land adjacent to the current Zone and located within the Little Rock Port Authority Industrial Park has been reserved for future development. Additional ware-



Chr. A. Olsen, President and Vice Chairman, Leif Hoegh & Co. A/S, of Oslo, was honored by the Port of San Francisco on a recent visit. Thomas T. Soules, Port Director (right) affixes the ribbon holding the port's Order of Maritime Merit, rank of Commander. Famed Coit Tower, on Telegraph Hill, shows in right background. (Port of San Francisco)

housing (general commodities and refrigeration) is planned for construction during 1976 in this area.

This 1,500-acre development with $2\frac{1}{2}$ miles of shoreline on the navigable Arkansas river is a prime location for a distribution center or a new plant site. All utilities are available. Of this amount 200 acres have been sold, 183 acreas have been optioned and the remainder is available.

The Little Rock Port owns and operates its own Railroad which provides service to all industries located within the industrial park. It is directly-connected to the Missouri-Pacific, and the Chicago, Rock Island & Pacific Railroad Company; reciprocal switching is available to the St. Louis-Southwestern Railway company (Cotton Belt) lines. Located two miles away is the Little Rock Municipal Airport. Under design at this time is the approved Interstate East-Belt Freeway which will interconnect I-30 and I-40. An interchange will be located at the edge of the port industrial park. So, all modes of transportation are readily available.

Initial commodities being handled in the zone consists of food products. Also under consideration are valves, steel coils and mechanical components. Facilities are available for unloading from barge to dock and from there by means of fork lift into the Zone. Some prospective users of the zone are considering leasing (or erecting their own building structure on leased land) for the purpose of manipulating imported commodities. After mixing with domestic parts the completed unit would enter the commerce of the United States duty free or at a lower rate than the foreign components would command.



Mr. Clifford B. O'Hara

Mr. O'Hara elected CI President

New York, N.Y. (The Containerization Institute):-Clifford B. O'Hara, director of Port Commerce for the Port Authority of New York and New Jersey and a wellknown figure in international trade circles, has been elected president of The Containerization Institute, a transportation trade organization.

The announcement of Mr. O'Hara's election was made by Warren Serenbetz, chief executive officer of Interpool Ltd., who was re-elected chairman of the group.

Mr. O'Hara replaces Michael B. Northen, president of Associated Container Transportation/PACE Line, who served two years as president of CI and was awarded The Connie Award in 1975.

The other new officers are: Joseph P. O'Donnell, executive vice president, who is traffic manager of Eastman-Kodak Co.; Donald S. Chakas, vice president and chairman of the steering committee, who is executive vice president and general manager of ACT/PACE Line, and Wilton B. Jackson, vice president and chairman of the membership committee, who is manager of the overseas division for duPont de Nemours and Co.

Gerard Ekedal, Canadian advertising manager for the Journal of Commerce, was re-elected treasurer.

Mr. O'Hara has been affiliated with the transportation industry since 1939, when he graduated from Princeton University. He joined the Port Authrity in 1953 in the port commerce division. Today, Mr. O'Hara is largely responsible for the total program of promoting the port of New York throughout the world, including trade development and traffic management functions.

He resides in Connecticut.

The Containerization Institute is a 16-year-old organization which provides a national neutral forum for the discussion of issues in the intermodal transportation field. Members are from the ocean carrier, rail and truck, equipment, and transportation industries, as well as importers, exporters, container leasing companies, and government agencies.

Pamphlets offered to shippers

Norfolk, Virginia, February/March 1976 (Virginia Ports, Port of Hampton Roads):-The Virginia Port Authority Planning Department has compiled and published two new pamphlets of interest to manufacturers and shippers currently using the ports of Virginia, or those contemplating such usage. These pamphlets are: Interstate Motor Common Carriers Serving The Commonwealth of Virginia; and Warehouse Facilities in Hampton Roads, Richmond, Hopewell, Petersburg and Metro.

These publications are available through any of the Virginia Port Authority Trade Development Department field offices, or by writing direct to: Planning Department, Virginia Port Authority, 1600 Maritime Tower, Norfolk, Virginia 23510.

Banner year for Philadelphia grain shipments

Philadelphia, March 18 (Philadelphia Port Corporation News):-Philadelphia's two giant grain handling facilities exported 88,000,000 bushels of corn, wheat, soybeans, rice, barley and oats in 1975. This volume ranks Philadelphia as one of the nation's leading seaports in the handling of grain. For comparison, New York handled about one-fifth that amount; Toledo, Ohio, much closer to the grain belt, handled only about 15% more.

The grain, valued at \$450,000,000 moved to Philadelphia by unit trains. A small amount also comes by truck.

The facility at Port Richmond, operated by Bunge Corporation, has a 3,400,000 bushel capacity elevator (storage building), six conveyor belts to move 90,000 bushels per hour from the elevator to shipside and twenty-six shipping spouts capable of loading two vessels simultaneously.

The facility at Girard Point, operated by Tidewater Grain Co., has a 2,225,000 bushel capacity elevator, four conveyor belts which move 60,000 bushels per hour to shipside and seventeen shipping spouts capable of loading two vessels at one time.

Philadelphia's labor, recognizing the value of grain shipments to the area's economy, work around the clock when necessary. This is an advantage to shipowners when port time must be kept to a minimum. Since ships make money for their owners only when they are on the move, Philadelphia's fast loading facilities and cooperative labor are important to shipowners.

It is estimated that each bushel of grain produces about \$.21 in direct income to Philadelphia's economy. Eightyeight million bushels, therefore, are worth about \$18,000,000. It pays for labor, tugboats and pilots, dockage charges, repairs, ship supplies, fuel, rail and motor freight charges, vessel crew expenditures while in port and payments for services provided by steamship agents, terminal operators, marine insurance companies and the foreign departments of Philadelphia's banks. As the money comes into the area, it is spent and respent, producing another \$36,000,000 of indirect benefits.

Philadelphia a grain town? Yes and everyone benefits from this huge movement to Russia, India, Northern Europe and the Mediterranean countries.



Mr. George J. Nichols

Savannah, Ga., March 22, 1976 (Georgia Ports Authority): -Robert H. Tharpe, Sr., Chairman of the Georgia Ports Authority, today announced the appointment of George J. Nichols to the position of Assistant Executive Director of the Authority. In making his announcement, Tharpe stated that J.D. Holt will continue as Executive Director.

Nichols joined the Authority in 1963 and was named Assistant Comptroller in 1964. He was appointed Comptroller in 1971.

Prior to joining the G.P.A., Nichols was affiliated with Hunt Foods and Industries.

A native Savannahian, Nichols is married to the former Anna Marangos of Valdosta, Georgia. The Nicholses have two children, John and Heidi, and reside at 1605 Queensbury Street.

Golden Gate shipping is favorable

San Francisco, Calif., 2/23/76 (Marine Exchange of the San Francisco Bay Region):—Despite the downswing from which few sectors of the national economy have fully recovered, Golden Gate shipping appears to be both healthy and prospering reasonably well, according to latest traffic reports.

The Marine Exchange of the San Francisco Bay Regionin releasing 1975 totals-noted that total ship transits of 7,462 last year were only 2.7% lower than 1974. And the maritime service and intelligence agency cited January, 1976 transits of 616 as almost level with 610 movements a year ago. Both reports are viewed as favorable, when the steadily larger cargo capabilities and sizes of ships in service are taken into account, the Exchange noted.

While foreign flag shipping gained slightly-2,048 arrivals last year at Bay and river ports, an increase of $1\frac{1}{2}$ % over 1974-American flag activity declined by 10½ to 1,650 arrivals. Major categories of decline were tanker movements-down almost 9% to 805 arrivals-and cargo ships, off $12\frac{1}{2}$ % to 656 arrivals.

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Europe-Africa

U.S. passenger ship activity increased however by 27%, with 74 arrivals in 1975, while the 52 foreign flag passenger ship arrivals were only 3 greater than a year earlier.

Vessels of 24 nations called at the Golden Gate last month.

The Executive's Corner

Savannah, Georgia, January-February 1976 ("Georgia Anchorage"):-Considering the rate of consumption of some of the basic raw materials, it is obvious that certain raw materials in which the U.S. has historically been self-sufficient are being depleted at a high rate and in the near future may have to be imported. Currently, approximately 50 percent of aluminum, chromium, maganese, nickel, tin and zinc used in the U.S. is imported. By 1980, it is expected that 50 percent or more of the copper, potassium and sulphur will be imported and by 1985, 50 percent or more of the iron, lead and tungsten will be imported into the United States.

These imports, as they become more significant, undoubtedly will have an influence on the site selection for future industrial plants requiring such raw materials. Those industrial plants already established but seeking to increase production will have to evaluate very carefully the option of expansion at an inland site versus a new location at a port of entry of imported raw and other materials essential for production. It is to be expected, then, that some industries, historically always located inland, might be selecting new sites for development in or adjacent to a port.

The preceding paragraphs are excerpts from a recent study made by Frederick R. Harris, Inc., relative to the industrial potential of Colonel's Island, a choice 2,500 acre deepwater industrial site near Brunswick, owned by the Georgia Ports Authority.

Circumstances may very well signal a new concept in plant location.

-J.D. Holt, Executive Director, Savannah, Georgia Ports Authority.

Opheim named to development board

Seattle, Washington, February 1976 (Port of Seattle Reporter):-J. Eldon Opheim, general manager of the Port of Seattle, was recently elected to the board of trustees of the Downtown Seattle Development Association.

"We're pleased to have a man of Mr. Opheim's caliber serve with us in this important capacity," said Donald J. Covey, president of the Association. "Seattle's downtown is kept alive and active and attractive because community leaders such as Mr. Opheim are interested enough to devote their time and talents to it."

The Downtown Seattle Development Association and its Business Promotion Division have a membership consisting of some 625 interested business people representing all facets of the downtown community. The Association works with other organizations, governmental bodies and the general public in furthering the utilization and appreciation of one of the finest downtowns in America—from the Seattle Center to the Kingdome and from our attractive waterfront to First Hill.

Higher 1975 shipping tonnage

Toledo, Ohio, January 30 (Toledo-Lucas County Port Authority):-The Port of Toledo has completed a highly successful 1975 shipping season, with year end statistics registering significant increases over last year in practically all categories.

The port handled 23,213,284 tons of cargo in 1975-up 8.8 percent-and saw a 23 percent increase in overseas general and miscellaneous cargo, a total of 415,462 tons.

Highlighting the season was a record breaking 100,484,000 bushels of grain loaded for Canadian and overseas markets. The figure tops the previous record export grain shipping season of 91.2 million bushels in 1971, and represents a sizable 95 percent increase over last year.

Significant gains were also registered by the entire St. Lawrence Seaway system which saw a total of 48 million tons of shipping pass through its locks in 1975, up 8.8 percent. The Seaway served 21.4 percent more overseas vessels this year than last.

"While shipping tonnage was down in most major Great Lakes ports, Toledo has been able to show significant increases in tonnage," said Frank E. Miller, Toledo-Lucas County Port Authority seaport director. "This extremely positive situation is due primarily to the efficiency and enthusiasm of all the people involved with the port operation in Toledo."

Other final figures were: petroleum and bulk liquids, 1,002,241 tons (up 16.6 percent); coal, 14,762,132 tons (up 14.8 percent); total general and miscellaneous cargo, 417,573 tons (up 9.2 percent); iron ore, 3,768,452 tons (down 30.1 percent); and miscellaneous dry bulk, 314,304 tons (down 3.5 percent).

A total of 203 ocean-going vessels visited the Port of Toledo during the 1975 season, a increase of 43 percent.

Ro-Ro 76

London, 27th February, 1976 (Ro-Ro News Release):-Ro-Ro 76, the first international conference devoted to marine transportation using Roll-on/Roll-off methods for moving freight, will take place in the World Trade Centre in the City of London on June 29-30 this year. The focus on all aspects of Ro-Ro is particularly timely in the otherwise stagnant shipping world, as Ro-Ro operators continue to order new ships and to expand into new routes, notably the Middle East and Third World countries.

For two days, international authorities will speak on terminal design, ship/shore systems, cargo safety, ship design, equipment and operational experience. Papers have already been received covering various areas of Ro-Ro technology but further submissions may be sent to the Conference Secretariat, 2 Station Road, Rickmansworth, Herts, England, for consideration by the Papers Committee.

Continuing advances in both shipboard and shore technology have influenced shipowners to put Ro-Ro services on both short-sea and deep-sea routes, avoiding the heavy and captive investments of the purely cellular ships with the attendant expensive lifting equipment on the quayside. Reflecting this expansionist climate, Ro-Ro 76 will examine views from both the freight forwarders who are rightly concerned about the safe carriage of their goods while also



looking at the ship operator who wishes to use as much of his cargo capacity as possible.

Another area of discussion will centre on the fact that despite the availability of sophisticated designs of integrated ship and vehicle systems, Ro-Ro ship operators are clients of most of the world's shipyards, buying at keen prices with designs provided by their own consultants. Moreover, enterprising owners are "Rollering" sea routes previously considered sacred to conventional tonnage—the Middle East being a prime destination from both Europe and the U.S.A.

The pioneering Ro-Ro fleets trading in the North Sea, the Baltic and the Mediterranean have now been joined by new competitors and recent statistics credit the Soviet Union with the fastest-growing Ro-Ro fleet—putting a new emphasis on international Ro-Ro operations and the specialised equipment required to make them work profitably. These and other far reaching influences will be discussed at Ro-Ro 76.

Conference bookings and inquiries received to date indicate that Ro-Ro 76 will attract an international audience of several hundred delegates and the organisers are preparing an exhibition, related to Ro-Ro shipping, technology and services, to be held concurrently with the Conference in the World Trade Centre, to provide this influential audience with a practical display related to the subject matters under discussion.

Conference delegates and exhibitors will be accommodated in the London Tower Hotel, a magnificently appointed facility forming part of the World Trade Centre complex.

Chairman Next Lord Mayor

Bristol, March 3, 1976 ("Portfolio, newspaper for the Port of Bristol):-Docks Committee Chairman, Councillor Jack Fisk has been selected by the Bristol City Council's Labour Group as Bristol's next Lord Mayor.

The selection has delighted Councillor Fisk who considers that to serve as Load Mayor is the top honour in the city.

Councillor Fisk has a unique qualification for the role of Lord Mayor, having already had ten months practice at chairing the council. This occurred as a result of local government reorganisation which saw him elected chairman of the Bristol District Council at their first meeting on the 22nd June 1973, remaining in office until 31st March 1974.

The selection is dependent on his retaining his seat in the forthcoming May elections, to be held appropriately enough on Councillor Fisk's 54th birthday, but the Chairman is optimistic that this he will do.

Born in Avonmouth, Councillor Fisk first became a member of the Council of the then City and County of Bristol in May 1954. A Trade Union officer by profession he is regional organiser for the Union of Construction and Allied Trade Technicians.

His wife Robina, a nurse at St. Monica's Hospital, Bristol, confessed to being somewhat surprised at the news because of the narrow majority in the Henbury ward but, as can be seen from the photograph above, is as delighted as her husband.



The Southampton Container Port showing, in the foreground the 201/2 Berth container terminal which is to serve the ACE Group's Europe/Far East vessels. (B.T.D.B. Port of Southampton)

New major container service for the Port of Southampton

London, March 1976 (British Transport Docks Board Southampton):-The Port of Southampton has gained further important new business for its rapidly expanding Container Port.

It has been announced by Orient Overseas Container Lines' Director, Captain J.J. Howard, that the ACE Group, made up of four lines—Orient Overseas Container Line, Neptune Orient Line, Kawasaki Kisen Kaisha and Franco-Belgian Services—are to make Southampton the sole U.K. port for their Europe/Far East service. Terminal operations at Southampton will be carried out by the British Transport Docks Board at the 201/2 Berth multi-user terminal and the first sailing from the port is scheduled for 9th April. The service is expected to be fully developed by the end of next year when there will be eight large container ships operating on the route making calls at Southampton once every seven days.

Southampton is already the fastest growing container

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port in the United Kingdom; work is currently in hand on the construction of an additional 1,000 ft berth with fully equipped back-up facilities to cater for the U.K./South Africa container trade which commences in 1977.

The ACE Group decision is seen by the British Transport Docks Board as a welcome development in the continued expansion of the port's cargo traffic, and as further evidence of the success of their continuing capital investment in Southampton and their faith in its potential as a major cargo port.

Port Talbot Harbour, massive imports of iron ore

London, 2 March, (British Transport Docks Board):-Over one million tonnes of iron ore and 210,000 tonnes of coking coal are due to be discharged at the British Transport Docks Board's Port Talbot Harbour in the next eight weeks.

Arriving in 15 cargoes, the first consignment of 60,000 tonnes of iron ore from Norway arrived at Port Talbot last

Saturday, 28 February, in the bulk carrier 'Vinistra' and was discharged over the weekend.

Further cargoes of iron ore, ranging from a part cargo of 50,000 tonnes to full cargoes of up to 100,000 tonnes are scheduled to arrive at the harbour at regular intervals by the end of April. The ore comes from Canada, Australia, Liberia, Brazil and Norway. The 210,000 tonnes of coking coal will arrive in four shipments, and the first consignment of 75,000 tonnes of coking coal was discharged from the 'Subotre' last Friday, 27 February.

The lighting up of the new blast furnace at the B.S.C.'s Llanwern Works recently has contributed to this high level of ore shipments. A total of 440,000 tonnes of ore is destined for the Llanwern Works and will be taken from Port Talbot Harbour by menas of "merry-go-round" trains. The rest of the ore is for the B.S.C.'s plant at Port Talbot.

In 1975 a total of 3,152,054 tonnes of ore were handled at Port Talbot Harbour, a decrease of 278,980 tonnes compared with 1974, but coal imports increased by 163,962 tonnes to 503,723 tonnes.

Car import boom at Grimsby

London, 15 March (British Transport Docks Board):-The port of Grimsby has dealt with imports of 6,500 Volkswagen and Audi cars in just ten weeks of 1976. This is more than half the total number handled during 1975. The cars have arrived at the rate of two shipments a week, and have been discharged at the roll-on/roll-off terminal provided by the British Transport Docks Board for Volkswagen (GB) Limited in Alexandra Dock.

The terminal came into use in May last year, and during the eight months of 1975 it was in operation, 12,450 Volkswagen and Audis were imported into the UK through Grimsby.

It is expected that the port will handle 30,000 Volkswagen and Audi cars this year, about 45 per cent of the company's total imports. The company chose Grimsby as the sole northern import and distribution centre for Volkswagen and Audi cars, and are building an inspection depot about a mile from their terminal in Alexandra Dock.

The existence of the car handling facilities at the port means that UK cars could be accepted for export, and the Docks Board hope that this is a traffic which could be attracted to the port.

ScanDutch container vessels calling at Le Havre for Far East

Tokyo, February 25 (ScanDutch News, Far East Counsellors):—On the 18th of March, ScanDutch will introduce direct calls at Le Havre with its fully containerized vessels, thus bringing France and the Far East closer to each other.

The first vessel in the regular 10-day service will be m.s. "Toyama" followed by t.s. "Korrigan" accepting cargo to the following destinations: Malaysia, Singapore, Hong Kong, Taiwan, Japan, South Korea.

ScanDutch will, through the establishment of direct calls at Le Havre 3 times a month with its highly sophisticated fleet of 7 third generation containerships, offer an improved service to the French exporters by shortening the transittimes to these destinations.

Ace Group offering direct container link between Le Havre and Japan

Tokyo, March 3 (received) (Le Havre Port Authority Representative in Japan):-The Port of Le Havre is proud to welcome Ace Group berthing "Quai de l'Atlantique" as being the first Far East Container Service calling le Havre on a direct regular basis.

Ace Group is a 4 shipping lines consortium made of:

- F.B.S. (Franco-Belgian Services Paris)
- K. LINE (Kawasaki Kobe)
- O.O.C.L. (Orient Overseas Containers Line Hong Kong)
- N.O.L. (Neptune Orient Line Singapore)

When this consortium is fully operative with 8 newly built container ships (1.400/1.900 T.E.U.-23/24 knots) they will be in a position to offer their shippers a sailing every 12 days from Le Havre to Osaka and Tokyo. The transit time of this new service between Le Havre and Osaka is 25 days and between Le Havre and Tokyo 27 days via Suez canal.

The three first vessels scheduled to call Le Havre are: NEPTUNE EMERALD due in Le Havre 6th March NEPTUNE SAPHIRE due in Le Havre 24th March SEVEN SEAS BRIDGE due in Le Havre 27th April The other ports of call in Europe of Ace Group are: Hamburg/Bremenhaven/Rotterdam/Southampton/ Antwerp/Le Havre

and in the Far East:

Port Kelang/Singapour/Hong Kong/Kaohsiung/Tokyo/ Osaka

Port of Le Havre Flashes

Le Havre, France (Port of Le Havre Flashes, January 1976):

• Container traffic picks up

After being somewhat irregular during the first eight months of 1975, container traffic got its second wind in September, when 13,700 containers were handled, against 10,311 in September 1974.

The total throughput of containers in the port of Le Havre during the first three quarters of the year amounted to 116,920 units, compared with 105,501 during the same period of 1974.

The Quai de l'Europe terminal had its busiest month ever in October 1975, when 7,065 containers were passed through.

• 300,000th passenger

On November 21st Normandy Ferries checked in the 300,000th passenger to be carried on the Havre-Southampton service in 1975, the first time such a figure has been reached since the line was established in 1967. The lucky travellers were Mr. and Mrs. Spencer, a retired couple on their way home to Britain from the South of France.

• Birth of a new port

On December 10th Mr. Paul Bastard, Director of Ports and Waterways at the Ministry of Development & Construction, laid the first stone of the 2,300 feet (700m) of

Europe-Africa

quayside that is to be built alongside A Dock, the new dock that has been constructed in the port development zone. It is one of the major new facilities with which the port of Le Havre is to be equipped during the next few years for the reception of general cargo. This zone has been chosen for the first stage of the extension of the commercial port and also for the first phase of the programme of new port facilities, which includes the A Dock sector for the reception of both containerised and traditionally packaged general cargo.

The first stage of the work concerns the provision of two berths on the east side of A Dock and includes 2,300 feet (700m) of quayside and a back-up area of about 46 acres (18½ ha). The first 1,300 feet (400m) of quay will be brought into service in January 1977, together with 30 acres (12 ha) of back-up area. The main items of equipment will be two new container cranes capable of working the largest containerships either in service or planned. The first will be operational in December 1976 and the second in March 1977.

The schedule of work also provides for a 162,000 sq ft shed $(15,000\text{m}^2)$, operational by the end of 1976, a rail link with gantry cranes, a power supply system for refrigerated containers, a lift bridge and various service buildings.

This major investment programme will reinforce Le Havre's position as the leading French container port and, at the same time, strengthen its capacity for handling conventional merchandise.

• Record rate at coal wharf

Unloading of the 29,250 tonnes of coal brought by the Polish **Syn Pulku** began at 8.0 a.m. on November 12th and was completed by midday on the 13th. The average rate of 1,625 tonnes an hour was the best achieved so far.

• Le Havre chosen for South Africa trade

The companies forming the Europe–South Africa Shipping Conference (SAFCON) have chosen Le Havre as the French port of call for the container service which is to be introduced in 1977 between North Europe and South Africa.

• Franco-Norwegian Chamber of Commerce

About a hundred members of the Franco-Norwegian Chamber of Commerce came together in Le Havre on November 25th for their annual meeting, which the committee decided to hold in our port this year both because of the large number of Norwegian vessels that call here and of the importance of the port/industry zone, in which Norwegian investments is a real possibility. Yet another factor was the construction of the new oil terminal at Havre-Antifer. The guest of honour was H.E. the Norwegian Ambassador, Hr. Jahn Halvorsen, who provided members with a brilliant review of the Norwegian economy in these days of North Sea oil.

It is worth noting that in 1974 the number of Norwegian vessels calling at Le Havre was second only to the number of French vessels and accounted for 14% of all shipping movements, 10% of gross tonnage, 9% of goods loaded and discharged and 37% of all passengers.

News from Bremen

Bremen Opens Port Skilled-Labour School

Bremen, 28.2.76 (BremIn). Bremen, in the Spring of 1976, is to open a port skilled-labour school in middockland, the graduates from which will receive, after completing a two-year training and successfully passing the final exam, a port, skilled-labour, certificate, which will raise them from the long-out-of-date unskilled status and place them on a par with the industrial skilled worker. This will also include all rights to special financial and social services accruing to the skilled labourer such as, for instance, social insurance pension advantages in the event of vocational disability.

Training is divided into three separate, successive main stages. The 1st half-year: instructional training, 2nd halfyear: basic training, 3rd & 4th half-years: port skilledlabour training. Knowledge is imparted on portorganisation, cargoes handled, stow and piling techniques, handling-plant techniques, cargo securing techniques, forktruck techniques; on legal aspects, as well as labour and social security provisions and prevention-of-accident regulations. There are 3 branches: shunting and localisedconveyance techniques (shore-side), cargo-handling gear (Ships-side) and both spheres (Overall Port Ops). The final exam for the port skilled-labourer is taken before the Bremen Chamber of Commerce. Permitted to sit are those who have successfully completed all three training divisions, or those who have possessed a port-workers card for an uninterrupted minimum period of four years. These 'old hands' require only to pass the tests in functional training sections, thereby demonstrating their accomplishments as sufficient to justify their sitting the final examination. He who passes the final exam in the written, oral and practical parts receives the port skilled-labour certificate, with addendum according to branch: "Handling Operations (Shore-side)" or "Stevedoring Operations (Ships-side)".

The management of the port skilled-labour school will come under the 'Hafenschule Bremen e.V.', which will be composed equally of representatives of the 80 port undertakings (employers) and the 'Öffentliche Dienste, Transport und Verkehr' trades-union (employees). The City of Bremen is supplying the school-building and equipment.

The 'securing of the vocational standing of the Bremen port worker', proclaimed on 15.12. 1971 by the President of the Bremen Senate, Hans Koschnick, burgomaster, and the training skeleton-plan for skilled port labour produced on 3.3. 1975 by the special port commission established for the purpose, has thus been fulfilled and completed. The commission has now been dissolved.

The Bremen Senator for Ports, Shipping and Traffic, Oswald Brinkmann commented: "The new school and port-skilled worker certificate are partly a continuation and also partly a tempestuous technical development effect of the consequential raising of the port workers' social position, the vocational standard of whom has, quite naturally, assimilated more and more in recent years that of the qualified skilled worker. Whereas 80 percent of port labour in Bremen and Bremerhaven in 1960 was graded as, so-called unskilled—in the days when work was effected with trundles and cargo hooks—it was still only 50 percent in 1967 and in 1976 it is, today, a good 10 percent. All other port workers have, meanwhile, had special training to cope with the constantly increasing demands such as, for instance, crane, forklift and van-carrier drivers—and tradesmen of all description". The Bremen ports themselves will profit mostly from this new arrangement. Qualified port skilled-labour guarantees expert, speedy and frictionless cargo handling.

Kocks much in Demand

Bremen, 28.2.76 (BremIn). The container cranes and tank installations of Messrs. Friedrich Kocks GmbH., Bremen, are, as ever, in great worldwide demand. Kocks have already delivered over 40 container bridges and ship-discharging plants to European, American and Asian ports. A latest order: 2 more container bridges for Savannah/Georgia, USA. They are the largest and fastest on the American Eastern Seaboard. Price: DM 15 millions. The order books of Friedrich Kocks GmbH. are currently exceeding DM 100 millions. For further information contact Kocks. Tel: 0421/5090232, Telex: 244863.

"Lash" is the Tip for Congested Ports

Bremen, 28.2.76 (BremIn). Lash is the magic formula which produces swift passage for cargo, even in completely congested ports; for the lighters can leave deepsea water depths and tie up in less-frequented coastal-shipping harbour basins for their cargo operations, on the outskirts of the fully congested Near and Middle East ports. If need be, the most primitive facilities will suffice.

In order to avoid waiting-times of up to half a year considerable deviations are also accepted unhesitatingly. Thus ocean cargoes are currently moving from Bremen to Djeddah, on the Red Sea, via New Orleans-twice crossing the Atlantic and nevertheless proving more economical and reaching destination quicker than with the conventional routeing. Bremen-New Orleans, 14 days; New Orleans-Jeddah, 18 days; Lash-handling operations Jeddah, 10 days. Compared with the long and highly costly waiting times, Lash is greatly advantageous, even with such deviations, even though, no direct Lash connection exists between Bremen/Bremerhaven and the Near East (Bremen/ Bremerhaven is the only German port-group handling all 3 Lash shipping companies serving the North Continent). The first Lash-freighter for Djeddah sailed from Bremen on February 6th-others will follow. More goods are piling up for Arabia at the head of Bremen's 'Überseehafen'; the centre for German Lash cargo-handling.

Turnround is fast at HHLA Container Terminal, Hamburg

HHLA Press Information Hamburg



HHLA Container Terminal, Hamburg

Hamburg, 19th February, 1976:-The "Tokyo Bay's" 21st turnround in Hamburg, where it was originally built, represented another peak performance in the history of container handling: 1,495 containers were handled between quay and ship in three shifts. This figure represented 1,966 TEU (20 ft. units), of which 796 TEU (630 containers) were discharged and 1,170 TEU (865 containers) were loaded. The 58,000 grt containership can carry some 2,300 TEU. With 1,170 units therefore, more than half of the ship's container carrying capacity was taken up for outgoing cargo whereas incoming cargo represented more than one third. This underlines Hamburg's importance as a centre for Far East trade.

This is only one example of the turnround performance the HHLA Container Terminal is capable of achieving. For the first shift, 3 container cranes were concentrated on the "Tokyo Bay" and 540 containers were handled during the 7½ hours. This represents a rate of 180 containers per crane per shift-although one crane had to suspend operations temporarily to allow the 100 t floating crane "HHLA III" time to load a 54 t machine measuring $5.3 \times 4.2 \times 3.2$ metres destined for Tokyo. The uncrated machine was lashed on two 40 ft. flats in adjacent container shafts-the method normally used in container traffic. As a result of the high performance achieved during the first shift, the other two shifts only needed two cranes to complete the turnround, thus leaving handling capacity free for new arrivals.

The 1,495 containers handled in the case of the "Tokyo Bay" do not represent an all-time record at Burchardkai. Already on 30th August 1975, 1,560 containers were handled when the sister ship, the "Kowloon Bay", was turned round. Both ships, each of which replaces four conventional freighters, belong to the fleet of 17 third

(Continued on next page bottom)



HHLA in Recession Year 1975: drop in cargo volume kept within limits

Hamburg, 20th February (HHLA Press Information):-The world-wide recession of the previous year did not leave the Hamburger Hafen- und Lagerhaus-Aktiengesellschaft entirely unscathed: with 5,252 mill. t, 9.1% less cargo was handled than in the record year 1974. The drop was mainly registered in outgoing cargo which fell by 10.7% to 2.516mill. t. There was good news, however, about the number of shipcalls at HHLA terminals: with 4,504 turnrounds representing 14.605 mill. nrt, the 1974 figure was surpassed by 4.5%, thus establishing a new all-time record for the company.

How well the HHLA fared in 1975 is also apparent from

generation containerships owned by the Trio Group which consists of 5 shipping companies from three countries. This group operates a Far East service which affords ten monthly sailings from Burchardkai. The "Tokyo Bay's" departure with the large shipment from Hamburg on board was already the 451st sailing of this service.

Container lines of 25 companies are turned round regularly at the HHLA Container Terminal—in addition to other lines with roll on/roll off ships, modern multi-purpose freighters and conventional vessels. The number of turn-

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the fact that with DM 252 mill., the gross turnover was only 1.17% down compared with 1974. This successful result can be attributed to the intensive efforts made in looking after the interests of customers in Germany and overseas and to the continuing modernisation and expansion of HHLA's facilities.

Compared with the development of general cargo traffic in the Port of Hamburg as whole and in other German and European ports, the company did relatively well. This is above all due to the fact that two sectors, which form a particularly important part of HHLA's activities, proved less vulnerable to the recession: container and fruit traffic.

HHLA maintains leading position in container traffic

The 225,025 20 ft units with 1.861 mill. t which HHLA handled in 1975 represent a growth of 2.3% in numbers, albeit a drop of 6.5% in tonnage. The volume of con-

rounds is constantly increasing. Last December alone, 130 vessels were turned round-four per day, in spite of weekends and public holidays. Containers handling at Burchardkai in December totalled approx. 20,000 TEU-a monthly figure which has occasionally been exceeded and which will no doubt be exceeded often in the future. In addition, more than 50,000 t of general cargo of all kinds, in particular break bulk cargo, vehicles and plant, are regularly handled at the HHLA Container Terminal each month.

tainerised cargo handled at HHLA terminals remained unchanged at 34% and is still much higher than the current average for the entire port. HHLA's share of all containers handled in the Port of Hamburg remained practically the same as for the previous year at approximately 70%.

Concentrated efforts in fruit sector paid off

With 636,000 t, the fruit sector, which HHLA has long devoted a great deal of attention to with regard to investment and selling as a service, continued to prove stable. Efforts aimed at attaining swifter and more rational handling continued in close co-operation with the fruit trade and the export organisations of number of supplier countries.

Fall in consolidated export cargo traffic

The Overseas Centre suffered considerably. With 289,000 t, the volume of goods delivered there was 25.7% lower than in 1974.

This fall was a result of the decrease in the classical exports sector, but the increased share of capital goods and other break bulk cargo shipments in the overall export tonnage handled by HHLA had some compensating effect.

"Blue chip" warehousing

Sales operations aimed at consolidating and expanding existing business connections also bore fruit in the warehousing sector. Despite the recession and local competition, the business volume could be maintained. The average level of warehoused goods actually rose by 4%. In this respect, the warehousing sector proved itself to be as solid a pillar for the company's operations as the container, fruit handling and break bulk cargo sectors. Thanks to its versatile storage capacities, HHLA was able to gear itself flexibly to the requirements of its customers.

Investments remain high

Consolidation and expansion were the key considerations guiding investment. In 1975, HHLA spent more than DM 30 mill. on improvements to its facilities. One of the main items of expenditure was the modernisation of Shed 58. Other larger projects were extension to Burchardkai, Diestelkai and the Overseas Centre as well as extensions to the container rail terminal at Burchardkai for break bulk cargo handling. The standard of training among personnel was further improved through specialised courses. HHLA will continue along this path in 1976.

Cagliari will confront Fos

Monte Carlo, Monaco (Released by Kim J. Loroch, President, Loroch-Haris Trade & Transport Ltd., Monte Carlo, reprinted from December 17, 1975 issue of International Freighting Weekly, London):-Work is going ahead in Cagliari, Sardinia, on the first stage of an international port project which includes a deepwater canal, a container terminal and an industrial estate.

According to Dr. Achille Sirchia, director of a consortium in charge of Cagliari's industrial development, the first stage is expected to cost about 45,000 million lire, and should be completed by the end of 1979.

Cagliari aims at exploiting its geographical position in the Mediterranean for international trade. The consortium is aware of the competition Cagliari will have to face from



Mr. Alhaji Bamanga M. Tukur General Manager Nigerian Ports Authority

New General Manager for Nigerian Ports Authority

Lagos, Nigeria, February 10, 1976 (Nigerian Ports Authority):-Alhaji Bamanga M. Tukur has newly been appointed as General Manager of Nigerian Ports Authority, succeeding Mr. M.A. Tokunboh who retired in August, 1975.

Alhaji Tukur entered the service of the Authority as a management cadet in 1960. Upon successful completion of the course which is in transport studies and administrative management, he worked in a humber of Nigerian ports in varying capacities. He was appointed Port Manager, Lagos in 1971, a post he held until his new appointment.

Alhaji Bamanga M. Tukur has for the past six years been a Director of the I.A.P.H.

Marseilles-Fos in the south of France, but Dr. Sirchia is believed to be confident that there is room for Cagliari's international Port.

He says the re-opening of the Suez Canal has come as a breath of fresh air for seaborne trade in the Mediterranean.

Cagliari wants to attract container traffic, especially from the United States for trans-shipment to all parts of the Mediterranean. According to informed sources, the whole project is expected to take at least ten years.

Terminal

The project, as drawn up by the consortium, includes: a ten kilometre long, 18-metre deep canal with an average width of 200 metres, and docks of 500 metres in diameter to give room for ships to manoeuvre, to guard the entrance to the canai; wharf frontage totalling about 20 kilometres, serving the industrial estate; an 8,000 hectare industrial estate, on what is at present marshland and a brackish water lagoon in an area called Macchiareddu; a 20 kilometre road

network and a container terminal occupying 400 of the 8,000 hectares.

The first phase incorporates 2.5 kilometres of 14 metre deep canal, 1.5 kilometres of wharf frontage, and a container terminal of 60 hectares, able to be quickly enlarged.

G. Mackenzie news, January

• Abu Dhabi

62 vessels called at Abu Dhabi during the month of January with 90,249 deadweight tons of cargo on board for discharge. Imports consisted of 33,078 tons general, 42,121 tons cement, 1,598 tons pipes, 9,352 tons timber and 4,100 tons bitumen.

Additionally 2 tankers called at Mina Zayed and discharged 36,020 tons of petrol and gas oil.

There has been an improvement in the port position recontly, and berthing delays are now in the region of nil to two days.

Work on further sheds has commenced and progress seems to be well in hand. It is noted that port storage facilities are steadily improving which is likely to continue as the new sheds are completed.

Construction of berths 14 to 19 continues, three of which should be ready by June and three by the end of the year.

In recent months number of port trailers and cranes has increased and the movement of cargo has generally improved.

• Dubai

142 ocean vessels called at Port Rashid in Dubai during January, 1976, and discharged a total of 223,831 dead-weight tons of cargo.

Vessels were subject to a berthing delay of four to six days with storage areas still congested.

At the end of 1975 a census in the United Arab Emirates was taken and the preliminary figures indicate a total population of 655,937 made up as follows:--

Abu Dhabi	235,662
Dubai	206,861
Sharjah	88,188
Ras al Khaimah	57,282
Fujairah	26,498
Ajman	21,566
Umm al Quwain	16,879

Trust Chairman's Review

Melbourne (Port of Melbourne Annual Report 1974-75):-I have pleasure in reviewing the main activities of the port under broad headings for the year ended 30th June, 1975.

Trade reached 17.1 million tonnes, a marginal increase of 234,000 tonnes (1.3%). General cargo comprised the major portion of the total trade and included close to 7 million tonnes of containerised cargo in 364,752 (T.E.U.) containers.

Finance—After providing for depreciation, State levies, and appropriations, net revenue amounted to \$256,422. Escalation in operating and maintenance expenses significantly

contributed to a mammoth 23% increase in costs. Although gross revenue received was a record figure, the Trust was forced for the first time since 1970 to float a public loan which was oversubscribed.

Development—The year was a record one for capital projects when nearly \$19 million was expended. Two major engineering projects will cater for the increasing trade through the port. The two berth roll-on roll-off complex at Nos. 5 and 6 Victoria Dock at a cost of \$8.2 million was completed whilst the fourth berth at Webb Dock at a cost of \$6.5 million neared completion.

Port Complex—An important announcement during the year was the decision by the State Government to join the Trust in commissioning a feasibility study into a port complex, including a World Trade Centre at North Wharf. Preliminary results have been most encouraging and efforts are being made to find a responsible developer.

Operational—The two main restrictions to the port—the lack of night navigation and depth of water in the river—have been greatly improved. Ships up to 230.42m (756') in length have been successfully handled after daylight hours and we have 12.2m (40') of water in the river. The intention is to progressively provide up to 13.7m (45') of water over the next few years, or when required. This will enable a ship with a draft of 12.2m (40') to negotiate the river under normal conditions. The Cargo Facilitation Committee, formed in March, 1974, continues to function in a constructive manner and its members deserve recognition for their efforts towards reducing port congestion early in this period.

Environment—The Victorian Government has directed the Trust to conduct an environmental impact study on its proposed Hobson's Bay Development. This important study will take at least three years to complete and in the interim the Trust may only complete works at Webb Dock which had already been commenced. The cost of the full study is estimated at \$1.5m. On the subject of the environment we must identify the areas for economic growth and development, and at the same time protect the areas for enjoyment and recreation. However industrialists, planners and true conservationists must adopt a flexible attitude and surely our environmental and economic needs and necessities can be related to each other rather than appear to be in continual opposition. In addition the Commissioners are pursuing their policy for beautification of the port areas.

Security-A new Police Station in the port costing the Trust \$377,500 was opened by the Chief Secretary of the Government, the Honorable J.F. Rossiter.

Government Levy—The Commissioners were appreciative of the action of the Government in reducing the statutory payment on wharfage and tonnage revenue from 10% to 8%.

Charges—Regrettable the Commissioners found it necessary during the year to increase their main charges to port users. I suggest that no port authority takes this step lightly but if the port is to give a proper service to its clients, increases in charges are inevitable during this trying period. I can assure port users that every effort is being made to keep costs to a minimum without impairing the efficiency of the service.

Industrial—Many man days work have been lost through industrial unrest in the port during the year and I can only repeat that where the Trust is directly involved it would be

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Trade Promotion Meetings Sponsored by Port of Nagoya

Nagoya Port News February 1976

Two key cities on the Japan Sea side of the Chubu Region-Kanazawa and Toyama-were the scene of a round table discussion on Port of Nagoya on January 12-13. The affair was jointly sponsored by Nagoya Port Authority and the Nagova Chamber of Commerce & Industry. With the marked port development of late, ties with inland industry close to Nagoya have grown stronger (i.e., automotive, iron & steel and ceramics industries). The conference sought to strengthen commercial ties between the Japan Sea area and Port of Nagoya, the largest port of the Chubu Region. The 20-member Nagoya delegation was headed by Mr. Fumio Kohmura (Exec. Vice President of Nagoya Port Authority), Mr. Otosaburo Kato (Vice President of the Nagoya Chamber) and Mr. Ichimatsu Torii (Chairman of Port Council, Nagoya Chamber). Kanazawa and Toyama were represented by presidents of respective Chambers and economic leaders in the Japan Sea area (Hokuriku District), and a lively exchange of opinions took place. Up to now, the Hokuriku District has more often used Kansai ports (Osaka, Kobe) for imports and exports, but the discussion focussed on the mutual benefits of using Port of Nagoya from here on, in view of its closeness. Accord was reached on the need for greater exchange of personnel and materials, and voices called for early completion of the Tokai-Hokuriku Highway, a key factor in joining the port with the Kanazawa-Toyama area as well as conjoining the Nagoya and Japan Sea regions as a whole. A united effort is now slated.

First Day of Talks (Kanazawa)

The afternoon talks on January 12th were held at the Kanazawa Chamber of Commerce. About 20 participants attended from the Japan Sea Area. The delegation was headed by the President of the Kanazawa Chamber, Mr. Miya (President of Daiwa Dept. Store), who opened the discussion by saying that "I think it is extremely significant that we have this opportunity to put our heads together with Nagova leaders from the same Chubu Region, just when we are entering this new phase of development in the Japan Sea area." The following were the main opinions voiced in the ensuing talks: 1) Since Kanazawa's main industry is textiles bound for Osaka trading firms by commercial practice for many years, use of Port of Nagoya would naturally be minimal; 2) Upon hearing that nearly all regular lines call at Port of Nagoya, there was a renewed awareness that the geographical promixity would mean an edge for manufacturers, and many hope to use the Port from here on; 3) Separate jurisdictions now cause considerable inconvenience in handling of trade-related procedure; 4) To facilitate trade, Nagoya banks should open branches in Kanazawa; 5) Better roads are needed to link the Japan Sea and Nagoya areas, so mutual effort is called for to complete the Tokai-Hokuriku Highway.

Second Day of Talks (Toyama)

The Toyama talks began at 10 A.M. next day in the Toyama Chamber of Commerce building, and about 20 participants formed the Toyama delegation headed by its Chamber of Commerce President, Mr. Kanaoka, and area economic leaders. President Kanaoka launched the meeting with the following remark: "The Japan Sea and Pacific sides should be two peas in a pod. It is of great significance, I believe, that Nagoya has called for exchange between both." Opinion highlights: 1) Toyama has traditionally leaned towards Osaka Area, businesswise; 2) Jurisdiction is not always the same as Nagoya's, so this might work to each other's disadvantage; 3) The first step in mutual exchange is road improvement, so Nagoya's contribution to the construction of the Tokai-Hokuriku Highway is sought; 4) To foster exchange, opening of Nagoya trader's branches in Toyama is to be encouraged; 5) With the opening of the new Port of Toyama, more thought should be given to dividing port functional responsibilities, sharing trade and using Toyama's new facilities.

Exports reviving

Hong Kong, January 31 (The Week in Hong Kong, Hong Kong Government Information Services):-HONG KONG, on the threshold of the Year of the Dragon, learned this week of a further encouraging revival of exports achieved during the Year of the Rabbit.

The value of domestic exports in December, it was announced, amounted to \$2,292 million (229.2 million pounds), an increase of 32.4 per cent on the same month in 1974.

Nevertheless, the decline in earlier months left domestic exports for the whole of 1975 falling 0.2 per cent behind the 1974 total.

Imports for the whole year decreased by 1.9 per cent and re-exports dropped 2.1 per cent.

The export figure for December was \$561 million (56.1 million pounds) up on December 1974, however. And the value of imports, at \$3,438 million (343.8 million pounds) was 35.3 per cent ahead of the figure for the previous December.

Re-exports, meanwhile, rose 18.9 per cent from \$527 million (52.7 million pounds) in December 1974 to \$626 million (62.6 million pounds) last month.

A spokesman for the Commerce and Industry Department said that Hong Kong's external trade had continued to recover.

Figures for the last quarter of 1975 showed significant increases, by value, compared with the same period of 1974.

Domestic exports were up 27.5 per cent to \$6,586 million (658.6 million pounds) in the last quarter compared with \$5,167 million (516.7 million pounds) in the same period last year.

Auckland Prepares for Doubling of Container Traffic

Auckland Harbour Board Auckland, New Zealand 27 February 1976



Overseas passenger terminal, Port of Auckland, off the downtown city area.

Auckland, New Zealand:-

Two major port improvement projects are under way at Auckland where the requirements of twice the present container traffic must be met in the 1977-80 period.

The two projects are closely related as the present roll-on roll-off berth serving mainly the Australian and coastal trades occupies an area needed for extension of the container wharf and expansion of the container complex.

Now nearing completion is a new terminal for roll-on vessels which late in 1976 will be transferred from the eight-year-old berth they have been using at the end of Fergusson Wharf in the container complex.

Work on Bledisloe Terminal for the roll-on trade has been delayed by industrial and other stoppages but the first of the two new linkspan berths is now expected to come into use in October.

Dredging of the basin between Bledisloe and Kings, the two old wharves involved in the redevelopment, began early in 1974. This was the start of the \$NZ9.8 million project on which Auckland Harbour Board staff had earlier completed technical, economic and other surveys.

With purpose-built berths and about nine acres of fully serviced back-up land, the new terminal should further improve the handling of an important proportion of the port's trade.

Last year nearly 600,000 tonnes of cargo, about one-tenth of the port's total annual tonnage, moved in and out of Auckland by roll-on vessels. More than half of this consisted of imports from and exports to Australia.

A later stage of this Bledisloe-Kings project will be



Mr. R. W. Carr Chairman Auckland Harbour Board

reconstruction of Kings, one of the first ferro-concrete wharves to be built anywhere, and provision of additional specialised berthage for unit ships.

Before work could begin on Bledisloe Terminal the Commission for the Environment, then newly established by the Government, had to approve it. This required preparation of a comprehensive environmental impact report which, in fact, set the pattern subsequently encouraged in New Zealand.

Final Government approvals on the second major port project, the extension of Fergusson, the present container wharf, and expansion of the container terminal, were being awaited at the end of February after the Auckland Harbour Board had provided the Commission for the Environment with additional traffic and other information to supplement the Board's separate environmental impact report on the development.

The Board plans to extend Fergusson Wharf from 457.2 metres (1,500 ft) to 609.6 metres (2,000 ft), reclaim the 3.7 ha (9.2 acres) roll-on basin and incorporate this land with that of the present roll-on terminal to provide an additional 6.07 ha (15 acres) for container terminal operations. Total backup land adjacent to Fergusson will then exceed 16.39 ha (40 acres).

In addition, the Board at considerable additional cost is negotiating the purchase of land south of Auckland city for an inland container base to be linked by rail and road with the Fergusson Wharf complex.

The Fergusson extension, the third and final stage of the whole Fergusson Wharf scheme, will extend over a two-year period and is estimated to cost \$NZ8.5 million exclusive of plant.

A second container crane, single lift of 40.64 tonnes capacity, is due for delivery from the manufacturers and

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Port of Auckland, New Zealand, looking west along the waterfront from above the Fergusson Wharf container complex where the wharf will be extended. In the centre of the picture Bledisloe Terminal for roll-on vessels is shown under development.

erection on the site later this year.

Among other plant to service a two-berth operation at Fergusson are additions to the present fleet of 10 straddle carriers. A $7,432 \text{ m}^2$ (80,000 sq.ft) container base shed adjoining the terminal became operational in April 1975. The whole of this break-bulk base covers a total area of 2.83 ha (7 acres). It is linked directly with the container berth and stacking area by a two-way road on Board land. Annual handling capacity of this base is up to 14,000 LCL import and export containers and will cover known requirements until 1977-78 when the supplementary inland base should be operational.

Extension of the Fergusson container terminal is a priority project for the Auckland Harbour Board which wants port facilities capable of accommodating the proposed transfer of Japanese cargo from conventional to container services and simultaneously handle an expanded UK/Europe container service.

The Japanese service is planned to start in October 1976 with one ship and increase with the introduction of additional vessels up to 1980. By that time all containerable cargo in the trade will be handled that way. Expansion of the UK/Europe service is expected from 1977.

Already regular calls at Auckland, easily the largest general cargo port in New Zealand, are made by 26 container ships, four of which are more than 244 m (800 ft) in length. They make more than 100 calls a year.

By 1978 44 ships are expected to make more than 200



Reclamation of the basin between Bledisloe (right) and Kings, two of the older wharves in the commercial port, and construction of two linkspan berths for the new terminal to serve roll-on vessels at Auckland, were well advanced at the end of 1975 when this picture was taken.

calls a year and 10 of these vessels will be more than 244 m long. Each of the two container berths at the Fergusson terminal must be long enough for the largest ships using the port.

The planned development of Bledisloe Terminal and the Fergusson container complex includes arrangements for a high degree of cargo exchange and should be more adaptable than the traditional finger piers to the introduction if necessary of further mechanisation.

"It is imperative that we complete both port development projects as rapidly as possible," said Mr. R.W. Carr, Chairman of the Auckland Harbour Board, in a recent survey of the situation.

Mr. K. W. Sweetman dies

Sydney, 16th March (The Maritime Services Board of N.S.W.):-The Maritime Services Board regrets to advise that Mr. K.W. Sweetman, Personal Secretary to the President and Press Relations Officer, passed away at the St. George District Hospital on the afternoon of 15th March 1976 after a short illness.

Mr. Sweetman was born on the 13th June, 1922, and joined the Board's service as a Clerk on 15th February, 1939, and served in various Branches of the Board's organisation prior to being appointed to his last position in February, 1974.

After enlisting in the Australian Military Forces in October, 1941, he saw active service in the Islands and Borneo and was discharged in March, 1946.

He is survived by his wife Jean, married daughter Jill and son John.

Contract for the Changi Reclamation Project Awarded at Singapore

Speech by

Mr. A. Vijiaratnam Director (Engineering Services), PSA, at the awarding of contract for the Changi Reclamation Project, at the PSA Conference Hall, 11th floor, PSA Towers, 3 March, 1976

Distinguished Guests, Ladies and Gentlemen

On behalf of the Port of Singapore Authority, I would like to welcome Mr. Mizuno, Dr. Sakamoto and Mr. Watanabe for being able to be here today for the signing of the contract documents for the Changi Reclamation Project. I would also like to thank all of you present to witness this ceremony.

In June last year, the Singapore Government announced its decision to develop a new International Airport at Changi to meet the increasing needs of Civil Aviation in the Republic. The siting of the new Airport mainly on land to be reclaimed at Changi would mean the minimum of disruption from the resettlement aspect together with a reduction in noise pollution by enabling aircraft to fly over water. The limited land area at the present military airfield leads to the requirements of having to create land by reclamation to meet the needs of the new Airport. The Port of Singapore Authority, because of its available technical resources and experience gained in various dredging and reclamation works, has been entrusted by the Government to plan and supervise this major reclamation which will stretch from Changi to near Bedok.

With the development of the new International Airport, the present face of Changi will be changed. Holiday bungalows, beaches and recreational areas will have to make way for runways and aprons, passenger terminal and associated buildings which would be built on the reclaimed land; but from the recreational point of view all is not lost. The Port of Singapore Authority's planning has provided for the formation of new beaches on the outer limits of the reclaimed area and this forms part of the present contract.

As agents for the Sentosa Development Corporation, the Port of Singapore Authority is providing new recreational outlets on Singapore's offshore islands and barren reefs. Associated with the reclamation are the creation of beaches, swimming lagoons, shelters and jetties complete with fresh water, electrical power and modern sanitation facilities. Tree-planting, landscaping and greenery have also been introduced to enhance the attractiveness of these locations. Ferry services will provide the necessary connection links between the islands.

Well underway at present is the development of varied facilities at Sentosa together with other development works at Kusu Island, Pulau Hantu, Sisters' Islands and other locations. In implementing this multi-million dollar programme, we are aware that an increasing number of our



The Port of Singapore Authority as agents for the Singapore Government recently awarded a \$239,156,000 contract to Messrs Penta/Toa/Rinkai Joint Venture for the reclamation of some 750 hectares of land along Changi foreshores at the east coast of Singapore island.

This reclamation work considered to be the largest undertaken in this region, is for the development of an international airport by the Government to meet the Republic's future civil aviation needs. Most of the new airport's ancillary facilities is to be built on the reclaimed land. More than 40 million cubic metres of fill from dredging the shoals and nearby sea lanes will be required for the reclamation, planned and to be supervised by PSA. The project will be completed in 37 months.

Picture shown (from left) Dr. N. Sakamoto, President, Toa Harbor Works Co., Ltd., Messrs A. Vijiaratnam, Director (Engineering Services) PSA, R. Mizuno, Vice-President, Penta-Ocean Construction Co., Ltd., and R. Watanabe, President, Rinkai Construction Co., Ltd. signing the contract for the reclamation during a ceremony held at the PSA Towers on 3 Mar. 76. (Port of Singapore Authority)

population living in highrise flats need easy access to the seaward recreational facilities. As the present holiday bungalows and youth camps at Changi need to make way for the Airport Project, new facilities are being developed on West St. John's Island. The youth camps will be available for use within a month or so. Planning for holiday bungalows, chalets, and other facilities are now under way. Such development work for the recreational sector is both challenging and interesting.

The reclamation contract for a sum of S\$239,156,000/-awarded to Messrs Penta-Ocean/ Toa/Rinkai Joint Venture Companies, is the biggest single contract ever awarded by the Port of Singapore Authority. This project involves the reclamation of some 750 hectares of land along the Changi foreshore which is considered to

(Continued on next page bottom)

Speech by

Mr. R. Mizuno, Vice-President, Penta-Ocean Construction Co., Ltd. on behalf of Penta/Toa/Rinkai Joint Venture at the awarding of contract for Changi Reclamation Project on Wednesday, 3 March, 1976

Mr. Vijiaratnam, distinguished guests, ladies and gentlemen, it gives me great pleasure today to be given this opportunity to speak on behalf of our joint venture on this occasion of the contract signing for the Changi Airport Reclamation.

In Japan, we have a saying that one arrow is easy to break but three arrows together is very difficult to break. This was the idea when our three companies, Penta-Ocean Construction, Toa Harbor Works, Rinkai Construction joined together to form our group to tender and now to work together. The intention is to gather the resources, employees, equipments and engineering knowhow of the three companies for the successful completion of this project to the entire satisfaction of the Authority.

With the recent successful conference of the ASEAN nations, the development of this region is now entering a new stage, and Singapore situated in the centre, will play a larger and more important role in the future. Singapore, already a communication, finance and transport centre of this part of the world, will have to be prepared to cope with this future important role. This Changi Airport development scheme is the first step in this direction and we the joint venture are very proud to be able to participate in it.

Very soon, you will see one of the largest fleet of cutter suction dredgers working off the Changi shore. They will have a total pump capacity of over 40 thousand horse power. They are not only one of the largest in total but each dredger is of the largest size and the equipment is most modernised. They are our pride and the cream of the

be the largest reclamation work undertaken in this region. More than 40,000,000 cubic metres of fill will be required for this purpose. An important aspect of this Project is that the fill will be obtained solely by dredging the shoals and nearby sea lanes. The Joint Venture Companies are expected to deploy a fleet of at least 5 large cutter suction dredgers brought specially from Japan and a total of some 900 men will be involved for the next 37 months to complete this work. The newly reclaimed land will be adequately consolidated to support facilities to meet the demands of some of the fastest and heaviest aircraft which are now in operation.

The Port of Singapore Authority looks forward to this challenge and we are glad that the Joint Venture is able to take part in this aspect of Singapore's development and with their vast experience as some of Japan's largest Dredging Companies, we can confidently look forward to the successful completion of this Project.

Thank you.

dredging fleet of the world. We have arranged the best, the largest and the most modern dredgers for this project.

All three of our companies have been working in Singapore for many years, and we consider ourselves not a foreign contractor, but a local partner participating together with the government and the people of Singapore for the development and the improvement of this country. We hope that this occasion will be another further step towards the closer relationship.

Finally I would like to thank the Government of Singapore and the Port of Singapore for accepting our services and hope to have your continued support and advice.

Thank you.

New floating crane

Singapore, 12 March (PSA Press Release):-The Port of Singapore Authority has commissioned a new \$6 million floating crane recently as part of its efforts to enhance its



cargo handling capabilities and to provide better and more efficient service to the shipping community.

The self-propelled crane "VULCAN" is one of the most sophisticated cranes in operation in South East Asia.

At its first job recently, it lifted a 82-tonne delicate transformer for the Public Utilities Board from a vessel at Keppel Wharves onto its deck before transporting it to Telok Ayer Basin and loading it onto a low-loader truck.

Designed and manufactured by Waagner-Biro of Austria, the crane parts were shipped from Vienna and assembled at



Singapore Slipway & Engineering Co. (Pte) Ltd. The local yard also built the 42-metre long pontoon.

The "VULCAN" is equipped with twin screw propulsion systems of the Voith Schneider type, each powered by a separate diesel engine. It has a cruising speed of six knots and can be manoeuvred anywhere in the port without the aid of tug boats.

The floating crane is capable of lifting loads of up to 120 tonnes at an outreach of ten metres from the fender edge. It also has an auxillary hoist with a capacity of 25 tonnes. The total lifting height is 40 metres and the maximum hoist speed is three metres and 12 metres per minute for the main and auxillary crane respectively.

A unique characteristic of the crane is its ability to slew through 360 degrees providing maximum mobility. It is also equipped with double-guilded level-luffing device. A built-in safety feature prevents the crane from overlifting. The crane mechanism will automatically stop when the load is beyond its capacity.

The crane also has a deck area to transport heavy lifts and containers. This eliminates the need for an extra barge for the transportation of cargo.

The floating crane is managed by the Offshore Supply Terminal of PSA. Detailed information can be obtained by contacting the Manager (Offshore Supply Terminal) at Tel 914755 ext 242 or direct line 912093.

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our sincere wish that Trade Union leaders and employees continue to communicate with the Trust.

Staff—On behalf of the Commissioners I commend the executives and employees of the Trust for their loyal co-operation over the past year. The reputation of the Trust is very much a team effort and each of us in our own particular sphere can make a helpful contribution.

A.S. MAYNE

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